

J. William Gayner

...and the Gayner Glass Works

The early 1920's brought a new era of glass insulator production to the East Coast. The most significant factor was the closing of the Brookfield Glass Company. The failure of Brookfield created a vacuum in insulator production in the East which encouraged new competition in the manufacture and sale of insulators. This came at a time of rapid growth in the use of open wire communication lines, especially telephone lines in rural areas of the Midwest and West. This expansion also fostered competition and stimulated improved insulator designs.

Two well-established New Jersey glass companies, Whitall Tatum and Gayner Glass Works, immediately rushed to fill the void left by the closing of Brookfield. Gayner, located at Salem, New Jersey, was the first into actual production of insulators, beginning late in 1920 or early in 1921.

Insulator production at Gayner was supervised by J. William Gayner. It is not known what insulator equipment was used at the Gayner plant in its early production, but it is likely that some equipment, including hand insulator presses, was obtained from Brookfield. Brookfield's automatic presses were not sold until late in 1922 or early 1923, so it is unlikely that these were ever used at Gayner. Gayner eventually built their own fully-automatic insulator machine, presumably based on designs and patents developed by Brookfield. It appears that Gayner either bought Brookfield patents and equipment outright or paid royalties for their use.

The facilities at Gayner were good. Since the company was already producing bottles, fruit jars, and other glassware, skilled labor and production expertise were readily available. The result was the production of consistently high-quality insulators.

Gayner produced insulators until late 1922 or early 1923. At that time J. William Gayner, the driving force behind insulator production at Gayner, joined the Lynchburg Glass Corporation and moved the entire Gayner operation to Lynchburg, Virginia.

Because of the high quality of Gayner production, its insulators are remarkably uniform, good news for the company but not very exciting for collectors. The colors range only from a medium blue aqua to a darker greenish aqua. On all styles, the lettering is "GAYNER" in neat uniform letters on the front and the Gayner style number and very small mold numbers on the back. The style numbering generally follows Hemingray style numbers, although on three types the style number is a combination

of Hemingray and Brookfield numbers (e.g. No. 38-20).

There are ten styles of insulators which bear the Gayner name:

| | |
|--------|------------|
| CD 103 | No. 6 |
| CD 106 | No. 90 |
| CD 121 | No. 160 |
| CD 153 | No. 48-400 |
| CD 154 | No. 44 |
| CD 160 | No. 140 |
| CD 162 | No. 36-190 |
| CD 164 | No. 38-20 |
| CD 205 | No. 530 |
| CD 252 | No. 620 |

Most are common styles of the era, although some have unique features.

The CD 103, No. 6, is quite rare. It may have been an experimental design or a special order. It is possibly from a reworked Brookfield mold that Gayner never put into commercial production.

The CD 106, No. 90, has two distinct types. Type I is the earlier design, closely resembling early types of the Hemingray CD 106 No. 9. It has a slightly peaked, rounded dome and thick heavy ridges on both sides of the wire groove. The groove itself is rounded and protrudes slightly from the sides of the insulator. Type II more closely resembles the Whitall Tatum CD 107, No. 9, with a flatter top and a flat squared-off wire groove.

The CD 160, No. 140, has two minor variations in the shape of the dome.

The CD 252, No. 620, is a unique design of cable insulator with a wider base and a shorter, more squatty appearance than other CD 252 cables. The CD 154, No. 44, is also slightly shorter than the Hemingray No. 42 likewise giving it a more squatty appearance when compared to other CD 154's.

All styles except the CD 103 occur with sharp drip points and all but the CD 121, CD 153 and CD 160 also exist with a smooth base.

Gayner prepared molds for a CD 122 but the operation at Gayner was moved to Lynchburg before these could be put into production. Careful examination of Lynchburg CD 122's will reveal the five- or six-circle blotouts covering the original GAYNER embossing.

It is not certain whether the No-Name CD 106, No. 9 and No. 90, the CD 153, No. 48-40, the CD 162, No.

36-19, and the CD 164, No. 38-20, were produced by Gayner, later by Lynchburg, or by some other company using Gayner-manufactured molds. There is some evidence that at least the CD 153 was produced by Lynchburg. The color and numbering of these No-Names suggest at least some connection to either Gayner or Lynchburg. It is possible that other styles without the Gayner name were

also produced at the Gayner plant.

While the Gayner insulators were produced for less than three years, the fact that so many are available, and that they can be found in many areas of the country still in service along railroad rights-of-way, attests to some measure of success of Gayner insulator production.

...and the Lynchburg Glass Corporation

Lynchburg Glass Corporation of Lynchburg, Virginia, was another of those companies which attempted to capitalize on the vacuum left when Brookfield ceased production in 1922. Because of various problems with Gayner Glass Works' insulator production, J. William Gayner, who had supervised insulator production at Gayner, joined the newly reorganized Lynchburg Glass Corporation in 1923 as vice president in charge of production. He brought with him his expertise in insulator production and his "contacts" in the glass industry, along with the equipment and insulator molds which had been used at Gayner.

The Lynchburg plant was a state-of-the-art facility when it was constructed in 1918. It occupied a little over five acres at the corner of Ann and Hudson Streets in Lynchburg. The main furnace building was about 200' by 100' and contained two gas-fired tank furnaces with a daily capacity of about 40 tons each. It also housed five 7' by 65' oil-fired annealing lehrs.

The mixing shed or batch house contained three large bins of soda ash, lime and sand, as well as equipment for weighing and mixing the glass formula. The bins were filled directly by railroad cars from an overhead trestle. An electric-powered mixing machine mixed the glass formula and fed it to the furnaces.

A 64' by 37' production building provided ample space to sort, grade, and pack the insulators. There was also a large warehouse for storage. The plant had its own powerhouse with two 66" diameter 18' boilers for steam driven machinery and an electric generator for powering lights. There was also a complete box shop with electric saws for constructing wooden shipping crates and barrels, as well as an amply-equipped machine shop for equipment repair and the tooling of molds.

Most of Lynchburg's actual insulator equipment came from the Gayner plant, including the Gayner-built fully-automatic insulator machine, all the Gayner molds, and four hand-operated insulator presses. Lynchburg also obtained Brookfield's two automatic insulator presses. These were most likely the Brookfield-Kribs presses built under Brookfield's 1900 patent. These presses were specifically mentioned in the liquidation sale of Brookfield

equipment in late 1922. Evidence indicates that Lynchburg paid royalties for the use of this equipment.

In addition, Lynchburg had six bottle-blowing machines, one automatic and five semi-automatic, with a variety of bottle molds. It also had one fruit jar machine with pint, quart and half-gallon molds. While most of Lynchburg Glass Corporation's production consisted of insulators, they did produce a small number of fruit jars. There are reports that some soda bottles were also produced at the Lynchburg plant, but these were likely produced by Lynchburg Glass Works prior to 1923 before the company was reorganized as Lynchburg Glass Corporation.

Insulator production began at Lynchburg in November of 1923. Their slogan was "Supreme Where Quality Counts." This reflected the concern with high quality which had marked insulator production at Gayner under J. William Gayner.

Lynchburg's insulators were aggressively marketed. By early 1924 they were shipping insulators to exporters in Seattle, Los Angeles, and New York; to customers in Newfoundland, South America, the Caribbean, Mexico, and as far away as the Philippines and Australia; to wholesalers throughout the East and South; and small orders to businesses, cities, and utility and telephone companies from Arizona to Nebraska. Since Lynchburg was located near several major railroads, low transportation costs allowed it to compete with the larger companies. Demand increased steadily and during the first twelve weeks of operation, Lynchburg produced an average of 150,000 insulators per week.

However, things did not go well for the company. Despite the modern equipment, superb management and good sales, the company struggled to show a profit. The quality of glass produced was not good and production costs were excessive. By the middle of March 1924, the company was in trouble. Production was halted the first week of April after only sixteen weeks of operation. After some reorganization, the plant resumed operation in early November of 1924. However, there were still problems with glass quality resulting in a large number of rejects which pushed production costs higher. Unable to show a

profit, the company finally closed at the end of May 1925 after only 44 weeks of operation.

Efforts to raise capital to reopen the plant failed and the entire facility was eventually demolished. Only then during the demolition was it discovered that a valve in a gas line feeding the main furnaces had been improperly installed in an inaccessible place and was partially closed. This had caused low gas pressure resulting in improper heating of the glass in the furnaces. The Lynchburg plant had been doomed to failure the day it was built!

The majority of Lynchburg insulators are a characteristic bright blue aqua, although they occur in hues ranging from a sparkling ice blue to a deep greenish aqua. Many shades of green are also found, including olive, lime, sage, apple, and emerald green. Characteristic of later production (early 1925) are various shades of clear, including ginger ale, pink, green, and amber tints as well as sparkling crystal clear. Rare colors known to exist include bright blue (no aqua), translucent (jade) aqua, aqua-swirled with green, aqua-swirled with milk white, and amber-tinted clear. Due to production schedules, particular styles only occur in certain colors.

The lettering arrangement on Lynchburg insulators varies widely. The most common front embossing is the name "LYNCHBURG" and their logo, an "L" within an oval, either above or below the name. The logo sometimes appears on the top of the dome or is omitted altogether. In a few cases, the logo appears without the name. Since many Gayner molds were reused, often the Gayner-embossed style and mold numbers were retained on the back with "MADE IN U.S.A." added as a distinctly Lynchburg feature.

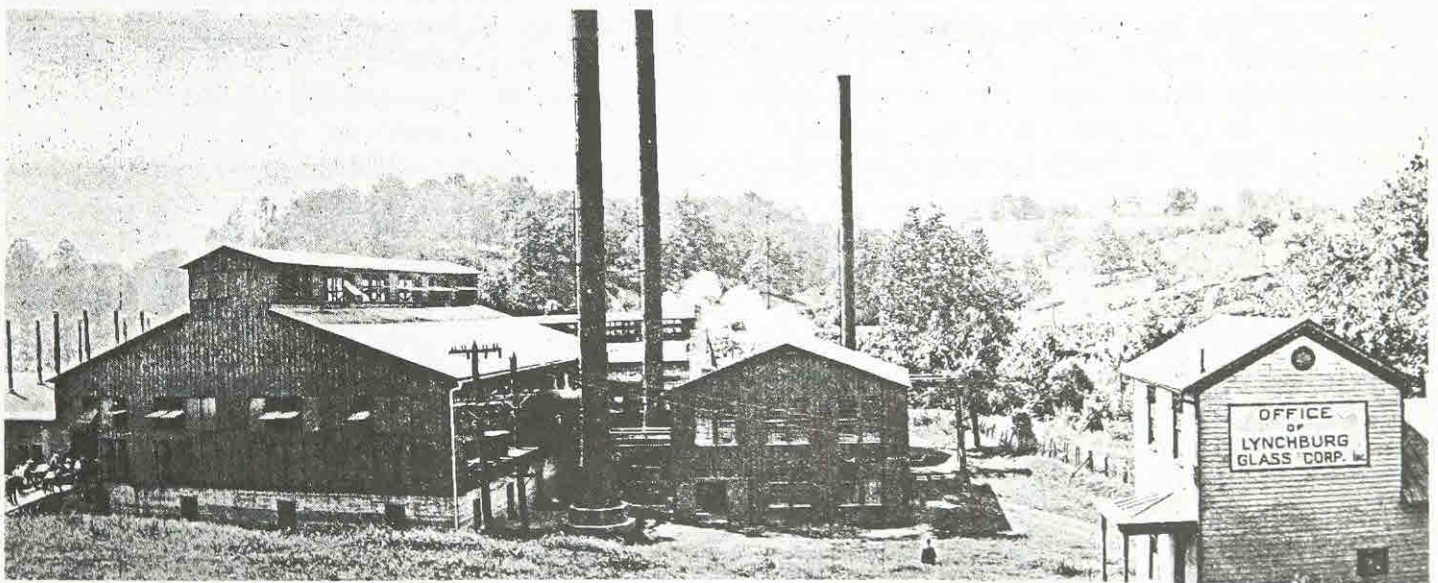
The style numbers generally follow Brookfield's system, so even when the Gayner numbers were retained they were usually partially altered to eliminate the Hemingray numbers favored by Gayner.

Lacking skilled engravers, much of the early Lynchburg lettering was crudely done, often little more than the name scratched into the mold. This resulted in many embossing errors and various sizes of lettering. Most of the crude embossing and errors were corrected in later retooling of the molds, but it makes for some interesting variations for collectors. Since Lynchburg carefully numbered most of their molds, some of the same molds can be traced through as many as three modifications.

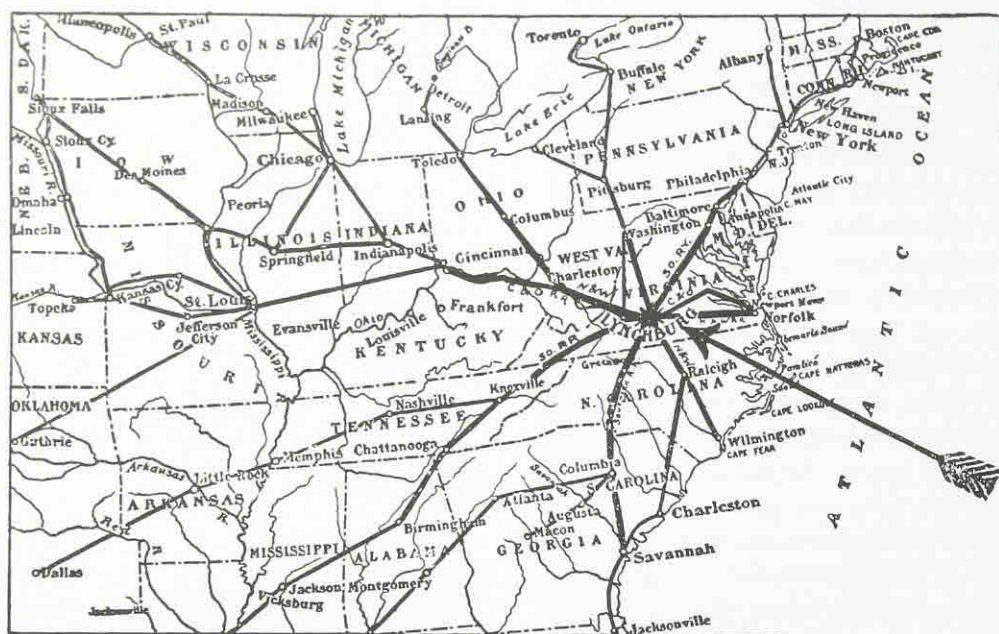
There are fourteen styles of insulators that carry the Lynchburg name or logo:

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|-------------------|--------------------|
| CD 106 | No. 10 |
| CD 112 | No. 31 |
| CD 121 and CD 122 | No. 30 |
| CD 145 | No. 43 |
| CD 154 | No. 44 |
| CD 160 | No. 32 |
| CD 162 | No. 36 |
| CD 164 | No. 38 |
| CD 205 | No. 53 and No. 530 |
| CD 251 | No. 1 |
| CD 252 | No. 2 |
| CD 281 | No. 180 |
| CD 306 | No. 181 |

An interesting feature of Lynchburg insulator



Pictured is the office of the Lynchburg Glass Corp., Inc. (right foreground) and the plant buildings belonging to the Lynchburg, Virginia, glasshouse. (Lynchburg advertising brochure provided by Neil Eidson)



Part of Lynchburg Glass Corporation advertising stressed the centrality of Lynchburg to all parts of the United States via the rail system. (Courtesy of Neil Eidson)

production was that they made extensive use of recycled insulator molds, not only from the Gayner company, but from other companies as well. This fact makes for even more interesting variations of insulators, as well as some unique styles.

Lynchburg CD 121, CD 122, CD 160, CD 164, and CD 205 were all made from Gayner molds in which the old embossing was blotted out and the Lynchburg lettering recut into the molds. The sides of the Gayner CD 121 molds were machined slightly to give greater thickness to the skirt. The CD 122 was prepared by Gayner but never put into production there. Five- or six-circle blotouts reveal the presence of the old Gayner lettering. The CD 160 has two minor variations in the shape of the dome. The CD 164 has some minor variations in the wire groove ridges. Several of the No. 38 molds were retooled to strengthen weak embossing. It is likely that Lynchburg eventually made a few of its own molds for the CD 164.

The CD 106, No. 10, was first produced from modified Gayner Type II molds (see information under Gayner). The insulator was given a more rounded wire groove and a fully-rounded dome so that it would more closely resemble the popular Hemingray No. 9. At least one of the reworked molds escaped the dome retooling. This resulted in two major variations of the Lynchburg CD 106: Type I with a squared-off, flattened top, and Type II with the more typical fully-rounded top.

The lettering on several molds of the CD 106 was retooled to correct embossing errors. Others were retooled to strengthen the original embossing which had been weakly done and was quickly worn away by the pressure of the insulator presses. Several of these had additional mold

numbers added to the front or side of the insulator.

Lynchburg eventually made their own molds for the CD 106. These can easily be distinguished by the large, widely spaced lettering on the back. Even some of these exhibit embossing errors.

The skirt of the Lynchburg No. 10 proved too thin and was easily chipped, so several molds were retooled to thicken the skirt. This resulted in the erasure of the name "LYNCHBURG" from the front of the insulator, leaving only the "L" logo. The back also lost "U.S.A.", leaving only "MADE IN".

The Lynchburg No. 31 is a unique variety of CD 112. This double groove insulator was produced from reworked Brookfield CD 102 molds by machining the sides enough to add the lower wire groove. It was designed to compete with Hemingray's No. 12. In fact, a Lynchburg catalog uses a cut of the Hemingray No. 12 to illustrate its own No. 31!

The CD 145 was reworked from two varieties of Brookfield "B" molds, producing two slightly different variations of the No. 43. There is some evidence that the original molds were for special-order insulators made by Brookfield for the Grand Trunk Pacific Telegraph in Canada.

The CD 154 was first produced from old Gayner molds. This variety (Type I) is easily recognized by its short squatty appearance and by the blotouts over the old embossing. Because of the popularity of this style, Lynchburg eventually made its own molds for the No. 44 (Type II), adopting a slightly larger design which closely conformed to Hemingray's No. 42. There are minor variations of the Type II, with indications that some of the old Gayner CD 153 molds were reworked into the newer CD 154 style.

The CD 162 exhibits some of the most interesting variations. The Lynchburg No. 36 was produced from both Gayner (Type I) and old Brookfield (Type II) molds. The Brookfield molds can be identified by the back embossing in which "MADE IN U.S.A." occurs in a single line; on the Gayner molds it was added in two lines: "MADE IN/ U.S.A."

Both the Gayner and Brookfield designs originally had very narrow wire grooves. However, Lynchburg advertised the No. 36 as a "deep groove" insulator to compete with Hemingray's No. 19. As a result, both types of molds were eventually retooled to a wider and deeper wire groove (Type III). Each of the original types produced minor but distinguishable variations in appearance (retooled Gayner, Type IIIa; retooled Brookfield, Type IIIb). Several of the No. 36 molds were also retooled to correct embossing errors. There is at least one case of a hybrid No. 36 produced with a Brookfield dome and a Gayner skirt.

The CD 251 was made from N.E.G.M. molds relettered for Lynchburg. The CD 252 was produced from modified Brookfield No. 2 Cable molds. The sides of the molds were machined out slightly to add thickness to the skirt. The result is a slightly "fat" cable.

The CD 281, No. 180, was relettered for Lynchburg from Hemingray molds. There is no record of where or how Lynchburg obtained these molds from Hemingray. The design itself was obsolete so it is possible that the molds had been discarded. We know of other cases where obsolete molds were recycled by unscrupulous scrap dealers. However, it is just as possible that Lynchburg bought the molds legitimately or paid a royalty for their use. Production records show that 11,230 No. 180's were produced. However, there are reports that most of these were melted down when they failed to sell. This style of side-tie power insulator had already been replaced by the saddle groove design. So Lynchburg, always adaptable to market demands, reworked the CD 281 molds in March of 1925, replacing the rounded top with a saddle groove. Thus was created the unique Lynchburg CD 306, No. 181. While records show only 4,205 of these were produced, they are far more common than the rare No. 180.

Two interesting enigmas concerning Lynchburg insulators are worth noting. Production and sales records

list a Lynchburg No. 48 insulator with nearly 50,000 produced. The corresponding Gayner insulator is a CD 153, the No. 48-400. However, no CD 153 with Lynchburg markings has turned up. Lynchburg's sales brochure lists a No. 48, but the accompanying illustration is of a Hemingray No. 40, CD 152. This same cut is used to illustrate Lynchburg's No. 44, although with different measurements. Since Gayner never produced a CD 152, and Lynchburg would certainly not go to the expense of creating new molds for an already obsolete insulator, it is fairly certain that Lynchburg's No. 48 was not a CD 152. While we cannot be certain, evidence seems to point to the No-Name No. 48-40 as being the No. 48 produced at Lynchburg. This raises the possibility that the other Gayner-like No-Names ("No. 90", "N0.9", "No. 36-19", "No. 38-20") might also be Lynchburg products.

The second mystery concerns one of Lynchburg's illustrated brochures. The cover features a line drawing of a CD 103, the same style as the Gayner No. 6. This seems to indicate that Lynchburg had the Gayner molds for the CD 103. Did they intend to put the CD 103 into production and decided otherwise? Were some actually produced under the Lynchburg name? It seems unlikely that Lynchburg ever produced a CD 103, but we cannot know for certain.

It is generally agreed that the CD 106, No. 10, embossed "BIRMINGHAM", as well as the corresponding unembossed CD 106, have some connection with the Lynchburg plant. However, there is no record of this insulator being produced at Lynchburg.

Lynchburg advertised insulators with drip points unless the customer specified smooth base, so drip points are more common, although most styles also occur with smooth base. The company first used small, sharp drip points, later more blunted points, and finally began using large, round points.

In its short life span, Lynchburg produced a tremendous amount of insulators, over four and a half million in less than a year of actual production. It is interesting to think that were it not for the twist of fate, or deliberate act of sabotage, that doomed the plant from the beginning, Lynchburg may have emerged as a leading manufacturer of insulators.



Lynchburg Company logo was an "L within an oval".

"J. William Gayner and the Gayner Glass Works and Lynchburg Glass Corporation" was authored by Dennis Bratcher of Oklahoma City, Oklahoma. Dennis has an extensive collection of both manufacturers and has been involved in historical research on both companies.