

2016 PDF edition

Old Familiar Strains

A newsletter for Collectors of Radio Strain Insulators and related items
Volume 3 No. 4/5 August/October 1996



18 So. Broad St., circa 1915

Editorial

It is a pleasure to feature the M.M. Fleron company in this year's Fall double issue. I must start by thanking Fred Fleron, the grandson of Louis and Mary Melissa Fleron for his help. Fred provided the priceless family photos and wonderful background information on the company. My grandfather Howard had a service station here in Portland. Putting myself in Fred's position of having a stranger call up and ask for detailed information on a business that has been closed for 50 years, I am blown away by the amount of terrific material that he came up with. I must also recognize the efforts of **Jim Singleton** who put me in touch with Fred and has been an ongoing source of encouragement.

This issue includes a few pages about my experiences at the National Insulator Show this summer. **Bob Stahr**, whose picture you will see in the story, has been appointed Central Region Vice President of the National Insulator Association. Congratulations!

Congratulations are also due **Dick Mackiewicz** and **John Lewis**. Dick again won honors at the Antique Wireless Association annual show in Rochester, NY. This year he presented a display of "could-have-been" Atwater Kent headphones. John wrote about his antenna insulator display at the Crestview, FL, Spring bottle show which received an honorable mention. I hope to outline John's novel approach for displaying strains in a future issue.

During the Summer, we added 7 readers to the mailing list, bringing the total to 46, the highest it has ever been. An address update appears on page 23. Thank you for your efforts to publicize Old Familiar Strains.

I hope that you found your copy of OFS Vol. 3 No. 3-1/2 the NIA national show "give away" issue in your envelope. You are getting both the *longest* Old Familiar Strains and *shortest* issue at once. OFS will be back on the regular bimonthly schedule, starting with the December issue. As always, your letters, photos, articles, and classifieds are welcomed.

M.M. Fleron & Son Inc.

by Dan Howard

Not a manufacturer but a highly successful retailer the M.M. Fleron Company sold everything the radio hobbyist of the 1920's or 1930's would need. This important family-owned company sold its own brand of insulators, lightning arresters, and antenna accessories mail order, through jobbers, and in a Trenton, NJ, storefront.

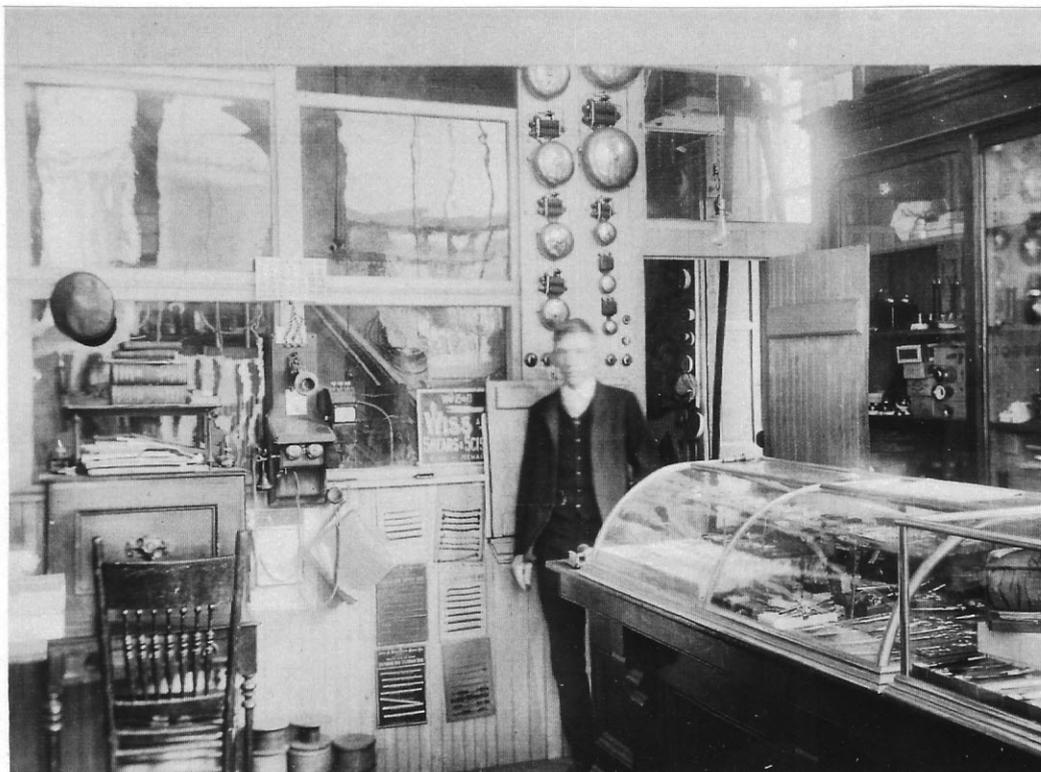
L. Fleron Cutler & Grinder

The company's founder Louis Fleron and his sister Elizabeth emigrated from Fleron, Belgium, in the 1880's. Louis brought with him metal-working skills learned from his father who made iron work, including bed frames and firearms.

After marrying Mary Melissa Ackerman, Louis opened a store in Paterson, NJ. In addition to selling cutlery, razors and electrical supplies, Louis repaired locks and provided knife and razor grinding services.

M.M. Fleron & Son, 18 So. Broad St. Trenton, NJ

The Fleron's and their three young sons, Russell, Louis Jr., and Frederic, moved to Trenton, NJ, around the turn of the century. Louis opened his new store at 18 So. Broad St. in Trenton under the name M.M. Fleron & Son in honor of his wife, Mary Melissa. Russell, the Fleron's eldest son, is pictured here "minding the store" around 1904.



Bercy's Laboratories

At their new location, the Flerons added barbering and beauty supplies to their offerings. According to trademark files, the company trademarked at least two "medicinal" products, operating under the name "Bercy's Laboratories." The first, "Icy Rub," had been used since 1905 for an astringent. Another, "Monarch," was a hair tonic trademark dating from 1913. (See page 19).

Mr. Fleron had an on-going interest in electricity and telephones. At one point he manufactured and applied for a patent on a "self-transmitting" telephone. I also have a copy of a schematic that he drew in 1918 of a working wireless transmitter and receiver.

The picture of the 18 So. Broad St. store (below), taken in the late teens, shows some of the lamps and electrical fixtures that they sold. Mr. Fleron can be seen on the left. Russell is in the right foreground with Louis Jr. in the right background.

Unfortunately, Mr. Fleron did not live to see the real advent of the consumer radio market in the 1920's, as he passed away in 1919.



M.M. Fleron and Son, Inc. 112 No. Broad St. Trenton, NJ

Although we don't know when they moved from 18 So. Broad St., ads from early 1924 place the company a couple of blocks down at 112 No. Broad St.

In 1923, presumably under the direction of Russell, the company began advertising radio antenna insulators for sale in QST Magazine and other publications. The earliest Fleron advertisement in my collection is for porcelain insulators from the April, 1923 QST.

The May, 1923 QST was "the antenna issue." Included in the issue were the results of laboratory performance tests of antenna insulators. The American Radio Relay League purchased six samples each of twenty types of strain insulators. The samples were divided and sent to two independent laboratories for testing.

QST technicians selected two styles of Fleron dry-process porcelain insulators for testing. The first, a Fleron #2 porcelain ball insulator, performed well when dry but tended to take moisture (as might be expected from dry process porcelain).

The other, a ribbed porcelain rod, probably a Fleron #4, also performed well. The date of the tests would suggest that Fleron insulators were sold as early as 1922.

Adding to the line

By 1924, in addition to porcelain strain insulators, Fleron was advertising porcelain tube sockets and other radio accessories. Figure 31 shows that the first Fleron stand off insulator (No. 8) was simply a #4 strain insulator coupled with a brass fitting to hold it to the wall.

In 1924, the company introduced the unusual, refillable lightning arrester (see Figure 26). Apparently there was concern that the internal gap would break down after passing sparks. Fleron, L.S. Brach, Frost, and others sold lightning arresters which could be "refilled." In fact, some manufactures still sell lightning arresters with replaceable points.

Once the company had a lightning arrester on the market, it was possible to begin selling complete antenna kits. The January, 1925 price sheet lists two of them, the #350 and the #500 (Figures 11 & 13).

A Touch of Glass

Introduced in 1924, Fleron originally offered both a 3" and a 4" ribbed glass strain insulator. Of the Fleron glass insulators, the most elusive is the 4" #44 five-rib insulator (Figure 5). The smaller insulators are more common but come in a number of variations. Figure 3 shows a side-by-side comparison of several from **Jim Singleton's** collection. Also, check out Jim's unembossed purple look-alike in Figure 2.

From the mid-1920's through the early 1930's, the product line expanded to include other insulators and a variety of lightning arresters. The photo of **Bob Puttre's** lightning arrester display in Figure 4 gives you a look at the cobalt blue "Home Guard" and the black "Sentinel."

The Fleron retail store closed during the depression. My latest advertisement is from the May, 1934 *QST*. In the 1930's the company had introduced a "Boy Scout Signaler," a device for learning Morse code (Figure 41). After the store closed, the brothers went into business producing signal senders exclusively. Louis Jr. was kept busy assembling units. Fred, who had always worked as salesman, traveled throughout the Thirties selling the signalers.

After M.M. Fleron and Son went out of business, Russell Fleron opened his own cutlery and beauty supply store, Fleron Beauty Supply. In 1942, Fred Fleron moved his family to Wesley, MA, and went to work for Hasbro selling educational products.

Made by...

It has been established that Fleron was a retailer not a manufacturer. But who made the porcelain and glass products for Fleron?

My research suggests that Cook Pottery Co., also of Trenton, NJ, is a likely source of the porcelain insulators. Many of the Fleron insulators and arresters are gray clay glazed black, an unusual combination. Without boring the reader with the details, Fleron's gray and black products resemble insulators known to be made by Trenton Pottery. That, and the companies' proximity to one another, lead me to believe that a connection exists. A follow up on Cook Pottery's other radio insulator products is planned for a future issue.

I am still at loss to determine who made the glass insulators. The variations that **Jim Singleton** has observed may indicate that the company contracted with more than one source.

Sources:

Fleron advertisement, *QST* (April, 1923) pg. 90. (Courtesy *QST Magazine*)

Fleron advertisement, *Popular Radio* Vol. 7 No. 2 (February, 1925) pg. 72.

Fleron, Frederic J. Jr., various telephone interviews 9/96.

"Fleron Radio Outfit, The," *Radio* (July, 1925) pg. 42.

"New Glass Insulator, A", *Popular Radio* Vol. 9 No. 8, (August, 1924) pg. 193.

"Some Tests of Amateur Antenna Insulators," *QST* (May, 1923) pp. 24-30.

Tod, Jack. *A History of the Electrical Porcelain Industry in the U.S.*, privately published, 1977. (Courtesy Elton Gish)

M.M. Fleron & Son Inc.
Radio Antenna Hardware Check List

Antenna Eliminators		Figure #
<input type="checkbox"/> Aerostat	black porcelain (1)	8
<input type="checkbox"/> Extenna	(8) (9)	9, pg. 24
<input type="checkbox"/> Lamp Socket Aerial	(14)	10
<input type="checkbox"/> #94 "Antenex"	brown bakelite (1) (14) (16)	7
Antenna Kits		
<input type="checkbox"/> No. 5	2 x No. 75's, Cadet arrester (14)	12
<input type="checkbox"/> No. 120	2 x No. 21's, Cadet arrester (14)	12
<input type="checkbox"/> No. 150	2 x No. 21's, Cadet arrester (14)	12
<input type="checkbox"/> No. 350	porcelain strains, refillable arrester (18)	11
<input type="checkbox"/> No. 350	glass strains, Sentinel arrester (7) (8)	np
<input type="checkbox"/> No. 500	porcelain strains, refillable arrester (6) (18)	13
<input type="checkbox"/> No. 702	porcelain strains, all wave arrester (14)	12
<input type="checkbox"/> No. 704	porcelain strains, all wave arrester (14)	12
<input type="checkbox"/> Fleron-Wallace SW	glass strains, transposition blocks (13)	np
Antenna Spring		
<input type="checkbox"/> #88	Spring with porcelain spools (8) (12)	14
<input type="checkbox"/> #188	Spring with porcelain spools (14)	15
Balun		
<input type="checkbox"/>	Fleron All Wave Antenna Coupler (14)	12
Feed Thru Insulators		
<input type="checkbox"/> #85	1-5/16" dbl cone porcelain (14)	16
<input type="checkbox"/> #86	1-11/16" dlb cone porcelain (14)	16
<input type="checkbox"/> #87	2-1/4" dbl cone porcelain (14)	16
<input type="checkbox"/> #87j	2-1/4" dlb cone w/jack (14)	16
Lead-in Insulators		
<input type="checkbox"/> #9	lead-in bushing black porcelain (4) (12) (14)	17
<input type="checkbox"/> #12	3/8" x 12-1/2" lead-in strap w/clips (14)	18
<input type="checkbox"/> #126	3/8" x 12-1/2" lead-in strap w/screws (14)	18
<input type="checkbox"/> #159	feed through bushing porcelain (12)	19
<input type="checkbox"/> LIB	same as #9 (18)	17

Lightning Arresters

		Figure #
<input type="checkbox"/>	Defender bakelite (8)	25
<input type="checkbox"/>	Defender black porcelain (16)	25
<input type="checkbox"/>	Home Guard black porcelain, flat top (1)	np
<input type="checkbox"/>	LA same as refillable (18)	26
<input type="checkbox"/>	Refillable black porcelain (5)	26
<input type="checkbox"/>	No. 17 "Sentinel" black porcelain (1) (8) (10) (11) (16)	23 ^a
<input type="checkbox"/>	No. 20 "Home Guard" blue porcelain (1) (8) ("Home Guard" <i>on</i> ridge)	21 ^b
<input type="checkbox"/>	No. 20 "Home Guard" blue porc. (1) (8) (15) (16) ("Home Guard" <i>flanks</i> ridge)	21
<input type="checkbox"/>	No. 80 "Cadet" porcelain (14)	20
<input type="checkbox"/>	No. 92 "All Wave" brown porcelain (doublet) (1) (14)	22
<input type="checkbox"/>	No. 92 "All Wave" white porcelain (doublet) (14) (15)	22 ^c
<input type="checkbox"/>	No. 93 "All Wave" black porcelain (doublet) (14)	24

Stand Off Insulators

<input type="checkbox"/>	#8 8" column (#4 strain + mounting bracket) (3) (12)	31
<input type="checkbox"/>	#14 4" column black porcelain (8) (12) (16)	31
<input type="checkbox"/>	#14 4" column blue porcelain (20)	31
<input type="checkbox"/>	#15 1-1/2" beehive black porcelain (1) (8) (12)	30
<input type="checkbox"/>	#79 nail knobs glazed white porcelain (14)	27
<input type="checkbox"/>	#82 1-1/2" cone porcelain (12) (13) (14)	28
<input type="checkbox"/>	#82J 1-1/2" cone w/jack (14)	28
<input type="checkbox"/>	#83 5-1/4" column porcelain (12) (14)	32
<input type="checkbox"/>	#180 3/4" cone porcelain (14)	28
<input type="checkbox"/>	#181 1-3/8" cone porcelain (14)	28
<input type="checkbox"/>	#184 3-1/8" column porcelain (14)	32
<input type="checkbox"/>	#318 3" screw-eye type blue porcelain (8) (12) (14)	29
<input type="checkbox"/>	#618 6" screw-eye type blue porcelain (12) (14)	1, 29
<input type="checkbox"/>	#1218 12" screw-eye type blue porcelain (12) (14)	29

Strain Insulators (glass)

<input type="checkbox"/>	#25 same as 52? (12)	39
<input type="checkbox"/>	#33 ?" x 3" (18)	3, 6, 38
<input type="checkbox"/>	#33 1-1/8" x 3-3/8" (6) (12) (14) (16)	3, 6, 38
<input type="checkbox"/>	#44 1-1/4" x 4" (18)	38
<input type="checkbox"/>	#44? 1-1/4" x 4-3/16" (16)	38
<input type="checkbox"/>	#44? 1-1/4" x 4-5/16" (19)	5, 38
<input type="checkbox"/>	#52 1" x 3-1/8" (8) (14)	40

^a see Figure 4 column 2, row 9

^b see Figure 4 column 1, row 3

^c see Old Familiar Strains August, 1995 pg. 12 column 4, row 1

Strain Insulators (porcelain)		Figure #
<input type="checkbox"/> #0	1-1/8" x 3" black (2) (18)	33
<input type="checkbox"/> #1	1-5/8" x 4" black (2) (18)	33
<input type="checkbox"/> #2	2-1/8" x 3-3/4" (ball) black (2) (18)	33
<input type="checkbox"/> #3	1-5/8" x 5" black (2) (18)	33
<input type="checkbox"/> #4	1-5/8" x 8" black (2) (18)	33
<input type="checkbox"/> #13 "NU-BLAC"	7/8" (square) x 2-3/8" (3 ribs) black (1) (18)	37
<input type="checkbox"/> #13? "NU-BLAC"	7/8" (square) x 2-3/8" (2 ribs) black (17)	np
<input type="checkbox"/> #21	1-3/8 x 3" blue (14)	35
<input type="checkbox"/> #23	13-16" x 1-1/2" (egg) white (14)	34
<input type="checkbox"/> #40	1-1/2" x 8" black (12) (14)	36
<input type="checkbox"/> #40	1-1/2" x 8" white (14)	36
<input type="checkbox"/> #73	1-1/4" x 2-1/2" (egg) white (14)	34
<input type="checkbox"/> #75	1-3/8" x 2-3/4" white (14)	35

Transposition Insulators

<input type="checkbox"/> Fleron-Wallace	glazed porcelain (13)	np
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Sources: (numbers in parenthesis)

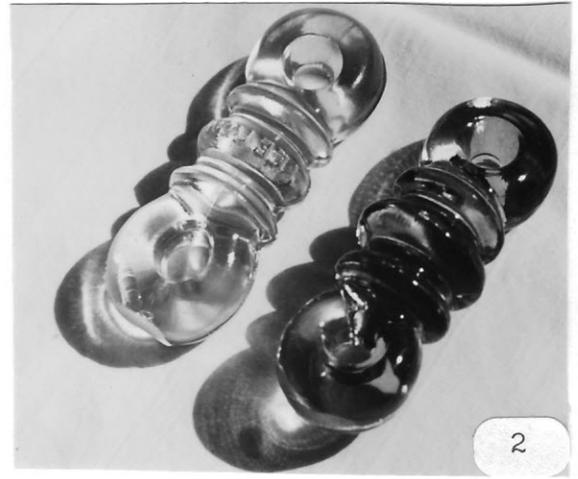
- | | |
|--|---|
| 1. Dan Howard collection | 12. QST November, 1932 pg. 85 |
| 2. QST April, 1923 page 90 | 13. QST December, 1933 pg. 83 |
| 3. Popular Radio February, 1924 pg. 85 | 14. Fleron price circular No. 662 (ca. 1930) |
| 4. Popular Radio January, 1925, pg. 120 | 15. Bob Dennison letter 7/12/94, <i>OFS</i>
8/95 pg. 12 |
| 5. Radio July, 1925 pg. 42 | 16. Dick Mackiewicz notebook |
| 6. Popular Radio August, 1925 pg. 193 | 17. Steve Coffman letter 7/96 |
| 7. Popular Radio April, 1927 pg. 362 | 18. Fleron price circular No. R D 9 (1/25) |
| 8. Radio News July, 1931 pg. 80 | 19. David Benko collection |
| 9. Patent Gazette Vol. 386 No. 3
(9/17/29) pg. 501 | 20. Brown, Gerald. <u>Collectible Porcelain
Insulators</u> , 3rd Edition, 1983, pg. 89.
(Courtesy Bob Stahr) |
| 10. Allied Radio Catalog 1930 pg. 148 | |
| 11. Patent Gazette Vol. 358 No. 3
(5/17/27) pg. 606 | |

Photo Credits

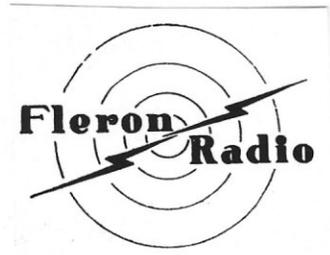
Frederic Fleron: front cover, pg. 4, pg. 5, pg. 23, pg. 24
Fleron Price Circular No. 662: 7, 12, 15-18, 20-22, 24, 27-29, 32 (text), 34-36, 40, 41 (Courtesy Dick Mackiewicz)
Fleron Price Circular RD9, 1/25: 11, 13, 26, 31, 33, 37, 38 (Courtesy Fred Fleron)
Patent Gazette: 42-49
Bob Puttre: 4
QST November, 1932, pg. 85: 14, 19, 30, 32 (picture), 39 (Courtesy ARRL)
Radio News June, 1932, pg. 1030-31: 8
Radio News July, 1931, pg. 80: 9, 10, 20, 23, 25
Jim Singleton: 2, 3
John Webster: 1, 5, 6



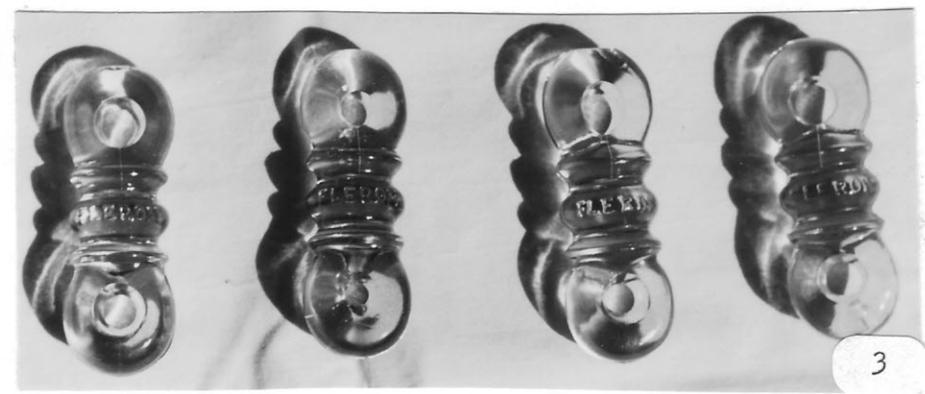
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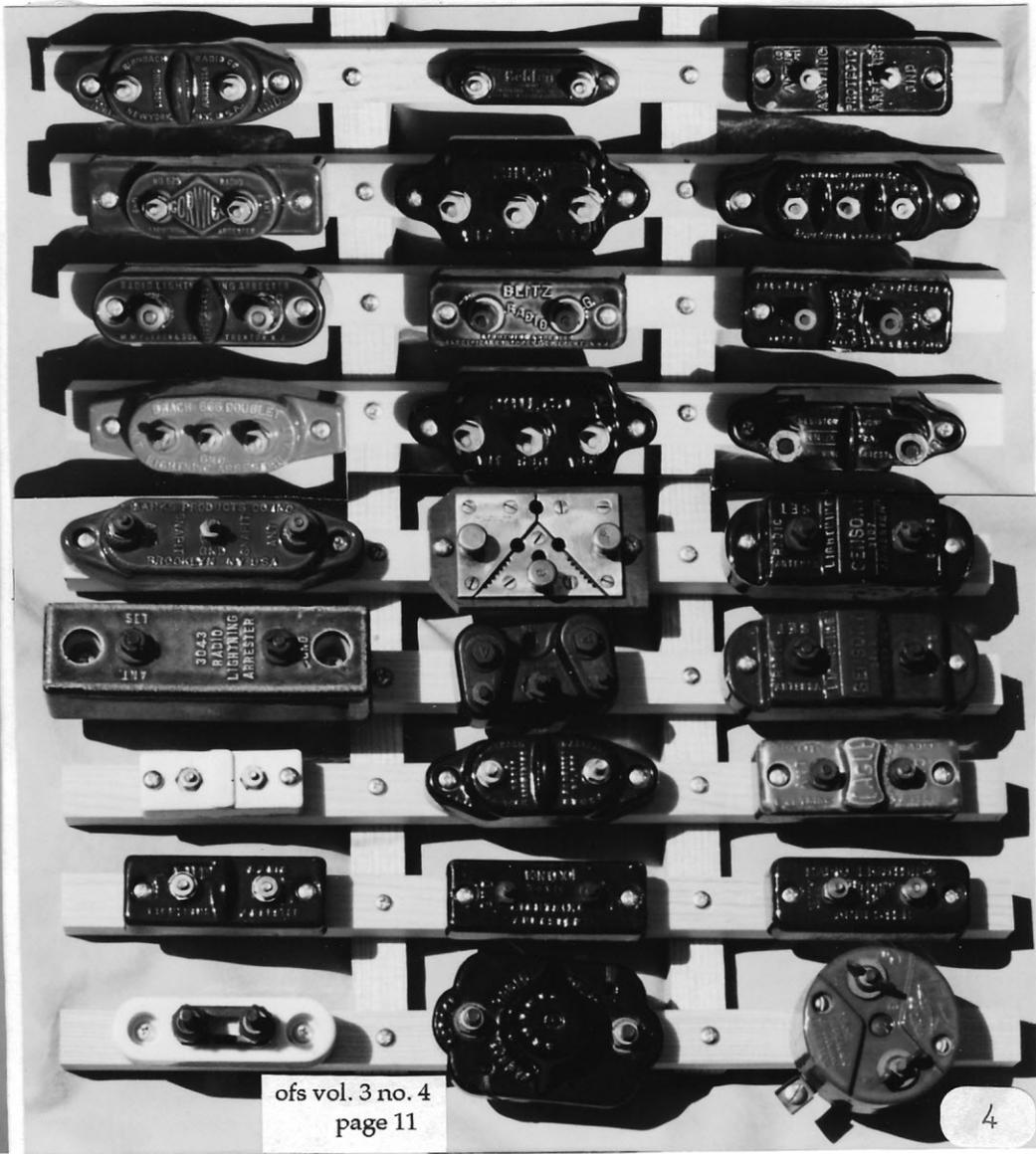
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3



5



ofs vol. 3 no. 4
page 11

4

Antenna Eliminators

Better RADIO RECEPTION
with



Eliminates outside wires. Reduces static, noise and interference. Easily installed by anyone. No moving parts. No adjustment necessary. Dust-proof bakelite case. No larger than a door knob. Satisfaction guaranteed.

1.00 worth more
(News Mat No. 394)

**ANTENEX
BUILT-IN AERIAL**

The best selling Aerial Eliminator on the market because of:

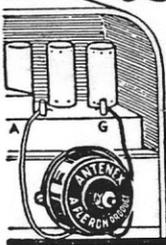
1. *Performance*
2. *Ease of Installation*
3. *Attractive Display Material*
4. *Strong Eye Appeal*

High powered Display Material packed with every dozen turns hundreds of thousands of prospects into SALES. Sold by Radio, Hardware, Electrical, Drug, Furniture and Department Stores. Made of Bakelite.

Cat. No.	Carton	Std. Pkg.	List, Ea.
94	12	144	\$1.00

Better RADIO RECEPTION
with

**Antenex
INDOOR AERIAL**



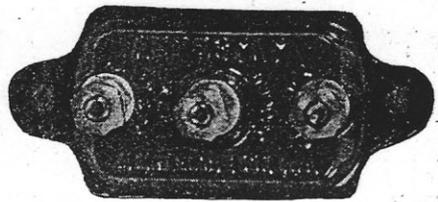
Eliminates outside wires. Reduces static, noise and interference. Easily installed by anyone. No moving parts. No adjustment necessary. Dust-proof bakelite case. No larger than a door knob.

SATISFACTION GUARANTEED
1.00 worth more
(News Mat No. 294)

Figure 7: Antenex Indoor Aerial

Indoor Aerial Device

Description—A new device known as the Aerostat to replace the outside antenna. To



install this unit it is only necessary to connect the antenna and ground terminals of the receiver to the binding posts on the Aerostat marked "Set A" and "Set Ground." A good ground lead, preferably from a cold water pipe, is connected to the end binding post marked ground "X." This unit measures 4 inches long by 1 3/4 inches wide by 1 3/4 inches high.

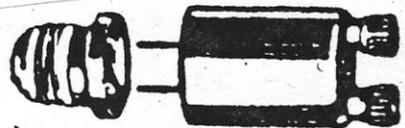
Maker—M. M. Fleron & Son, Inc., Trenton, N. J.

Figure 8: Aerostat



Extenna Aerial Eliminator

Figure 9: Extenna



Lamp Socket Aerial

Figure 10: Lamp Socket Aerial

Antenna Kits



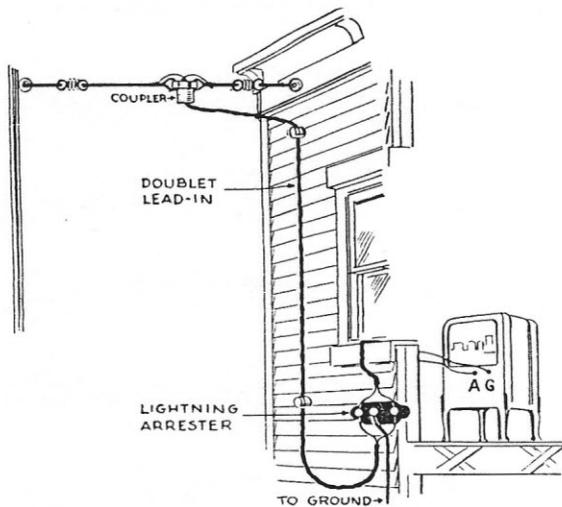
No. 350 OUTFIT



No. 500 OUTFIT

COMPLETE AERIAL OUTFITS

With Coupler in Aerial



FLERON IMPROVED TYPE DOUBLET AERIALS are factory assembled and soldered so as to simplify installation. This eliminates soldering on the job and insures a complete trouble-proof aerial. Only the best materials used in the assembly of these outfits.

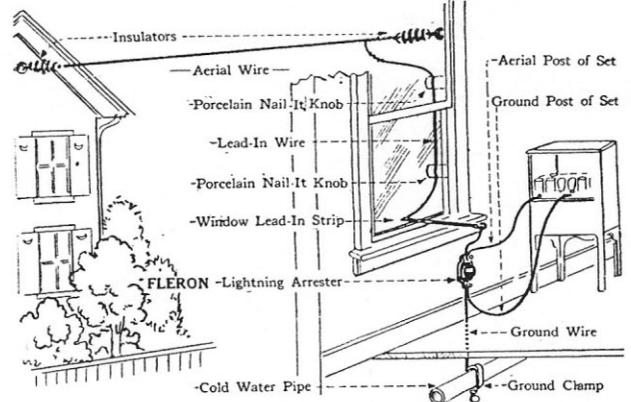
No. 702 2 Coils Stranded Copper Aerial Wire. 1 Coil All Wave Transmission Line. 1 Fleron All Wave Antenna Coupler. 1 All Wave Lightning Arrester. 2 Porcelain Insulators. 1 Ground Clamp. 2 Nail Knobs. Directions.

Cat. No.	Carton	Std. Pkg.	List, Each
702	10	50	\$3.00

No. 704 2 Coils Stranded Copper Aerial Wire. 1 Coil Stranded Copper Guy Wire. 1 Fleron All Wave Antenna Coupler. 1 Coil All Wave Transmission Line. 1 All Wave Lightning Arrester. 1 Coil Hook-Up Wire. 2 Porcelain Insulators. 2 Lead-in Strips. 1 Porcelain Tube. 1 Ground Clamp. 2 Stand Off Insulators. 3 Nail Knobs. Directions.

Cat. No.	Carton	Std. Pkg.	List, Each
704	10	50	\$4.50

Standard Broadcast Type



No. 5 75 ft. 725 Hard Drawn Copper Aerial Wire. 25 ft. No. 8364 New Code Rubber Covered Lead-in Wire. 1 No. 80 Approved Lightning Arrester. 1 No. 126 Weatherproofed Window Lead-in Strip. 1 No. 2 Ground Clamp. 2 No. 75 Porcelain Insulators. 2 Nail-it Knobs. Diagram and Directions.

Cat. No.	Carton	Std. Pkg.	List, Each
5	10	50	\$1.00

No. 120 75 ft. 7-24 Hard Drawn Copper Aerial Wire. 35 ft. Stranded Rubber Covered Lead-in Wire. 1 No. 80 Approved Lightning Arrester. 1 No. 2 Ground Clamp. 2 3" Porcelain Insulators. 1 No. 126 Weatherproofed Window Lead-in Strip. 2 Nail-it Knobs. 2 Galvanized Screw Eyes. 6 Insulated Staples. 2 Wood Screws. Diagram and Directions.

Cat. No.	Carton	Std. Pkg.	List, Each
120	10	50	\$1.35

No. 150 100 ft. No. 723 Hard Drawn Copper Aerial Wire. 40 ft. Stranded New Code Rubber Covered Lead-in Wire. 1 No. 80 Approved Lightning Arrester. 2 3" Porcelain Insulators. 1 No. 6 Ground Clamp. 1 No. 126 Weatherproofed Window Lead-in Strip. 2 Nail-it Knobs. 2 Galvanized Screw Eyes. 6 Insulated Staples. 2 Wood Screws. Diagram and Directions.

Cat. No.	Carton	Std. Pkg.	List, Each
150	10	50	\$1.50

Figures 11, 12, & 13

Antenna Springs

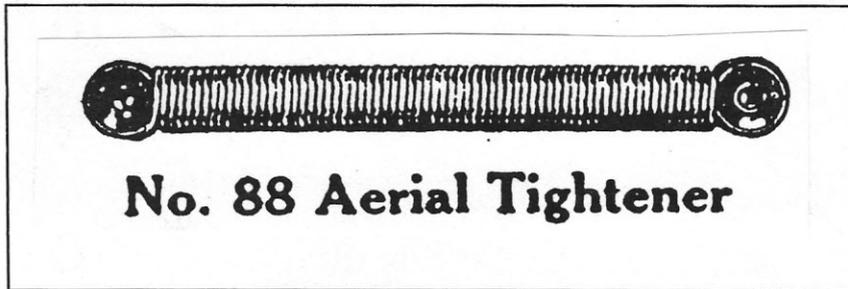


Figure 14: No. 88

NO. 188 AERIAL SPRING TIGHTENER

For holding aerial wire tight and straight. Prevents breakage when swaying in trees, etc. Improved Rust Proofing.

Cat. No. 188	Carton 50	List, Each \$0.50
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Figure 15: No. 188

Feed Thru Insulators & Lead-ins

Feed Thru Insulators

Made in three sizes of best quality Fleron Porcelain. Brass Parts nickel plated. Cork washers included.

Cat. No.	Height	List, Ea.
85	1 5-16	\$0.12
86	1 11-16	.20
87	2 1/4	.25
87-J (Jack Type)	2 1/4	.30

Figure 16

PORCELAIN LEAD-IN BUSHING

This device makes a workmanlike finish at a point in aerial installation that has been a source of power loss. Maximum length, 14 inches. Porcelain sections slide off brass rod to any wall thickness up to 9 3/4 inches. Threaded rod can then be cut at any desired point. Black Porcelain. Black Glaze. Passed by Underwriters Laboratories. Each Bushing in carton.

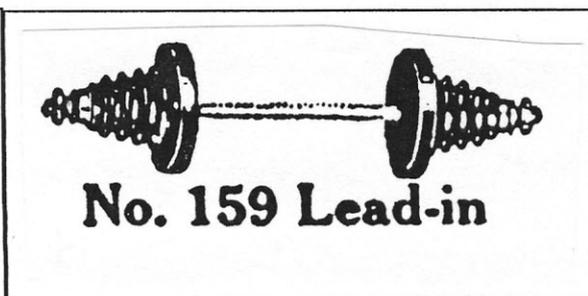
Cat. No. 9	Carton 10	Std. Pkg. 25	List, Each \$1.25
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Figure 17

WEATHERPROOF AND SOLDERED COPPER LEAD-IN STRIPS

Insulated its entire length and thoroughly impregnated with a new process high gloss weather-proof insulating varnish. End clips are soldered to strip.

Cat. No.	Size	Carton	List, Each
12	3/8" x 12 1/2"	50	\$0.10
126	3/8" x 12 1/2"	50	.10



Figures 18 & 19

Lightning Arresters

CADET LIGHTNING ARRESTER



A high grade Air Gap type approved arrester, at a low price. Packed in individual cartons with two screws for mounting.

<i>Cat. No.</i>	<i>Std. Pkg.</i>	<i>List, Each</i>
80	100	\$0.25

Figure 20

Home Guard LIGHTNING ARRESTER with \$50 Protection Bond



Meets the demand for a lower priced arrester, but avoids trouble and service calls because of care in manufacture. Mineral Gap type. Each arrester in an attractive carton, with Counter Display Sign. Listed by Underwriters.

Home Guard

<i>Cat. No.</i>	<i>Display Carton</i>	<i>Std. Pkg.</i>	<i>List, Each</i>
20	10	100	\$0.50

Figure 21

ALL WAVE LIGHTNING ARRESTERS



Same type of construction as our No. 93, but smaller in size.

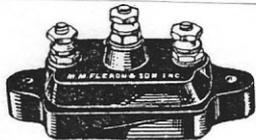
<i>Cat. No.</i>	<i>Carton</i>	<i>Std. Pkg.</i>	<i>List, Each</i>
92	10	50	\$0.35

Figure 22



Sentinel Arrester

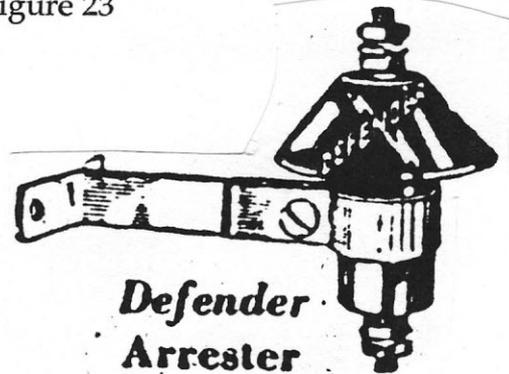
Figure 23



Carefully calibrated Air Gap Type Arrester. Insures maximum protection with minimum loss of signal. Sealed against moisture.

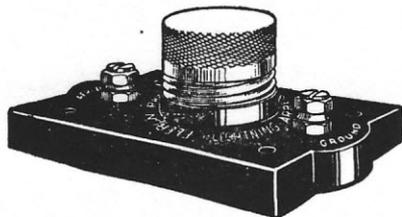
<i>Cat. No.</i>	<i>Carton</i>	<i>Std. Pkg.</i>	<i>List, Each</i>
93	10	50	\$0.75

Figure 24



Defender Arrester

Figure 25



LIGHTNING ARRESTER

FLERON REFILLABLE LIGHTNING ARRESTER

Meets the need for a high grade, attractive arrester at a medium price, but still having the refillable feature.

Black Porcelain, Black Glaze. Carbon gaps. All metal parts of heavy brass. Carbon Renewals with Mica 20c pair. 10 pair in a box.

<i>Cat. No.</i>	<i>Convenience Carton</i>	<i>Std. Pkg.</i>	<i>Wt. Lbs. Std. Pkg.</i>	<i>List Price Each</i>
LA.	10	100	53	\$1.10

Figure 26

Stand Off Insulators



NAIL KNOBS

Two-piece porcelain knob for supporting lead-in wires, etc. White glaze finish. Standard size.

Cat. No.	Carton	Weight	List, per 100
79	100	30 lbs.	\$3.50

Figure 27



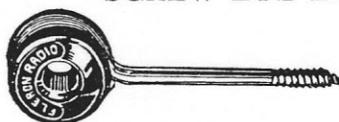
Stand Off Insulators

3 Sizes,
Fittings N. P.
Brass

Cat. No.	Height	List, Ea.
180	¾ in.	\$0.07
181	1 ¼ in.	.08
82	1 ½ in.	.12
82J	1 ½ in.	

Figure 28

SCREW EYE INSULATORS



Made in three sizes. Porcelain ring made of Fleron Blue Porcelain. Screw eyes of steel, hot tinned finish.

Screw Eye Insulator

Cat. No.	Size	Carton	List, Each
318	3"	50	\$0.05
618	6 ¼"	50	.07
1218	12"	20	.20

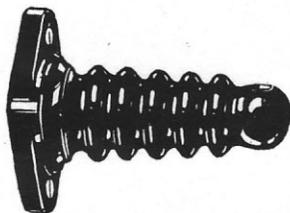
Special Bulk or Packed Quantity Prices on Application

Figure 29

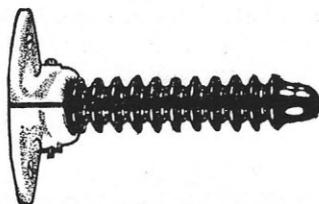


No. 15

Figure 30



4" STAND OFF INSULATOR



8" STAND OFF INSULATOR

FLERON STAND-OFF INSULATORS

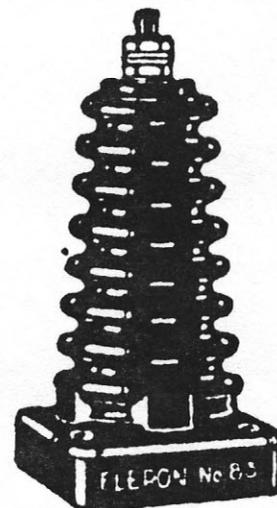
Each of these two numbers is a substantially made, good looking device.

The four inch insulator is made of one piece of porcelain packed one to a carton with two brass screws and leatherheads for use as a cushion under the screw heads. Black Body, Black Glaze.

The eight inch insulator is made by combining our regular No. 4 insulator with a heavy cast brass holder, made in two parts, fastened together as shown. It is a very rugged device, developed for the finest antenna installations. One insulator to a carton. Brass screws furnished.

Cat. No.	Size	Convenience Carton	Std. Pkg.	Wt. Lbs. Std. Pkg.	List Price Each
14	4 in.	20	100	100	\$.45
8 S.O.	8 in.	10	50	100	1.25

Figure 31



**No. 83
Heavy Duty**

HEAVY DUTY INSULATORS

No.	Fittings	Base	Height	Std. Pkg.	List, Each
83	¼"-20	2 ½" sq.	5 ¼"	36	\$0.60
184	14-24	1 ⅞" sq.	3 ⅜"	48	.35

Figure 32

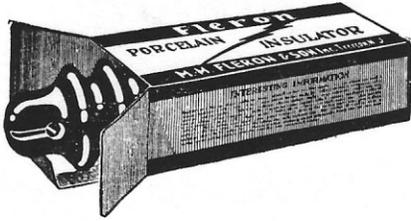
Fleron Porcelain Insulators

FLERON PORCELAIN INSULATORS

Bureau of Standards says that large power losses in the antenna can be traced to wooden masts, nearness to trees and defective insulators, etc.

Power losses due to dielectric absorption are reduced to the very minimum with correctly made Porcelain Insulators. This is true because of the low phase difference of Porcelain.

Fleron Porcelain Insulators are made in seven sizes of a highly vitrified close texture porcelain with a heavy black glaze.



INSULATORS IN CARTONS

EACH INSULATOR IN A SEPARATE CARTON

Cat. No.	Size	Convenience Carton	Std. Pkg.	Wt. Lbs. Std. Pkg.	List Price Each
0	1 7/8 x 3	50	250	41 1/2	\$.20
1	1 7/8 x 4	30	150	61	.30
2	2 1/8 x 3 3/4	20	100	63	.35
3	1 7/8 x 5	20	100	64	.40
4	1 7/8 x 8	10	50	51 1/2	.60

Figure 33



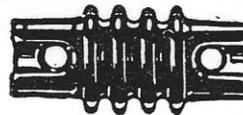
AEROPLANE TYPE STRAIN INSULATORS

Lap Type Strain Insulator, made of Fleron High Test Porcelain, finished in White Glaze.

Made in two sizes as follows:

Cat. No.	Size	Carton	List, Each
23	13-16" x 1 1/2"	100	\$0.07
73	1 1/4" x 2 1/2"	100	.10

Figure 34



PORCELAIN INSULATOR

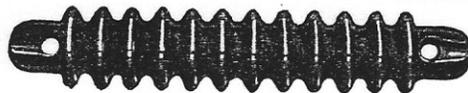
A high grade insulator made of Fleron Porcelain. No. 21 finished in Blue Glaze and packed 24 to Display Carton. No. 75 White Glaze finish.

Cat. No.	Size	Carton	Std. Pkg.	List, Each
21	3 x 1 3/8	25	100	\$0.10
75	2 3/4 x 1 1/8	25	100	.06

Special Bulk Quantity Prices on Application

Figure 35

HEAVY DUTY AERIAL INSULATOR



Extra Strong Black or White Glaze Porcelain. Individual Cartons

Cat. No.	Size	Std. Pkg.	List, Each
40	8" x 1 1/2"	20	\$0.80

Figure 36



FLERON NO. 13 INSULATOR

This item meets competition by offering a small, quality insulator, at a low price. Black Body. Black Glaze.

Cat. No.	Size	Carton Convenience	Std. Pkg.	Wt. Lbs. Std. Pkg.	List Price Each
13	7/8 x 2 3/8	100	1000	152 1/2	\$.10

Figure 37

Fleron Glass Insulators



GLASS INSULATORS IN CARTONS

FLERON GLASS INSULATORS

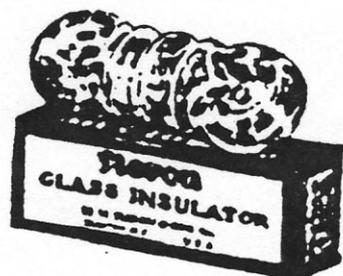
A glass insulator of the finest quality at a reasonable price.

Fleron glass insulators are made of a special Temperature Resisting glassware which is unaffected by sudden changes of heat or cold or any atmospheric condition.

No. 33 has a breaking strength well over 300 lbs., while the strength of No. 44 runs in excess of 500 lbs.

Cat. No.	Size	Convenience Carton	Std. Pkg.	Wt. Lbs. Std. Pkg.	List Price Each
33	3"	25	200	48	\$.20
44	4"	25	200	90	.30

Figure 38



No. 33 No. 25

Figure 39

"TUGITE" GLASS INSULATORS



Fleron Glass Insulators are made of special temperature resisting glass which is unaffected by heat or cold or any atmospheric condition. Packed in individual cartons.

Cat. No.	Size	Carton	List, Each
33	3 3/8 x 1 1/8	100	\$0.10
52	3 1/8 x 1	100	.06

Special Bulk Quantity Prices on Application

Figure 40

Fleron Boy Scout Signaler



Double Set No. 21096

NEW — IMPROVED OFFICIAL BOY SCOUT SIGNALER

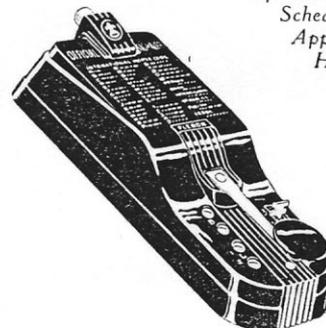
Radio Buzzer--Blinker--Telegraph

A new, easy method to learn Radio Code. Required in Army, Navy, Boy Scouts, Radio, etc.

Operates from 2 self contained standard Flash-light Cells. Beautiful new, streamlined Bakelite Case with Code Chart molded in top. 2 sets can be connected together and messages sent or received. Packed in individual cartons or in Double Sets with connecting wire.

Cat. No.	List, Ea.
1096	\$1.30
21096	2.95

Special Net Price Quotations to Trade Are Without Batteries



Single Set No. 1096

Special Net
Schedule
Applies
Here

Figure 41

Fleron Trademarks

241,249. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) M. M. FLERON & SON, INC., Trenton, N. J. Filed Mar. 18, 1927. Serial No. 245,975.

Fleron

Particular description of goods.—Lightning Arresters, Glass Insulators, Lead-In Bushings, and Aerial Outfits.
Claims use since 1923.

Figure 42

Ser. No. 245,974. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) M. M. FLERON & SON, INC., Trenton, N. J. Filed Mar. 18, 1927.

“DEFENDER”

Particular description of goods.—Lightning Arresters.
Claims use since September, 1926.

Figure 43

Ser. No. 245,976. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) M. M. FLERON & SON, INC., Trenton, N. J. Filed Mar. 18, 1927.

“HOME GUARD”

Particular description of goods.—Lightning Arresters.
Claims use since March, 1926.

Figure 44

Ser. No. 245,977. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) M. M. FLERON & SON, INC., Trenton, N. J. Filed Mar. 18, 1927.

“SENTINEL”

Particular description of goods.—Lightning Arresters.
Claims use since 1925.

Figure 45

No. 271,695. M. M. FLERON & SON, INC., doing business as Bercy's Laboratories, Trenton, N. J. Filed Aug. 29, 1928.

ICY RUB

The word “Rub” is disclaimed apart from the mark as shown.

Antiseptic, Astringent Cerates, Refreshing Creams, Lotions, Hair Tonics, Witch Hazel, and Bay Rum.
Claims use since June, 1905.

Figure 46

Ser. No. 286,985. M. M. FLERON & SON, INC., Trenton, N. J. Filed July 12, 1929.

EXTENNA

For Radio Aerials and Ground Eliminators.
Claims use since June 3, 1929.

Figure 47

287,301. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) M. M. FLERON & SON, INC., Trenton, N. J. Filed Apr. 7, 1930. Serial No. 298,493.

DUO TAP

For Radio Aerial and Ground Connectors Used for Connecting Radio Sets.
Claims use since Dec. 16, 1929.

Figure 48

Ser. No. 296,640. M. M. FLERON & SON, INC., doing business as Bercy Laboratories, Trenton, N. J. Filed Feb. 28, 1930.

Monarch

For Hair Tonics.
Claims use since July 6, 1913.

Figure 49

NIA 1996 National Convention Show Report

by Dan Howard

Ever since I heard that the National Insulator Association convention would be "within range" this year, I have been beside myself with anticipation. We had such a great time meeting the New England area readers at **Dick Mackiewicz's** picnic last Fall. Now, here was my chance to meet some of the others at the Long Beach show.

My planning began with a call to one of the show hosts, Dwayne Anthony. Dwayne and I had met at Auburn two years ago (see OFS Vol. 1 No. 4). He still recalled seeing my strain insulator display. (Is that a good thing?)

No being shy, I "innocently" asked where my strains might fit into the displays at nationals. Dwayne's good intentioned suggestion that I might fit in the "go-withs" category, spawned June's editorial comments about strains being insulators, too.

Anyway, they graciously allowed me to enter my Japanese insulators from Kwajalein (see OFS Vol. 3. No. 3) in the Foreign category. I am so glad that I did not end up competing against **Ginny Way** in the go-with category. Her display of colored pin insulators and depression glass was outstanding! Ginny's display is to the right in Figure 1.

I did see one other strain insulator in the displays. Dwayne's display of "fakes" included a dark amber strain insulator that had been colored by heat or radiation. I have not heard of collectors faking strains insulators and, really, I cannot see an economic incentive to do so. Hopefully, our efforts on documenting original production, will provide a long-term disincentive to those who would seek to deceive.

I don't know, but maybe interest in strains is somehow contagious. You will note that the first two new readers from Nationals, **Ginny Way** and **Kevin Lawless**, were set up on either side of me. Kevin's battery rest insulators flank me to the left in Figure 1.

Shortly after I heard about the show, **Bob Stahr** called and offered to split the cost of a sales table with me. Although I wasn't taking insulators to sell, I thought that it would be nice to have a space for the OFS literature. Our end-of-the-aisle space provided an eye-catching place to show off some back issues (see Figure 8). **Glenn Sievert**, one of our newer readers had the next table over.

There were so many people that I wanted to meet and so much good stuff to look at that Bob probably grew a little weary of my comings-and-goings. Figure 5 should be titled "there's gold in them thar tubs." Jerry Turner brought who-knows-how-many tubs of strain insulators, sign insulators, and the like. **Elton Gish**, Figure 2, can attest to the fact that I was back going through the tubs on at least four different occasions.



1



2



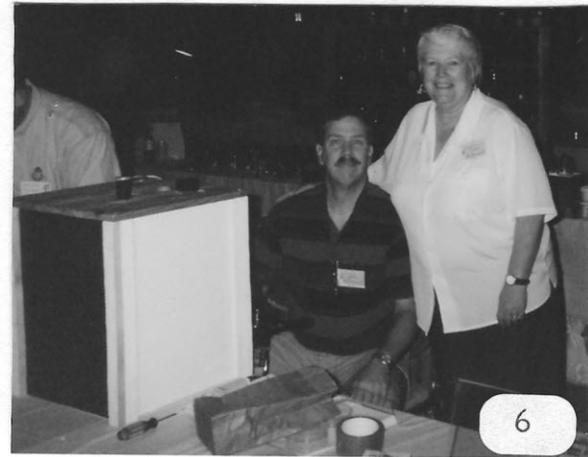
3



4



5



6



7



8

Carol and **John McDougald** are shown next to their magic photo box at the **Crown Jewels** table. John kindly photographed some of my colored glass acquisitions and the picture turned out beautifully.

Speaking of acquisitions, **Shirley Patocka** (Figure 7), **Gene Condon** (Figure 4), and I seemed to have most of the goodies vacuumed up by noon on Friday. There definitely were some "closet collectors" out there, however. Several folks came by our table and confessed to being long-time strain collectors. Some had heard about OFS but had never sent for a sample. I am hoping that the efforts at the show will continue to bear fruit in terms of additional interest and input to the newsletter.

Bob introduced me to our newsletter's founder, **Keith Roloson**, on Sunday. That's Keith on the left of Bob in Figure 3. Although it was great to meet so many folks throughout the weekend, I still think fondly of the informal camaraderie that we shared last Fall at the picnic and look forward to the time when we can again gather as a community of strain collectors.

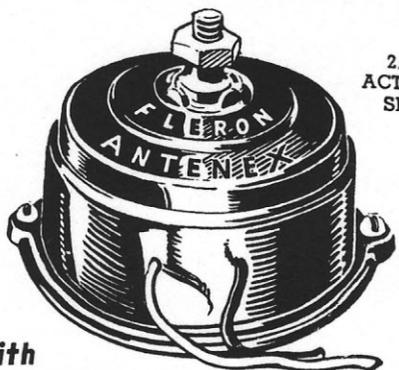
The next national convention will be in Chicago and **Bob Stahr** and **Rick Soller** will be in the thick of things. Even if you can't make it to a national convention, however, check out the periodic regional shows listed in **Crown Jewels**. And, by all means, write and let me know how you did.

What Do You Think? (Part II)

by Dan Howard

I would like to think that the underwhelming response to my inquiry in the December, 1995 issue (page 11) was because no one else had ever seen the 3043 and Sensory lightning arresters side-by-side for comparison. So here, thanks to **Bob Puttre**, everyone gets a chance to draw his or her own conclusion. In the center (column 1 row 6, column 3 rows 4 & 5) of Bob's photo on page 11, you can compare the arresters for yourselves. Were they both made by Heinemann? WHAT DO YOU THINK?

Better RADIO RECEPTION



2/3
ACTUAL
SIZE

With
FLERON

ANTENEX INDOOR AERIAL

ELIMINATES ALL OUTSIDE WIRES

REDUCES STATIC AND NOISE

NO ADJUSTMENT NECESSARY

REDUCES LIGHTNING HAZARDS

NO MOVING PARTS

EASILY INSTALLED

A FLERON PRODUCT

Price \$1.25

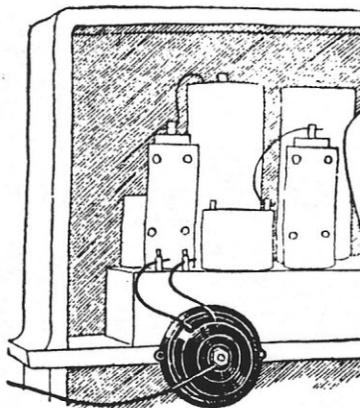
Here is the new modern Aerial for better Radio reception. Now you can hear your favorite dance, jazz or symphony Orchestra, and listen to other delightful programs . . . all PERFECT, without the need of outdoor wires, poles and other unsightly equipment.

It is unharmed by winter's snow, ice and sleet, or by summer's winds and lightning!

Fleron Antenex eliminates aerial troubles. It reduces noises caused by electrical devices, such as washing machines, sweepers, dentists' apparatus, etc.

Fleron Antenex is built with care and precision. Each device is factory tested before it is shipped which insures satisfaction to the purchaser.

Remember, no adjustments are necessary, nothing to get out of order, no lightning hazards. Your aerial worries are over—and you get perfect reception—when you use a Fleron Antenex. They're sold on a money-back guarantee. Get one today.



Shows Antenex Mounted on Radio Set

Fleron Antenex is quickly and easily attached to your set—only two seconds of your time. It is DeLuxe in appearance, about the size of a door knob, and is made of polished Bakelite. Ask for a Fleron Antenex.

M. M. FLERON & SON, INC., MFRS.
TRENTON, N. J., U. S. A.

Printed in U. S. A.

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