

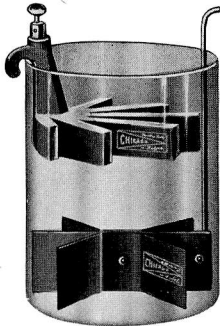
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CATALOGUE AND PRICE LIST

SECTION J

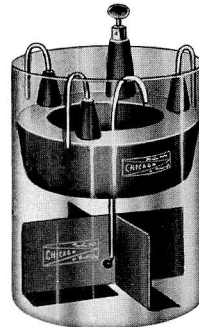
BATTERIES AND ACCESSORIES



GRAVITY BATTERIES, BLUE VITRIOL



Crowfoot Gravity Battery
No. 297-1



Signal Gravity Battery
No. 297-3

The Gravity Batteries shown are made up of highest grade materials and can be furnished in any of the combinations listed. As prices vary with the market, our lowest net prices will be quoted upon request.

"Chicago" Blue Vitriol listed is of highest quality large mesh, per R. S. A. Specifications and put up in barrels approximately 450 pounds net.



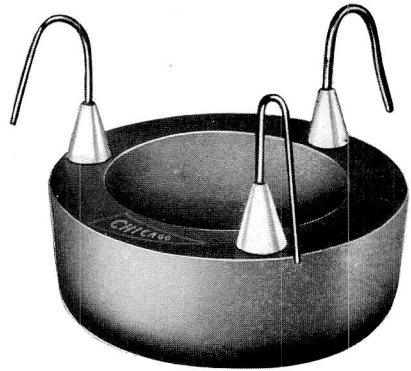
Blue Vitriol
No. 297-9

Trade No.	DESCRIPTION	List Price
297-1	Crowfoot Gravity Battery consisting of one No. 299 Glass Jar, one No. 64 Copper and one No. 53 Zinc .....	.....
297-2	Same as above but with No. 299-1 Glass Jar .....	.....
297-3	Signal Gravity Battery consisting of one No. 299 Glass Jar, one Two-Leaf R. S. A. Copper and one 4-lb. Round R. S. A. Battery Zinc .....	.....
297-4	Same as above but with one No. 299-1 Glass Jar .....	.....
297-5	" " " " " " " " 299-2 " " .....	.....
297-6	Signal Gravity Battery consisting of one No. 299 Glass Jar, one Three-Leaf R. S. A. Battery Copper and one 4-lb. R. S. A. Battery Zinc .....	.....
297-7	Same as above but with one No. 299-1 Glass Jar .....	.....
297-8	" " " " " " " " 299-2 " " .....	.....
297-9	Blue Vitriol, per lb.	\$0.18
	For full barrels, prices upon application.	

ROUND BATTERY ZINCS



Standard R. S. A. Zinc



No. 51

Special 4 lb. Round Zinc

R. S. A. Battery Zinc is furnished strictly in accordance with R. S. A. Specifications and Drawing 1087, weight 4 lbs., for 6" x 8" Jars.

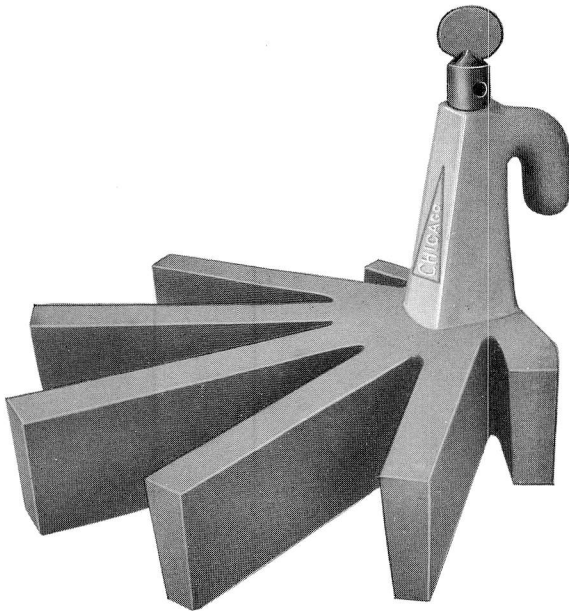
Zinc No. 51 is furnished plain or amalgamated as specified and in 3 or 4 lb. weights. Intended for use in 6" x 8" Jars and with Battery Connectors. With this type of battery zinc practically the entire zinc is available for current consumption as the heavy binding post lug is omitted and same amount of zinc added in the casting.

Prices of Battery Zincs necessarily vary with spelter market. Lowest market prices will be quoted upon request.

Trade No.	DESCRIPTION	List Price
1087	Standard R. S. A. Battery Zinc, each.....	.....
51	Special 4-lb. Round " " ".....	.....
51-1	" 3-lb. " " ".....	.....
51-2	Round, Gamewell Type, Battery Zinc, weight 3 lbs., each.....	.....
51-3	" " " " 4 lbs., ".....	.....
51-4	" Fire Alarm " " " 4 lbs., ".....	.....

In ordering other than Zincs No. 1087 specify whether "plain" or "amalgamated" is wanted.

CROWFOOT BATTERY ZINCS



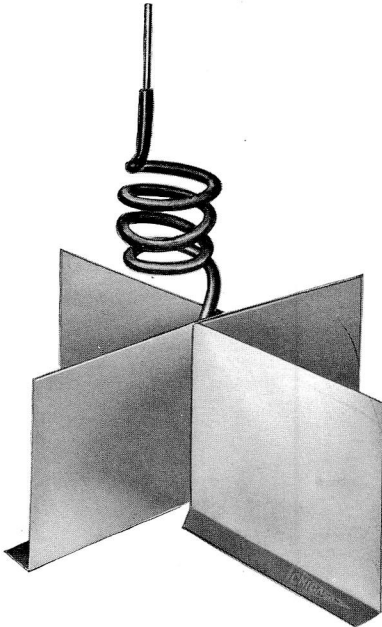
Standard Crowfoot Zinc No. 52

Our Crowfoot Battery Zincs are cast from pure spelter and are guaranteed 99% pure zinc. Furnished plain or amalgamated. Zincs are guaranteed full size and weight. Made for 6" x 8" and 5" x 7" Battery Jars. Price of Battery Zincs necessarily varies with spelter market. Lowest net prices will be quoted upon request.

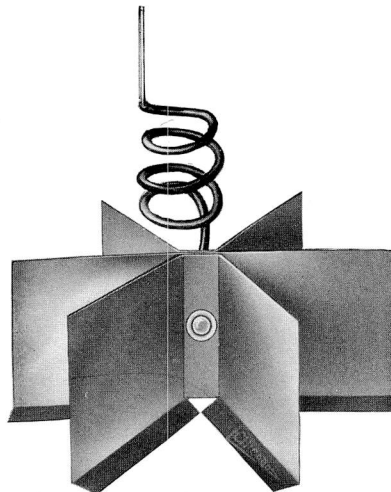
Trade No.	DESCRIPTION	List Price
52	Standard Western Union 3 1/4 lb. Crowfoot Zinc, for 6" x 8" Jar, each.....	.....
53	Standard 3 lb. Crowfoot Zinc, for 6" x 8" Jar, each.....	.....
54	" 2 3/4 lb. " " " 6" x 8" " ".....	.....
55	" 1 3/4 lb. " " " 5" x 7" " ".....	.....

In ordering Crowfoot Battery Zincs specify whether "plain" or "amalgamated" is wanted.

BATTERY COPPERS



R. S. A. 2 Leaf Copper



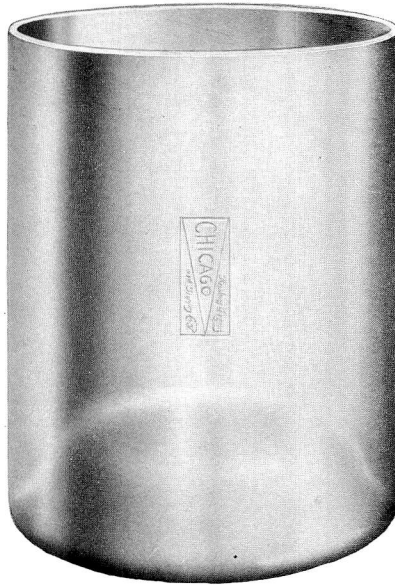
R. S. A. 3 Leaf Copper

The Battery Coppers shown here are Standard Railway Signal Association Battery Coppers, furnished in accordance with R. S. A. Drawings and Specifications.

List prices are omitted as price of coppers vary with copper market. Lowest prices upon application.

Trade No.	DESCRIPTION	List Price
1088-2	R. S. A. 2 Leaf Battery Copper, each.....	.....
1088-3	“ 3 “ “ “ “ “ .....	.....

GLASS BATTERY JARS



Battery Jars are furnished machine made for ordinary use, of annealed lead glass where a more durable jar is required, and of heat-resisting glass for use with soda solutions. The latter is warranted to withstand the intense heat of this solution when being set up, without cracking.

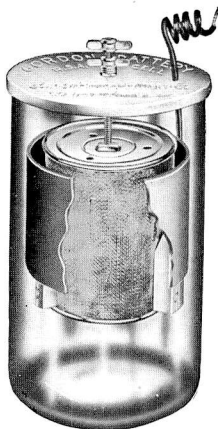
Trade No.	DESCRIPTION	List Price
299	Glass Battery Jar, machine made, 6" x 8", each.	\$0.45
299-1	" " " Lead Annealed Glass, 6" x 8", each.	1.10
299-2	" " " Heat Resisting, 6" x 8", each.	2.00
299-3	Battery Jar for R. S. A. Signal Cells, Round Heat-Resisting Glass, 6" x 10½" inside.	2.16
299-4	Battery Jar for R. S. A. Signal Cells, Rectangular, Heat-Resisting Glass, 10½" high inside.	2.78
299-5	Battery Jar for R. S. A. Signal Cells, Barrel Shape, Heat-Resisting Glass, 10½" high inside.	2.32
Prices for any size Porcelain Jars upon application.		



CAUSTIC SODA BATTERIES



Edison BSCO Battery



Gordon Primary Battery

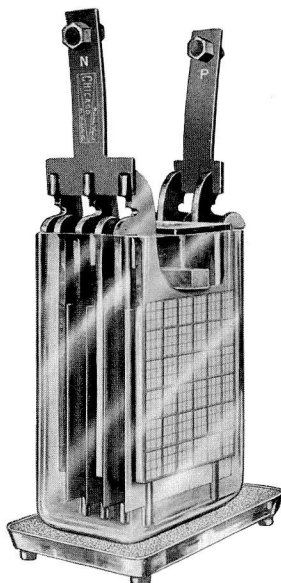
Trade No.	Description	Size Over All	Jar	Inside Dimension of Jar Only	List Price
EDISON—BSCO CELLS AND RENEWALS					
4-452	450 Amp. Hr. Cell Complete	5 $\frac{3}{8}$ x6 $\frac{3}{8}$ x12 $\frac{3}{4}$	Rectangular H. R. Glass	5x6x10 $\frac{1}{2}$	\$7.15
4-450	Renewal for above				3.55
4-455	450 Amp. Hr. Cell	7 $\frac{1}{2}$ x11 $\frac{1}{2}$	Round H. R. Glass	6 $\frac{3}{4}$ x9 $\frac{1}{2}$	6.82
4-450	Renewal for above				3.55
4-401	400 Amp. Hr. Cell	6 $\frac{3}{4}$ x12 $\frac{1}{2}$	Porcelain	6x10 $\frac{1}{2}$	6.20
4-401A	"	6 $\frac{3}{4}$ x12 $\frac{1}{2}$	Round H. R. Glass	6x10 $\frac{1}{2}$	6.50
4-400	Renewal for above				3.25
4-403	400 Amp. Hr. Cell	7 $\frac{1}{2}$ x11	Porcelain	6 $\frac{3}{8}$ x8 $\frac{3}{4}$	5.55
4-400	Renewal for above				3.25
4-404	400 Amp. Hr. Cell	7x11 $\frac{1}{2}$	Barrel Shape H. R. Glass	10 $\frac{1}{2}$ " High	6.35
4-400	Renewal for above				3.25
1053-A	R. S. A. Cell	12 $\frac{1}{8}$ x6 $\frac{1}{2}$	Round Porcelain	6x10 $\frac{1}{2}$	6.20
1053-B	" " " Cell	" " "	H. R. Glass	6x10 $\frac{1}{2}$	6.50
1053-C	" " " Cell	" " "	Barrel Shape H. R. Glass	10 $\frac{1}{2}$ " High	...
1053-D	Renewal for above				3.25
4-305A	300 Amp. Hr. Cell	6 $\frac{3}{4}$ x10 $\frac{1}{4}$	Porcelain	6x8	4.95
4-305B	"	6 $\frac{3}{4}$ x10 $\frac{1}{4}$	H. R. Glass	6x8	5.42
4-300	Renewal for above				2.78
4-309	300 Amp. Hr. Cell	5 $\frac{3}{4}$ x12 $\frac{3}{4}$	Porcelain	5 $\frac{1}{4}$ x10 $\frac{1}{2}$	5.12
4-300	Renewal for above				2.78
4-208	200 Amp. Hr. Cell	6x9	Porcelain	5x7	3.40
4-200	Renewal for above				2.32
GORDON BATTERIES AND RENEWALS					
1053-E	R. S. A. Cell Complete	12 $\frac{1}{8}$ x6 $\frac{1}{2}$	H. R. Glass	6x10 $\frac{1}{2}$	6.50
1053-F	" " " " " "	" " "	Porcelain	6x10 $\frac{1}{2}$	6.20
1053-G	" " " " " "	" " "	Barrel Shape H. R. Glass	10 $\frac{1}{2}$ " High	...
1053-H	Renewals for above				3.10
4-3	300 Amp. Hr. Cell Complete	6 $\frac{1}{2}$ x9 $\frac{3}{4}$	Porcelain	6x8	5.00
4-3A	Renewal for above				2.56
4-AA	350 Amp. Hr. Cell	6 $\frac{3}{4}$ x11 $\frac{3}{4}$	Porcelain	6x10 $\frac{1}{2}$	5.42
4-AAA	Renewal for above				2.70
4-B	600 Amp. Hr. Cell	7 $\frac{3}{4}$ x14 $\frac{1}{2}$	Porcelain	7 $\frac{1}{2}$ x13 $\frac{1}{2}$	7.35
4-BB	Renewal for above				4.65
4-C	1000 Amp. Hr. Cell	8 $\frac{1}{2}$ x15 $\frac{3}{4}$	Porcelain	8 $\frac{1}{2}$ x14 $\frac{1}{2}$	8.90
4-CC	Renewal for above				6.95
4-H	150 Amp. Hr. Cell	5 $\frac{3}{4}$ x8	Porcelain	5x7	3.85
4-HH	Renewal for above				1.95
4-6	100 Amp. Hr. Cell	5x7 $\frac{1}{2}$	Porcelain	4 $\frac{1}{2}$ x6	3.10
4-66	Renewal for above				1.55

We are prepared to furnish any type Caustic Soda Battery not specified above. List prices include Standard Caustic Soda; Cells and Renewals can be furnished with special Low Temperature Electrolyte at an advance in price.

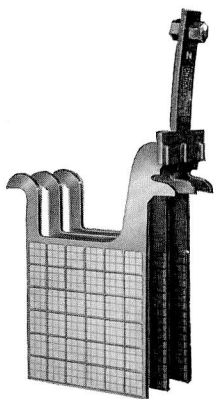


CHICAGO STORAGE BATTERIES

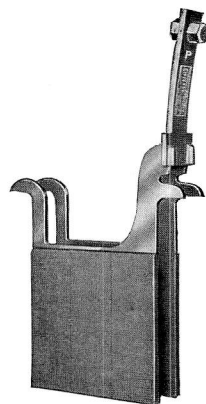
R. S. A. Design



R. S. A. Storage Battery



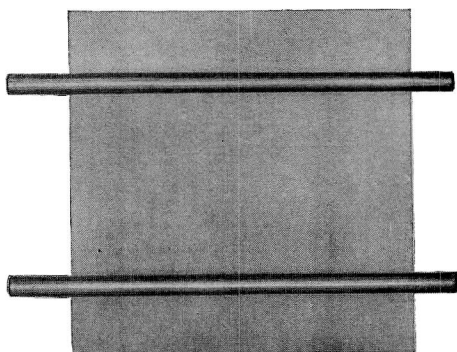
3-Plate Negative Group



2-Plate Positive Group



Ribbed Glass Cover



Wood Separator



Glass
Separator
Retainer



CHICAGO STORAGE BATTERIES

R. S. A. Design

These Batteries are manufactured exclusively for us by one of the oldest storage battery manufacturers in the United States, and are sold exclusively by us for railroad service. Batteries are made and warranted strictly in accordance with R. S. A. Specifications in all details.

The Plates are made of pure rolled slab lead, grooved with upward projecting ribs 1-20" thick to hold the active material, thus allowing large surface exposed without sacrificing strength of plates. The active material is formed electro-chemically from the plate itself and is in direct union with it. The formation of peroxide of lead in the positive, and reduced or spongy lead in negative plates is by a special process making them very porous so as to utilize with practically no loss the reaction of the electrolyte. This construction allows charging of cells with minimum E. M. F. and discharging them at maximum E. M. F. and high discharge rate. Notwithstanding the large size of our plates only 3 A. H. per pound of element is sought.

From above, it will be evident that these Batteries are especially designed for long life with constant and severe service. The voltage of cells of all capacities is slightly above 2 volts on open circuit and during the normal discharge at 8 hour rate falls to 1.7 volts. Each cell shipped consists of one Positive and one Negative Group of Elements, Separators, Glass Jar, Glass Sand Tray, Glass Separator Retainer and required Electrolyte. Electrolyte is shipped in carboys for which an extra charge is made. Credit in full will be allowed for carboys when returned in good condition, charges prepaid to Chicago, Illinois.

Trade No.	DESCRIPTION						List Price
	Capacity A. H.	Size of Jar	Height	Size of Sand Tray	Height	Size of Cell Cover	
58-40	40	7 $\frac{7}{8}$ x4 $\frac{3}{4}$ "	11"	9 $\frac{1}{2}$ x6 $\frac{1}{2}$ "	2"	3 $\frac{7}{8}$ x6"	\$15.60
58-80	80	9 $\frac{1}{8}$ x5 $\frac{1}{2}$ "	12 $\frac{3}{4}$ "	10 $\frac{3}{4}$ x7 $\frac{1}{4}$ "	2"	6 $\frac{1}{8}$ x6 $\frac{3}{4}$ "	24.16
58-120	120	9 $\frac{1}{8}$ x6 $\frac{3}{4}$ "	13 $\frac{3}{4}$ "	10 $\frac{3}{4}$ x8 $\frac{1}{2}$ "	2"	6 $\frac{1}{8}$ x8"	31.80
58-200	200	9 $\frac{1}{8}$ x9 $\frac{3}{8}$ "	12 $\frac{3}{4}$ "	10 $\frac{3}{4}$ x12"	2"	6 $\frac{1}{8}$ x10 $\frac{3}{4}$ "	50.12
58-320	320	12 $\frac{5}{8}$ x9"	17"	15x12"	2 $\frac{1}{2}$ "	8 $\frac{1}{8}$ x10 $\frac{3}{4}$ "	75.92
58-400	400	12 $\frac{5}{8}$ x10 $\frac{5}{8}$ "	17"	15x12 $\frac{1}{2}$ "	2 $\frac{1}{2}$ "	8 $\frac{1}{8}$ x11 $\frac{3}{4}$ "	94.88

CHICAGO PORTABLE STORAGE BATTERIES



R. S. A. Design "A"

These Portable Storage Batteries are especially manufactured for us and sold exclusively by us to Steam and Electric Railways for railway signal purposes. The general construction is the same as in our Stationary Signal Batteries except that they are mounted in a substantial hardwood case, provided with convenient carrying handle and heavy wing nut terminals, all made in accordance with **R. S. A.** Drawing and Specifications for Design "A" Portable Storage Batteries. All connections are burned securely and cannot work loose. The entire elements are sealed into case with sealing compound, nothing being exposed except the special hard rubber vent caps. Unless otherwise ordered portable batteries will be shipped filled with electrolyte and charged ready for service.

We recommend that short distance shipments be made by express to insure safe delivery, as we cannot be responsible for freight shipments of filled and charged batteries. Where final destination from Chicago is too far for economical express shipments, electrolyte should be ordered shipped separately and batteries charged at destination. An extra charge will be made for carboys, which charge, however, will be credited in full upon the return of carboys in good condition, charges prepaid.



CHICAGO PORTABLE STORAGE BATTERIES

R. S. A. Design "A"

Trade No.	DESCRIPTION								List Price
	No. of Cells	No. of Plates	Amp. Hr. Capacity	Charg-ing Rate	Outside Dimensions of Case			Approx Wt.	
					Length	Width	Height		
59-42	2	5	40	4	5 7⁄8"	1 13⁄16"	9 1⁄8"	20	\$38.72
59-43	3	5	40	4	8"	1 13⁄16"	11 1⁄4"	30	55.64
59-44	4	5	40	4	10"	1 13⁄16"	13 1⁄4"	40	72.60
59-45	5	5	40	4	12 1⁄8"	1 13⁄16"	15 3⁄4"	50	89.52
59-46	6	5	40	4	14 1⁄8"	1 13⁄16"	17 3⁄8"	60	106.48
59-62	2	7	60	6	7 3⁄8"	2 9⁄16"	10 5⁄8"	28	49.36
59-63	3	7	60	6	10 1⁄4"	2 9⁄16"	13 1⁄2"	42	73.04
59-64	4	7	60	6	13"	2 9⁄16"	16 1⁄4"	56	96.32
59-65	5	7	60	6	15 7⁄8"	2 9⁄16"	19 1⁄8"	70	119.76
59-66	6	7	60	6	18 5⁄8"	2 9⁄16"	21 7⁄8"	84	143.24
59-82	2	9	80	8	8 3⁄4"	3 1⁄4"	12"	36	61.20
59-83	3	9	80	8	12 1⁄4"	3 1⁄4"	15 1⁄2"	54	90.00
59-84	4	9	80	8	15 3⁄4"	3 1⁄4"	19 1⁄4"	72	118.80
59-85	5	9	80	8	19 1⁄4"	3 1⁄4"	22 1⁄2"	90	147.60
59-86	6	9	80	8	22 3⁄4"	3 1⁄4"	26"	108	176.40
59-102	2	11	100	10	10 3⁄4"	4 1⁄4"	14"	44	73.08
59-103	3	11	100	10	15 1⁄4"	4 1⁄4"	18 1⁄2"	66	107.16
59-104	4	11	100	10	19 3⁄4"	4 1⁄4"	23"	88	141.32
59-105	5	11	100	10	24 1⁄4"	4 1⁄4"	27 1⁄2"	110	175.44
59-106	6	11	100	10	28 3⁄4"	4 1⁄4"	32"	132	209.56

For length over handles and terminals add 3 inches.

For width with handle folded down add 1 $\frac{1}{2}$ inches.

BATTERY ACCESSORIES



Storometer No. 298 and 298-1

This instrument has scale from 1150 to 1325 specific gravity for use with storage batteries and scale Baume 15° to 35° for gravity batteries.

Trade No.	DESCRIPTION	List Price
298	Storometer for Storage Batteries, length 15", weight 12 oz., each	.....
298-1	" " Gravity " " 11" " 8 oz., "	.....



Hydrometers No. 298-2 and 298-3

These Hydrometers are furnished with scales for storage battery solutions or gravity batteries.

Trade No.	DESCRIPTION	List Price
298-2	Hydrometer, for Gravity Batteries, scale Baume 15° to 35°, length 4½", each	.....
298-3	Hydrometer, for Storage Batteries, scale 1150 to 1325 specific gravity, length 4½", each	.....



Battery Syringe No. 298-4

This Battery Syringe is made from best Hard Rubber and is equipped with interchangeable nozzles.

Used for changing solution in batteries without disturbing operation of cells.

Trade No.	DESCRIPTION	List Price
298-4	Hard Rubber Battery Syringe, capacity 12 oz., each	.....
298-5	Extra Nozzles for above, each	.....

BATTERY ACCESSORIES



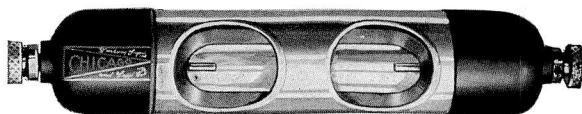
Battery Brush No. 298-6

Trade No.	DESCRIPTION	List Price
298-6	Straight Battery Brush, 4 Rows of Bristles, each . . . . .	. . . . .



Battery Knife No. 298-7

Trade No.	DESCRIPTION	List Price
298-7	Battery Knife for Cleaning Batteries, each . . . . .	. . . . .



Polarity Indicator No. 298-8 and 298-9

These Indicators are used to determine direction of flow of current. The liquid adjacent to Negative Pole turns red when Indicator is placed in circuit. Also used to detect grounds, crosses, etc.

Trade No.	DESCRIPTION	List Price
298-8	Polarity Indicator for Battery Work under 50 Volts, each . . . . .	. . . . .
298-9	“ “ “ Voltages of 50 to 600, each . . . . .	. . . . .