

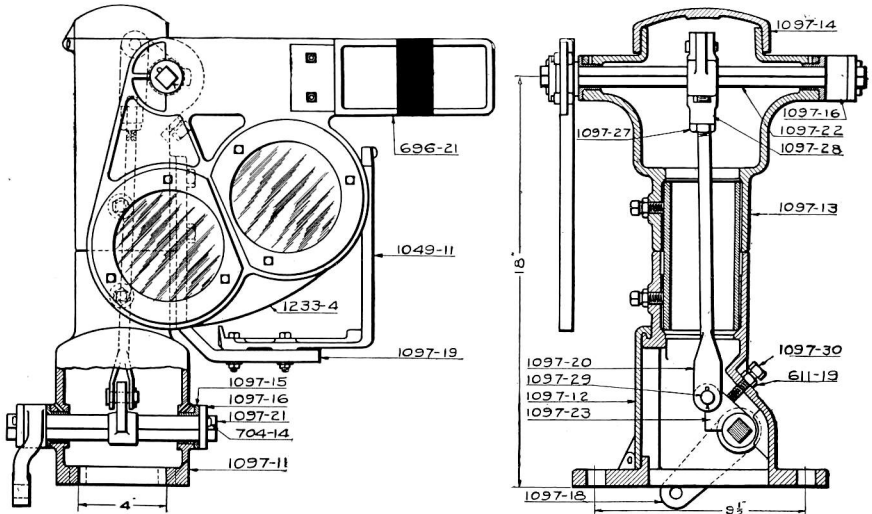
1914

CATALOGUE AND PRICE LIST

SECTION O

DWARF AND POT SIGNALS

R. S. A. DWARF SIGNAL



1097

The Dwarf Signal illustrated is built in accordance with R. S. A. Drawing No. 1097, arranged for Pipe or Wire Operation. As the Signal is only 18" high, it is well out of the way of all projecting parts of passing trains, thus eliminating the objectionable feature of dwarf signals, viz.: broken blades, spectacles, lamps, etc. The operating crank may be turned at any angle in respect to the position of the Spectacle, making it possible to operate the Signal from any direction.

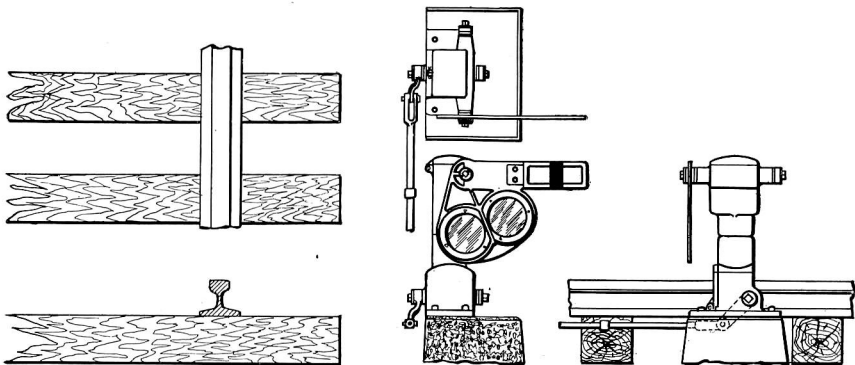
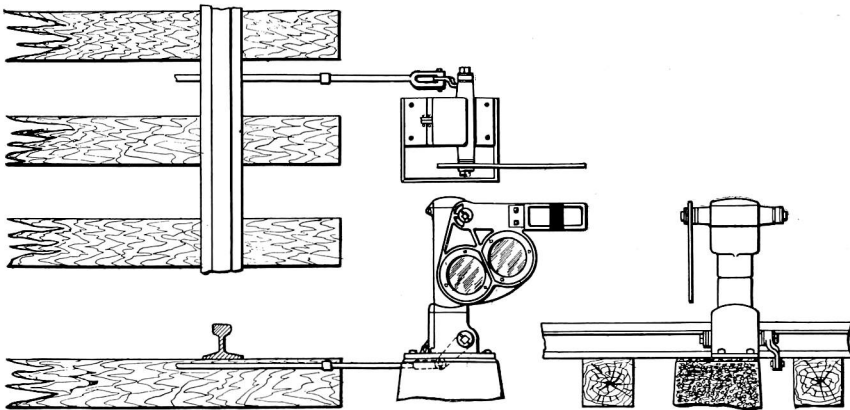
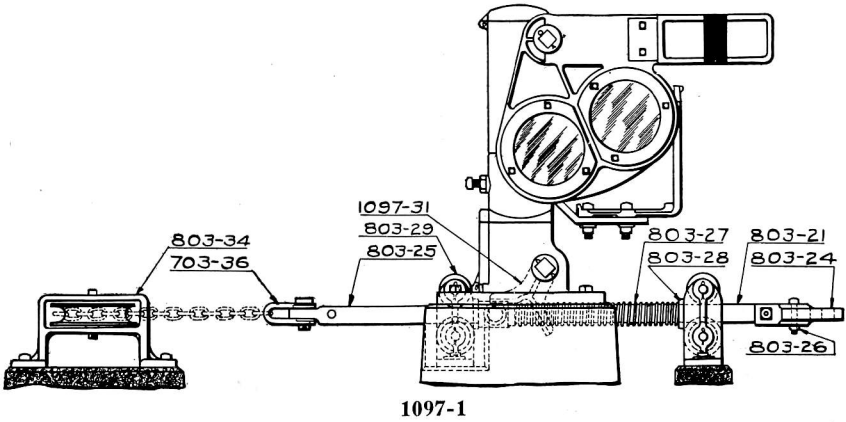
Application 1 shows a pipe operated signal with the pipe line coming to the Signal across under the rails. Application 2 shows a pipe operated signal with the pipe line running parallel with rails. No. 1097 shows the Signal equipped for Pipe Operation. No. 1097-1 shows this Signal equipped with escapement crank with spring for Wire Operation. Application 3 shows the Signal operated by wire with leads coming parallel to rails. Application 4 shows it with leads coming under and across the rails.

The Signal as shown operates through an angle of 0 deg. to 45 deg. in the Upper Right Hand Quadrant. We can furnish the Signal equipped to operate from 0 deg. to 90 deg. in two or three positions. The upper and lower cranks inside the Signal are interchangeable and are held in position by lugs cast on the frame instead of the usual pinning through the shaft. It is obvious that this method insures a stronger construction. The operating rod is adjustable; stops are provided which allow adjusting to fractions of one inch, a removable cover at top and a removable door at bottom are provided to facilitate inspection and adjusting. Standard R. S. A. Lamp Bracket is used.

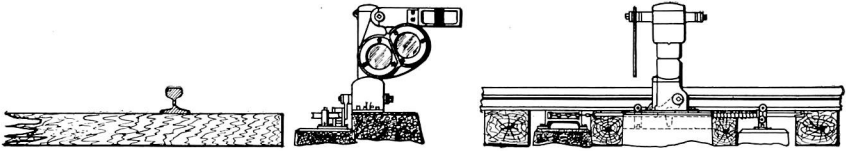
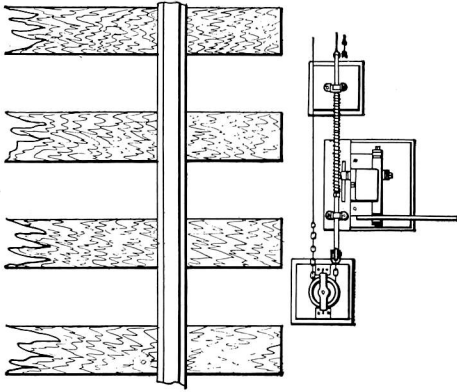
Trade No.	DESCRIPTION	List Price
1097	R. S. A. Dwarf Signal for Pipe Operation, complete as shown	\$40.50
1097-1	(no Chain, Wire or Anchor Bolts included)	45.00

List prices do not include Anchor Bolts, Chain, Wire Operating Jaws or Foundations.

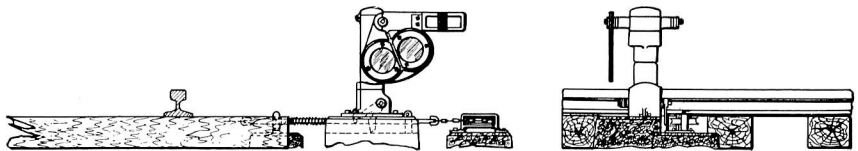
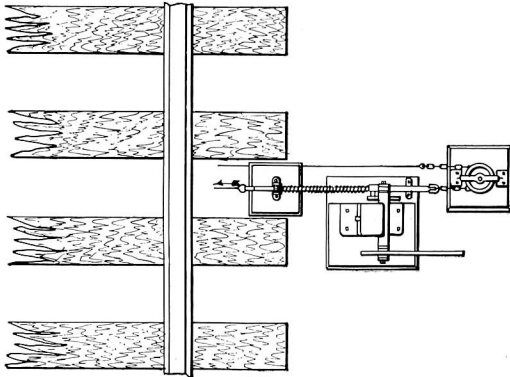
R. S. A. DWARF SIGNAL



R. S. A. DWARF SIGNAL

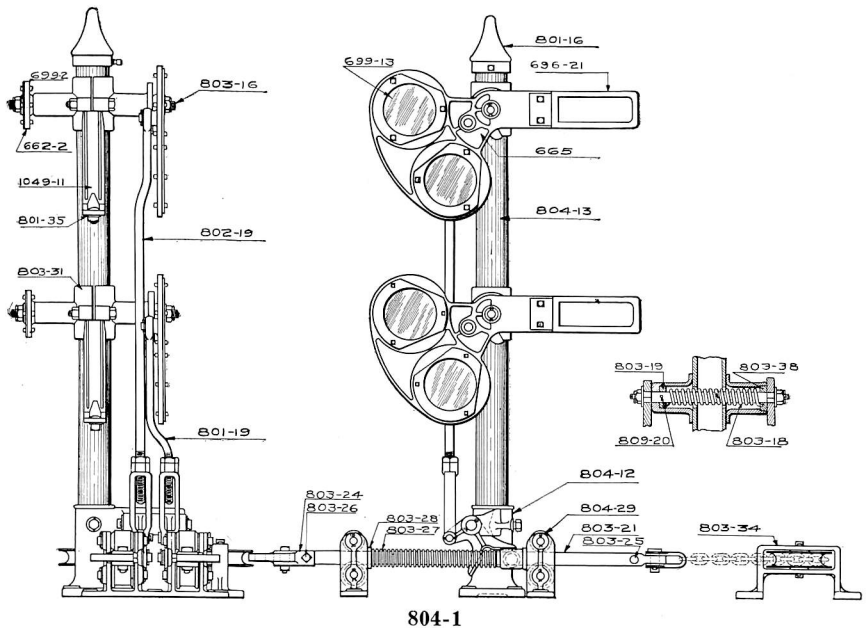
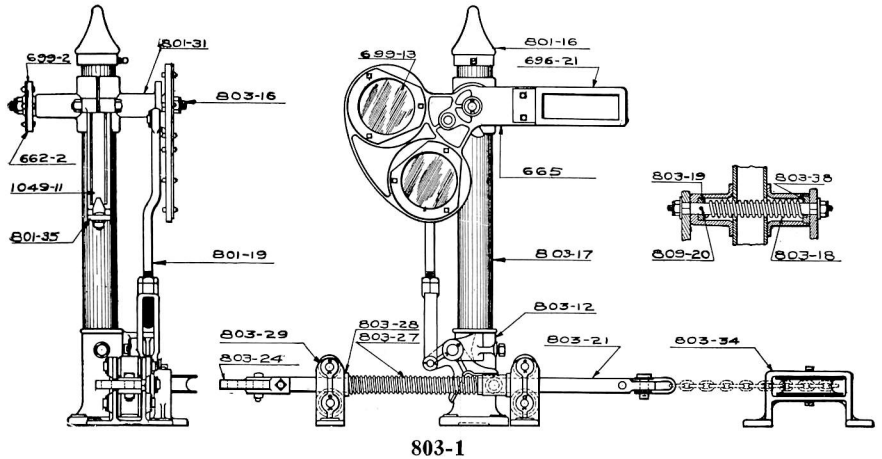


Application 3



Application 4

ONE AND TWO ARM 60 DEG. LOWER QUADRANT PIPE OR WIRE OPERATED DWARF SIGNAL WITH SPRING ATTACHMENT



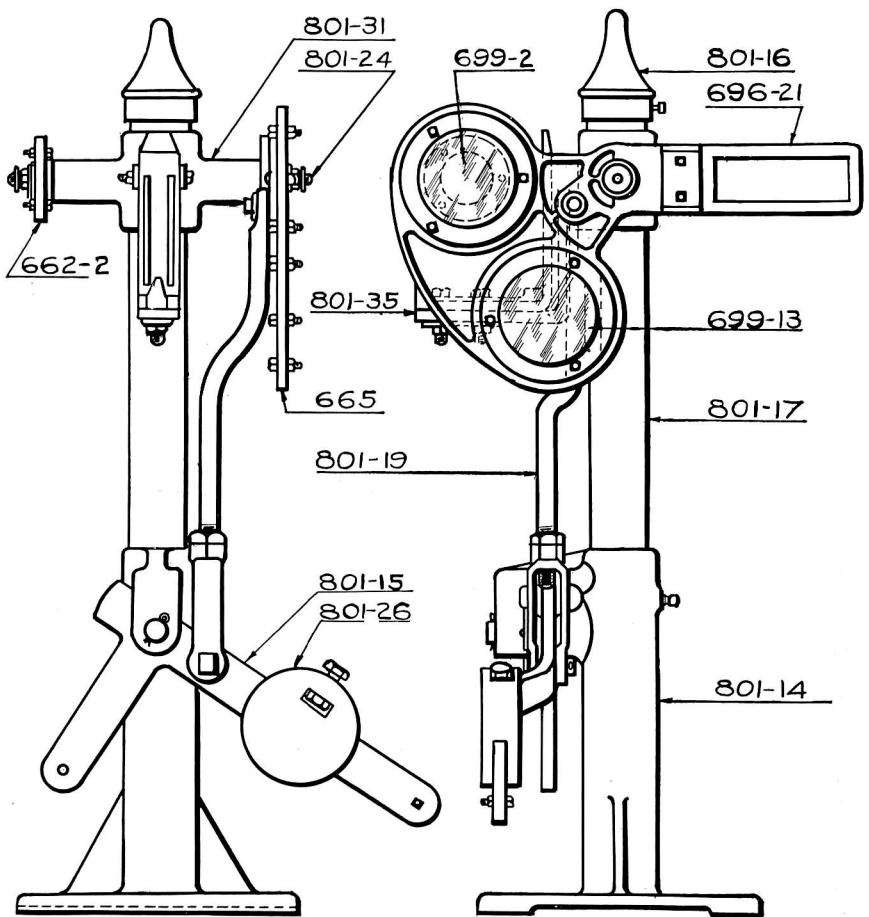


ONE AND TWO ARM 60 DEG. LOWER QUADRANT PIPE OR WIRE OPERATED DWARF SIGNAL WITH SPRING ATTACHMENT

Lamps, Chain, Split Links, Wire Eyes and Wire are not included in list prices, but Signals are furnished complete with Roundels and Fittings as shown. Specify color and number of Roundels. This Signal can be furnished with any style Semaphore Spectacle or Blade. Prices on application.

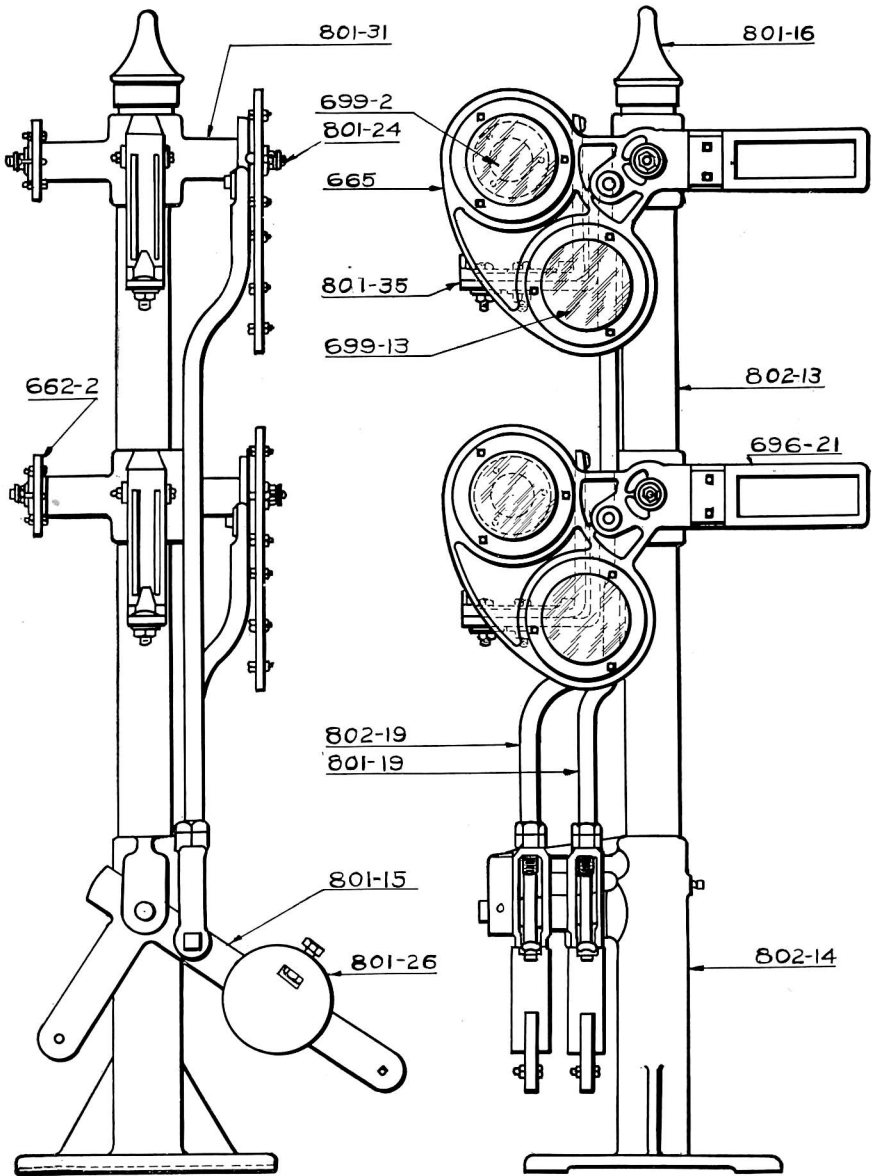
Trade No.	DESCRIPTION	List Price
803-1	One Arm 60 deg. Lower Quadrant Pipe Operated Dwarf Signal with Spring Attachment, complete as shown.....	\$28.00
803-2	One Arm 60 deg. Lower Quadrant Wire Operated Dwarf Signal with Spring attachment, complete as shown.....	28.00
804-1	Two Arm 60 deg. Lower Quadrant Pipe Operated Dwarf Signal with Spring Attachment, complete as shown.....	57.60
804-2	Two Arm 60 deg. Lower Quadrant Wire Operated Dwarf Signal with Spring Attachment complete as shown.....	57.60
803-17	Mast Only.....	2.00
804-13	“ “.....	4.05
803-11	Base with Set Screw.....	7.65
803-12	“ “ Crank, Pin and Cotter.....	8.20
803-13	One Way Pin with Cotter.....	.09
804-11	Base with Set Screw.....	7.65
804-12	“ “ Two Cranks, Pin and Separators.....	8.75
804-14	Two Way Pin with Cotter.....	.11
704-14	$\frac{3}{8}$ " x $1\frac{1}{4}$ " Cotter Pin, per C.....	.90
803-14	Crank Only.....	.45
801-16	Pinnacle with Set Screw.....	1.00
803-31	Semaphore Bearing complete with Front Half, Rear Half and Bolts for fastening to Mast.....	2.16
803-36	Front Half of Semaphore Bearing.....	1.10
803-37	Rear “ “.....	.95
803-16	Semaphore Shaft complete with Nuts, Washers, Cotters, Springs, Seat and Pin.....	1.80
803-19	Spring Seat for Shaft.....	.23
803-18	Coil Spring “ “.....	.36
803-38	Shaft Collar.....	.09
803-20	Pin for fastening Collar to Shaft.....	.03
696-21	Blade complete with Clamps and Bolts.....	.81
665	Two Light 60 deg. Lower Quadrant Semaphore Spectacle complete with Operating Stud, Roundel Rings and Bolts for $5\frac{3}{8}$ " Roundels.....	2.52
662-2	Back Spectacle complete with Roundel Ring and Bolts for $2\frac{3}{8}$ " Roundels.....	.99
699-13	Glass Roundels, $5\frac{3}{8}$ " dia. Specify Color.....	.....

ONE ARM 60 DEG. LOWER QUADRANT PIPE OR
WIRE OPERATED DWARF SIGNAL



801-1

TWO ARM 60 DEG. LOWER QUADRANT PIPE OR
WIRE OPERATED DWARF SIGNAL



802-1

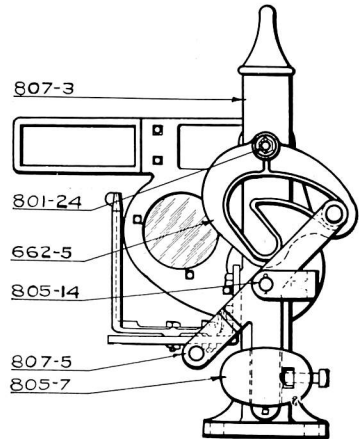
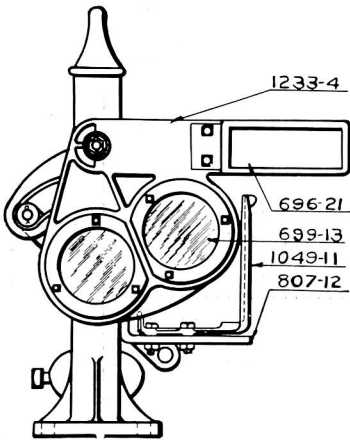


TWO ARM 60 DEG. LOWER QUADRANT PIPE OR WIRE OPERATED DWARF SIGNAL

Lamps, Chain, Split Links, Wire and Wire Eyes are not included in list prices, but Signals are furnished complete with Roundels and Fittings as shown. Orders should specify color and number of Roundels. This Signal can be furnished with any style Semaphore Spectacle or Blade. Prices on application.

Trade No.	DESCRIPTION	List Price
802-1	Two Arm 60 deg. Lower Quadrant Pipe Operated Dwarf Signal, complete as shown	\$51.75
802-2	Two Arm 60 deg. Lower Quadrant Wire Operated Dwarf Signal	53.25
802-13	Mast Only	4.05
801-16	Pinnacle with Set Screw	1.00
802-14	Base complete with Pin, Cotter, Two Balance Levers with 20 lb. Counterweights and Bolts	20.69
802-11	Base Only	7.65
802-25	Pin with Cotter for Balance Lever . . . . .	.27
994-12	1/4" x 3" Cotter pin for Balance Lever Pin, per C. . . . .	.88
801-15	Balance Lever with 20 lb. Counterweight and Bolts	6.30
801-18	“ “ Only	4.23
801-23	20 lb. Counterweight Only	1.98
801-26	Same as above with Bolt	2.07
720-16	5/8" x 3 1/2" Square Head Machine Bolt and Nut . . . . .	.09
1097-26	3/4" x 1" “ “ “ “ . . . . .	.03
801-19	Operating Rod for Lower Signal complete with Screw Jaw, Nut, Jaw Pin and Cotter	2.52
802-19	Same as above except for Upper Signal	3.15
801-32	Screw Jaw with Pin and Cotter . . . . .	.45
801-33	“ “ Only . . . . .	.36
801-34	Jaw Pin with Cotter . . . . .	.09
950-31	5/8" x 1 1/4" Cotter Pin for Jaw Pin, per C. . . . .	.96
665	Semaphore Spectacle complete with Operating Stud, Roundel Rings and Bolts	2.52
662-2	Back Spectacle complete with Roundel Ring and Bolts . . . . .	.99
699-2	Glass Roundels, 2 3/8" dia. Specify Color . . . . .	. . . . .
699-13	“ “ 5 3/8" “ “ . . . . .	. . . . .
696-21	Blade complete with Blade Plate and Bolts . . . . .	.81
801-24	Semaphore Shaft complete with Nuts, Washers and Cotters	1.53
801-31	Bearing “ “ Front Half, Back Half and Bolts for fastening to Mast	2.16
801-12	Front Half Semaphore Bearing	1.10
801-13	Rear “ “ . . . . .	.95
801-28	3/4" x 4" Hexagon Head Machine Bolts and Nuts for fastening Semaphore Bearing to Mast . . . . .	.16
801-35	Lamp Bracket and Support complete with Bolts for fastening to Mast	3.60
801-27	Lamp Bracket Support	2.03
1049-11	“ “	1.80
1194-10	1/2" x 1" Hexagon Cap Screws for fastening Lamp Bracket to Bearing . . . . .	.04
1049-15	1/2" x 2" Square Head Machine Bolts with Hexagon Nuts, Lamp Bracket to Support . . . . .	.05
1049-16	1/2" Lock Washers . . . . .	.02
930-2	Two Way Vertical Chain Wheel complete	1.59
703-46	Double Shackle complete with Pins and Cotters . . . . .	.20
703-1	Wire Eyes . . . . .	.04
703-11	Split Links, per C.	3.60
703-16	1/4" Proof Chain, per ft. . . . .	.14
801-29	1/2" x 1" Square Head Set Screw for Base . . . . .	.04
801-30	3/8" x 3/4" “ “ “ “ . . . . .	.03
950-32	3/4" x 4" Lag Screws, per C.	8.40

ONE ARM 45 DEG. UPPER QUADRANT DWARF SIGNAL WITH ESCAPEMENT CRANK

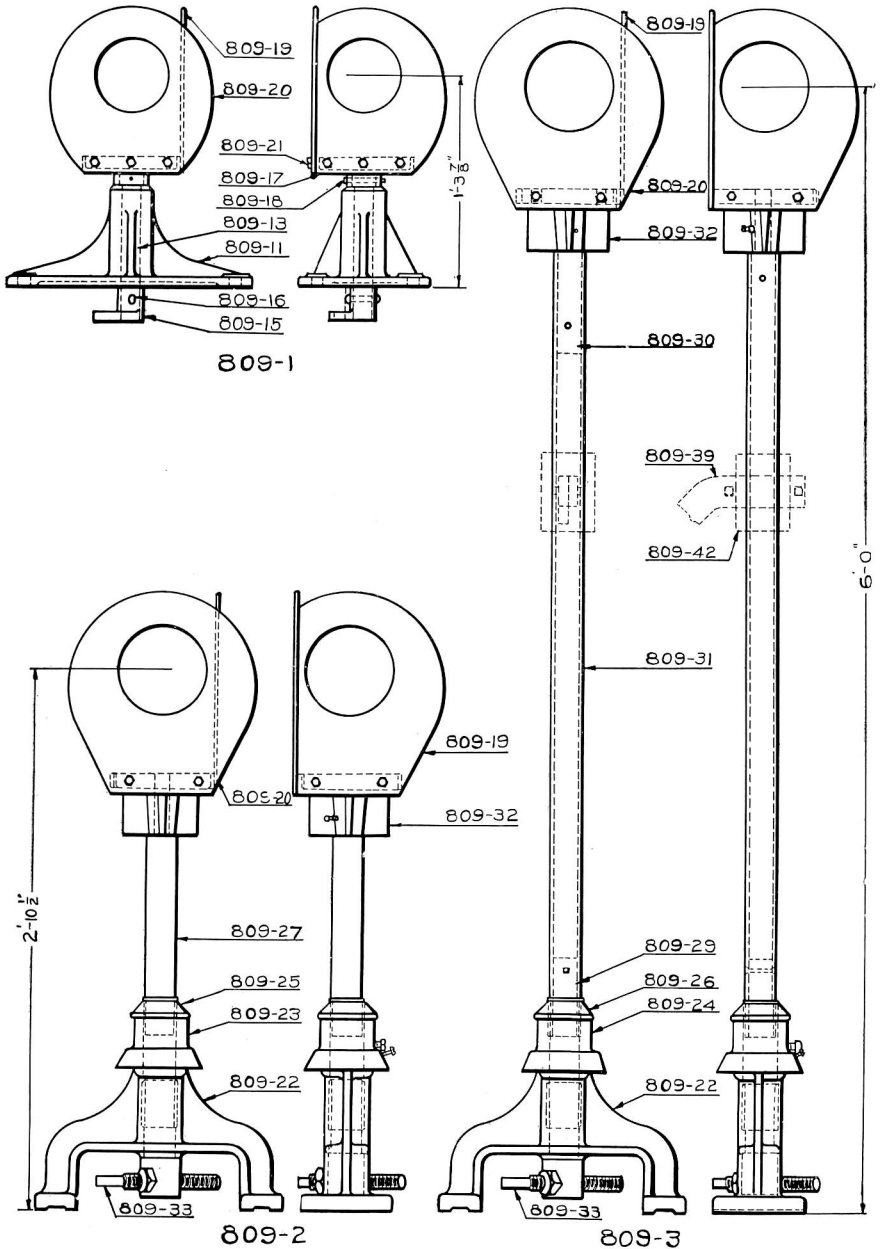


807-1

Lamps, Chain, Split Links, Wire Eyes and Wire are not included in list prices, but Signals are furnished complete with Roundels and Fittings as shown. Specify color and number of Roundels. This Signal can be furnished with any style Semaphore Spectacle or Blade. Prices on application.

Trade No.	DESCRIPTION	List Price
807-1	One Arm 45 deg. Upper Quadrant Pipe Operated Dwarf Signal, complete as shown.	\$25. 50
807-2	One Arm 45 deg. Upper Quadrant Wire Operated Dwarf Signal.	26. 90
807-3	Mast Only.	7. 74
805-14	Pin for Balance Lever with Cotter.	. 14
807-5	Balance Lever complete with 11 lb. Counterweight, Roller, Stud and Bolts	8. 37
807-6	with Stud and Cotter.	6. 57
805-7	Counterweight with Bolt and Nut.	1. 17
805-8	11 lb. Counterweight Only.	1. 08
805-9	Stud with Cotter for Balance Lever.	. 14
805-10	Roller for Stud.	. 18
805-11	Washer.	. 02
1097-26	$\frac{3}{4}$ " x 1" Square Head Machine Bolt and Nut for Balance Lever.	. 03
720-16	$\frac{5}{8}$ " x 3 $\frac{1}{2}$ " Counterweight.	. 09
801-24	Semaphore Shaft with Washers, Nuts and Cotter.	1. 53
1233-4	Two Light 45 deg. Upper Quadrant Semaphore Spectacle complete with Roundel Rings and Bolts.	2. 61
662-5	Escapement Crank.	. 90
699-13	Glass Roundels, 5 $\frac{3}{8}$ " dia. Specify Color.	. . . . .
696-21	Blade complete with Clamps and Bolts.	. 81
807-12	Lamp Bracket and Support complete with Two $\frac{1}{2}$ " x 1" Cap Screws.	3. 60
807-13	Support Only.	2. 03
1049-11	"	1. 80
1194-10	$\frac{1}{2}$ " x 1" Hexagon Head Cap Screws.	. 04
1049-15	$\frac{1}{2}$ " x 2" Square Head Machine Bolts with Hexagon Nuts.	. 05
1049-16	Standard $\frac{1}{2}$ " Lock Washers.	. 02
930-1	One Way Vertical Chain Wheel complete.	. 95
703-46	Double Shackle complete with Pin and Cotter.	. 20
703-1	Wire Eyes.	. 04
703-11	Split Links, per C.	3. 60
703-16	$\frac{3}{4}$ " Proof Chain, per ft.	. 14
950-32	$\frac{3}{4}$ " x 4" Lag Screws, per C.	8. 40

HIGH AND LOW POT SIGNALS





HIGH AND LOW POT SIGNALS

Lamps are not included in list prices, but Signals are furnished complete as shown.

Trade No.	DESCRIPTION	List Price
809-1	Low Pot Signal 1' 3 $\frac{7}{8}$ " high, complete as shown	\$12.35
809-11	Base Only	3.87
809-12	“ with Shaft Operating Crank, Lamp Base, Pin and Rivet	8.73
809-13	Shaft Only . . . . .	.54
809-14	“ with Operating Crank and Rivet	1.44
809-15	Operating Crank Only . . . . .	.72
809-16	Rivet for Operating Arm $\frac{3}{8}$ " x 2 $\frac{1}{4}$ " Round Head . . . . .	.03
809-17	Lamp Base Only	1.53
809-18	Dowel Pin for fastening Lamp Base to Shaft . . . . .	.32
809-19	Inside Vane	1.17
809-20	Outside “	1.17
809-21	$\frac{3}{8}$ " x $\frac{1}{2}$ " Hexagon Cap Screws for fastening Vanes to Lamp Base . . . . .	.03
809-2	Low Pot Signal 2' 10 $\frac{1}{2}$ " high, complete as shown	19.45
809-3	High “ 6' high, complete as shown without support	26.10
809-4	Same as above except with Support	31.00
809-22	Base Only	4.68
809-23	Thrust Bearing Only for Low Signal with Set Screw and Screw for Oil Hole	1.17
809-24	Same as above except for High Pot Signal	1.53
809-25	Cover for Low Pot Signal . . . . .	.18
809-26	“ “ High “ . . . . .	.27
809-27	Shaft Only for Low Pot Signal	3.78
809-28	Same as above with Adjustable Crank and Nut	4.32
809-29	Lower Shaft for High Pot Signal	3.78
809-30	Upper “ “ “ “	2.07
809-31	Pipe Post Only for High Signal	1.17
809-32	Lamp Socket Only with Set Screw	1.80
809-33	Adjustable Crank with Hexagon Nut . . . . .	.54
809-34	1" Hexagon Nut for Adjustable Crank . . . . .	.10
150-3	$\frac{3}{8}$ " x 1" Square Head Set Screw for Lamp Base . . . . .	.03
809-35	$\frac{3}{8}$ " x 2 $\frac{3}{4}$ " R. H. I. Rivets for Pipe Post to Shaft . . . . .	.04
809-36	$\frac{3}{8}$ " x 3 $\frac{1}{4}$ " R. H. I. Rivet for Thrust Bearing to Shaft . . . . .	.05
809-37	Screw for Oil Hole . . . . .	.01
809-38	Set Screw $\frac{1}{2}$ " x 1 $\frac{1}{2}$ " for Thrust Bearing . . . . .	.04
809-39	Support complete with Clamp and Bolts	4.05
809-40	“ Only	3.24
1049-14	$\frac{1}{2}$ " x 1 $\frac{1}{2}$ " Square Head Machine Bolts with Hexagon Nuts for fastening Clamp to Support . . . . .	.05
809-41	Clamp Only . . . . .	.72
809-42	Collar with Set Screw . . . . .	.54
801-29	$\frac{1}{2}$ " x 1" Set Screw for above . . . . .	.04



SPECTACLES, BACK SPECTACLES, ESCAPEMENT CRANKS AND OPERATING CRANKS FOR DWARF SIGNALS

Trade No.	DESCRIPTION	List Price
665	Two Light 60 deg. Lower Quadrant Semaphore Spectacle with Operating Stud, Roundel Rings and Bolts for 5 $\frac{3}{8}$ " Roundels	\$2.52
665-1	Same as above except without Operating Stud	2.37
667	Two Light 75 deg. Lower Quadrant Semaphore Spectacle with Operating Stud, Roundel Rings and Bolts for 5 $\frac{3}{8}$ " Roundels	2.52
667-1	Same as above except without Operating Stud	2.37
668	Two Light 90 deg. Lower Quadrant Semaphore Spectacle complete with Operating Stud, Roundel Rings and Bolts for 5 $\frac{3}{8}$ " Roundels	3.15
668-1	Same as above without Operating Stud	3.00
666	Three Light 90 deg. Lower Quadrant Semaphore Spectacle complete with Operating Stud, Roundel Rings and Bolts for 5 $\frac{3}{8}$ " Roundels	3.15
666-1	Same as above without Operating Stud	3.00
1233-4	R. S. A. Two Light 45 deg. Upper Quadrant Semaphore Spectacle complete with Roundel Ring and Bolts for 5 $\frac{3}{8}$ " Roundels	2.60
1233-6	Same as above with Operating Stud	2.75
1233-5	Three Light 90 deg. Upper Quadrant Semaphore Spectacle complete with Roundel Rings and Bolts	5.85
1233-7	Same as above except with Operating Stud	6.00
662-1	Back Spectacle complete with Roundel Ring and Bolts for 3" Roundels	.99
662-2	Same as above except for 2 $\frac{3}{8}$ " Roundels	.99
662-3	Combined Escapement Crank and Back Spectacle with Roundel Ring and Bolts for 2 $\frac{3}{8}$ " Roundels	1.26
662-4	Combined Operating Crank and Back Spectacle with Roundel Ring and Bolts for 2 $\frac{3}{8}$ " Roundels	1.26
662-5	Escapement Crank	.90
662-6	Operating Crank	.90
662-7	Roundel Ring for 5 $\frac{3}{8}$ " Roundels	.13
1233-2	“ “ “ 5 $\frac{3}{8}$ " “	.18
661-21	“ “ “ 3" “	.13
662-9	“ “ “ 2 $\frac{3}{8}$ " “	.13
640-5	$\frac{1}{4}$ " x $\frac{3}{4}$ " Square Head Machine Bolts and Nuts	.03
665-3	Operating Stud complete with Cotter and Washer	.15
665-4	“ “ and Cotter	.13
665-5	Washer for Operating Stud	.02
1233-8	Roundel Ring for 5 $\frac{3}{8}$ " Roundel	.27