1914

CATALOGUE AND PRICE LIST

SECTION C

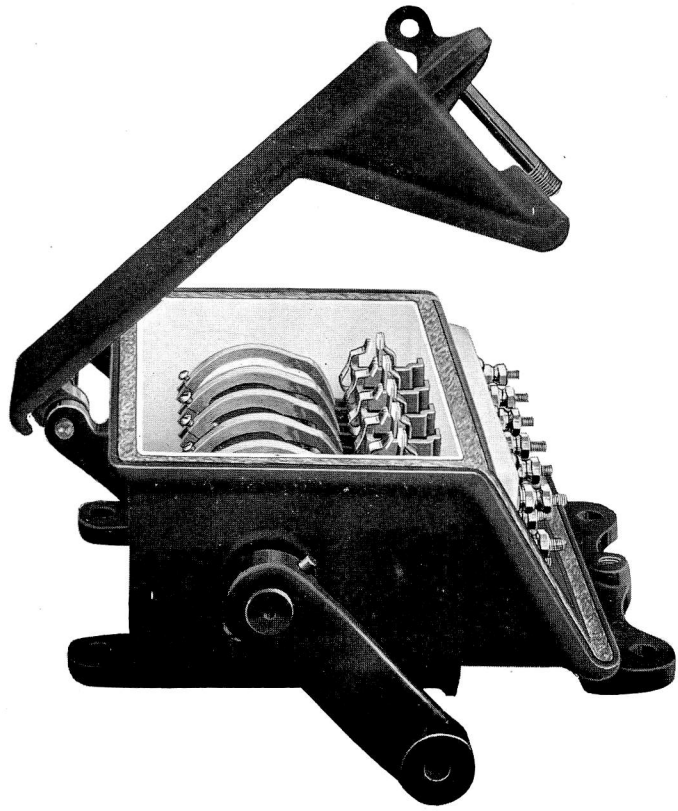
CIRCUIT CONTROLLING AND CIRCUIT BREAKING DEVICES

Switch Box and Commutator
Lever Lock and Floor Push
Electric Table Levers for Operating
Power Operated Signals
Track Instruments and Trolley Contacts
Pole Changing and Knife Switches
Strap Keys

Railway Signal CHICAGO and Supply Co.

SWITCH BOX

Style 1720



No. 1720

THIS SWITCH BOX POSSESSES THE FOLLOWING ADVANTAGES:

"Contacts are forced open and forced closed."

"Contacts may be adjusted, independently of each other to "open" or "close" at any part of stroke."

"Adjustments allow Contacts to be "opened" or "closed" with any desired amount of movement of Switch Point."

"Wire Entrance and Binding Posts are in front compartment while mechanism is in separate compartment. Both are dust and water proof."

"Crank is reversible and can be used on either side of Box."

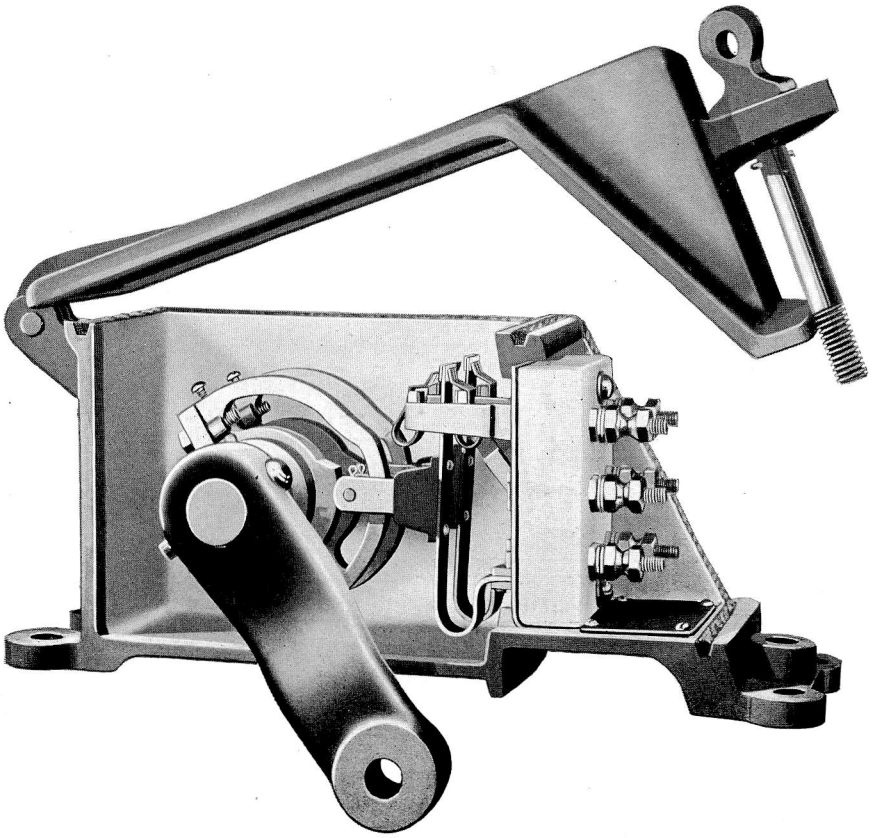
"It is built on the "unit principle" each Contact with all its parts being one unit allows additions or removals without affecting balance."

"Arranged to Operate in Two or Three Positions."

"Vibrations of the Operating Rod are not transmitted to Contacts."

SWITCH BOX

Style 1720



Sectional View

Contacts are triple fingered and make a positive self-cleaning Contact with large carrying capacity.

Spring action on contact fingers is arrested after a slight scraping movement has taken place, thus guarding effectively against fused points.

Size of Box, viz., 5½" high by 12" long, allows use of same within close proximity to Track.

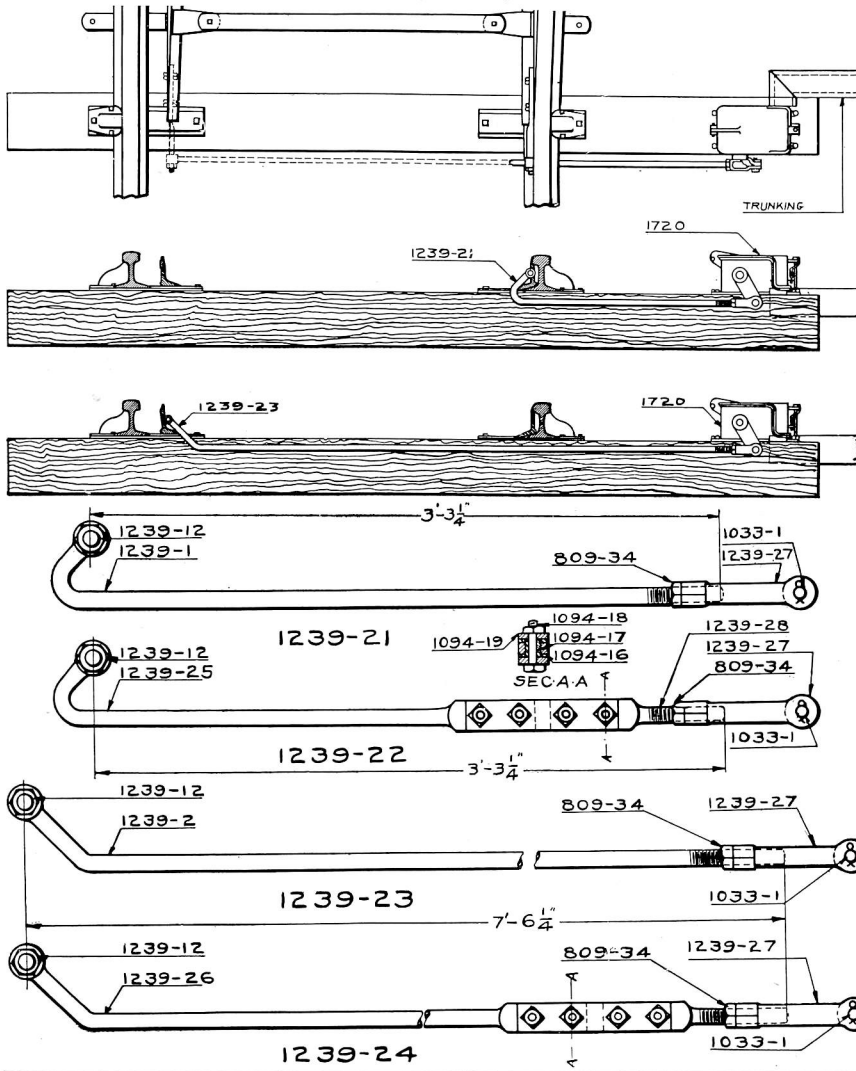
All Current Carrying Parts are mounted on Insulated Bases and have ⅜" or greater distance between them, Binding Posts are Standard **R. S. A.**

Box is furnished for any number of Contacts up to ten Front and Back Contacts.

Box is furnished with Standard **R. S. A.** Connecting Rod, both insulated or plain.

Railway Signal CHICAGO and Supply Co.

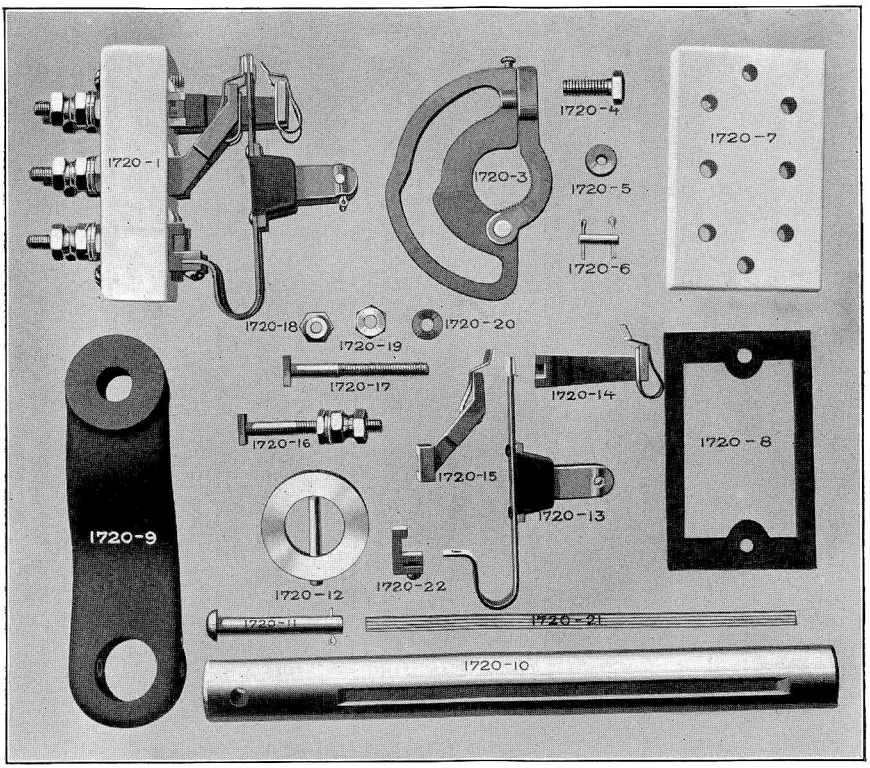
SWITCH BOX



Trade No.	DESCRIPTION	List Price
1720-76	Two Way Switch Box complete with Two Single Contacts	$23.00
1720-78	Four " " " " " Four " "	29.75
1720-80	Six " " " " " Six " "	36.75
1720-82	Ten " " " " " Eight " "	44.75
1720-84	Ten " " " " " Ten " "	48.25
	For each Double Contact in place of Single Contacts on Switch Box, add to list price	1.40
1239-21	Connecting Rod complete as shown with **R. S. A.** Switch Point Lug, Screw Jaw, Nut, Jaw Pin and Bolts for fastening to Switch Points	5.25
1239-22	Same as above except Insulated	7.50
1239-23	Connecting Rod complete as shown with **R. S. A.** Switch Point Lug, Screw Jaw, Nut, Jaw Pin and Bolts for fastening to Switch Points	5.75
1239-24	Same as above except Insulated	8.00

Connecting Rods not included in list price, desired connecting rods must be ordered separately.

SWITCH BOX



Repair Parts for 1720 Switch Box

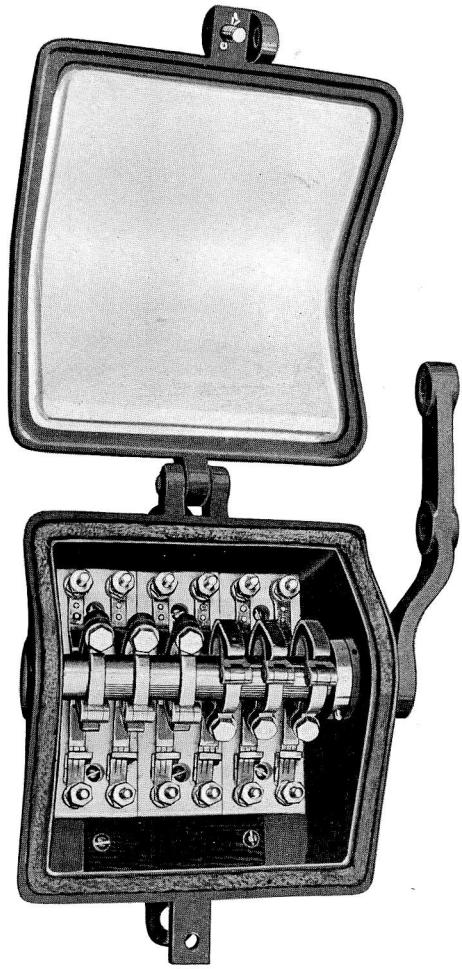
Trade No.	DESCRIPTION	List Price
1720-1	Complete Unit for Switch Box with Two Front and Two Back Contacts, Binding Posts and Base	.....
1720-3	Adjustable Cam	.....
1720-4	Screw for Adjustable Cam	.....
1720-5	Steel Operating Roller	.....
1720-6	Operating Roller Pin with Two Cotters	.....
1720-7	Porcelain Base	.....
1720-8	Gasket for Base	.....
1720-9	Operating Crank	.....
1720-10	Shaft. Specify Capacity of Switch Box	.....
1720-11	Operating Crank Pin	.....
1720-12	Collar	.....
1720-13	Main Contact Spring	.....
1720-14	Front " complete	.....
1720-15	Back " "	.....
1720-16	Binding Post "	.....
1720-17	" " Screw	.....
1720-18	**R. S. A.** Brass Nut	.....
1720-19	" " " 1/8" Brass Nut	.....
1720-20	" " " Washer	.....
1720-21	Adjusting Key. Specify Capacity of Switch Box	.....
1720-22	Main Spring Holder	.....
1720-52	Two Way Switch Box Case	.....
1720-53	Cover for Two Way Switch Box	.....
1720-54	Four Way Switch Box Case	.....
1720-55	Cover for Four Way Switch Box	.....
1720-56	Six Way Switch Box Case	.....
1720-57	Cover for Six Way Switch Box	.....
1720-86	Ten Way Switch Box Case	.....
1720-87	Cover for Ten Way Switch Box	.....
1720-50	Lock Bolt with Cotter	.....

TYPE 1700 COMMUTATOR

Type 1700 Commutator Furnished with One to Four Contacts

This Commutator is small, compact, waterproof and may be equipped with a maximum of six Contacts. The Adjustments are positive and permanent and may be arranged to open or close circuits at any part of the stroke, this making it possible to operate in two or three positions. The Contacts "Open" or "Close" with a quick snap action.

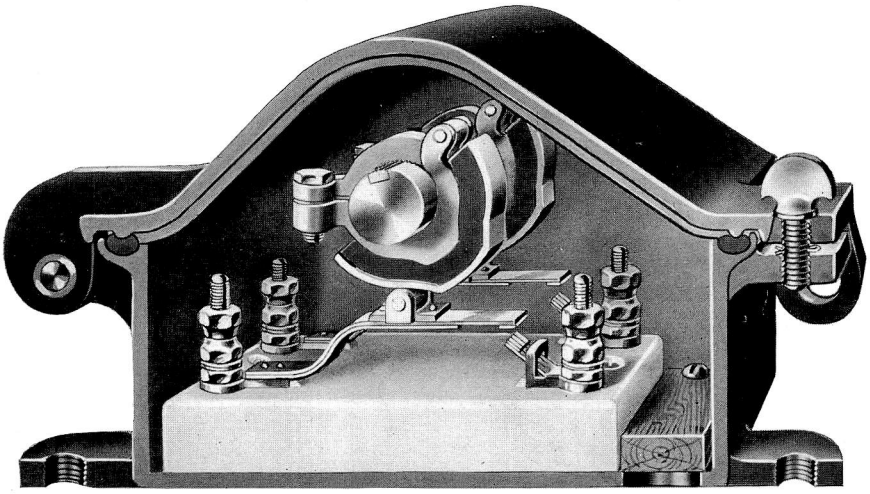
TYPE 1700 COMMUTATOR



Type 1700 Commutator as Furnished with Five or Six Contacts

The Contact Springs are heavy phosphor bronze and stationary Contacts are provided with triple fingered Platinum or Silver Contacts as specified. The flexible contact spring roller rides on a steel faced insulated cam which assures positive alignment under all conditions. Vibrations on operating rod are not transmitted to the Contacts, thus assuring permanency and long life of Contact Points.

TYPE 1700 COMMUTATOR

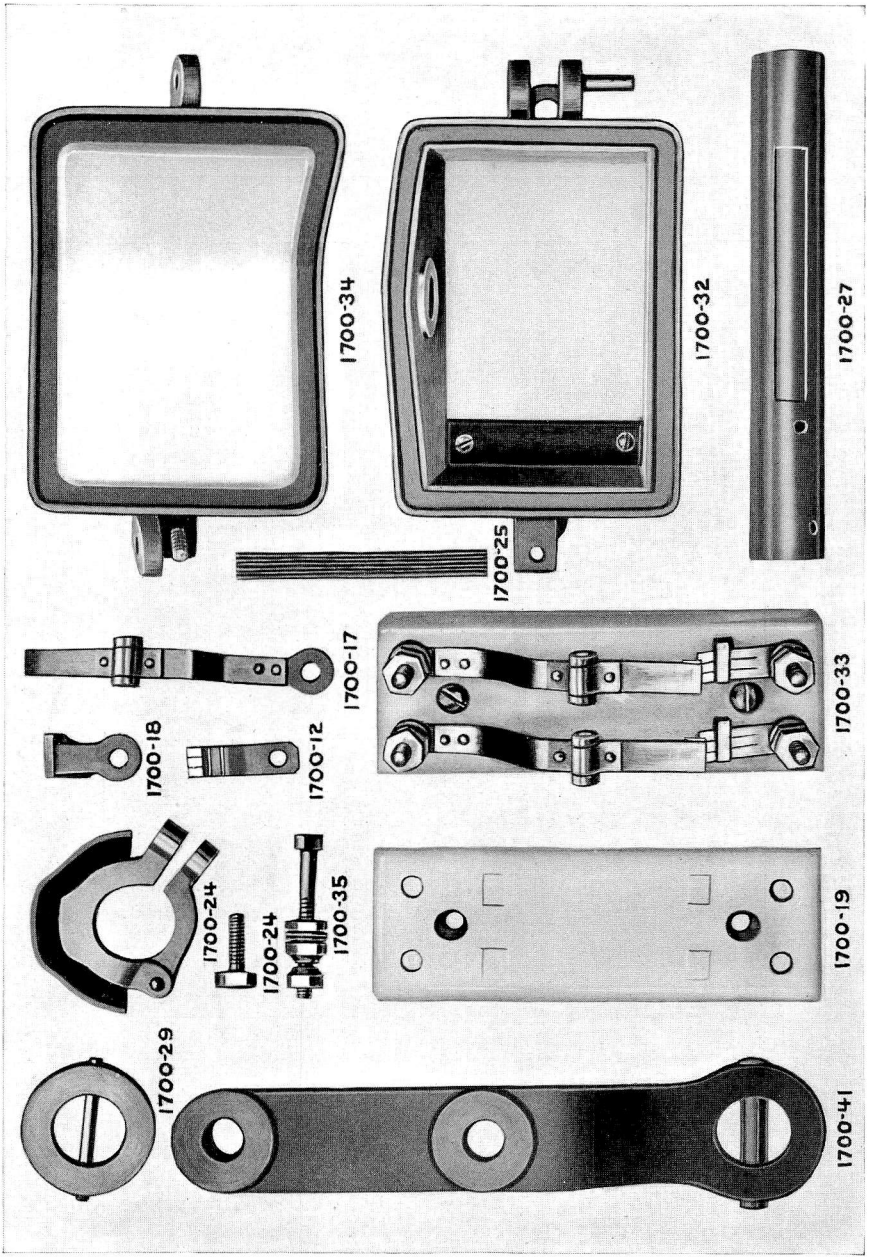


Sectional View Type 1700 Commutator

The working parts are heavy and strong, Contacts are mounted on Insulated Bases, two on a base, removable complete with Binding Posts as a Unit. The Case is heavy and is provided with a substantial gasket. The Cover has a simple and positive locking device which holds the door down tightly against the gasket on case, making the box absolutely water and dust proof.

Commutators are furnished complete with U Bolts and Hollow Bracket for fastening to Signal Poles as listed, or with fittings to operate Commutators as per various illustrations and listing on succeeding pages.

TYPE 1700 COMMUTATOR

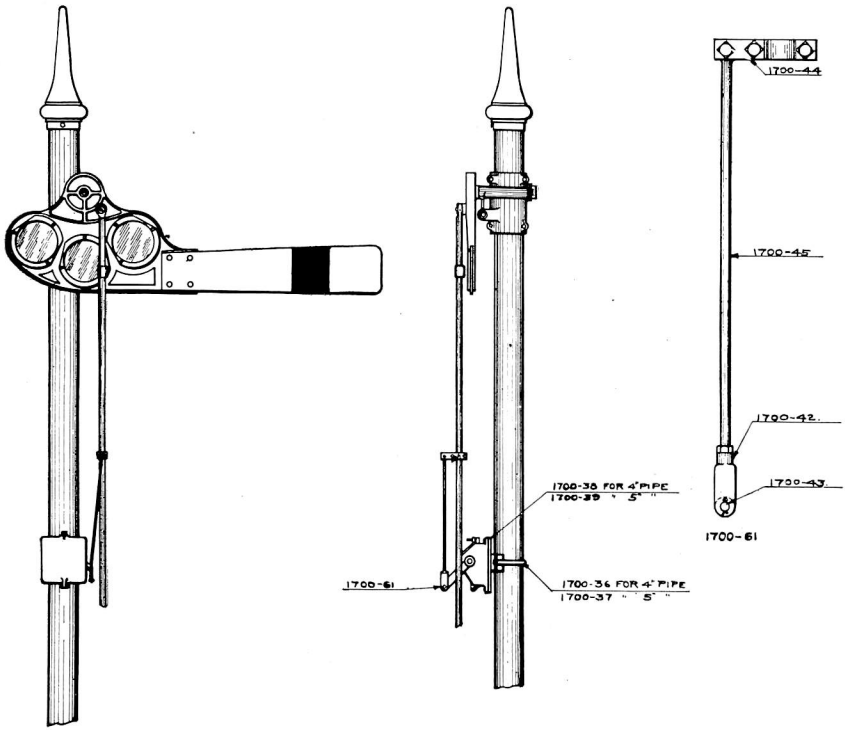


Parts of Type 1700 Commutator

TYPE 1700 COMMUTATOR

Trade No.	DESCRIPTION	List Price
1700–1	Commutator complete with One Contact	$10.40
1700–2	" " " Two "	13.10
1700–3	" " " Three "	15.80
1700–4	" " " Four "	18.50
1700–5	" " " Five "	22.20
1700–6	" " " Six "	24.90
1700–7	" " " Seven "	28.60
1700–8	" " " Eight "	31.40
1700–9	" " " Nine "	34.00
1700–10	" " " Ten "	36.70
1700–11	All required parts for one extra Contact ready to mount into Case, including Cam and Contact Springs complete with Binding Posts on Porcelain Base	2.70
	Above prices are based upon Silver Contacts, for each Platinum Contact add to list price	1.30
	Commutators are furnished with three sizes of Cases, viz.: for One, Two, Three or Four Contacts, for Five or Six Contacts and for Seven, Eight, Nine or Ten Contacts. Cases are fitted to receive additional Contacts which can be applied in field.	
1700–80	Fittings complete for fastening Commutators as per Application "A" for 4" Pipe	3.25
1700–81	Fittings complete for fastening Commutators as per Application "A" for 5" Pipe	3.25
1700–82	Fittings complete for fastening Commutators as per Application "B" for 4" Pipe	2.50
1700–83	Fittings complete for fastening Commutators as per Application "B" for 5" Pipe	2.50
1700–63	Rod, Jaw and Clamp complete with Pins, Cotters, Bolts and Lag Screws to attach Commutators to Interlocking Machines, per Application "C"	2.10
1700–64	Rod, Jaw, Pin and Lock Nut, Tail Lever Attachment, complete for applying Commutator to Interlocking Machines, per Application "D"	1.80
1700–65	Rod, Jaw and Clamp complete with Pins, etc., for attaching Commutator, per Application "E"	4.25
1700–66	Connecting Rod, Jaw, Pins and Bolts complete for attaching Commutators to Switch Points, per Application "F"	3.50
1700–56	Insulated Connecting Rod, Screw Jaw, Jaw Pin, Nut, Switch Point Lug and Bolts for attaching Commutator to Switch Points, per Application "F"	6.75
1700–57	Connecting Rod, Screw Jaw, Jaw Pin, Nut, Switch Point Lug and Bolts for attaching Commutator to Switch Points, per Application "F"	4.00
1700–58	Insulated Connecting Rod, Screw Jaw, Jaw Pin, Nut, Switch Point Lug and Bolts for attaching Commutator to Switch Points, per Application "F"	7.25
1700–84	Bracket, U Bolt and Shaft Sleeve for attaching Commutator to 4" (4½" O. D.) Steel Pipe Pole, per Application "G"	5.50
1700–85	Bracket, U Bolt and Shaft Sleeve for attaching Commutator to 5" ($5\frac{9}{16}$") Steel Pipe Pole, per Application "G"	5.50

TYPE 1700 COMMUTATOR

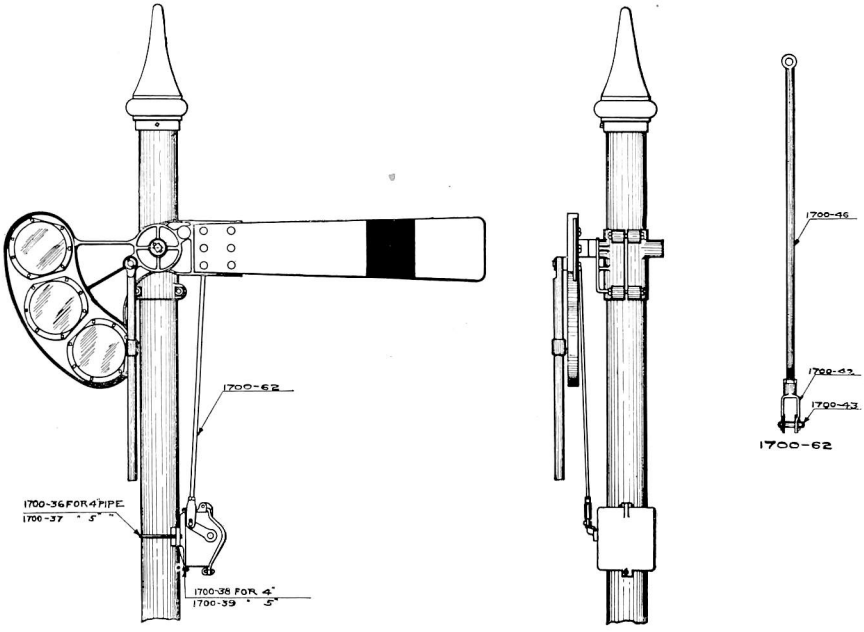


Application "A" of Style 1700 Commutator

The Fittings shown above illustrate Application "A" of Style 1700 Commutator as applied to Up and Down Rods of mechanically operated Signals. For illustrations and prices of Commutators, see separate listing elsewhere.

Trade No.	DESCRIPTION	List Price
1700–80	Fittings complete for fastening Commutators as per Application "A" for 4″ Pipe	$3.25
1700–81	Fittings complete for fastening Commutators as per Application "A" for 5″ Pipe	3.25
1700–61	Connecting Rod, Jaw, Pin, Lock Nut and Clamp complete with Bolts as shown	2.25
1700–36	U Bolt for 1700–38 Bracket	.45
1700–37	" " " 1700–39 "	.45
1700–38	Hollow Supporting Bracket with Two Bolts for 4″ Pipe	2.40
1700–39	" " " " " " " 5″ "	2.40
1700–42	Jaw Only	.50
1700–43	" Pin with Cotters	.14
1700–44	Clamp for Up and Down Rod complete with Bolts. Specify Size of Rod	.76
1700–45	Connecting Rod with Lock Nut (length 2′ 0″)	.60

TYPE 1700 COMMUTATOR

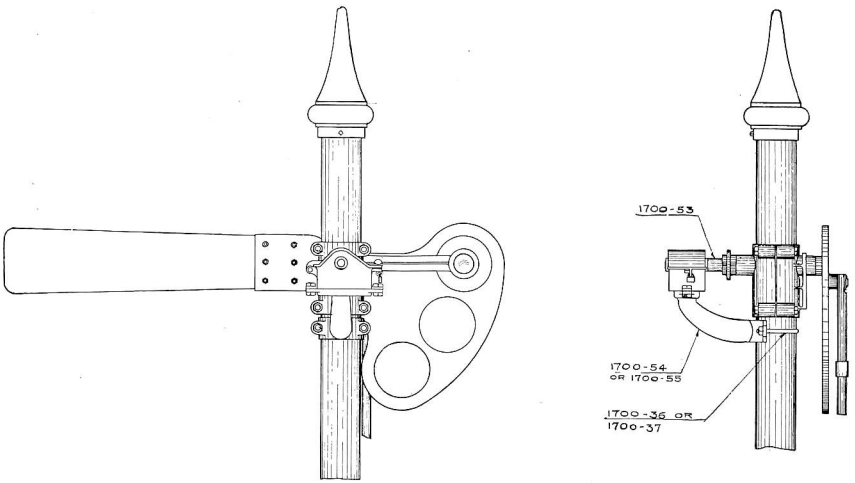


Application "B" of Style 1700 Commutator

Above illustration shows Application "B" of Commutator as operated direct from Blade. Rod furnished is sufficiently long so same can be used on any style of Blade Casting. For illustrations and prices of Commutators, see separate listing.

Trade No.	DESCRIPTION	List Price
1700–82	Fittings complete for fastening Commutators as per Application "B" for 4" Pipe	$2.50
1700–83	Fittings complete for fastening Commutators as per Application "B" for 5" Pipe	2.50
1700–62	Connecting Rod complete with Jaw, Pin and Lock Nut as shown	1.50
1700–36	U Bolt for No. 1700–38 Bracket	.45
1700–37	" " " " 1700–39 "	.45
1700–38	Hollow Supporting Bracket with Two Bolts for 4" Pipe	2.40
1700–39	" " " " " " 5" "	2.40
1700–42	Jaw Only	.50
1700–43	" Pin with Cotters	.14
1700–46	Connecting Rod with Lock Nut Only (length 2' 10")	.66

TYPE 1700 COMMUTATOR

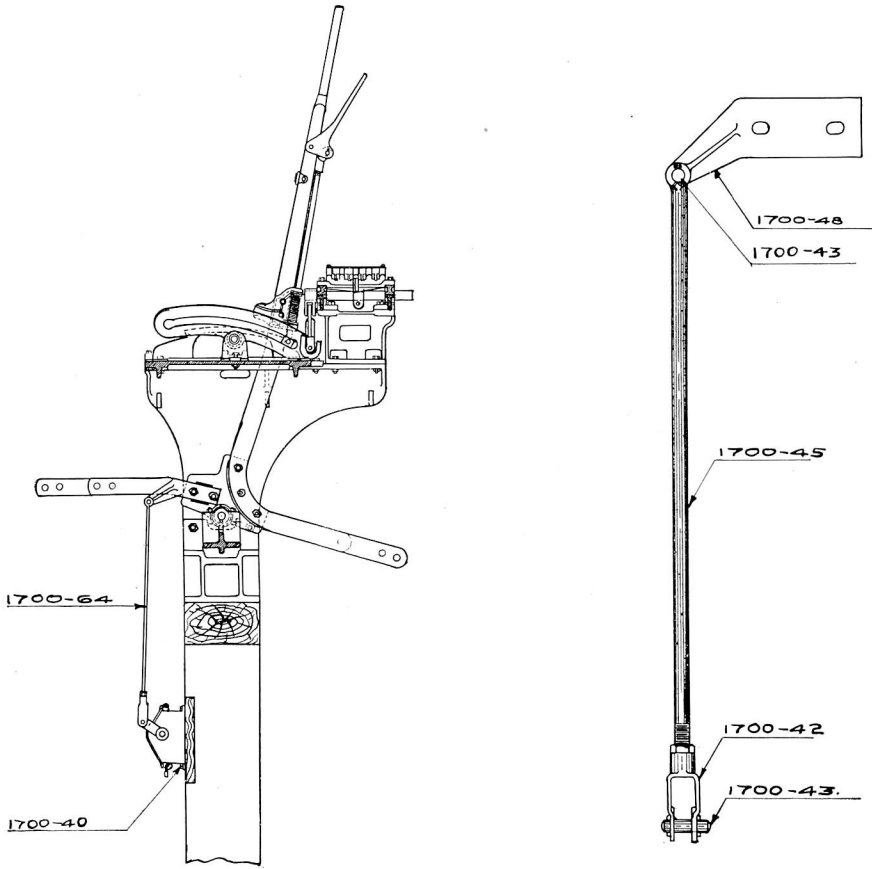


Application "G" of Style 1700 Commutator as Applied Directly to Semaphore Shaft

We illustrate above, method of applying Commutator directly to shaft of mechanically operated Semaphore Signals. The Bracket which supports the Commutator is hollow for wires to pass from Signal Pole into Commutator without exposing them to weather or wear from mechanical friction. For illustrations and prices of Commutators, see separate listing elsewhere.

Trade No.	DESCRIPTION	List Price
1700–84	Bracket, U Bolt and Shaft Sleeve for attaching Commutator to 4″ (4½″ O. D.) Steel Pipe Pole, per Application "G"....	$5.50
1700–85	Bracket, U Bolt and Shaft Sleeve for attaching Commutator to 5″ (5 9/16″ O. D.) Steel Pipe Pole, per Application "G"....	5.50
1700–53	Shaft Sleeve Only for above.....	1.25
1700–54	Hollow Bracket and Commutator Bolts Only for 1700–84....	4.00
1700–36	U Bolt for Bracket for 4″ Pipe.....	.45
1700–55	Hollow Bracket and Commutator Bolts Only for 1700–85....	4.00
1700–37	U Bolt for Bracket for 5″ Pipe.....	.45

TYPE 1700 COMMUTATOR

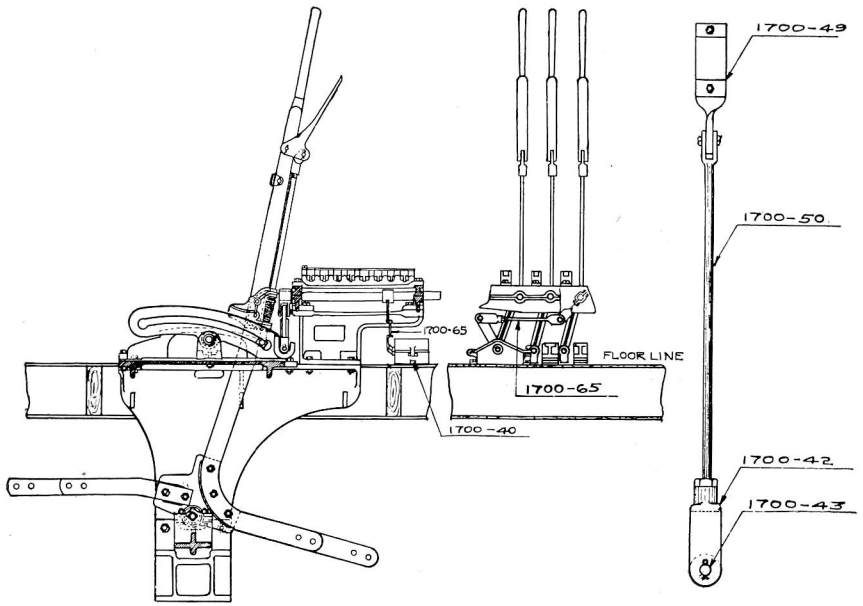


Application "D" of Style 1700 Commutator as Applied to Front Lever of Interlocking Machines

Above illustration shows method of application of Style 1700 Commutators to Front Levers of Interlocking Machines. For prices and illustrations of Commutators, see separate listing.

Trade No.	DESCRIPTION	List Price
1700–64	Rod, Jaw with Pin and Lock Nut, Tail Lever Attachment complete for applying Commutator to Interlocking Machines, per Application "D"	$1.80
1700–42	Jaw Only	.50
1700–43	" Pin with Cotters Only	.14
1700–45	Connecting Rod with Lock Nut Only (length 2')	.60
1700–48	Lever Attachment complete with Two Attaching Bolts	.40
1700–40	Lag Screws for fastening Commutator, each	.06

TYPE 1700 COMMUTATOR

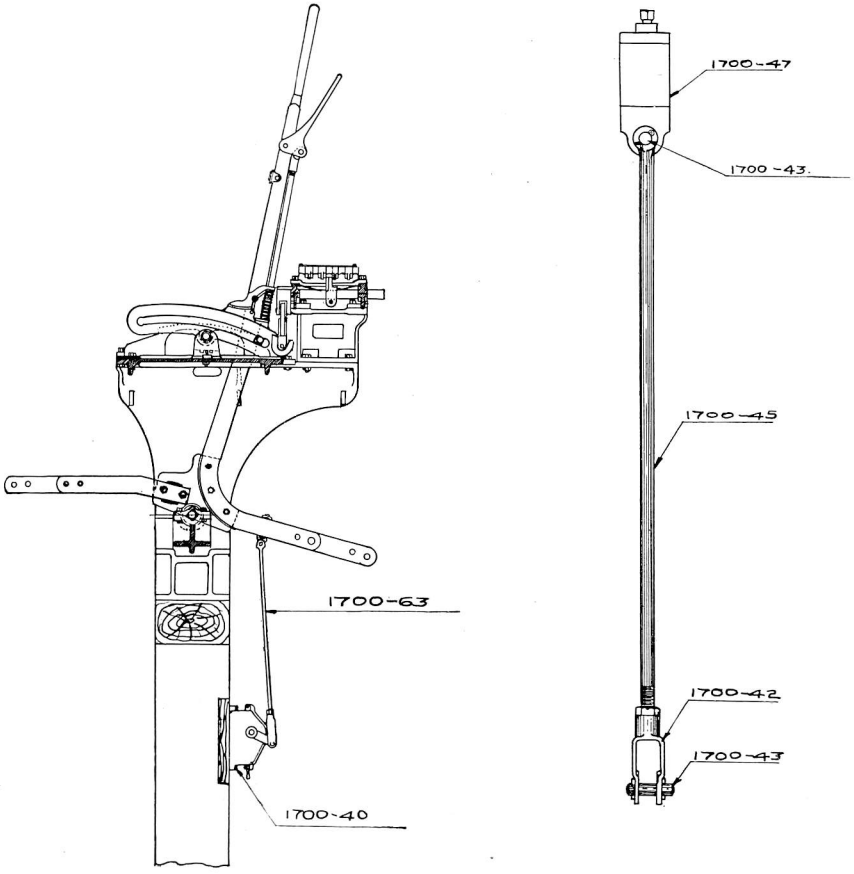


Application "E" of Style 1700 Commutator as Applied to Locking Shaft of Interlocking Machines

Style 1700 Commutator may be applied directly to Locking of S. & F. Interlocking Machines as illustrated above. For illustrations and prices of Commutators, see separate catalogue illustrations.

Trade No.	DESCRIPTION	List Price
1700–65	Rod, Jaw and Clamp complete with Pins, etc., for attaching Commutator, per Application "E"	$4.25
1700–42	Jaw Only	.50
1700–43	" Pin with Cotters Only	.14
1700–49	Wrought Iron Forged Clamp complete with Bolts for Locking Shaft	3.00
1700–50	Connecting Rod complete with Cross Bolt (length 12")	1.25
1700–40	Lag Screws for fastening Commutator, each	.06

TYPE 1700 COMMUTATOR

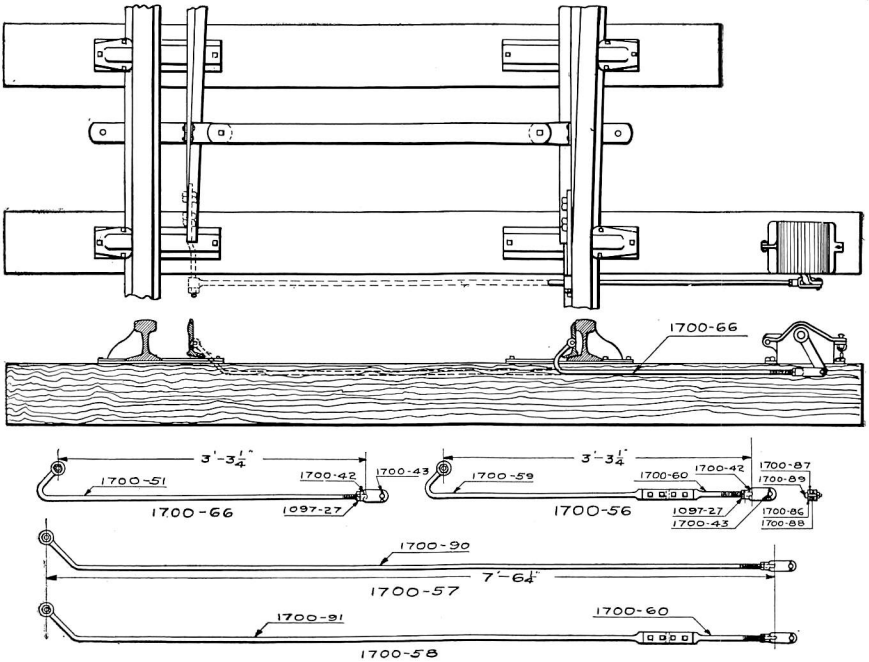


Application "C" of Type 1700 Commutator to Tail Lever of Interlocking Machines

The Fittings listed below are for use in attaching Type 1700 Commutators to Tail Levers of Interlocking Machines, per Application "C" illustrated above. For illustrations and prices of Commutators, see elsewhere.

Trade No.	DESCRIPTION	List Price
1700–63	Rod, Jaw and Clamp complete with Pins, Cotters, Bolts and Lag Screws to attach Commutators to Interlocking Machines, per Application "C"	$2.10
1700–42	Jaw Only	.50
1700–43	" Pin with Cotters Only	.14
1700–45	Connecting Rod with Lock Nut (length 2′ 0″)	.60
1700–47	Adjustable Clamp complete with Set Screw	.60
1700–40	Lag Screws for fastening Commutator, each	.06

TYPE 1700 COMMUTATOR

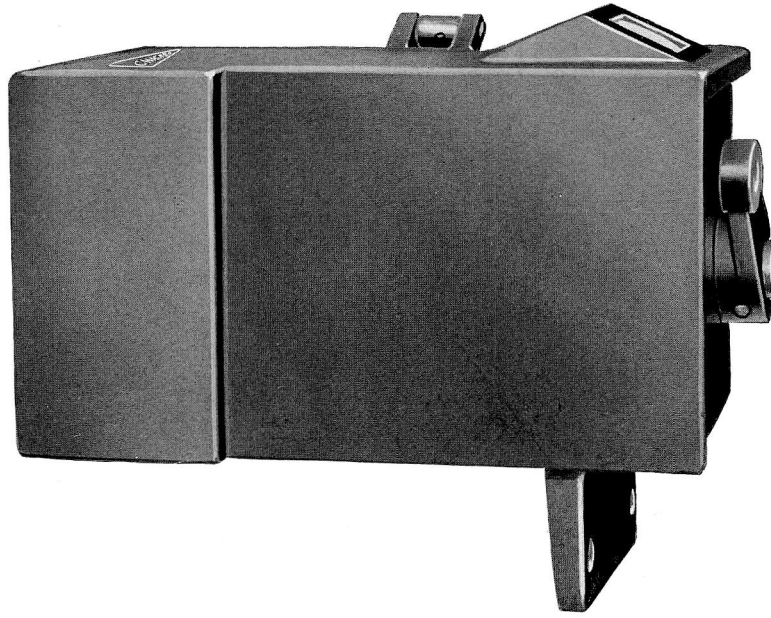


Application "F" Type 1700 Commutator

Type 1700 Commutator has such positive Contacts and Box is absolutely dust and water proof, besides being but 5½" high that same is admirably adapted for use on Switch Points where only six or less single Contacts are required. Connections shown are universal and can be used on right or left hand Switches.

Trade No.	DESCRIPTION	List Price
1700–66	Connecting Rod complete as shown with Switch Point Lug, Screw Jaw, Nut and Jaw Pin	$3.50
1700–56	Same as above except Insulated	6.75
1700–57	Connecting Rod complete as shown with Switch Point Lug, Screw Jaw, Nut and Jaw Pin	4.00
1700–58	Same as above except Insulated	7.25
1700–42	Screw Jaw Only	.50
1700–43	Jaw Pin with Cotter	.14
1700–52	Switch Point Lug with Bolts	1.50
1700–51	Rod Only for 1700–66 Connection	1.25
1700–60	Threaded Half Rod for 1700–56 and 1700–58	1.12
1700–59	Half Rod for 1700–59	1.70
1700–90	Rod Only for 1700–57	1.50
1700–91	Half Rod Only for 1700–58	2.20
1700–86	Splice Plate for Insulated Rods	.36
1700–87	Fibre "	.18
1700–88	Bushings for Insulated Rods, per C	5.40
1700–89	Bolts and Nuts for Insulated Rods	.11
427–61	¾" x 2½" Bolt with Hexagon Nut, Lock Washer and Cotter for fastening Switch Point Lug to Switch Points	.14
427–62	¾" x 3½" Bolt with Hexagon Nut, Lock Washer and Cotter for fastening Switch Point Lug to Reinforced Switch Points	.16

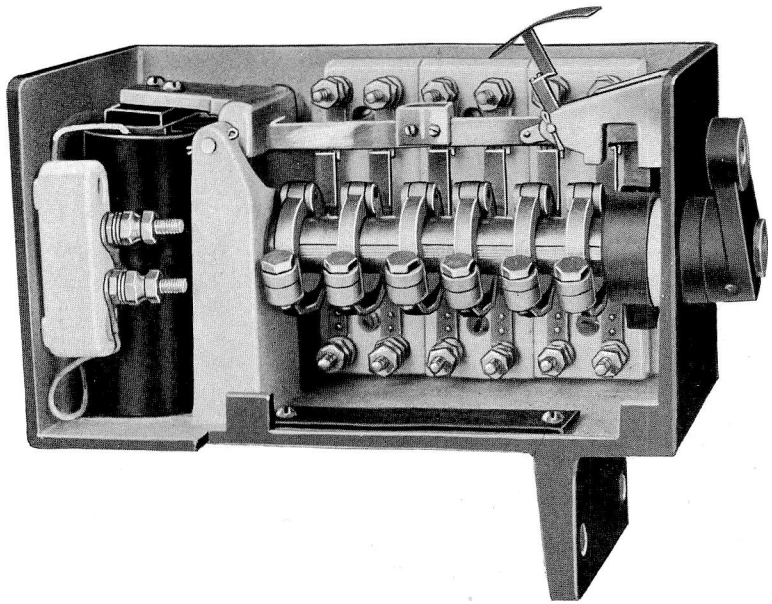
STYLE "A" UNIVERSAL ELECTRIC LOCK



Style "A" Universal Electric Lock
Size Over All, 7″ High, 12″ Long, and 7″ Wide

This Electric Lock is applicable to Saxby & Farmer, Johnson, National or Standard Interlocking Machines. It is provided with a visual indicator of good size showing through a heavy glass window to indicate whether Lock is in "Locked" or "Unlocked" position. As many as six Contacts are provided on the Operating Shaft. These Contacts are similar to our Commutator Contacts and are mounted upon heavy porcelain bases of ample strength. The Contacts are adjustable to open or close circuits at any point of stroke, and may be normally closed or open as required. The Contact Fingers are heavy three fingered Silver or Platinum pointed Contacts with large carrying capacity. They open and close with a snap action permitting the use of high Voltages.

STYLE "A" UNIVERSAL ELECTRIC LOCK



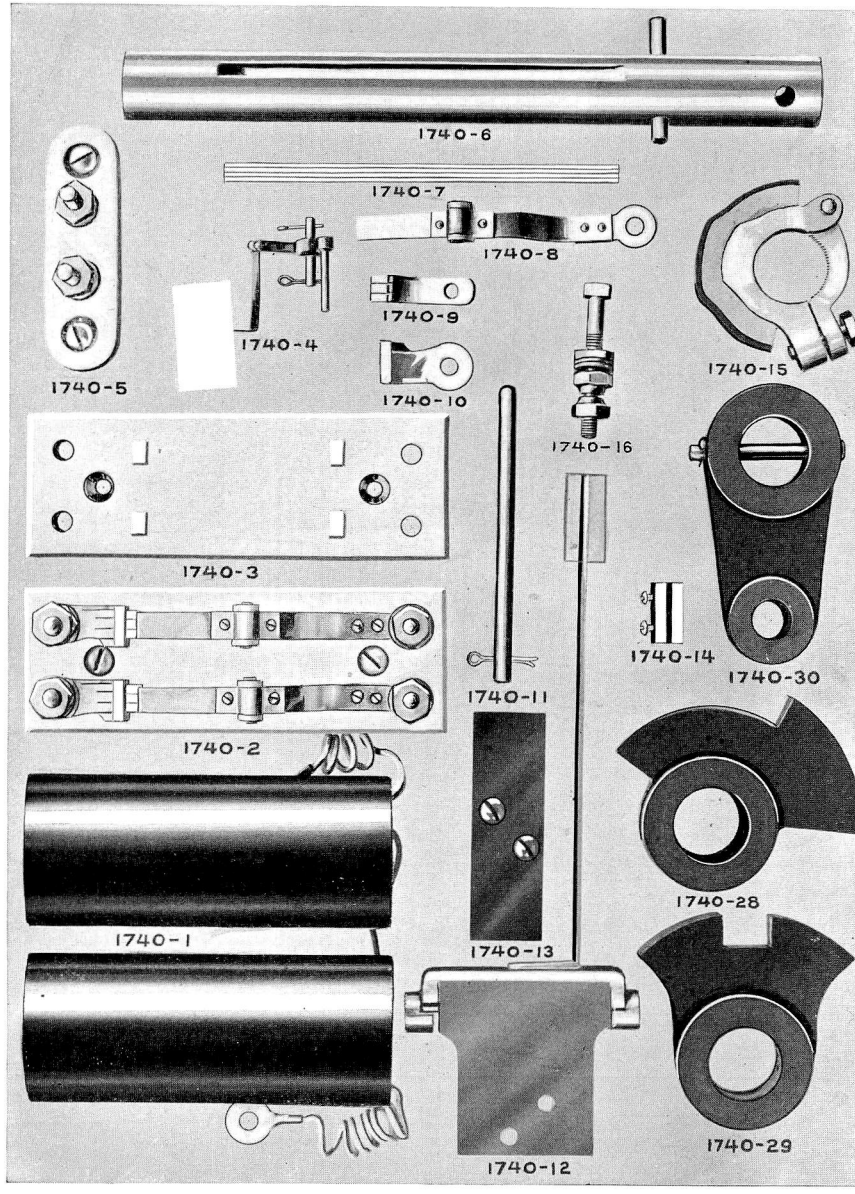
Style "A" Electric Lock (Cover Open)

The Magnets are large and powerful and are encased in a hard rubber protecting shell. Terminal wires from Magnets terminate on a Standard **R. S. A.** Terminal, all Binding Posts are **R. S. A.** Standard. A substantial hasp is provided for locking the instrument. When the cover is removed, all parts are in plain sight for inspection, and can be easily removed if required.

As the Lock is applicable to all standard type machines, fittings for the various applications are not included in list price, and must be ordered separately as indicated on following pages.

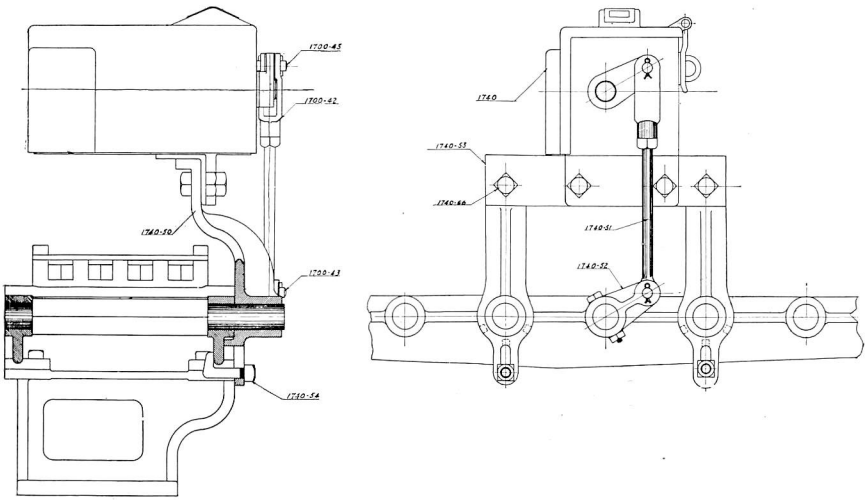
Trade No.	DESCRIPTION	List Price
1740–1	Electric Lever Lock with Six Contacts and "Normal" Lock Dog. Specify Magnet Resistance	$48.00
1740–2	Same as above with "Full Reverse" Lock Dog	48.00
1740–3	" " " " "Half Reverse" " "	48.00
	For each Contact complete, not required on above, deduct from list price	2.70
	Above prices are based upon Silver Contacts, for each Platinum Contact add to list price	1.30

STYLE "A" UNIVERSAL ELECTRIC LOCK



Parts of Style "A" Electric Lock

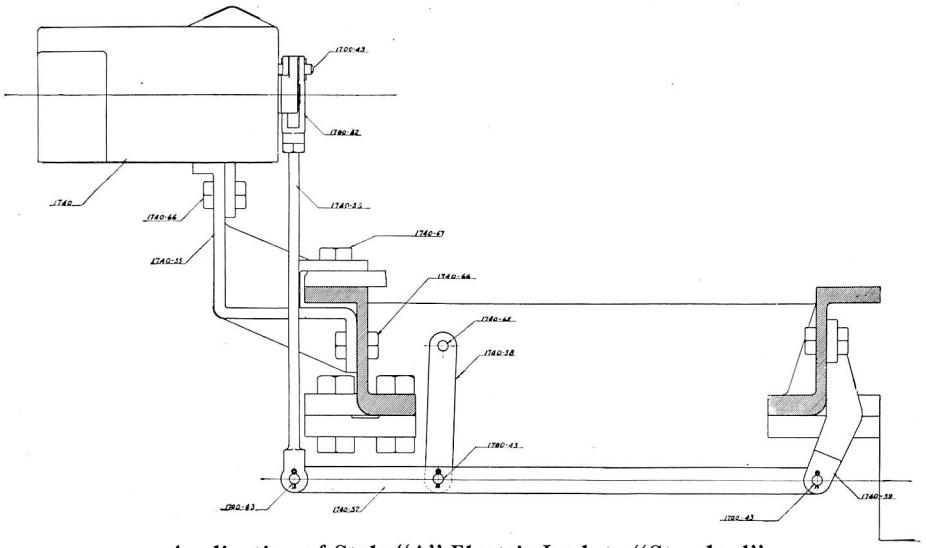
STYLE "A" UNIVERSAL ELECTRIC LOCK



Application of Style "A" Electric Lock to Saxby & Farmer Interlocking Machine

Trade No.	DESCRIPTION	List Price
1740–75	Fittings complete to apply Lock to S. & F. Interlocking Machine	$6.50
1740–50	Bracket, each	1.65
1740–51	Connecting Rod	.70
1740–52	Locking Shaft Crank with Bolt and Nut	1.10
1740–53	Angle Iron Support	.50
1740–54	Hook Bolt, each	.15
1700–42	Jaw for Connecting Rod	.50
1700–43	" Pin	.14
1740–66	Bolts and Nuts for 1740–53, each	.05

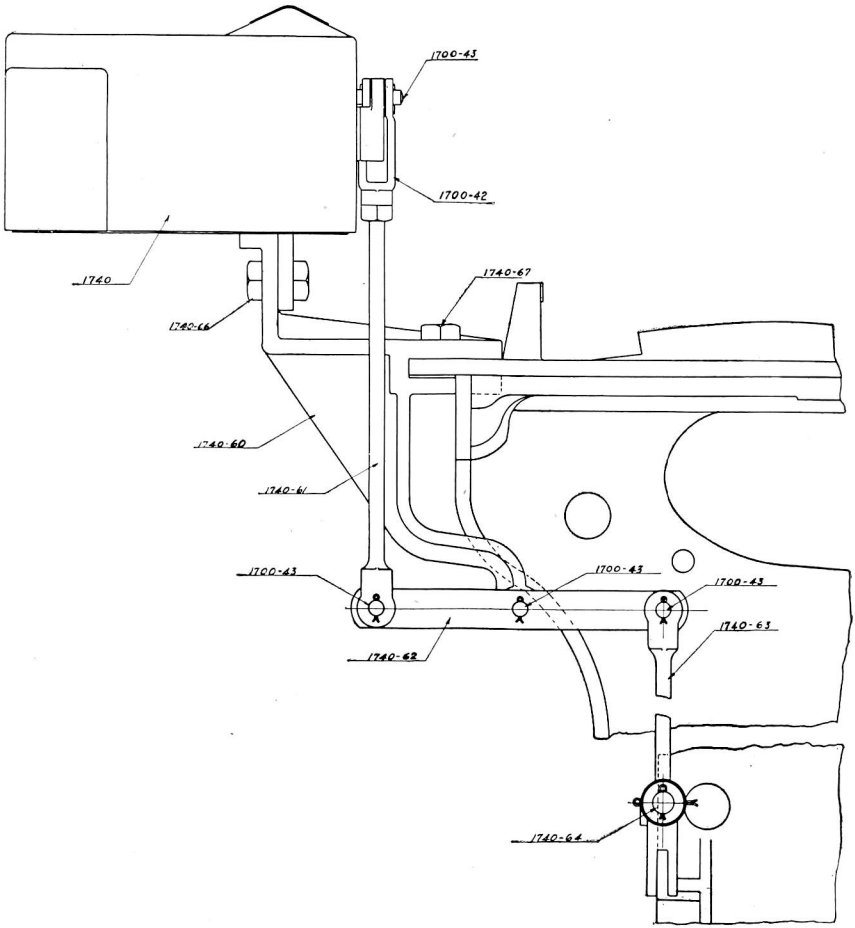
STYLE "A" UNIVERSAL ELECTRIC LOCK



Application of Style "A" Electric Lock to "Standard" Interlocking Machines

Trade No.	DESCRIPTION	List Price
1740–76	Fittings complete to apply Lock to "Standard" Interlocking Machines	$8.50
1740–55	Lever Bracket	3.35
1740–66	Bolts and Nuts for above, each	.05
1740–56	Connecting Rod	1.00
1740–57	" Link	1.34
1740–58	" "	.55
1740–59	Lock Bracket with Bolts and Nuts	.73
1700–42	Jaw	.50
1700–43	" Pin with Cotters	.14
1740–67	½" x 1" Hexagon Head Cap Screws	.04
1740–65	Pin with Cotter for fastening to Rocker of Machine	.10

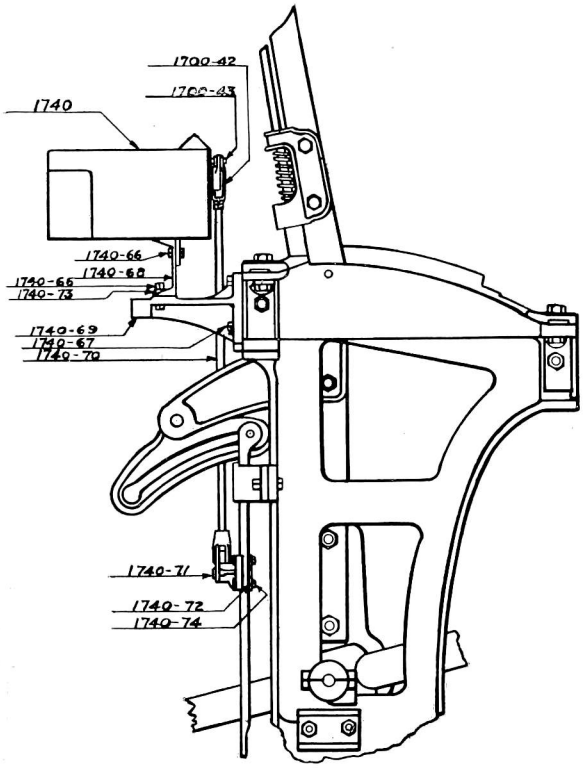
STYLE "A" UNIVERSAL ELECTRIC LOCK



Application of Style "A" Electric Lock to "National" Interlocking Machines

Trade No.	DESCRIPTION	List Price
1740–77	Fittings complete to apply Lock to "National" Interlocking Machine	$7.50
1740–60	Bracket complete with Cap Screws (1740–67) and Bolts (1740–66)	1.70
1740–61	Connecting Rod	1.00
1740–62	Lever	.38
1740–63	Tappet Connecting Rod	3.08
1740–64	Pin with Cotters	.14
1700–42	Jaw	.50
1700–43	" Pin with Cotters	.14

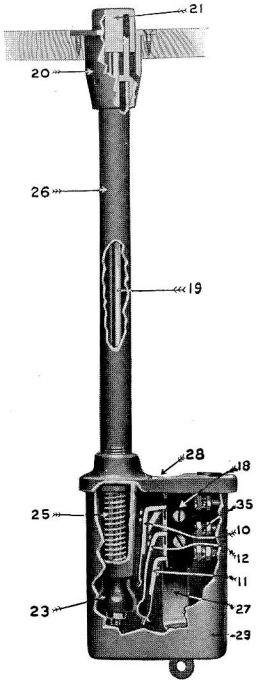
STYLE "A" UNIVERSAL ELECTRIC LOCK



Application of Style "A" Universal Electric Lock to "Johnson" Interlocking Machine

Trade No.	DESCRIPTION	List Price
1740–78	Fittings complete to apply Electric Lock to "Johnson" Interlocking Machine	$8.50
1740–69	Bracket complete with Cap Screws (1740–67)	1.56
1740–68	Channel Support complete with Bolts (1740–66) and Washers (1740–73)	.75
1740–70	Connecting Link	1.65
1740–71	Tappet Bar Bracket	.35
1740–72	" " Clamp and Bolts (1740–74)	.30
1700–42	Jaw	.50
1700–43	" Pin and Cotters	.14

STYLE "A" FLOOR PUSH



This Floor Push has been especially designed for use in Interlocking Towers and Block Stations to control Electric Lock Circuits, Code Signal Circuits, etc.

The entire working parts are located on ceiling below the operating floor and are enclosed in an iron case which may be locked with a padlock when desired. The Contacts are triple fingered sliding and self-cleaning heavy phosphor bronze springs to insure perfect operation.

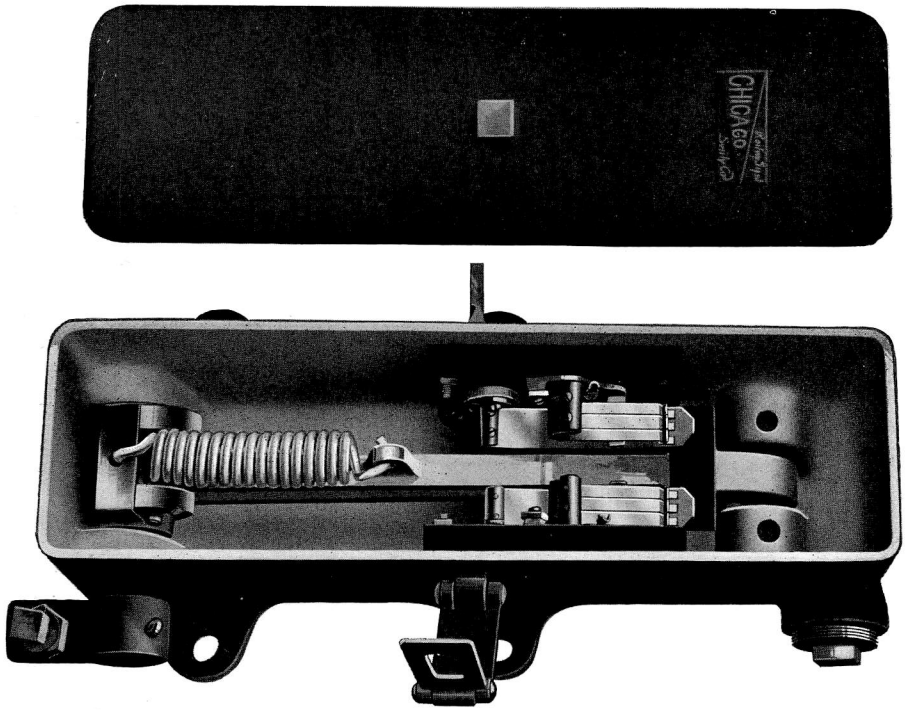
The upper end of Floor Push is so arranged that no water or dirt can run down into Contacts or other working parts.

Contact Springs are mounted upon a heavy slate base and provided with **R. S. A.** Binding Posts.

Trade No.	DESCRIPTION	List Price
1608–1	Style "A" Floor Push complete with One Normally Closed Contact	$6.00
1608–2	Style "A" Floor Push complete with One Normally Open Contact	6.00
1608–3	Style "A" Floor Push complete as shown with One Normally Closed and One Normally Open Contact	7.50
1608–10	Triple Fingered Normally Open Contact Spring complete with Fastening Rivets	1.50
1608–12	Center Contact Spring complete with Fastening Rivets	1.50
1608–11	Triple Fingered Normally Closed Contact Spring complete with Fastening Rivets	1.50

In ordering, specify distance between ceiling below and top of floor, so proper length pipe No. 1608–26 may be sent.

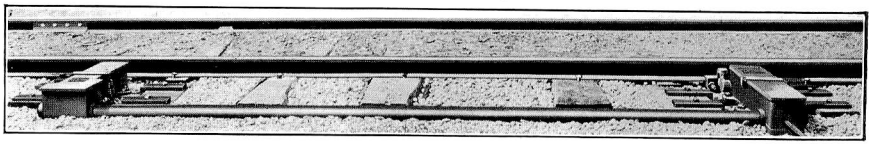
TRACK INSTRUMENTS



No. 550 Track Instrument

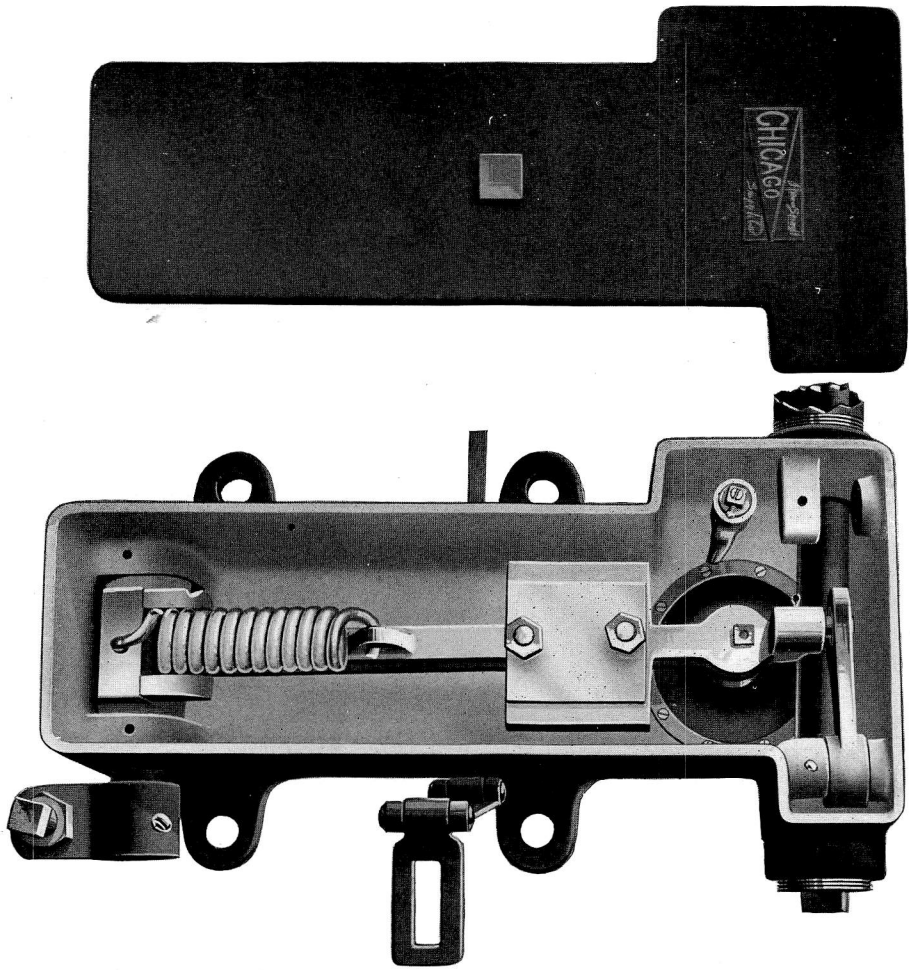
This Track Instrument is used in connection with Highway Crossing Alarms, Indicators, Annunciators, etc., etc., operated by means of line wires. The Instrument is supported upon two heavy steel straps between two ties, on outside of rail, and is operated by the natural spring and depressions of the rail as a train or car passes over same.

The Contact Instrument (No. 550) is furnished with one or two sets of Contacts. The Contacts are mounted upon heavy enameled slate bases within the case, and consist of heavy three fingered silver pointed phosphor bronze springs adjustable to large quick breaks for high voltages. The instrument is very sensitive, and is so adjustable that the slightest depression of rail from cars passing over same will open and close the Contacts.



Track Instruments as Installed on Single Track to Give Indications for Trains Running from Right to Left

TRACK INSTRUMENTS

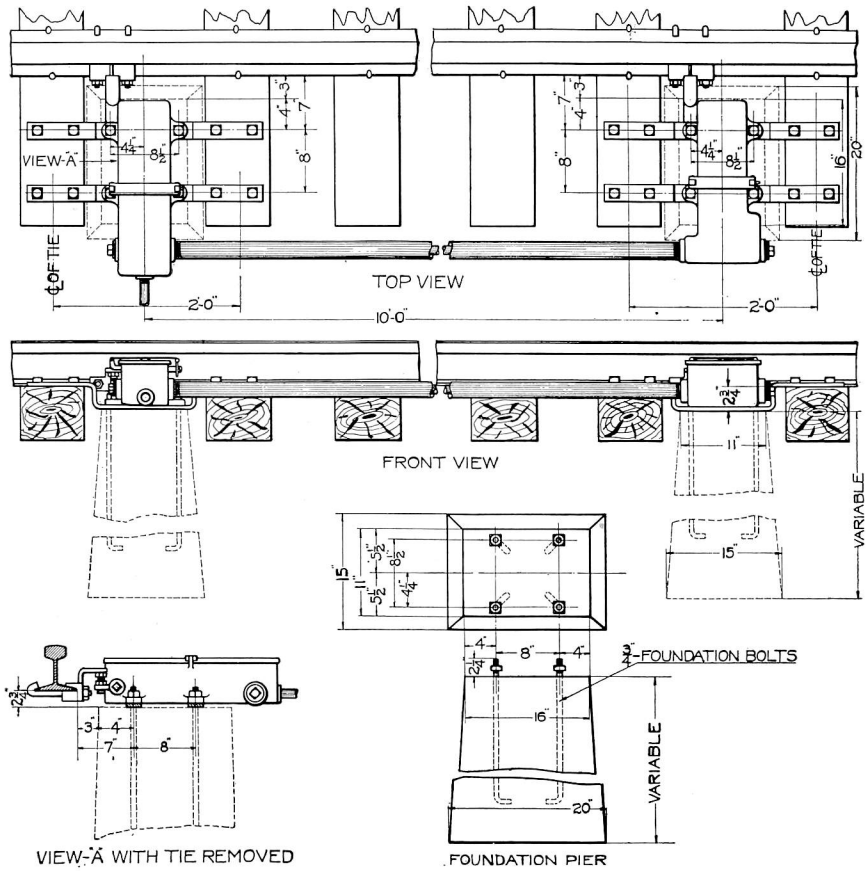


No. 551 Track Instrument

Track Instrument No. 551 is used in connection with the Contact Instrument when used on "Single Track" to close or open circuits for trains running in **one direction only**: the two Instruments, about 10 feet apart, are connected with 2″ pipe carrying the operating pipe which has a Steel Plunger on the end within the "Contact Instrument." The Plunger locks the Contact operating arm of the "Contact Instrument", and prevents operation of the Contacts for trains approaching from direction so as to first pass over the No. 551 Instrument. Trains running in opposite direction, viz.: over "Contact Instrument," first, will cause the arm to raise and operate the Contacts before the Plunger from the other Instrument can lock it into neutral position. An air dash pot is provided in No. 551 Instrument to prevent too early unlocking for slow train movements.

Both Instruments are so arranged that they may be connected right or left, and when ordered for "Single Track" operation are shipped complete as shown, ready to attach to ties and rail. The tops of Instruments when properly installed are considerably below top of rail, and being heavy and strong are not likely to become broken from hanging equipment.

TRACK INSTRUMENTS



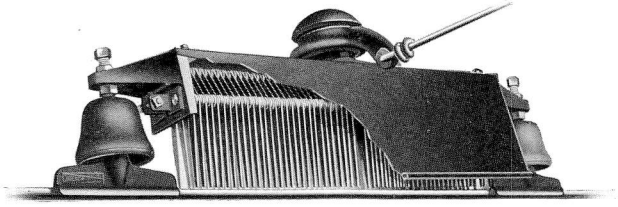
Track Instrument Installed on Single Track Operating in One Direction Only

The Boxes are machined throughout, and all parts are interchangeable. Covers are gasketed and provided with a spring latch holding same well in place and making Boxes dust and weather proof. Cases of Contact Instruments are tapped for 1" Pipe in which wires may be safely brought into same. At locations where frost is apt to heave track, a concrete foundation with foundation bolts in addition to the strap fastenings bolted to ties is recommended.

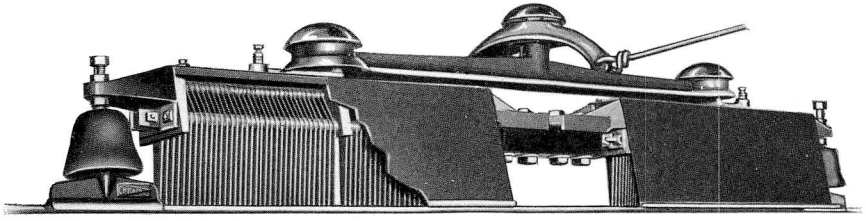
Trade No.	DESCRIPTION	List Price
550	Contact Instrument with One Normally Closed and One Normally Open Contact, complete as shown	$55.00
550–50	Contact Instrument with Two Normally Closed Contacts	55.00
550–51	" " " " Open "	55.00
550–52	" " " One " Closed "	43.00
550–53	" " " " " Open "	43.00
551	Track Instrument complete with 2" Connecting Pipe and Plunger Rod Pipe for use with Contact Instrument on Single Track	50.00
1620–1	Normally Open or Closed Silver Pointed Three Fingered Contact Spring	2.50
550–16	Long Straight Silver Pointed Contact Spring	3.00

Blue Prints and Specifications with full instructions for successful installations sent upon request.

TROLLEY WIRE CONTACTS



Single Trolley Contact



Double Trolley Contact

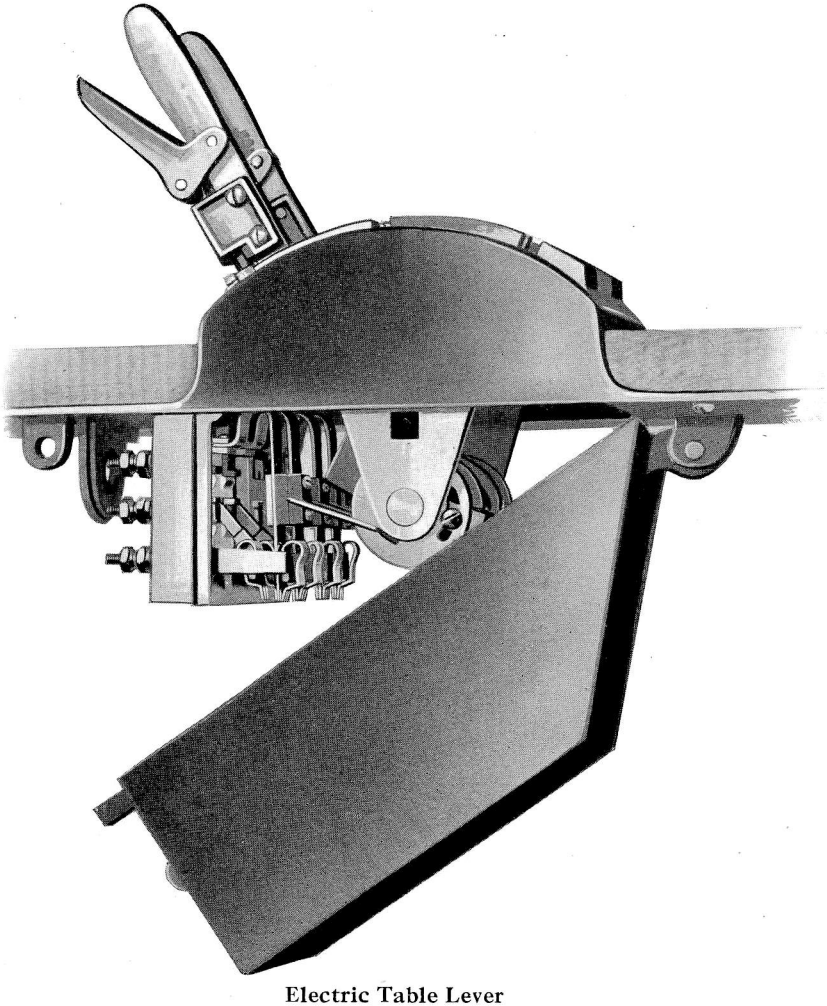
These Contacts are used on Electric Railways to operate Crossing Bells, Block Signals, Indicators, Annunciators, etc., etc., Single Contacts at locations where a Contact is required each time a trolley wheel passes, Double Contacts on single track lines where it is desired to operate signals for trains running in one direction only, which is accomplished with two Relays or "One Way" Interlocking Relays, Triple Contacts (not illustrated) in connection with Block Signals, etc., where Three Contacts, one after the other, by passing trolley wheels is required.

The Electric Contact is made between the phosphor bronze Contact Springs to trolley wire by passing trolley wheels and is positive in operation at any trolley speed. The Contact Springs are protected from rain and sleet by a weatherproof hood. The instruments are adjustable to any required condition, and if properly installed are warranted to cause Contacts to be made by each passing trolley wheel.

The Contacts are arranged to screw into studs of hangers and are equipped with ears to support the wire in usual way. Orders must specify size of hanger stud, kind and size of Trolley Wire so that proper hangers and ears may be furnished.

Trade No.	DESCRIPTION	List Price
560	Single Trolley Contact complete as shown ready to attach to Stud of Hanger, each	$28.00
561	Double Trolley Contact complete as shown ready to attach to Stud of Hanger, each	56.00
562	Triple Trolley Contact complete, ready to attach to Stud of Hanger, each	90.00

ELECTRIC TABLE LEVER



Electric Table Lever

Size above Table:—Width 5¾", Length 9", Height 7½".

Used to operate Two or Three Position Manually Controlled Power Operated Signals, Electric Train Order Signals, Outlying Electric Switch Locks and Electrically Operated Switch Movements.

ELECTRIC TABLE LEVERS

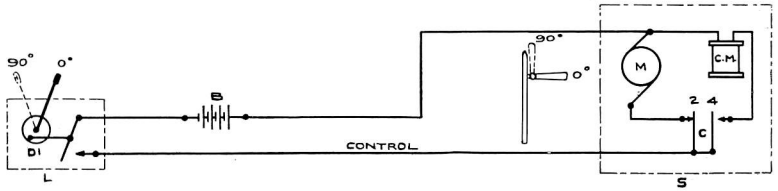
These Levers are small and compact and each Lever can be equipped with a maximum of two Front and two Back Contacts or any combination thereof. They are furnished in Two Lever Units which may be mounted alongside each other and will present a Single Unit appearance, regardless of number of Levers. Locking between any two Levers is furnished when specified.

Contacts can be adjusted to make or break at any part of the stroke by means of easily accessible slotted discs. The Contact Springs are made of heavy phosphor bronze, Front and Back Contact Spring are three fingered Platinum or Silver, all are insulated from the frame and mounted on a heavy Two Unit Porcelain Base equipped with **R. S. A.** Standard Binding Posts. All working parts are substantially constructed, and are guaranteed to stand up under severe working conditions.

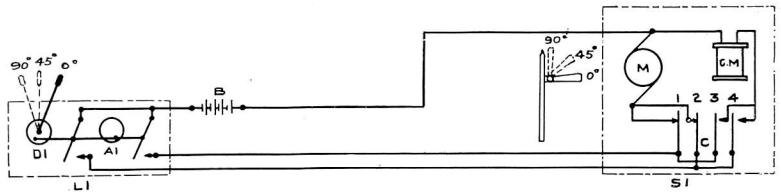
Cover on under side of table can be locked. These Levers may be used for a variety of cases, where Manually Controlled Electric Signals are used such as Electric Train Order or Manually Controlled Electric Block Signals, Electric Switch Locks, Power Operated Switch Movements, etc., as shown on the following pages.

Trade No.	DESCRIPTION	List Price
610–1	Two Lever Three Position Electric Table Lever with Locking, Lever equipped with Two Front or Two Back Contacts....	.....
610–4	Same as above except without Locking.....	.....
610–5	One Lever Three Position Electric Table Lever equipped with Two Front or Two Back Contacts.....	.....
610–2	Two Lever Two Position Electric Table Lever with Locking, each Lever equipped with One Front or One Back Contact	.....
610–3	Same as above except without Locking.....	.....
610–6	One Lever Two Position Electric Table Lever equipped with One Front or One Back Contact.....	.....
	Above prices are based on Silver Contacts, for each Platinum Contact in place of Silver Contact add to list price.....	$1.30
	Orders should specify whether Contacts are to be Front or Back Contacts. (Front Contacts are normally closed with Lever in normal position.)	
	Upon receipt of Specifications, Levers can be furnished with any desired combination of Contacts other than listed above. When ordering Locking on Levers, style of Locking required must be specified.	

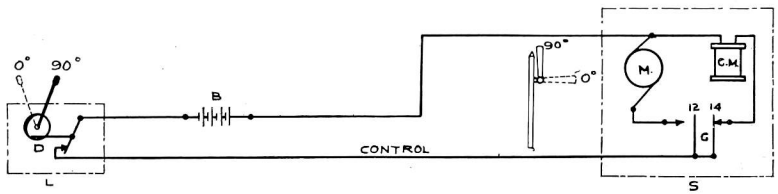
ELECTRIC TABLE LEVER



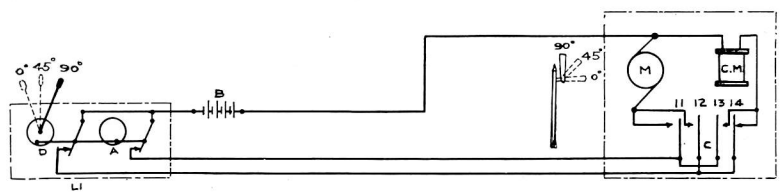
Two Position (Normal Danger) Manually Controlled Signal Circuit No. 5201



Three Position (Normal Danger) Manually Controlled Signal Circuit No. 5202



Two Position (Normal Clear) Manually Controlled Signal Circuit No. 5203



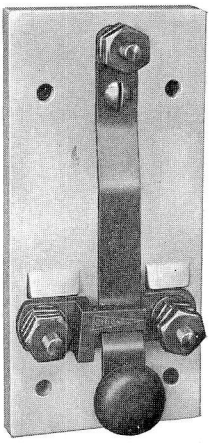
Three Position (Normal Clear) Manually Controlled Signal Circuit No. 5204

L—Two Position Electric Table Lever.
L1—Three " " " "
A—45 deg. Segment Open when Lever is pulled half way.
A'—45 deg. Segment Closed when Lever is pulled half way.
D—90 deg. Open when Lever is pulled entirely over.
D'—90 deg. Closed when Lever is pulled entirely over.
B'—Battery or Power.
S—Two Position Motor Driven Semaphore Signal.
S1—Three " " " " "

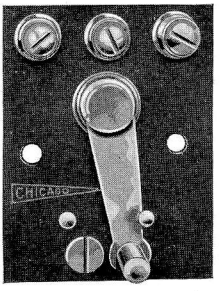
M—Motor.
CM—Clutch Magnet.
C—Circuit Controller.
11—Closes at 45 deg.
12— " " 90 "
13— " " 47 "
Opens at 43 "
14— " " 88 "
1— " " 45 "
2— " " 90 "
3—Closes at 43 "
Opens at 47 "
4—Closes at 88 "

STRAP KEYS AND SWITCHES

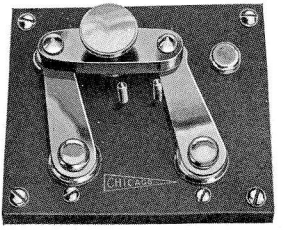
This Strap Key is especially made for heavy duty Railway Signal Work. It is furnished with heavy Porcelain Base, non-turnable Binding Posts and with one normally closed and one normally open Contact. Contact Spring is of best Phosphor Bronze equipped with a large Hard Rubber Button. The Contacts are sliding and self-cleaning and of large carrying capacity. Size 5″ x 2⅜″.



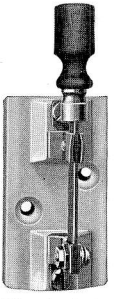
No. 220



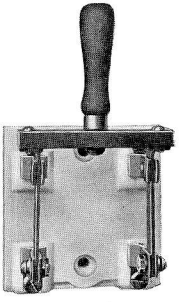
No. 221-2



No. 222-1



No. 223-1



No. 224-1

Trade No.	DESCRIPTION	List Price
220	Porcelain Base Strap Key as shown	$3.00
221–1	Hard Rubber Switch with Binding Posts, One Point, each	2.00
221–2	" " " " " " Two " "	2.50
221–3	" " " " " " Three " "	3.00
221–4	" " " " " " Four " "	3.50
222–1	Hard Rubber Nickel Trimmed Pole Changing Switch, Back Connected	3.50
222–2	Hard Rubber Nickel Trimmed Pole Changing Switch, Front Connected	4.00
223–1	Single Pole Single Throw, 15 Ampere Knife Switch	.75
223–2	" " Double " 15 " " "	1.30
224–1	Double " Single " 15 " " "	.90
224–2	" " Double " 15 " " "	1.65