BLUE CODE PRINTER SWITCH RELAY BANK

Selector for early telegraph receiver. Received special code signals from telegraph line and converted them to signals for working on experimental typewheel printer. Decoded received signals into permutation of eight magnet pulses instead of 64 unique magnet pulses for operating individual type base. Circuit was a variation of the original F. D. Pearne selector circuit showing Patent 894,044, which was used with regular typewriters as printing units.

YEARS PRODUCED & QUANTITY: 1903 Prototype

PRIMARY CUSTOMER(S):

CLASSIFICATION CODE:

MUSEUM EQUIPMENT CODE: 9.2A-1

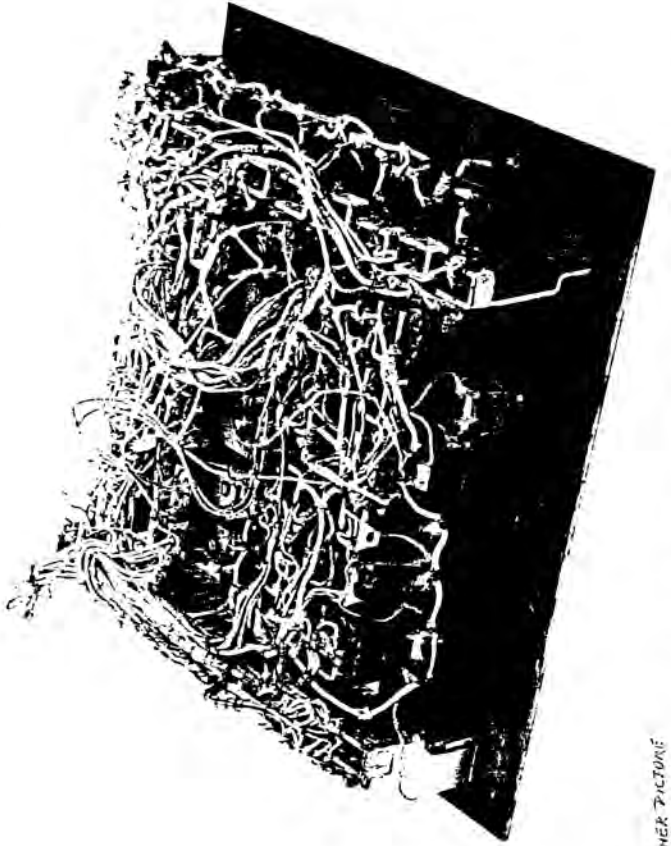
TECHNICAL BULLETINS & SPECS: Engr. Drwg. C. L.

PATENT NO(S): 891206-27 891130-3,5 871111-19

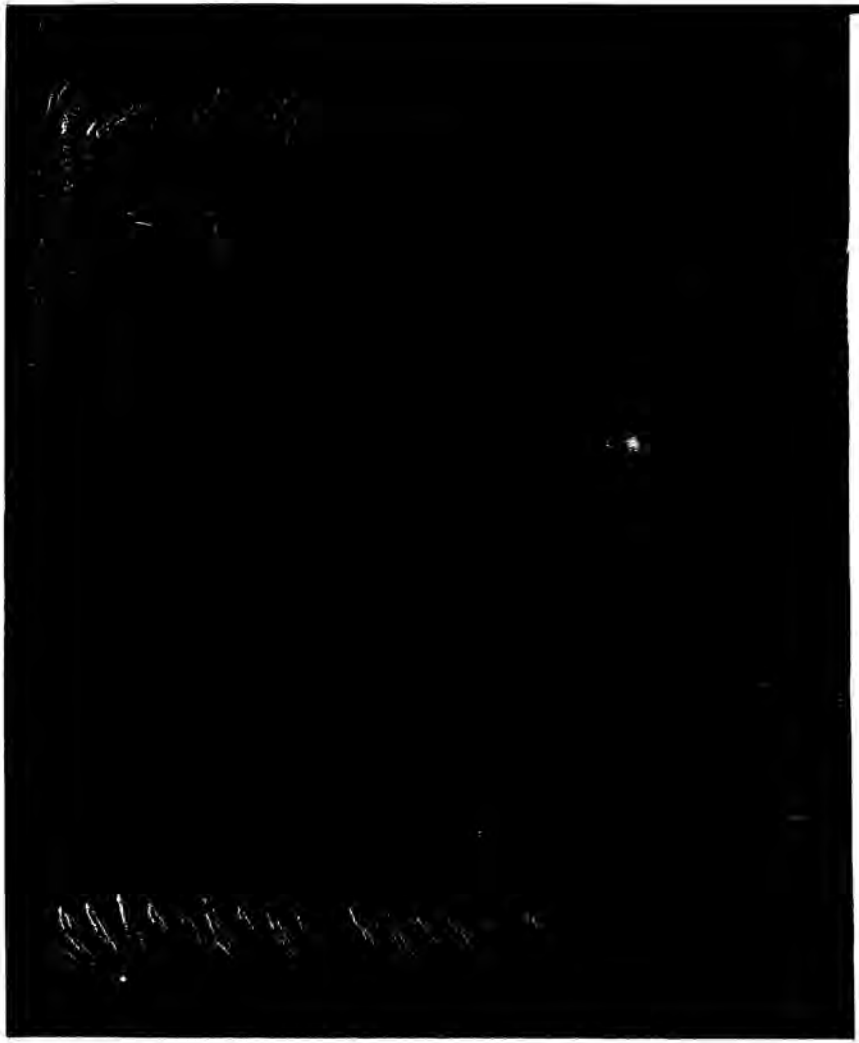
PATENT(S): No. 812,402

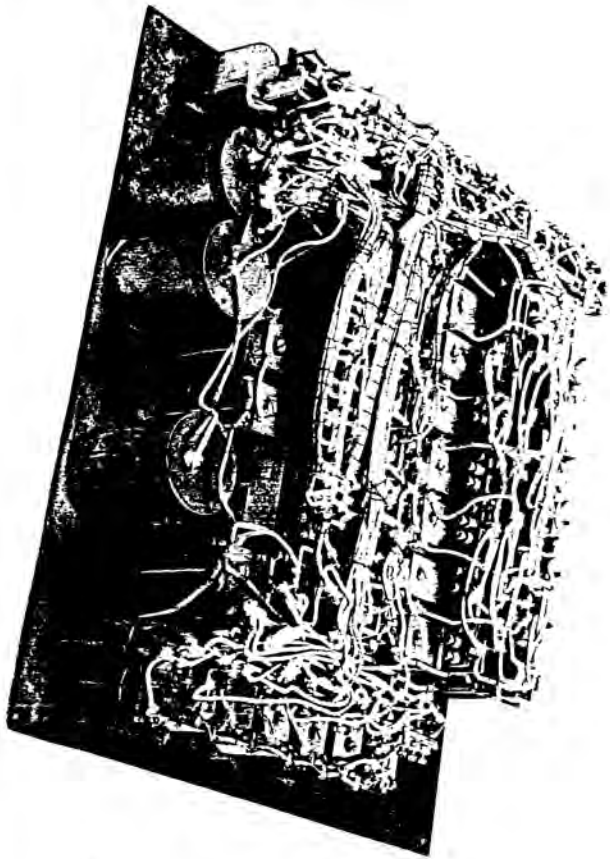
LIBRARY REFERENCE(S):

There are two slightly different units in box.



SEE OTHER PICTURE BEHIND





2,

REMOTE CONTROLLED SWITCH

A remotely controlled electrical switch with unusually extra heavy duty contacts used by railroads to turn on motors, lights, switch semiphores, etc.

YEARS PRODUCED & QUANTITY: 1900 Prototype

PRIMARY CUSTOMER(S): Railroads

CLASSIFICATION CODE:

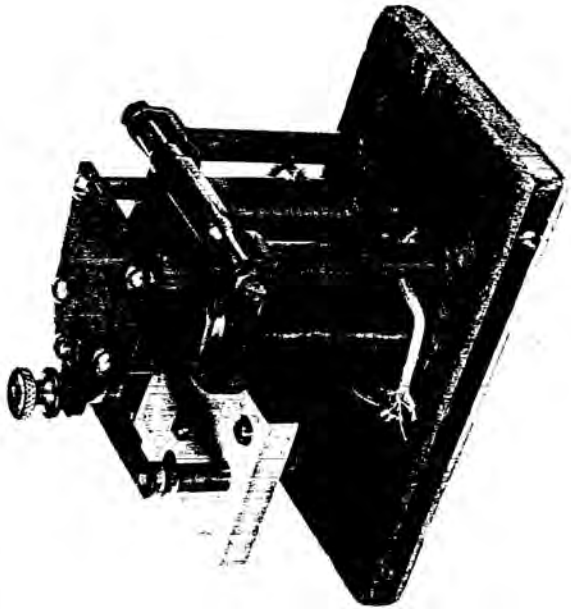
MUSEUM EQUIPMENT CODE: 9.2A-2

TECHNICAL BULLETINS & SPECS:

PHOTO NO(S): 280501-35 631111-12

PATENT(S):

LIBRARY REFERENCE(S):



SELECTING RELAY (KRUM-FEARNE)

Selecting relay for controlling local equipment from telegraph line signals. Had locking type polar relay with two or three positions, which could be locked up when extreme end positions were selected. Also included unlocking means. First record of collaboration of Frank Fearne and Charles Krum on telegraph developments. Patent filed February 3, 1902, and issued March 15, 1904. Used in early printing telegraph experiments. Became obsolete as Krum invented improved relays and the control circuitry changed to new forms.

YEARS PRODUCED & QUANTITY: 1901-02 Prototype

PRIMARY CUSTOMER(S):

CLASSIFICATION CODE:

MUSEUM EQUIPMENT CODE: 9.2A-3

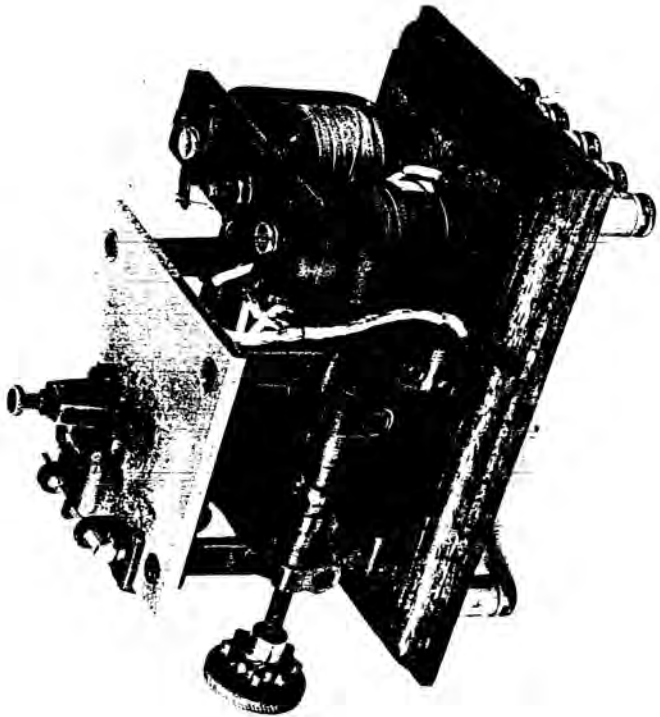
TECHNICAL BULLETINS & SPECS: Engr. Frank Fearne/Charles Krum

PHOTO NO(S): 28120c-2l. 631111-20

PATENT(S):

LIBRARY REFERENCE(S):

4



Donated to Edison Institut

EARLY RELAY

This relic of early - day telegraphy could have been a pole changing, sending relay to drive 5 circuits, although the arrangement of contacts on the top might have been for other purposes. The complex construction of the relay indicates that the designer was struggling with perhaps some of our problems.

YEARS PRODUCED & QUANTITY:

PRIMARY CUSTOMER(S):

CLASSIFICATION CODE:

MUSEUM EQUIPMENT CODE: 9.2A-L

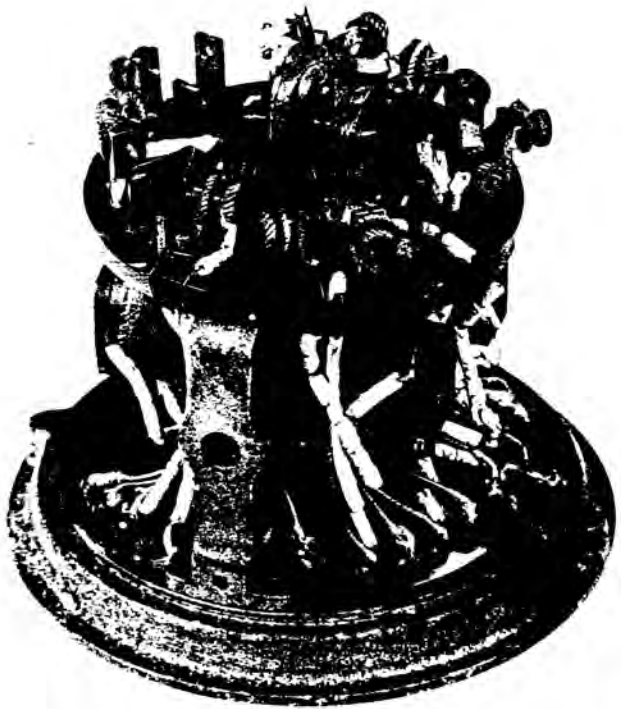
TECHNICAL BULLETINS & SPECS:

PHOTO NO(S): 281206-23 631111-21

PATENT(S):

LIBRARY REFERENCE(S):

5



SWITCH RELAY BANK (X870)

The object of this relay bank was to provide improved selecting means for a system in which all shifting parts had but a single movement and were operated by positively acting relays and which obviated the necessity of employing a variably acting switch mechanism. This relay made it possible for one character to be printed while the next character was being selected.

YEARS PRODUCED & QUANTITY: C. 1938

PRIMARY CUSTOMER(S):

CLASSIFICATION CODE:

MUSEUM EQUIPMENT CODE: 9.2 A-5

TECHNICAL BULLETINS & SPECS:

PHOTO NO(S): 281130-4; Polaroid TV-18

PATENT(S): No. 1,199,011, C. L. Krum and H. L. Krum, Printing Telegraph, Filed 1/22/35 and granted 9/19/39

LIBRARY REFERENCE(S):

POLAR REPEATING RELAY

This Telegraph Signal Repeating Relay designed for Western Union and the railroads was one of the few relays of this type to employ spring jack connectors. It was also known as a swinging beam Pole Changer and as a direct repeating relay.

YEARS PRODUCED & QUANTITY: 1910 Production

PRIMARY CUSTOMER(S): Railroads, Western Union

CLASSIFICATION CODE:

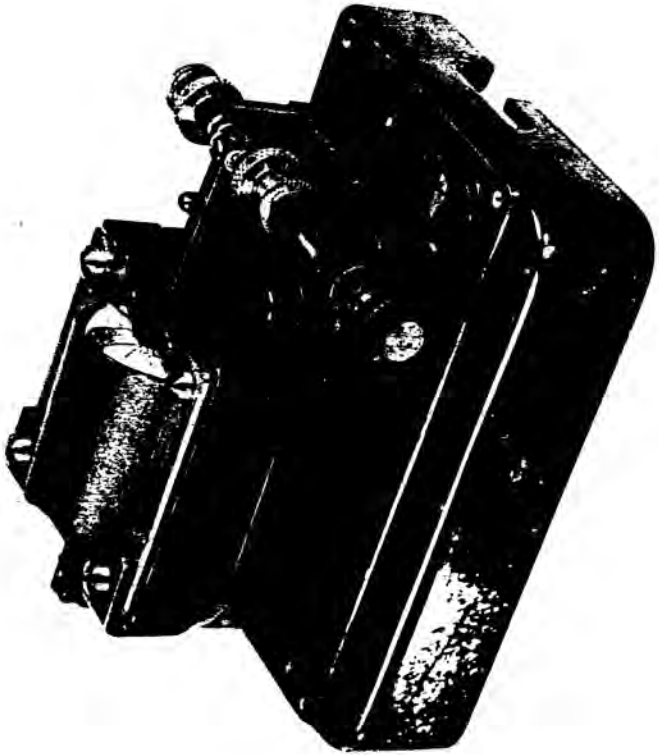
MUSEUM EQUIPMENT CODE: 9.28-1

TECHNICAL BULLETINS & SPECS: Engr. Kleinschmidt

PHOTO NO(S): 280501-35 631111-13

PATENT(S):

LIBRARY REFERENCE(S):



POLAR RELAY 1A

Telegraph Repeating Relay used for sending and Polar repeating. One of the first widely used Polar relays suitable for multiplex or MUX telegraphy. Used primarily to upgrade telegraph repeaters from Morse to printer. This was a very important part of the Telegraph Plant spanning the gap between the early printing telegraph and the advent of carrier telegraph. One of its disadvantages was the requirement for upright mounting.

YEARS PRODUCED & QUANTITY:

PRIMARY CUSTOMER(S): Western Union Telegraph Co. and Railroads

CLASSIFICATION CODE:

MUSEUM EQUIPMENT CODE: 9.2E-2

TECHNICAL BULLETINS & SPECS: Engr. Wheatstone

PHOTO NO(S): 650319-51

PATENT(S):

LIBRARY REFERENCE(S):

8

VIBRATOR RELAY-70

Polar relay sensitivity improving device. Applied on circuits receiving weak or distorted signals. This device serves as an aid to the operation of the relay. It was provided with tuning arrangements so that the vibrator can be adjusted to the speed of signaling. By this means an auxiliary EMF is applied to the Polar relay which accelerates the transit of the armature and improves contact pressure. By careful application of vibrators the signalling speed could be increased as much as 50 to 75 percent.

YEARS PRODUCED & QUANTITY: 1910 Prototype

PRIMARY CUSTOMER(S): Western Union, Postal, Railroads

CLASSIFICATION CODE:

MUSEUM EQUIPMENT CODE: 9.2B-3

TECHNICAL BULLETINS & SPECS: Engr. Kleinschmidt

PHOTO NO(S): 290501-37 631111-24

PATENT(S):

LIBRARY REFERENCE(S):

VIBRATOR RELAY

Polar relay sensitivity improving device. Applied on circuits receiving weak or distorted signals. The device serves as an aid to the operation of the relay. It was provided with tuning arrangements so that the vibrator can be adjusted to the speed of signalling. By this means an auxiliary EMF is applied to the Polar relay which accelerates the transit of the armature and improves contact pressure. By careful application of vibrators the signalling speed could be increased as much as 50 to 75 percent.

YEARS PRODUCED & QUANTITY: Prototype

PRIMARY CUSTOMER(S): Western Union, Postal, Railroads

CLASSIFICATION CODE:

MUSEUM EQUIPMENT CODE: 9.2B-4

TECHNICAL BULLETINS & SPECS:

PHOTO NO(S): 280501-46 631111-14

PATENT(S):

LIBRARY REFERENCE(S):

REPEATING RELAY

Telegraph Repeating Relay (also called Swingingbeam Pole Changer), adopted for signal bias adjustment in service. Used primarily on Manual Morse Circuits operating on open wire facilities exposed to rapidly changing weather conditions. Limited use on early day low speed (40 wpm) printer circuits. Made obsolete with replacement of Morse circuits by printer circuits.

YEARS PRODUCED & QUANTITY: 1930 Production

PRIMARY CUSTOMER(S): Western Union

CLASSIFICATION CODE:

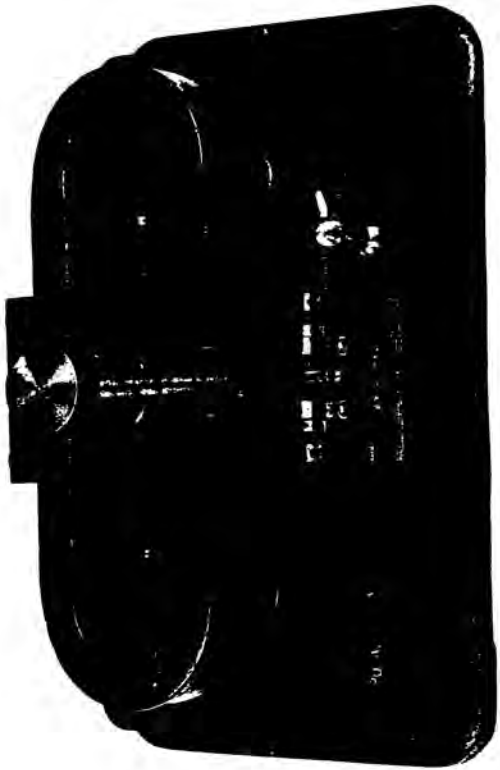
MUSEUM EQUIPMENT CODE: 9.2B-5

TECHNICAL BULLETINS & SPECS: Engr. Kleirschmidt

PHOTO NO(S): 560709-34 631111-11

PATENT(S):

LIBRARY REFERENCE(S):



SPACING INTERVAL TIMER

A spacing interval timer's function is to detect lines that open for an interval exceeding that for which the mechanism is set. It resets automatically each time the line is closed. The time interval is varied by adjusting the travel limits of the sounder bar. The escapement is driven by the sounder return spring.

YEARS PRODUCED & QUANTITY: Prototype

PRIMARY CUSTOMER(S): Railroads

CLASSIFICATION CODE:

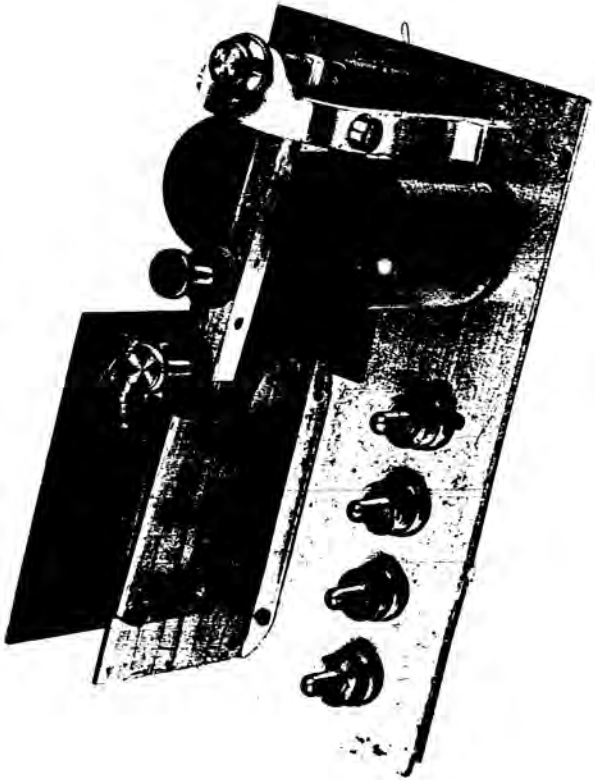
MUSEUM EQUIPMENT CODE: 9.2B-6

TECHNICAL BULLETINS & SPECS: Engr. Kleinschmidt

PHOTO NO(S): 281128-3 631111-15

PATENT(S):

LIBRARY REFERENCE(S):



POLAR RELAY

Telegraph Repeating Relay (also called Swingingbeam Pole Changer) with Neutral or Polar Input and Neutral or Polar Output. Especially designed for easy adjustment in service. Marking or spacing bias may be corrected by advancing or retracting either one of the two moving coils. Sensitivity may be increased by retracting both coils or decreased by advancing both coils. Improved operation on common side of Quad circuits. Used almost exclusively on Manual Morse Circuits operating on open wire facilities exposed to rapidly changing weather conditions. Limited use on early day low speed (40 wpm) Printer circuits. Made obsolete with the replacement of Morse circuits by printers.

YEARS PRODUCED & QUANTITY: 1930 Production,W.U., A.T.&T. Railroads

PRIMARY CUSTOMER(S):

CLASSIFICATION CODE:

MUSEUM EQUIPMENT CODE: 9.20-1

TECHNICAL BULLETINS & SPECS:

PHOTO NO(S): 631111 -10

PATENT(S):

LIBRARY REFERENCE(S):

INTERVAL TIMER

To control the lower limit of the length of time a pair of contacts will open. A spring loaded lever drives an adjustable friction break through a gear train. The timed interval is adjustable by varying the tension of the lever return spring and/or the shoes in the friction brake.

YEARS PRODUCED & QUANTITY: Prototype

PRIMARY CUSTOMER(S):

CLASSIFICATION CODE:

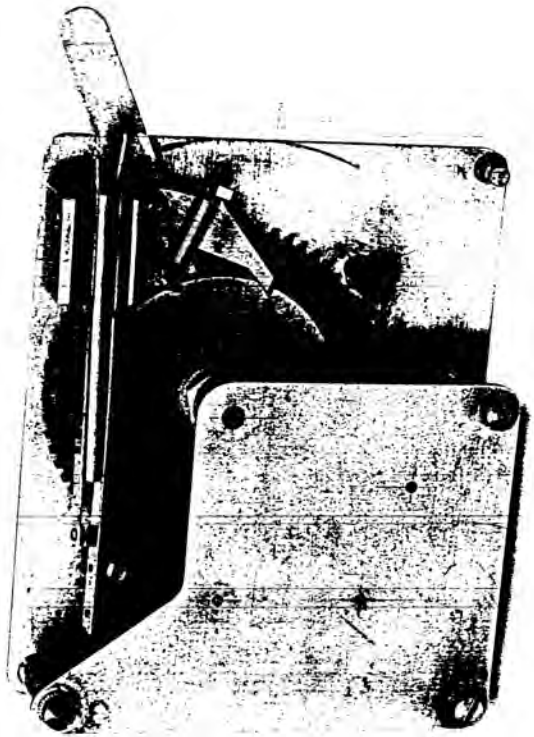
MUSEUM EQUIPMENT CODE: 9.2C-2

TECHNICAL BULLETINS & SPECS:

PHOTO NO(S): 371118-85,86 631111-16

PATENT(S):

LIBRARY REFERENCE(S):



INTERVAL TIMER

Interval Timer. To mechanically control the interval of time a pair of contacts will be opened by one operation of a pushbutton. Interval determined by a flywheel and spring mechanism much like the escapement wheel and hair spring in a watch.

YEARS PRODUCED & QUANTITY: Prototype

PRIMARY CUSTOMER(S):

CLASSIFICATION CODE:

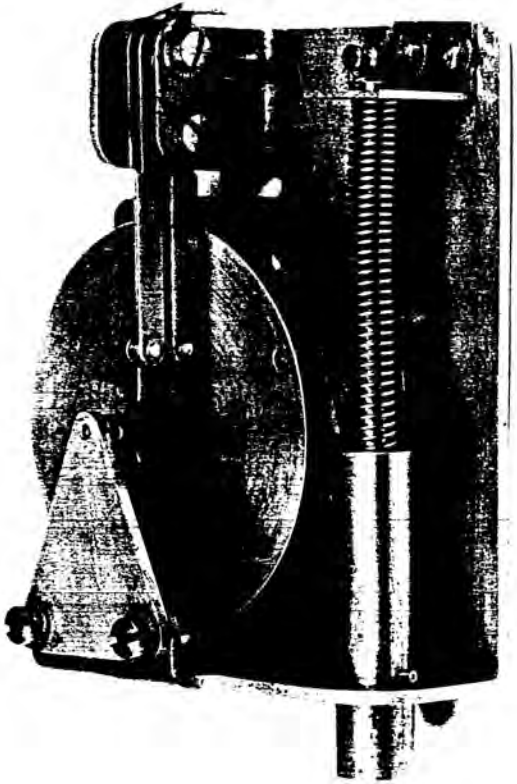
MUSEUM EQUIPMENT CODE: 9.2C-3

TECHNICAL BULLETINS & SPECS:

PHOTO NO(S): 371118-87,88 631111-17

PATENT(S):

LIBRARY REFERENCE(S):



CONTROL BOX RELAY

This mechanism detects when the frequency of oscillation in an electrical circuit matches a known resonant mechanical oscillation frequency. A magnetic armature mounted on a fixed spiral shaft is under the influence of an oscillating magnetic field excited by a coil carrying the alternating current. When the mechanical and electrical frequencies are resonant, the angular oscillation of the magnetic armature is maximum and closes the appropriate alarm or control contacts. This piece is valuable mainly as an antique curio.

YEARS PRODUCED & QUANTITY: Prototype

PRIMARY CUSTOMER(S):

CLASSIFICATION CODE:

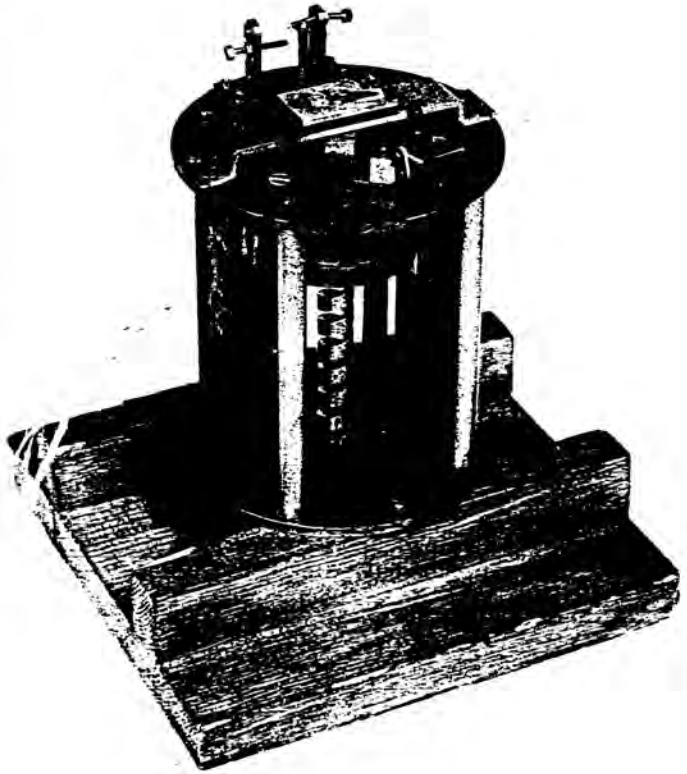
MUSEUM EQUIPMENT CODE: 9.20-4

TECHNICAL BULLETINS & SPECS:

PHOTO NO(S): 32029-7 631111-18

PATENT(S):

LIBRARY REFERENCE(S):



KEYBOARD TRANSMITTER
(Morkrum)

Keyboard transmitter with conventional cam and contact sending distributor modified with the addition of segment and brush;type receiving distributor, apparently for use with a multi-magnet typing unit such as Model 12

YEARS PRODUCED & QUANTITY: 1928 Prototype

PRIMARY CUSTOMER(S):

CLASSIFICATION CODE:

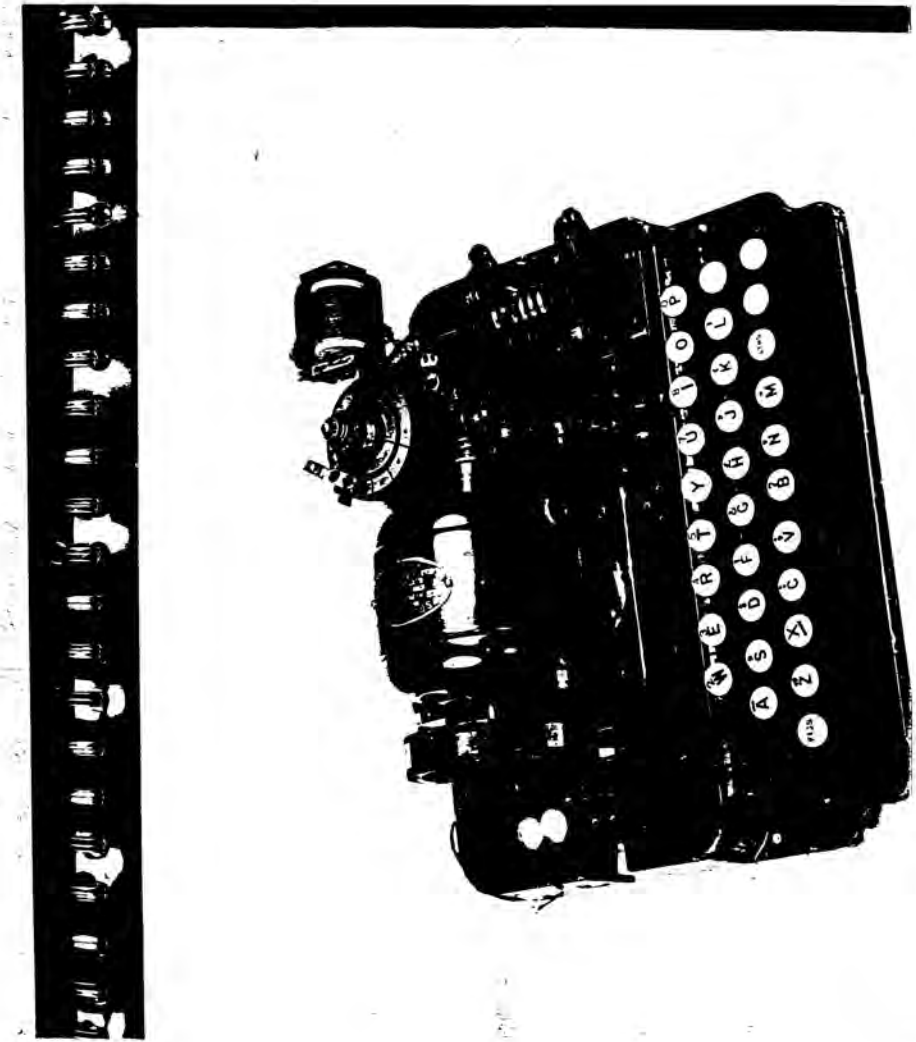
MUSEUM EQUIPMENT CODE: 9.3B-1

TECHNICAL BULLETINS & SPECS:

PHOTO NO(S): 281206-7 631111-09

PATENT(S):

LIBRARY REFERENCE(S):



KLEINSCHMIDT SIMPLEX KEYBOARD

Early Kleinschmidt Keyboard SIMPLEX uses Wheatstone* Perforator Type selection means to operate parallel output contracts.

*Character coding is notched in key lever; transfer of information to contacts through parallogram lever arrangement.

YEARS PRODUCED & QUANTITY : 1927 Production

PRIMARY CUSTOMER(S):

CLASSIFICATION CODE:

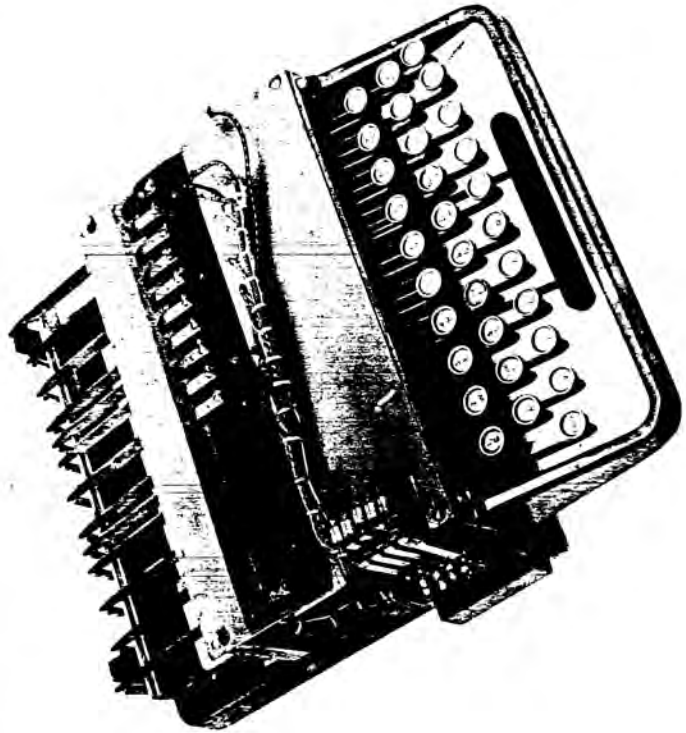
MUSEUM EQUIPMENT CODE: 9.38-2

TECHNICAL BULLETINS & SPECS:

PHOTO NO(S): 270202-2,3 631108-75,76

PATENT(S):

LIBRARY REFERENCE(S):



KLEINSCHMIDT TYPE 5 PRINTER KEYBOARD

Keyboard and base for Kleinschmidt Type 5 Printer.

NOTE: Code bar and single contact transmitter distributor arrangement - cam is shaft with pin extensions.

YEARS PRODUCED & QUANTITY: 1928 Production

PRIMARY CUSTOMER(S):

CLASSIFICATION CODE:

MUSEUM EQUIPMENT CODE: 9.38-3

TECHNICAL BULLETINS & SPECS:

PHOTO NO(S): 281006-2 631108-51,52

PATENT(S):

LIBRARY REFERENCS(S):

EXPERIMENTAL KEYBOARD
(Saw Tooth Code Bars)

Experimental keyboard. Saw tooth code bars.

NOTE: 4 position keylever fulcrum arrangement.

YEARS PRODUCED & QUANTITY: 1920 Prototype

PRIMARY CUSTOMER(S):

CLASSIFICATION CODE:

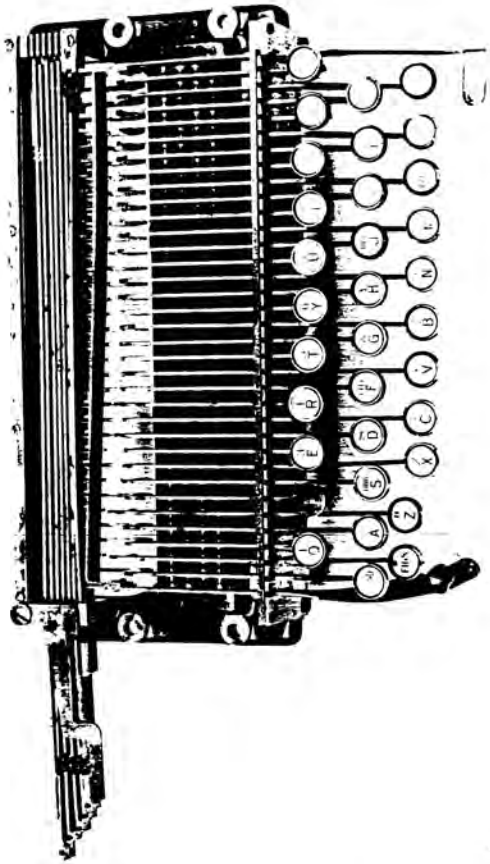
MUSEUM EQUIPMENT CODE: 9.38-4

TECHNICAL BULLETINS & SPECS:

PHOTO NO(S): 631108-44 421106-99

PATENT(S):

LIBRARY REFERENCE(S):



EXPERIMENTAL KEYBOARD
(Parallel Readout Contacts)

Experimental keyboard with parallel read-out contacts. Selection is based on Wheatstone Perforator type, keylever coded, parallelogram system.

YEARS PRODUCED & QUANTITY: Prototype

PRIMARY CUSTOMER(S):

CLASSIFICATION CODE:

MUSEUM EQUIPMENT CODE: 9.3B-5

TECHNICAL BULLETINS & SPECS:

PHOTO NO(S): 280501-24 631108-39,40

PATENT(S):

LIBRARY REFERENCE(S):