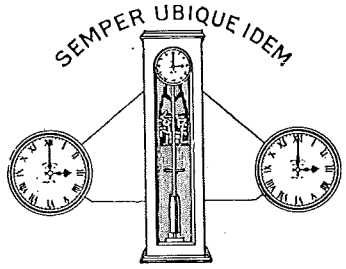
This document c1930
but was still in print until 1947.

SYNCHRONOME AUTOMATIC BELL CONTROLLERS



THE STANDARD CLOCKS
AT GREENWICH OBSERVATORY ARE
SYNCHRONOME FREE PENDULUMS

The address of our Sales, Service and Contracts Department is now

THE ABBEY ELECTRIC CLOCK WORKS,
Mount Pleasant,
Alperton, Middlesex.

Please Note new 'Phone Nos. WEMBLEY 3643-4-5.

All

THE SYNCHRONOME CO. LTD.

19 CA

Since the above leaflet has been printed the prices shown therein are increased by 10% and 10%. They are also subject to Purchase Tax unless a registration number can be given.

SYNCHRONOME AUTOMATIC BELL CONTROLLERS

FOR operating Electric Bells, Hooters, Syrens and all other forms of Warning Signals, according to a pre-arranged programme and in exact synchronism with the clocks in the premises, an Automatic Bell Controller forms a valuable addition to the SYNCHRONOME system in Schools, Factories, Business Establishments, etc., where punctuality is so necessary.

One of these instruments may be included anywhere in a circuit of electrical impulse dials, to control an independent circuit comprising any number of electric bells or other sound-producing devices.

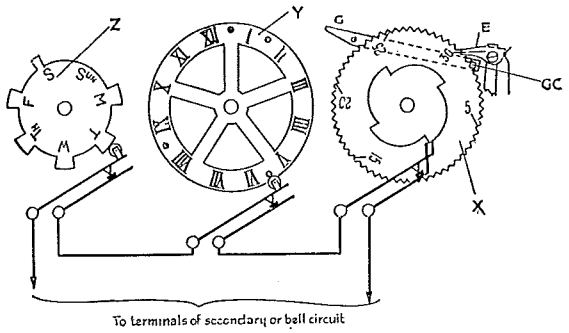
A variety of programmes can be performed according to the type of instrument selected, ranging from the simplest, which will give a ring repeated every hour, to the most selective, which will deal with individual minutes.

Four general types are here illustrated and described, with sample programmes to show their capabilities but if any doubt exists as to which pattern is required, SEND US YOUR PROGRAMME AND LET US QUOTE YOU.

General Description

A BELL Controller is in effect a relay the primary of which receives half-minute impulses from the Synchronome electric time circuit whilst its secondary closes one or more bell or signal circuits at pre-arranged times. It is provided with pairs of terminals as follows :—

One pair (primary) to connect it to the time circuit in which it is included as an ordinary electrical impulse dial. One or more pairs (secondary) to connect it with the bell circuit or circuits.



The primary electrical impulse dial movement rotates a wheel X, one revolution per hour. Wheel Y rotates once in 12 hours and wheel Z rotates once a week.

A pair of contact springs engages with each of these wheels X, Y and Z and since all are in series, the secondary circuit will not be completed unless all contacts are closed simultaneously.

Referring to the type C instrument, which is most generally suitable for average requirements, wheel X makes contact for half a minute every five minutes, but nothing will happen unless some particular five minutes is selected by wheel Y. Then if the wheel Z is making contact as it does during working hours (opening it every night, on Saturday afternoon, and on Sunday) the secondary circuit will be completed and the bells will ring for half a minute. Other special settings can be made if required. The programme can be varied at will within the limits of the range of the particular type of instrument by inserting pins in wheel Y in appropriate positions.

SETTING TO TIME.—The fixed zero is the engraved line on the driving click E. To set the instrument to time, the particular five-minute line on the 120-tooth wheel X or any intermediate tooth for odd half-minutes as required working from the zero " O " engraved on the wheel, must be set opposite to the line on the click. Proceed as follows :—

Depress the tail of the backstop lever G, thereby releasing the clicks GC and E from the wheel X which can then be turned FORWARD by hand. On no account must the wheel be turned backward, as by so doing, damage would be caused to the contacts.

The setting in the diagram shows the bells ringing at 5.30 p.m. on Tuesday.

TYPE A SERIES—CONTACTS APPLIED TO SECONDARY DIALS.

Cat. 2801.—The simplest form of Bell Controller. It consists of the application of a contact to the movement of an ordinary electrical impulse dial such as that in the head of the Master Clock case, arranged to perform a fixed pre-arranged programme of one or more rings of half minute duration repeated every hour.

Price £1 10s. 0d. extra to the price of any standard pattern dial listed in the Synchronome Company's catalogue.

Cat. 2802.—As above, but with extra contact to select the pre-arranged rings from one particular hour only.

Price £2 15s. 0d. extra to the price of any standard pattern dial listed in the Synchronome Company's catalogue.

TYPE B SERIES—HALF AND QUARTER HOURLY PERIODS

Cat. 2811.—To ring for half a minute at any **HALF** hour selectable at will by inserting pins where desired in the twentyfour-hour wheel and to provide automatically one change of programme per week thus :—

8 a.m., 9 a.m., 12.30 p.m., 1 p.m., 2 p.m., 5.30 p.m., Monday to Friday inclusive.

8 a.m., 9 a.m., **12.0 noon** Saturday.

Price £10 17s. 6d.

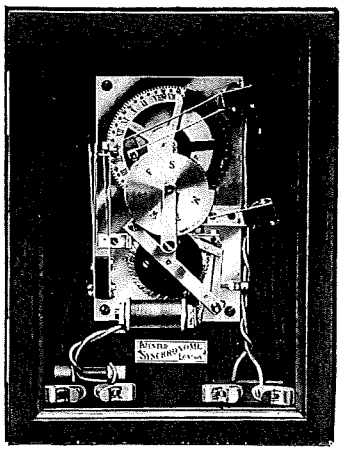
Cat. 2812.—The same, but to ring for half a minute at any **quarter hour continuously seven days per week** by inserting pins in the twenty-four-hour wheel thus :—

8 a.m., 8.45 a.m., 9 a.m., 12.30 p.m., 1.15 p.m., 4.45 p.m., 6.15 p.m., 8.30 p.m., 11.45 p.m., 1 a.m., 3.15 a.m., etc.

Price £10 17s. 6d.

Cat. 2816.—Week-end Silencer for automatically eliminating rings on Saturday afternoon and Sunday, or other days as required.

Price £1 15s. 0d. extra.

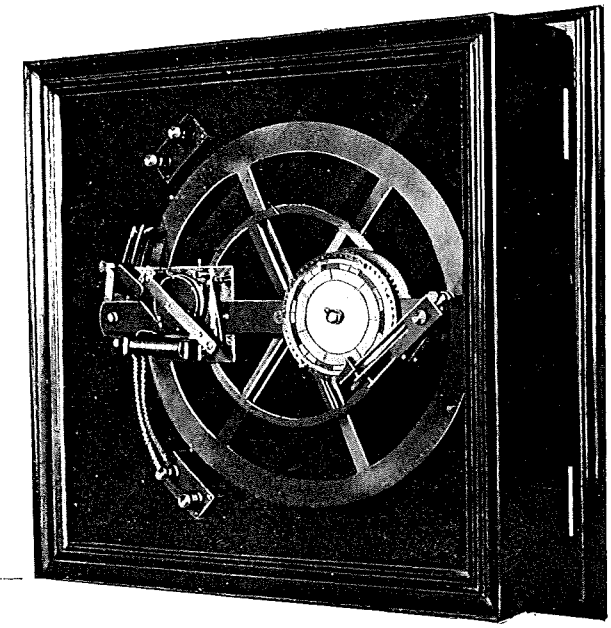


TYPE B

Supplied in polished hardwood case with glass front. External dimensions 11″× $8\frac{1}{2}$×$3\frac{3}{4}$″.

TYPE C
Supplied in polished hardwood case with glass front.

External dimensions
18″×18″×6″.



TYPE C SERIES—
FIVE MINUTE
PERIODS

Cat. 2821.—One programme of rings of half a minute duration at any **FIVE** minutes, selectable at will, continuously seven days per week by inserting pins where desired in the twelve-hour wheel thus :—

9 a.m., 9.20 a.m., 9.35 a.m., 9.40 a.m., 11.15 a.m., 11.45 a.m., 11.55 a.m., 12 noon, 12.25 p.m., 12.35 p.m., etc. **Price £19 15s. 0d.**

Cat. 2822.—Two separate programmes of rings of half a minute duration or one automatic change of the main programme thus :—

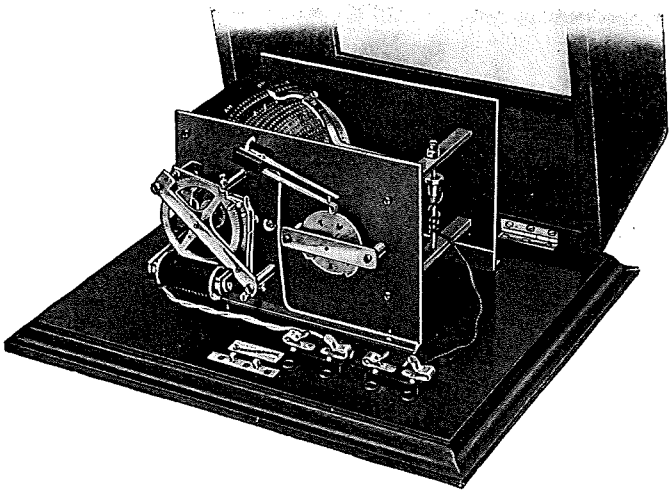
7.55 a.m., 8 a.m., 10.40 a.m., 10.45 a.m., 1 p.m., 1.55 p.m., 2 p.m., 4.15 p.m., 4.40 p.m., 5.30 p.m., 5.55 p.m., 6 p.m., Monday to Friday inclusive. 7.55 a.m., **12.25 p.m., 12.30 p.m.** on Saturday. **Price £21 5s. 0d.**

Cat. 2823.—Three separate programmes or two programmes and an automatic change of one of them. **Price £23 15s. 0d.**

Cat. 2824.—Four separate programmes or two programmes with an automatic change of each. **Price £25 5s. 0d.**

Cat. 2827.—Week-end Silencer for automatically eliminating rings on Saturday afternoon and Sunday or other days as required.
Price £2 15s. 0d. extra.

For programmes other than those indicated above, special prices on application.



TYPE D
Supplied in polished hardwood case with glass top.
External dimensions: 15″×13″×7½″

TYPE D SERIES—ONE MINUTE PERIODS

Cat. 2831.—One programme of rings of half a minute duration at any minute selectable at will during the day or night (24 hours) by inserting pins in the drum in appropriate positions. **Price £25 0s. 0d.**

Cat. 2836.—Week-end Silencer for automatically eliminating rings on Saturday afternoon and Sunday or other days if required.

Price extra £2 15s. 0d.

Type D is recommended for Schools with complicated and frequently altered programmes for class changes where more than one bell circuit is not usually required, but if different programmes are required on several bell circuits or an automatic change of the main programme on certain days the type C series is recommended, see page 5.

Duration of Rings

All rings are of HALF MINUTE DURATION unless otherwise provided for. A DURATION REDUCER may be fitted to enable any reduction to be effected down to a minimum of four seconds.

Cat. 2841. **Price £5 15s. 0d.**

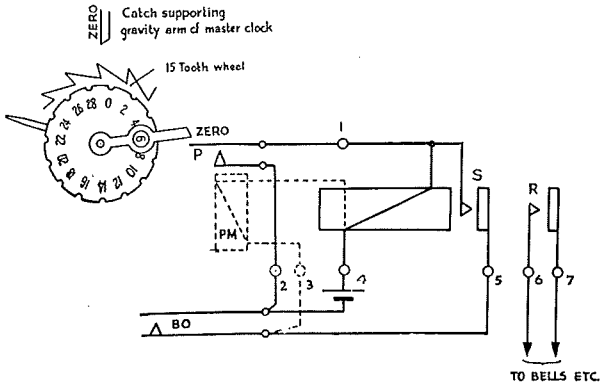


Diagram of connections of Automatic Bell Controller circuit with Duration Reducer fitted to master clock movement.

USE OF ELECTRIC SUPPLY SERVICE.

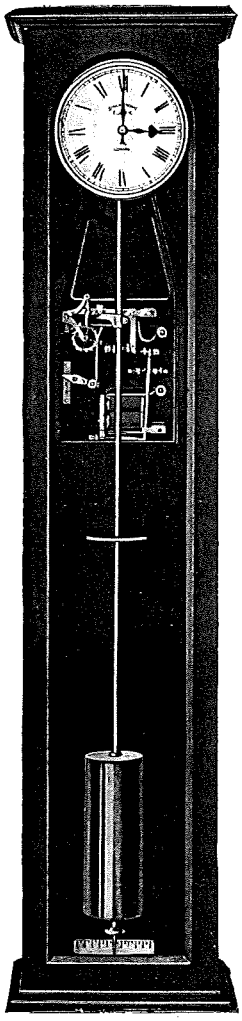
Where the electric supply service is used to operate the bells or hooters, a special Relay should be included, since the contacts of the Bell Controller are not designed to handle current at high voltage.

Cat. 2842. **Price £2 18s. 6d.**

ADJUSTMENT OF CONTACTS.—All contacts are set correctly before despatch and no adjustment should be required or attempted without first seeking our advice.

SYNCHRONOME

The Best System of Electric Clocks in the World.



It would be difficult to decide in which branch of Horology the name SYNCHRONOME stands highest for it is as pre-eminent in the Observatory as it is in the equipment of office and factory with uniform and accurate time and in the making of Turret Clocks without works.

"To break all known records for accuracy of time measurement, to measure the time of the world at Greenwich, to set the Astronomers plotting its performance against the rotation of the earth and the moon to see which is to blame for an error of three-quarters of a second in a year—is no mean achievement; but to bring science of that kind down to our doors and to serve it as our daily bread is a triumph which reflects credit upon the horological profession as well as on the makers."

HEAD OFFICE & WORKS:

THE SYNCHRONOME CO., LTD.

32 & 34 CLERKENWELL ROAD, LONDON, E.C.1.

Telephone: CLERKENWELL, 1517, 1518 & 5129.