The Silent Electric Clock Co.,

SILENT ELECTRIC CLOCKS.

INDEX.

N.B.—It will be noticed that the numbering of the illustrations is not always consecutive. This is done to keep the figures numbered similarly to older editions of our catalogues, and, primarily, for the convenience of our foreign correspondents.

The Silent Electric Clock Co.

PREFACE.

The principle of our Electric Clock System is that ONE MASTER CLOCK governs ANY NUMBER of secondary Dials, which are SILENT in action, and show perfect uniformity of time.

The motive power of the System can be supplied either from Electric lighting supply, or from a Battery.

No WINDING is needed in any part of the System, and it is impossible to over-estimate the advantages of clocks that do NOT need a weekly wind, constant individual regulating, and frequent cleanings; and which, moreover, show identically the same time in every part of the house.

Since 1895—the date of his first Electric Clock patent—Mr. G. B. Bowell has devoted an immense amount of time, energy, and experiment to the subject, with the result that we have now placed before the public

A PERFECTLY RELIABLE SYSTEM AT A MODERATE PRICE.

N.B.—We would like to emphasise the fact that ours is the only Electric Clock System that has completely abolished the old fashioned "click and ratchet" dial mechanism, which by its noisy action and rapid wear and tear has done so much to discredit Electric Clocks. Our System will be found RELIABLE, SILENT, and absolutely DURABLE

THE ECONOMY OF ELECTRIC CLOCKS.

That a system of RELIABLE Electric Clocks throughout a house is a **convenience** may nowadays be taken as an axiom; but that it is also a very great **economy** is a fact not so generally known. By the use of the Silent Electric Clock Co.'s System any house, where half-a-dozen clocks are needed, can be fitted with perfect and uniform time-keeping for a most modest figure, e.g. :—

	£	s.	d.
Master Clock, say, "B" pattern, Half Seconds	7	0	0
Five plain standard dials, 8-in. size, at 32/6	8	2	6
Battery of 6 special "Bamber" cells, at 4/6	1	7	0
Total	£16	9	6

The wiring would probably necessitate a coil of wire and a few staples—say, eighteen shillings total cost—and could be easily done by any handyman. We issue complete instructions for wiring, and the installation can be set going without the least trouble, because **every detail is simple in design and thorough in construction.**

A system of electric clocks—every mechanism with a Ten Years' guarantee—is thus within the reach of every householder.

But he must be careful to choose the RIGHT SYSTEM. Ours is **right** in **design** and right in **construction,** and is, moreover,

MADE IN ENGLAND.

THE DIAL MOVEMENT.

Hitherto, the electro-magnetic movement behind each dial in an electric clock system has consisted briefly of a "ratchet-wheel" operated by steel claws moved periodically by an electro-magnet; but, whatever form the parts may take, experience has shown that the working faces of the steel claws and the teeth of the wheel soon wear out, and that even a slight amount of wear is liable to cause inaccurate timekeeping; moreover, the noise of this type of movement is always objectionable.

Our system—the outcome of many years' precise study of the subject—is based upon an entirely different plan. The steel claws and other oscillating parts are absent, and in their place reign (1) a simple train of wheels whose sole function is to transmit their proper advance to the hour and minute hands, and (2) the "armature" and its appertaining electro-magnetic parts.

Fig. 1 shows a general view of the complete silent dial movement. The armature is mounted so as to rotate freely inside a circle of four iron blocks. Two of these blocks are magnetically connected to a permanent magnet, whilst the remaining two are similarly connected to an electro-magnet. When the current is sent through the electro-magnet, the armature takes a new position—$\frac{1}{4}$ of a turn forward—and

directly the current ceases, it is pulled forward another $\frac{1}{4}$ of a turn, and is held there securely locked by the permanent magnet.

The simplicity of this action, and the consequent trustworthiness of the complete dial mechanism, will be clearly shown by the following facts :—

(1) Either magnet *can* impart a positive forward motion for over a *third* of a revolution, though neither, under any circumstances, is called upon to do so for more than a *quarter* of a revolution.

(2) In all its positions, the Armature is securely locked magnetically.

(3) The design of even the smallest detail, and the quality of the finished article throughout, are such as to ensure the perfect performance of every movement we turn out.

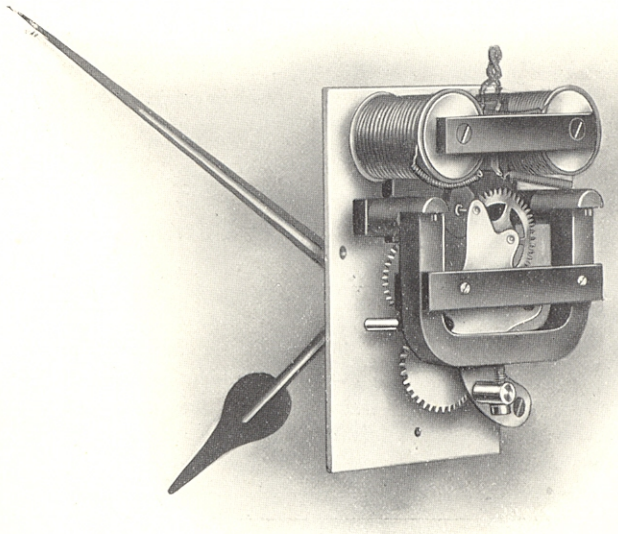


FIGURE 1.

THE "MASTER CLOCK" MOVEMENT.

The Master Clock consists of a pendulum arranged to be always kept swinging by occasional impulses from an electro-magnet, this Pendulum moving a wheel, and the driving piece operating the contact to the dials every half minute.

Fig. 2 shows the complete pendulum action for a Half-Seconds Master Clock; it is built with an accurately machined cast-iron back to which the various parts are secured. Jewelled pivots are provided for the driving piece, and also for the trailing nib that governs the amount of impulse given to the pendulum. All the steel parts are hardened and polished, and by a simple device can be locked for safety in transit. The pendulum bob is of lead, and the rod is made of steel in tubular form, or can be supplied of well-seasoned wood. With either form the time-keeping of these small Half-Seconds Master Clocks is marvellously accurate, and although they are sold at quite modest prices, their movements are such that they will endure for many years longer than even the best mechanical clocks.

It is wise, therefore, when installing, to be careful that the *wiring* and *battery* (if used) are of the best quality. We undertake the complete installation where desired; and when only asked to supply clocks, we are always pleased to furnish any information that may be required.

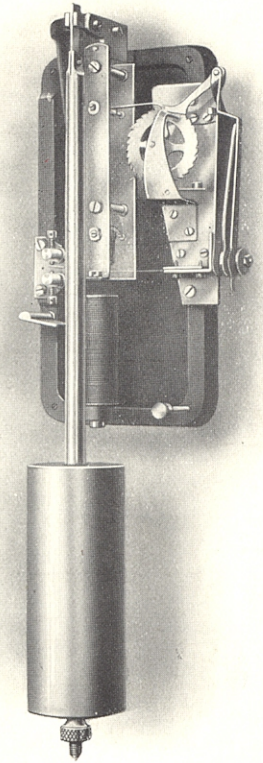


FIGURE 2.
HALF-SECONDS MASTER MOVEMENT.

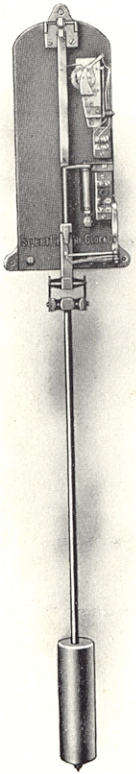


FIGURE 2a.
"SECONDS-BEAT" MASTER MOVEMENT.

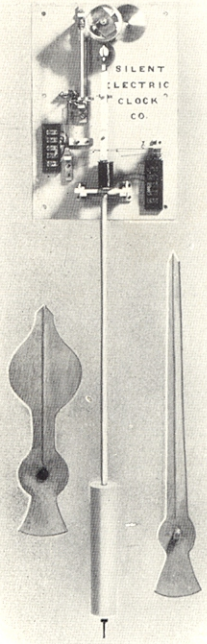


FIGURE 3.

TURRET CLOCKS

SELF-CONTAINED.

For driving small Turret Dials, up to five feet diameter, we make a special movement which combines the work of the Master Pendulum with the mechanism for driving the Turret Dial. In such a case the Master Clock is not needed. These Turret Dials are very fine time-keepers, and the arrangement is a most economical one, whether driven by current from battery or from electric lighting circuit.

Fig. 3 shows the movement at the back of one of these Turret Dials, together with the hour and minute hands.

Prices of these Turret Clocks, complete with dial, hands, etc., according to specification, from **£19.**

TURRET CLOCKS

AS SECONDARY DIALS CONTROLLED BY A MASTER.

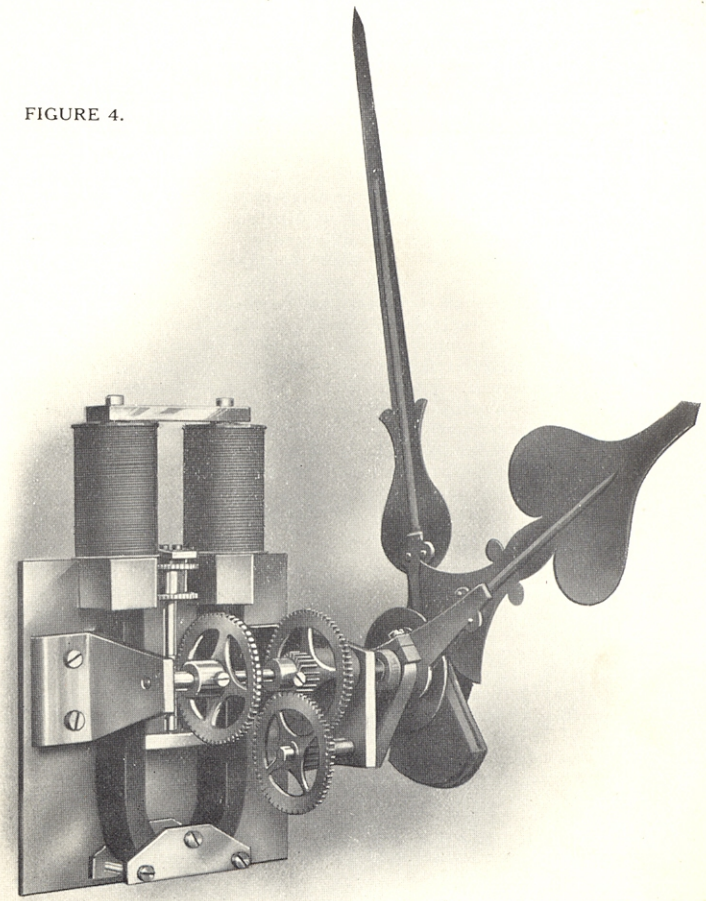
It is, however, generally found more convenient to have the Turret Clock as one of the dials controlled by the Master Clock. For this purpose we make a specially large movement (Fig. 4) with worm gearing and gun-metal wheels, so constructed to withstand the wind pressure against the hands. In this manner the large outside clock (on a Town Hall, for example) can be controlled together with all the smaller dials inside, by one ordinary Master Clock inside the Hall.

The Movement is made in several sizes, and can be built to any size to order. Standard sizes as follows:—Stout sheet-iron dials, with movement fitted rigidly to the back and enclosed with hardwood box cover accessible from behind. Hands built up of ribbed sheet copper and balanced. Suitable for Church Towers, Public Buildings, Railways Works, etc., and can be worked in circuit with ordinary small dials from our Standard Master Clocks.

Prices, complete, with dial and hands:—

2 ft. dial ...	...	£10	10 0.
2 ft. 6 in. dial	...	£12	0 0.
3 ft. dial ...	...	£15	10 0.
4 ft. dial ...	...	£18	0 0.

FIGURE 4.



MUNICIPAL TIME SERVICE.

In addition to manufacturing apparatus for the simpler classes of Electric Clock installations, we also manufacture and can supply apparatus suitable for use in connection with Public Time Services upon an extensive scale. Such apparatus varies according to local conditions, but we are always pleased to prepare a scheme to suit any conditions when made acquainted with requirements. In general, arrangements are made for a number of distributing centres, at each of which a small (half-seconds) Master Clock is installed, such being controlled by a main clock—preferably of the "Seconds" type—which transmits periodical Synchronising Currents to the Master Clocks at the distributing centres. This scheme enables the circuits to be so divided as to guard effectually against any risk of breakdown.

The distribution lines are of course metallic circuits, and suitable testing apparatus—together with convenient test boxes located where necessary—facilitate the localisation of line faults. All these accessories are of Standard pattern and ensure the utmost simplicity of the whole plant.

Apart from the foregoing arrangement of the electrical circuits, which affords the most durable results, it is well to emphasise two points in particulars in which our Master Clock and dial mechanisms are specially suitable for use in connection with a Public Time Service installation, viz. :—

(1) The simple, but effective, magnetic lock and drive in our dial mechanism obviates any risk of failure due to the use of Sliding, Striking, or Spring actuated parts which, in exposed positions where rusting (even to a slight extent) may occur, cannot be considered to be entirely reliable.

(2) Our Master Clocks, although inexpensive, are provided with contact mechanism which may justly be claimed as far superior to that in any other type of Electric Clock.

STRIKING MECHANISM.

For house systems where only an "hour strike" is needed, we make a dial movement which controls the number of strokes on the gong proper to each hour. This mechanism is of a particularly simple nature, and is worked in conjunction with an equally simple device which governs the time allowed to elapse between each stroke on the gong. A modification of this is arranged for ringing quarter chimes, and the same method is used for the chiming in connection with house installations, for which we usually use tubular gongs as being most effective for the purpose.

For large turret clocks, where a relatively large amount of power is required to strike the bell, we employ a small electric motor in conjunction with a similar arrangement wherein means for adjusting the time between each stroke are provided.

SYNCHRONISERS.

We make two forms of Synchroniser, by means of which a complete installation may be kept to Greenwich mean time, the Master Clock being automatically corrected by the signal obtained from the General Post Office. One (Fig. 31) consists of an electro-magnet whose armature is arranged to zero-ise the count wheel of the Master Clock by means of a cam action ; and the other (Fig. 27) an electro-magnet whose armature arrests the progression of the count wheel for exactly the length of time it has gained since the previous correction.

Both arrangements are so constructed that, should the synchronising current by any chance fail, the clock is not disturbed. Either arrangement may be used for actuation by the Greenwich daily time signals, or for synchronising by means of periodical currents from another control clock.

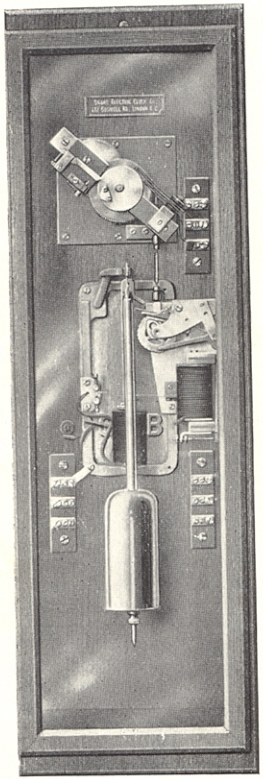


FIGURE 31.

Illustration of special MASTER CLOCK, fitted with SYNCHRONISING APPARATUS, for both **receiving** and **sending** out synchronising signals. As supplied for use by H.M. POST OFFICE.

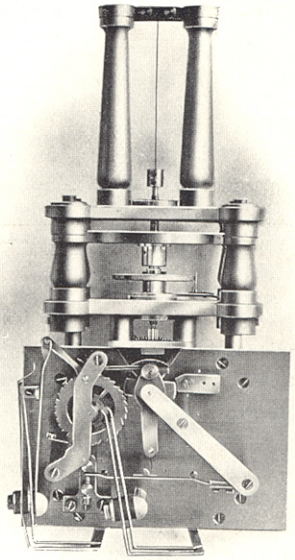


FIGURE 32.

SPECIAL BALANCE WHEEL MASTER CLOCK,

for use on board ship.

SHIPS' CLOCKS.

Our Ships' MASTER CLOCK is actuated on the same principle as our well-known Pendulum Masters, but, as will be seen from Fig. 32 (on the preceding page), a heavy "Balance Wheel" replaces the pendulum. This MASTER Clock can be used to actuate any desired number of dials throughout the ship.

For convenience in effecting the daily correction of the entire installation throughout the ship when steaming eastward or westward, a special mechanism is provided. This consists of a "Correcting Dial," the pointer of which is normally at rest opposite a central zero mark on its face, but which—if moved in either direction to any desired amount—will cause the whole installation to readjust itself automatically to the correct time, while the pointer itself will regain its zero position in readiness for the next day's correction.

In the design and construction both of the Ship's Master Clock and also of the "Correcting Dial," no trouble or expense has been spared in the production of an entirely satisfactory piece of mechanism.

DIALS.

The dials (or faces) on our clocks are manufactured specially for us by the largest makers of dials in Great Britain. They are enamelled on stout iron by special process, will stand any climatic conditions, are accurate in every particular, and of perfect finish.

STANDARD PATTERNS.

PLAIN DIALS; Standard pattern (with movement as described, pages 5–7), as Fig. 10, with polished oak or mahogany round-fronted cases, with bezel and glass. The type of dial recommended for ordinary use.

Diameter of Dial	8 in.	10 in.	12 in.	18 in.	24 in.
Outside diam. of Case	11 in.	13 in.	15 in.	23 in.	31 in.
Price =	**32/6**	**35/=**	**35/=**	**70/=**	**115/=**

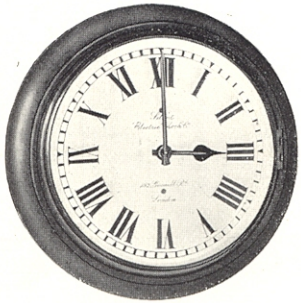


FIGURE 10.

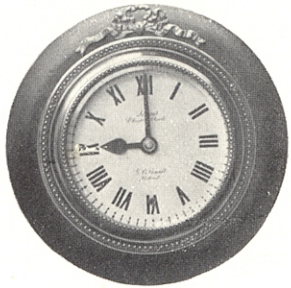


FIGURE 11.

THE "PICCADILLY" DIAL; a neat little 5 in. dial (as Fig. 11) with a screwed-on solid brass bezel; similar design to that in use throughout the Piccadilly Hotel, London, where some three hundred dials are installed.

Price = = £2 10 0.

THE "GALE" DIAL; a 6 in. convex cream tinted Old English style dial in handsome oak case; the design of the dial taken from an XVIIIth Century watch. (As Fig. 12.)

Price = = £2 12 6.

RAILWAY PATTERN DIAL; as Fig. 13, in either 12 in. or 18 in. size; with heavy solid casework, the whole circle sitting flush to wall; bezel screwed down; shows time very distinctly, and suitable for Railways, Schools, &c. Prices according to material and size.

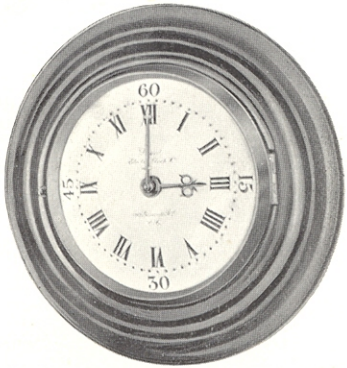
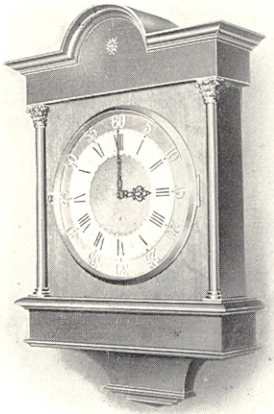


FIGURE 12.

FIGURE 13.

DIALS—Special Designs.



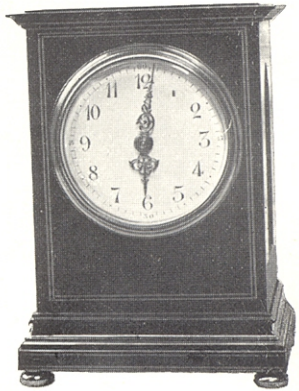


FIGURE 15.

FIGURE 14.

SPECIALLY DESIGNED ORNAMENTAL DIALS for country houses, &c. Fig. 14 shows a "Gallery Clock" with 12 in. brass dial, groundwork hand matted and gilt, circle and arabic numerals being pierced and silvered finish; in solid mahogany case, with ebony pillars, specially designed by us to order. Fig. 15 is a Mantel Clock, also specially designed, on the Sheraton style; in mahogany case.

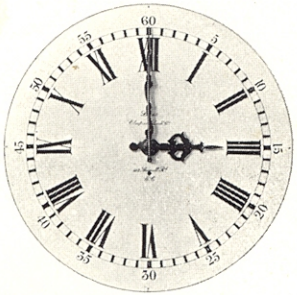


FIGURE 21.

18 in. SILENT ELECTRIC DIAL, as specially designed for a Louis XVI Ball Room. This dial is arranged to go flat on the wall, and is surrounded by a gilt bezel.

Price = = £3 10 0.

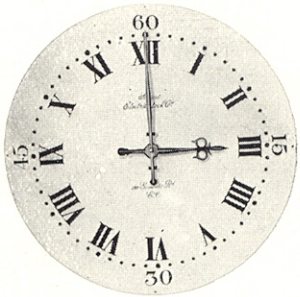


FIGURE 22.

24 in. SILENT ELECTRIC DIAL, as specially designed for an Old English Dining Hall. This dial is arranged to go flat on to oak panelling, and is surrounded by a dark bronzed bezel.

Price = = £4 4 0.

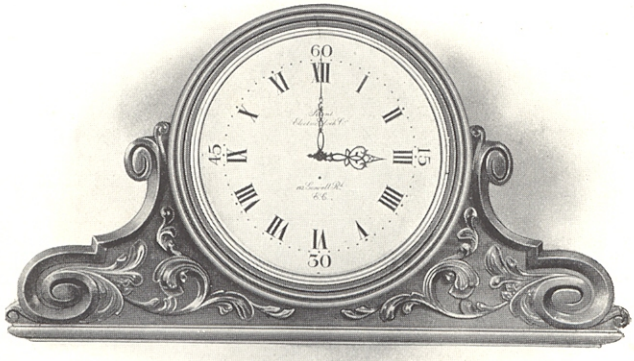


FIGURE 24.

SPECIAL DESIGN ; 18 in. dial, with ornamental hands, in solid mahogany casework ; suitable for Entrance Hall decoration, etc. As supplied to The Queen's Highcliffe Hotel, Cliftonville, Margate.

Price = = £12 12 0.

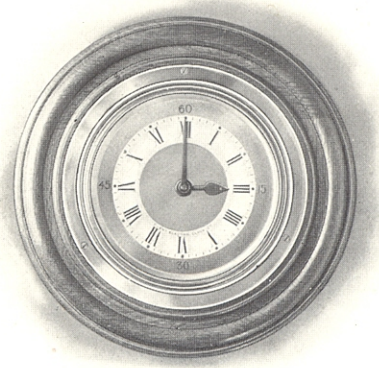


FIGURE 28.

SPECIAL DESIGN ; 6 in. dial, silvered hour circle on bronzed background, in handsome oak surround ($10\frac{3}{4}$ ins. outside diameter). As supplied for Vickers House, Westminster, S.W.

Price = = £4 4 0.

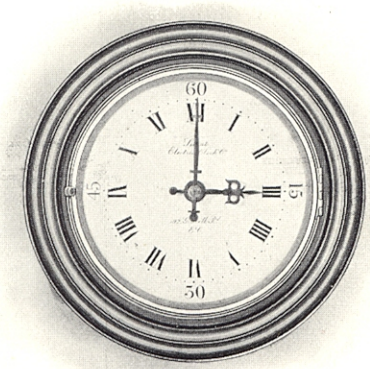


FIGURE 29.

SPECIAL DESIGN; 10 in. dial, "Gale" pattern, Old English style, convex dial and glass. As supplied for use by H.M. Post Office.

Price = = £5 5 0.

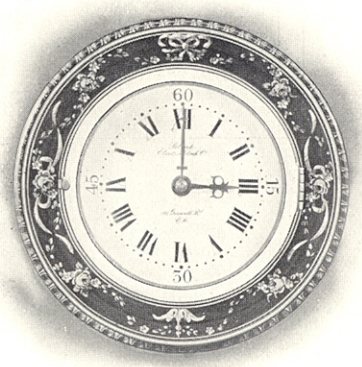


FIGURE 30.

SPECIAL DESIGN; 6 in. "Gale" dial (as Fig. 12), but with satinwood case, hand-painted floral decorations, Convex cream-tinted dial and convex glass.

Price = = £6 6 0.

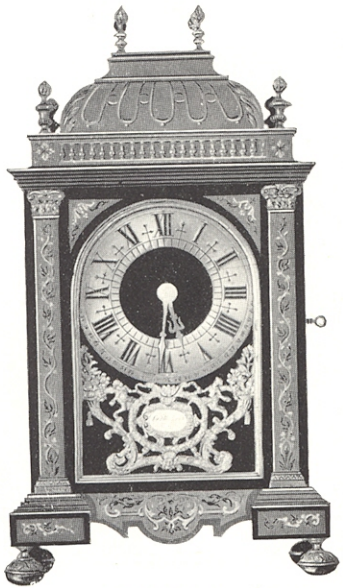


FIGURE 16.

We can obtain any style of casework to order, and as the Patent Dial Movement can be easily fitted to ordinary clocks, we make a speciality of this work when installing the system in private houses. In this manner antique cases retain all their handsome appearance, and have the additional advantage of showing accurate time. Fig. 16 shows a valuable old clock fitted with our Silent Movement in this manner. It is not practicable to list uniform prices for this work, but we supply the Electric Movements at 17/- each and effect the alteration at the lowest possible price.

MASTER CLOCKS.

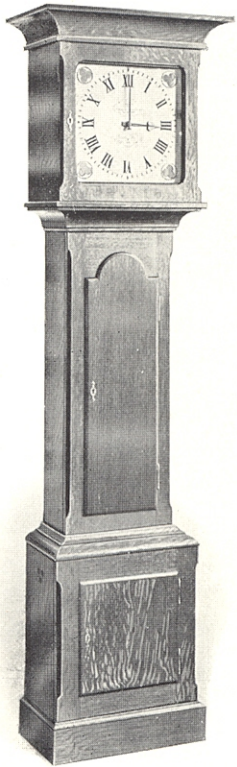


FIGURE 20.

MASTER CLOCK
IN
GRANDFATHER CASE.

Overall height, 6 ft. 4 in.

In solid oak, fumed finish, fitted with Half-Seconds Master movement and dial, as shown.

Price = £14 10 0.

Or with Seconds Master movement

Price = £27 0 0.

If fitted with handsome brass dial, raised hour circle, matted centre and dull brass corner pieces,

Extra = £1 10 0.

This is an exceptionally well-made case, of very pleasing appearance, and forms a handsome addition to the hall of a country house.

Made to special order only.

ANY NUMBER OF DIALS CAN BE CONTROLLED BY THIS CLOCK.

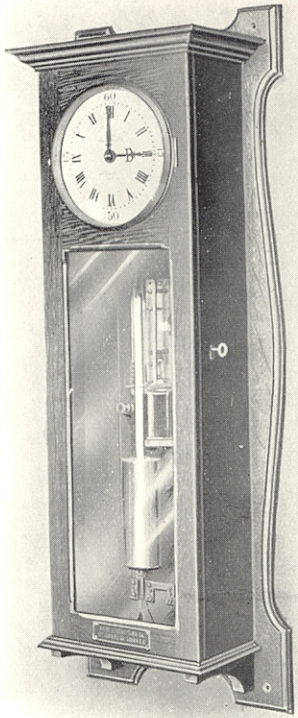


FIGURE 6.

STANDARD PATTERN MASTER CLOCKS.

HALF-SECONDS BEAT.

A. In plain hardwood case without dial (as Fig. 5), and with Master Pendulum mechanism as described on page 8. This style is as supplied for use by H.M. Post Office, and is an excellent time-keeper, and quite suitable for controlling even large installations.

Price = £5 10 0.

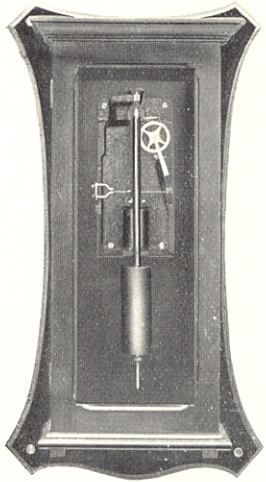


FIGURE 5.

B. Similar to above, but in polished oak case, and with 5 in. dial. A most convenient plain pattern Master for school or office use. Outside dimensions, 30 in. by 12 in. by 6 in.

Price = £7 0 0.

C. Similar to above, but in dark oak case, and with handsome Old English style 6 in. convex dial, as Fig 6. This has been specially designed to provide a more artistic Master Clock for private house installations.

Price = £8 10 0.

The Master Pendulum Movement alone can also be supplied.

"Invar" steel pendulum rod can be fitted if desired.

While the above are our standard pattern Half-Seconds Masters, we can supply any style of casework to suit architectural surroundings, and will be always pleased to submit special designs and estimates for same.

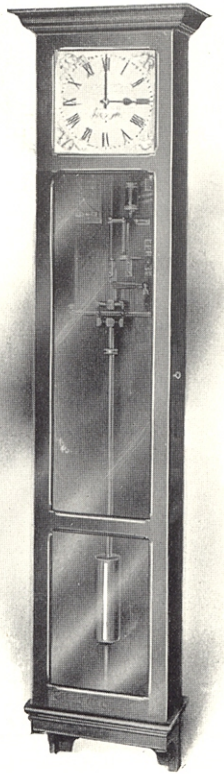


FIGURE 7.

STANDARD PATTERN MASTER CLOCKS.

SECONDS BEAT.

A. In polished hardwood case, built on accurately machined cast-iron base ; double suspension seconds pendulum ; jewelled pivots to driving clicks and impulse contact nibs ; all steel parts hardened and polished. Outside dimensions, 60 in. by 15 in. by 7 in.

Price = = £17 10 0.

B. Similar movement, but fitted with engraved silvered dial, as Fig. 7 (a photo of the Master supplied to the order of the London and South Western Railway to operate dials at Waterloo Station).

Price = = £22 15 0.

We can, if desired, supply the Seconds Master Movement alone.

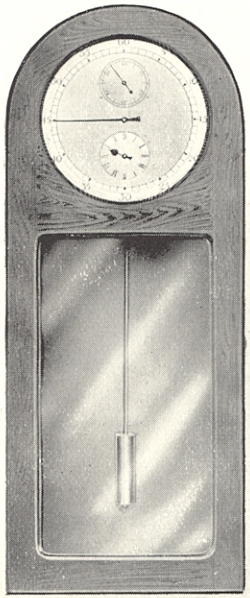
"Invar" Steel or Steel and Mercury compensated pendulums can be supplied.

Seconds Master Clocks can be supplied to any special design. Fig. 8 shows the Master for the Town Hall, Aberdeen, which has special synchronising Attachment.

We make a Special feature of Automatic Synchronising Attachments, by which the Clock can be synchronised from the Post Office Greenwich Mean Time Signal. Fig. 31 (page 16) shows a special synchronised Half Seconds Master, as supplied to H.M. Post Office.

SPECIAL DESIGNS—MASTER CLOCKS.

SECONDS BEAT.



Seconds beat Master Clock with 18 in. Regulator dial, beating seconds, and arranged to automatically receive the daily P.O. Time Signal and to hourly synchronise the 8 ft. turret clock at Aberdeen Town Hall.

FIGURE 8.

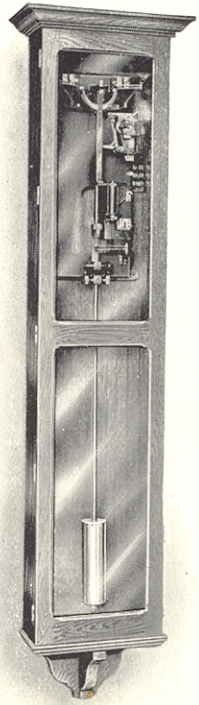


Fig. 9 shows a special Seconds Master as supplied to H.M. Post Office for Telephone Trunk Service Timing purposes.

FIGURE 9.

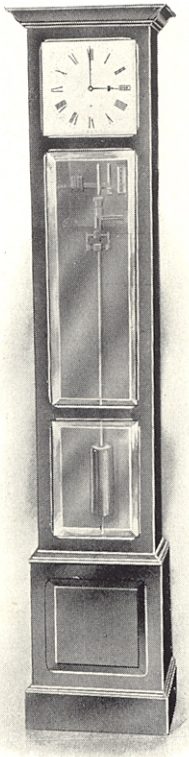


FIGURE 25.

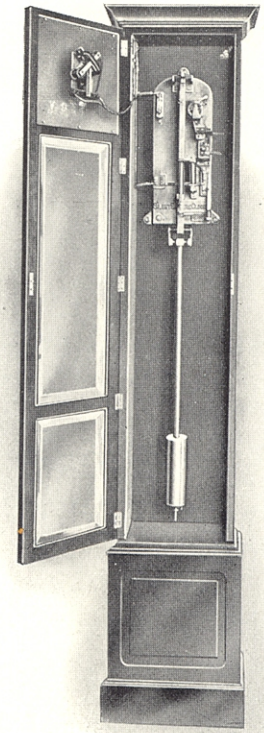


FIGURE 26.

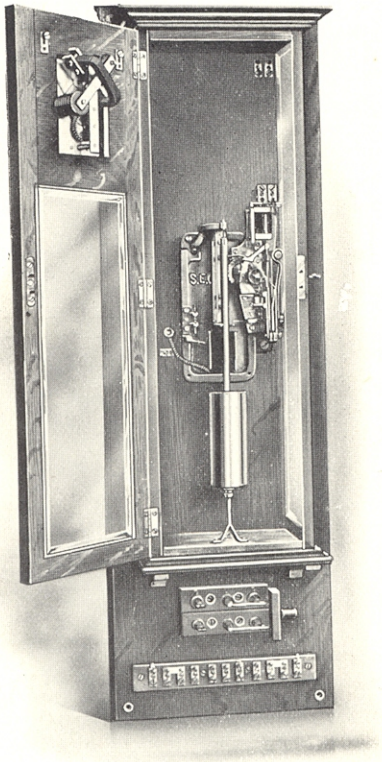


FIGURE 27.

MASTER CLOCK.

SECONDS BEAT.

In specially designed mahogany case ; overall height, 5 ft. 10 ins. Made to order only.

As supplied for country house installations. Fitted with engraved silvered 8 in. dial, as illustrated, Figs. 25 and 26.

Price = = £25 10 0.

MASTER CLOCK.

HALF-SECONDS BEAT.

Fig. 27 illustrates a Master Clock—specially arranged for hourly synchronisation with large Turret Clock—for the Manchester Ship Canal.

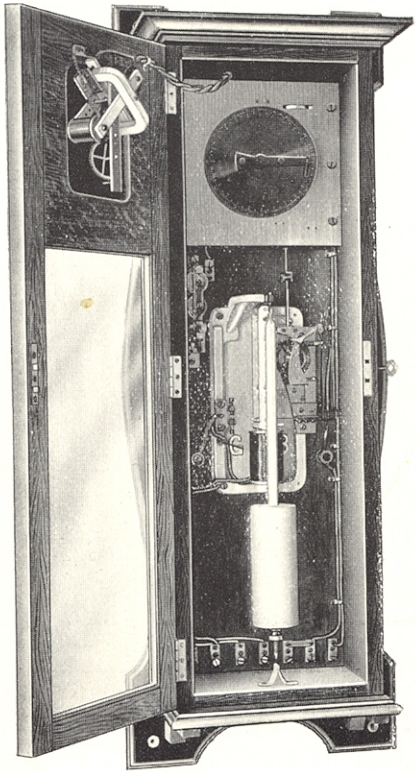


FIGURE 17.

MASTER CLOCKS.

WITH PROGRAMME-RINGING ATTACHMENT.

To meet the requirements of schools and large works, where uniform punctuality throughout is essential, we make this Master Programme Ringer (as Fig. 17), consisting of an ordinary Half-seconds Master, to control the dials throughout the establishment—combined with a programme ringing

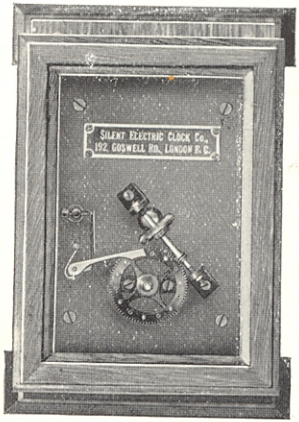


FIGURE 18.

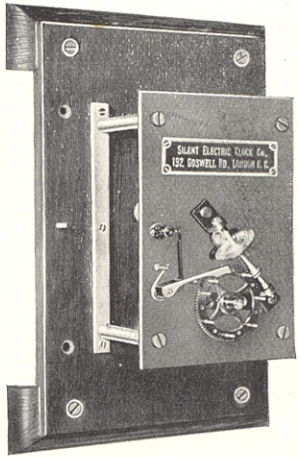


FIGURE 19.

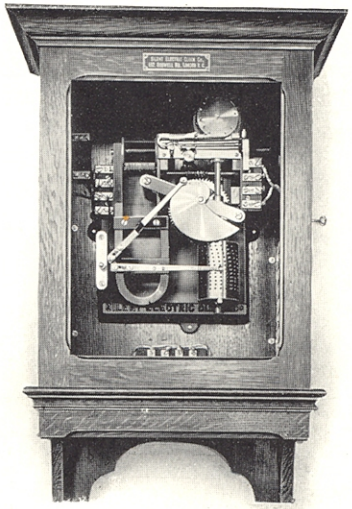
apparatus by which bells on each dial ring simultaneously at any or every fifth minute on a twelve hour circle. The programme can be altered at any time to suit new requirements. This pattern has been supplied to many large schools, and is the most perfect mechanism of its kind obtainable.

Price = = £14 10 0.

The above can be switched off for week-ends and nights by a hand-operated switch; but we also supply an automatic cut-off (as Figs. 18 and 19), which when placed in circuit with the dials can be set to switch the bells off at any pre-arranged twelve-hour circle in the week.

Price = = £5 5 0.

Extract from "The Electrical Review," August 26th, 1910: "The immense convenience of having a system of electric clocks throughout a school—or indeed, any place where uniform time-keeping is essential—may be greatly enhanced by the addition of a bell-ringing programme apparatus to the Master Clock. We describe below an installation of this kind that has recently been supplied by the Silent Electric Clock Co. to the order of Messrs. Northwestern Electric, Ltd., Regina, Sask., . . . and the growing popularity of the Bell-ringing Master Clock, with its subsidiary dials, is shown by the fact that this is the third such installation supplied by the Silent Electric Clock Co. for use in the Province of Saskatchewan alone."



PROGRAMME RINGER.

24-hour Drum type. For ringing bells at any fifth minute throughout the 24 hours; with 7-day motion for cutting off at week-ends.

FIGURE 23.

As specially designed for and supplied to the new Parliament Buildings, Regina, Canada.

Price, in fumed oak case = £22 10 0.

Full particulars on application.

SOME RECENT TESTIMONIALS.

From ***J. B. Joyce & Co.,*** *Whitchurch, Salop, Contractors to H.M. Gov't., and all principal Railways.*

"We are pleased to say that all your Electric Time Indicators "that you have supplied us with have up to the present given every "satisfaction."

From ***John Summers & Sons, Ltd.,*** *Hawarden Bridge Steel Works, Shotton, Flintshire.*

"We have pleasure in saying that the complete equipment of "G. B. Bowell's Patent Silent Dials throughout our offices has given "us every satisfaction."

From The Librarian, ***Wood Green Public Library.***

"I beg to inform you that the Library Committee are entirely "satisfied with the working of the System of Clocks installed here."

And two years later.

"I am fully satisfied at the way in which the clocks here have "been working."

From ***A. J. Wilson, Esq.,*** *Highbury New Park, N.*

"The Electric Clocks you fitted to my house are the admiration "of all visitors. It is a great comfort to know that the servants will "arise in the morning by time synchronous with that indicated by the "dial in my own bedroom."

From ***Professor Malcolm M. McHardy, F.R.C.S.,*** *5, Savile Row, W.*

"I am glad to be able to certify that, after a comparative survey "of various electrically controlled Time Indicators on the market, I "decided on having your System of Silent Electric Time Indicating "Dials and a single Master Clock installed . . . where the subsequent "regular working of the Installation and its remarkably accurate time-"keeping have been so eminently satisfactory that I gladly recom-"mend the System when opportunities for so doing occur."

From the ***Isle of Thanet Tramways & Electric Lighting Co.***

"I have pleasure in informing you they have given every satis-"faction; the dials have required no attention, and the Master Clock "has proved itself a very fine timekeeper."

From The General Manager, ***The Piccadilly Hotel,*** *London, W.*

"I have much pleasure in stating that the electric clocks installed "by you in this hotel have given us every satisfaction."

From ***Munro Cobb, House Furnisher, Cliftonville,*** *Margate.*

"I am pleased to be able to inform you that the Electric Clock "you made and fitted to the corner of my business premises has "proved an unqualified success. As a timekeeper, it is far in advance "of the ordinary Turret Clock. I have no hesitation in saying that I "believe it to be the most reliable public clock in the town."

From ***A. Leach Lewis, Esq., M.A.,*** *Margate College.*

"Please accept my thanks for the excellent manner in which the "Installations, both here and at Lausanne House (The Margate "Ladies' College for Girls) have been carried out, and for your prompt-"ness in the delivery of the clocks.

"I may say that both systems are working entirely satisfactorily, "and that we find them a very great improvement on the time-pieces "which they superseded."

From ***Mrs. Boldero,*** *Ennerdale, Bexhill-on-Sea.*

"I am sure you will be pleased to hear that the clocks you "installed for me are a ***perfect*** success. Since you substituted your "delightful Silent System for my old hand-wound clocks, the whole "household runs punctually and peacefully. It is also a great blessing "to be free of the weekly winding, constant regulating, and expensive "cleaning."

From ***Sir David Salomons, Bart.,*** *Broomhill, Tunbridge Wells.*

"I have more than forty of your Silent Electric Clocks installed, "and I am pleased to state that they prove satisfactory in every "respect."

From The Managing Director, ***Queen's Highcliffe Hotel,*** *Margate.*

"With reference to your Silent Electric Clocks, 62 of which, "with Master Clock, we have got installed here, I am pleased to be able "to state that up to now the same have given us every possible satis-"faction, and have proved a very great convenience to our Visitors and "Staff alike, the time-keeping having been all that can be desired.

"When our New Building is completed in the Spring, I shall be "happy to send you a further order for our additional requirements."

From ***E. F. Johns, Esq., M.A.,*** *Winton House School, Winchester.*

"I have found the Silent Electric Clocks, installed here by "Mr. G. B. Bowell, of the greatest assistance in securing punctuality in "a large household. The clocks keep very good time, and require "little or no attention."

From ***C. R. Jelf, Esq., M.A.,*** *The Grange School, Folkestone.*

"I am delighted with the clocks. A little regulating got them "into good order, and they are keeping excellent time. It is the "greatest convenience to have the same time everywhere."

From **Dr. Rashleigh,** *Throwleigh, Okehampton.*

"I am very well satisfied with the Electric Clocks you sent me "last Summer. They were installed without difficulty, keep excellent "time, and, except for periodically replenishing the cells with water, "they require no attention."

From **J. C. Wright, Esq., F.R.S.E.,** *Northfield, Colinton, N.B.*

"I am convinced of the importance of your invention by which "the electro-magnet and the permanent magnet are used in combination "without mechanical contact to impart the impulses to the clockwork "and to lock the same."

From **Sir William Ingram, Bart.,** *The Bungalow, Westgate.*

"You ought to insert an illustration of the Town Hall Clock. It "has gone well ever since it was started."

From **A. Y. Salmon, Esq., M.A.,** *Normandale School, Bexhill-on-Sea.*

"The system of Electric Clocks which you installed throughout "my School is an unqualified success. They have worked without a "hitch, and the timekeeping is practically perfect—they have not varied "a minute a month. In a School where regularity and punctuality are so "essential, your system is invaluable. The 'Grandfather' Case for "the Master Clock has been much admired."

From **G. H. Gowring, Esq., M.A.,** *St. Bede's School, Eastbourne.*

"The Clocks are most satisfactory and I should not like to have "to do without them now. I cannot think how any large Establishments "or Schools, with the chance of such a System before them, fail to take "advantage of it. After the initial cost of installation the upkeep is "practically nil, which cannot be said of the ordinary clock."

From **A. N. Stephens, Esq.,** *Haddon House, Bridport Harbour.*

"The upright Mahogany Seconds Master Clock you made for "me has now been working for some time without attention, with the "exception of the first few days, when as the clock was going slightly "fast the pendulum had to be lengthened. It now keeps the most "excellent time, as of course do the other Dials which are controlled "by it."

From **Major A. L. Gallie,** *Tavistock, Devon.*

"The Electric Master and subsidiary clocks supplied by you are "most satisfactory in every way. I have now had them going for about "six months, and they have kept wonderful time. I also find not having "to wind and regulate each individual clock every week a great boon."

From **Lionel Helbert, Esq., M.A.,** *West Downs School, Winchester.*

"Your Clocks have kept excellent time, and the whole household "has derived very great benefit from them. It is a pleasure to testify "to their value in any establishment where punctuality is essential."

A. J. WILSON & CO., LTD. 154 CLERKENWELL ROAD, E.C.