

Telephone 820 Bank.

Telegraphic Address: "Celebrious, London."

The Standard Time Company, Limited.

(Reg. No. 120545.)

ESTABLISHED 35 YEARS.

19, Queen Victoria Street,

London,

E.C.

GREENWICH MEAN TIME
SIGNALS BY PRIVATE
WIRE.

CLOCKS MAINTAINED TO
EXACT GREENWICH
MEAN TIME BY ELECTRIC
CURRENT IN LONDON.

ELECTRIC TIME
INDICATING SYSTEMS
FOR
LARGE BUILDINGS.

COMPLETE
INSTALLATIONS FOR
MAINTAINING
UNIFORMITY IN PUBLIC
AND OTHER CLOCKS
DISTRIBUTED
OVER LARGE AREAS.

ELECTRIC REGULATOR
HIGH-PRECISION
CLOCKS.

ELECTRICALLY WOUND
CLOCKS.

TIME SIGNALS BY
TELEPHONE TO THE
PROVINCES.



R. Gardner Esq.

20 Lloyd Square, W.C.

Sept. 27th, 1912.

Dear Sir,

In the course of your business as a maker and rater of Chronometers you are no doubt aware of the importance of being able to get exact Greenwich Mean Time.

We beg to call your attention to our system of supplying Greenwich Time Signals HOURLY direct from Greenwich Observatory upon a bell or Deflecting Needle

The cost is only £5.3.0 per annum and there are no charges for wiring Instruments or Bell, all of which are supplied free of cost to the subscriber.

We enclose our booklet, and shall be pleased for our representative to call upon you on receipt of the enclosed card.

yours faithfully,

THE STANDARD TIME COY Ltd

 Sec

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TIME SIGNALS BY
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PROVINCES.



A few of the notable Chronometer makers & raters who
use our system of Bell signals.

Messrs. Barruds & Lund's, Bishopsgate St. E.C.

Messrs. Sir John Bennet Ltd. Cheapside. E.C.

Messrs. Birch & Gaydon. Fenchurch St. E.C.

G. L. Connel Esq. Cheapside E.C.

Messrs. C. Frodsham & Co. New Bond St. W.

Messrs. H. Hughes & Son, Fenchurch St. E.C.

Messrs. Kendal & Dent. Cheapside. E.C.

Messrs. Kelvin & J. White & Co. Billiter St. E.C.

J. A. Baugh. Esq.. Hatton Garden, E.C.

Messrs. E.B. Dennison & Sons. Holborn Viaduct.

Messrs. E. Harrop. Co. Rosebery Avenue. E.C.

Etc., etc.,

TIME RECORDERS SYNCHRONIZED.

Employers of Labour and Factory Owners are recommended to apply for our Pamphlet entitled **FACTORY TIME**; it costs nothing, and may be the means of effecting a large economy.

Yearly Contracts for Winding and Repairs ::
with or without electric correction undertaken.

£1 1s. 0d. per annum will secure you the right to ring us up as often as you please for the exact time, which will be called to you over the telephone in minutes and seconds from our clock beating synchronous with the Mean Solar Clock at Greenwich Observatory.

Makers of

**AIRTIGHT CASE CLOCKS FOR FACTORIES,
RAILWAYS, MILLS, FOUNDRIES, AND
DUSTY AND EXPOSED SITUATIONS**

AND
Clocks of all kinds for Business Purposes.

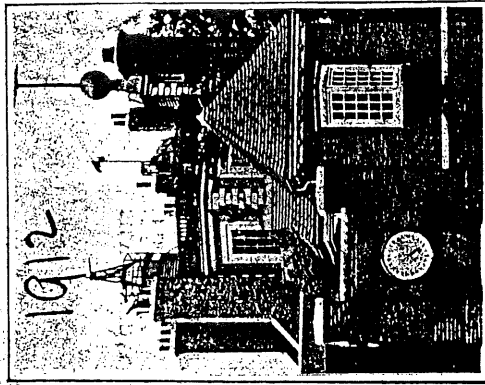
AUTOMATIC TIME KEEPING DEVICES.

THE STANDARD TIME Co., Ltd.

19 & 21, QUEEN VICTORIA STREET,
LONDON, E.C.

The Mervale Press, 26, Noble Street, London, E.C.

FROM



GREENWICH OBSERVATORY

Direct Connection Over OUR OWN WIRES
Clocks Synchronized by HOURLY Current.

Turret Clocks

Electric Systems

Time Signals

Time Balls

19 & 21,

Queen Victoria St.,
London, E.C.

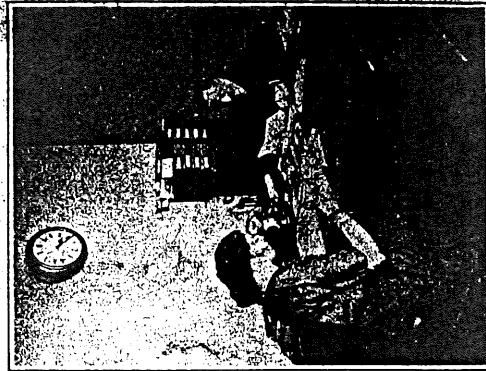
Telephone No.
5830 BANK

Telegraphic Address
"CELEBRIOUS,"
LONDON.

The Standard Time Co. Ltd.

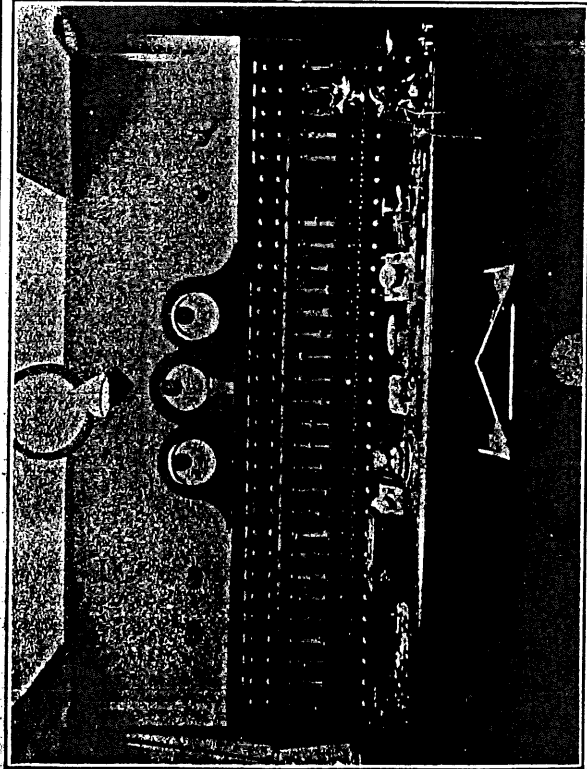
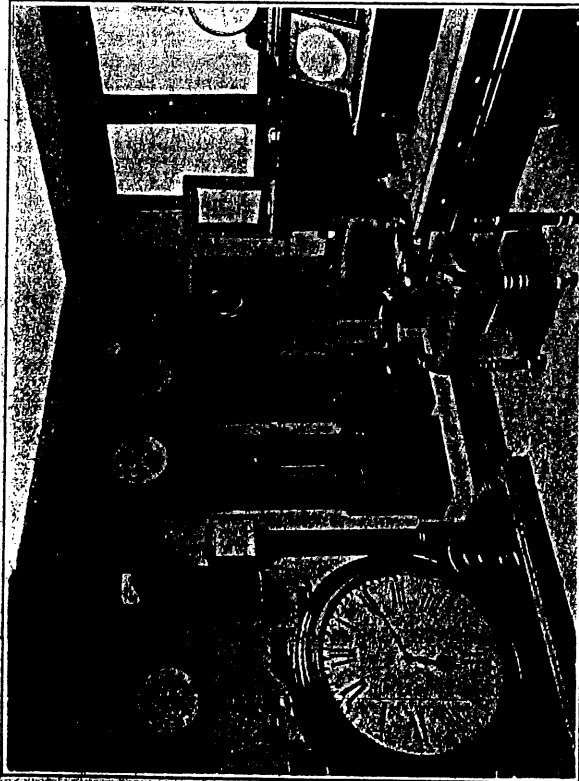
Established 1877

TO



YOU are invited to inspect this ::
INTERESTING INSTALLATION.

SILVER MEDAL
International Inventions
Exhibition, 1885.



Our Switch Room and Show Room at 19/21, Queen Victoria Street, E.C.

INDEX.

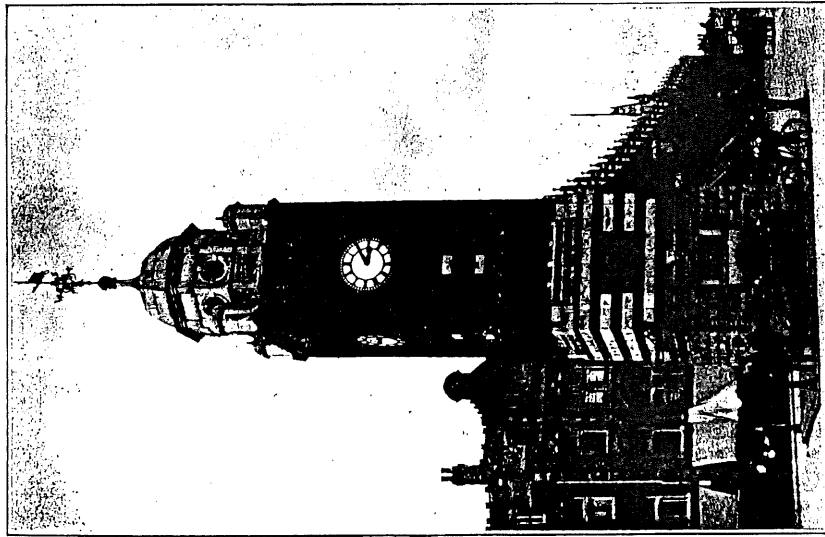
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The Representatives of The Standard Time Company, Ltd., are experts in all types of Time-keeping devices, electrical and otherwise, and as the result of their exhaustive experience, are able to independently advise intending users without confining their recommendations to any particular system or manufacture.

THE STANDARD TIME CO., Ltd.

Synchronizing of Clocks

Clocks connected with our installation are corrected EVERY HOUR by electric impulse, transmitted direct from the Mean Solar Clock at Greenwich Observatory.



As we have OUR OWN WIRES we are enabled to quote lower terms than any other company.

The following prices include winding and all cost of fitting and loan of synchronizing instruments and connection with our circuits.

For single dial clocks not exceeding 24 inches in diameter:—

1st Clock		£3 3s. 0d.	per annum.
2nd "		£2 2s. 0d.	"
Additional Clocks in same building		£1 1s. 0d.	each.
Turret Clocks	 from	£5 5s. 0d.	per annum.

THE STANDARD TIME CO., Ltd.

with Greenwich Mean Time.

A GREAT deal of loss and inconvenience are caused by errors and differences in clocks. This cannot be avoided by keeping them fast. It is no easier to keep a clock five minutes fast than right—if you go by it you waste your time unnecessarily, and if you make allowance, as most people unconsciously do, you are just as likely to find the supposed five minutes was only three, perhaps less.

Any watchmaker can wind and correct your clocks once a week, but he cannot keep them right; you may satisfy yourself of this and perhaps destroy a good deal of misplaced confidence by comparing them daily with each other—a day or so after winding differences will be apparent and for the rest of the week you cannot say which is correct.

You may ask why clocks cannot be corrected sufficiently frequently by hand. Our reply is because the trouble and labour would be prohibitive, and you have no reliable standard as a basis.

Many are deterred from having their clocks synchronized, which is the only means of obtaining correct time, from consideration of expense. The cost of keeping one clock exactly right by our system is only £3 3s. 0d. per annum, and we undertake to say there is not one business, however small, which does not lose much more than 1s. 3d. every week through errors and differences in clocks.

Our installation has cost over £40,000, and has been in operation since 1877.

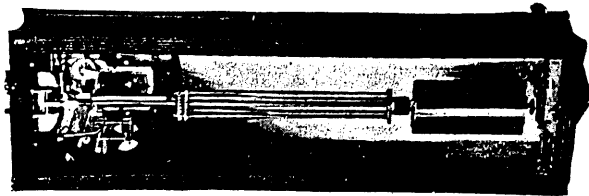
Numerous Railways, Commercial Exchanges, Telegraph and Cable Companies, Banks, Clubs, Hotels, Merchants, Offices, Factories, Shopkeepers, Printers, Newspaper Offices, Stockbrokers, and Private Gentry, have their clocks connected, and Standard Time now ranks as as great a necessity in well-regulated establishments as the telephone, typewriter, and other time and labour-saving appliances, which but a short time since were regarded as luxuries.

Clocks connected with our installation are automatically corrected every hour—day and night—by an electric impulse transmitted over our wires from the Mean Solar Clock at Greenwich Observatory, and thereby kept constantly exactly right, and there is no other way whatever by which this may be effected.

19 & 21, Queen Victoria Street, LONDON, E.C.

Electric Installations

In Large Railway Stations, Factories, Mills, Hospitals, Workhouses, Banks, Business Houses, Hotels and Ships.



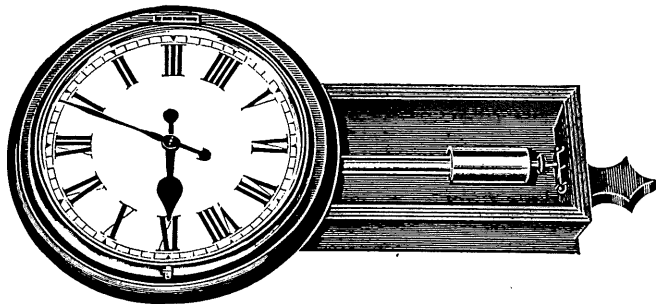
No. 1.

PENDULUM
TRANSMITTER.

Case 30 ins. by 10½ ins.
by 5 ins.

This Transmitter can be
fitted with 6 in. dial if
required.

For particulars
of existing
installations,
see pages
18 & 19.



No. 3.

TRANSMITTER
WITH CLOCK FACE

TRANSMITTER WITH CLOCK FACE.

No. 3. A complete single clock in the form of a combined Electrical Transmitter, similar to No. 2, and a Receiver Dial, 12 inches in diameter, from which any number of Receiver Dials can also be worked ... each £10 10 0

for Indicating Uniform Time

The indication of uniform time at a number of points more or less distributed is the time problem involved in the circumstances enumerated above.

Independent key-wound clocks are not adapted to this purpose, because, however good and however well regulated, some will gain and others will lose in the period between each weekly winding, and the time throughout the building soon becomes the mean of a number of clocks, some fast and some slow. Moreover, such clocks require winding and attention, and are an expensive and out-of-date means of meeting such problems.

The modern method is to cause a single clock to drive the hands of all the clocks required. This is accomplished by a master clock transmitting electric impulses which advance the hands half a minute at a time upon all the dials simultaneously.

Where an Installation exceeds ten clocks the first cost is less than that of ordinary clocks, no winding is required, and all the mechanism used is simpler and less in quantity.

Of the many systems offered, some have failed by reason of defects in design or mechanical imperfections consequent upon attempts to unduly cheapen them, but, after long and careful trial, full confidence may be placed in the system illustrated.

PRICES.

No. 1. Master Pendulum Transmitter, for driving any number of receiver dials, with seconds beating pendulum of best quality, compensated for temperature variations in best quality cases, in any wood, with glass front ... each £10 10 0

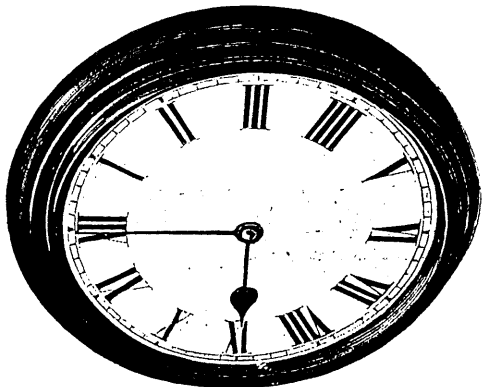
This constitutes the perfection of time-measuring instruments obtainable at the present time. Properly fixed and regulated, its errors for months together will be inappreciable.

No. 2. Ditto ditto with three-quarter-seconds beating pendulum ... each £8 8 0

This is quite suitable for average commercial installations. It is similar to No. 1 in quality and workmanship, its accurate time-keeping qualities differing from No. 1 only to the small extent to which a longer pendulum is superior to the shorter.

THE STANDARD TIME CO., Ltd.

19 & 21, Queen Victoria Street, LONDON, E.C.



DIAL IN WOOD

PRICES (in Wood Cases)

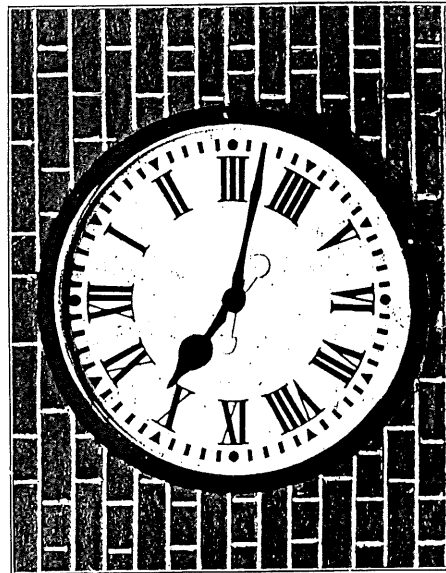
With white enamelled dials, in plain turned frames, with brass bezels and crown glass, in mahogany, oak, walnut or teak, stained to any colour, and plain polished or varnished.

6-inch dials, each ...	£1	12	6
8	1	17	6
10	2	0	0
12	2	5	0
14	2	15	0
16	3	15	0
18	4	10	0
20	5	15	0
24	7	0	0

PRICES (in Metal Cases).

In air-tight metal cases well painted to resist weather, smoke, factory fumes, water, steam, dust, etc., for railways, factories, laundries, flour mills, ships, and outdoors :—

12-inch dials, each	£2	10	0
18	4	0	0
24	5	10	0
36-inch dials, each	£7	15	0
48	15	0	0



3-ft.
Diameter Dial.
in
Weather-
Proof
Metal Case,
for exposed
situations.
Movement con-
tained in Circular
Case,
9 ins. diameter
and
2½ ins. in depth.

DIALS

FOR INDICATING THE TIME OF THE TRANSMITTER.

These are made in various sizes, and in plain or ornamental wood or metal cases to suit all tastes and requirements.

For factories, workshops, railway stations, and outdoors, where ornamentation is not a particular consideration, and for Ships, air-tight metal cases are specially recommended.

For hotels, mansions, banks, commercial offices, cases with any degree of ornamentation can be supplied, or, when required,

The cases of existing clocks at present in use may be utilised, and corresponding saving in cost effected.

The small amount of mechanism required to receive and communicate the Master Clock's impulses to the hands, is only supplied in the best quality, and is much smaller and more compact than the movements of ordinary clocks. It is enclosed in a small case, which hangs closely to the wall, thus opening up possibilities of combining the clock with many schemes of decoration to which ordinary clocks might not lend themselves.

ADVANTAGES.

The trouble and cost of winding is dispensed with.

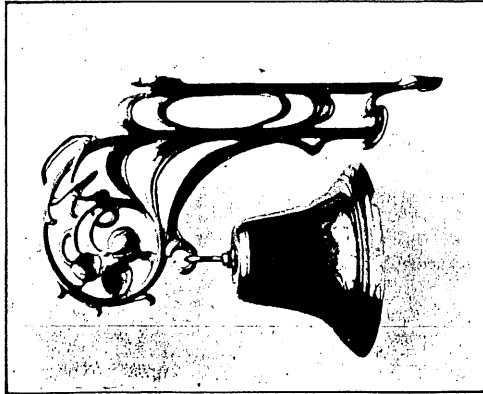
The transmitter and receiver dials run for many years without any mechanical repairs or renewals.

The battery power required is less than in any other system. Normal cells of good quality may be expected to last for eighteen months to two years.

Where conditions permit, the transmitter and receiver dials may be operated by current from the electric light wires, thus dispensing with batteries.

Employers of Labour and Factory Owners are recommended to read our Pamphlet entitled **FACTORY TIME**; it costs nothing, and may be the means of effecting a large economy.

TIME SIGNAL



No. 1.

Signal on Bell.

These can be supplied
in all sizes and styles.

DEVICES.

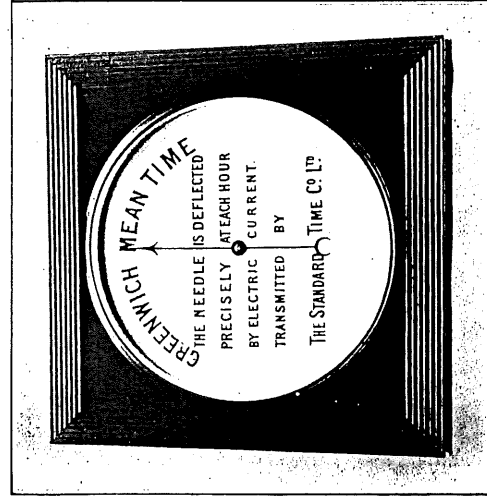
No. 1. Bells.

Hourly Signal on single stroke bell,

£3 3 0 per annum

A series of these Bell Signals on one circuit distributed through a number of rooms are highly recommended for schools with frequent class changes, workshops, etc.

Special quotations given for large installations.



No. 2.

Signal on Deflecting Needle.

No. 2. Deflecting Needles,

Greenwich Meantime Signals every hour on deflecting needle, **£3 3 0** per annum

These are a necessity for Chronometer, and Watch and Clock Makers for regulating time-pieces, and when placed in the shop window form an attractive and useful advertisement; when so used our charge is **£5 5 0** per annum.

*Dials lettered "Greenwich Mean Time,"
and SUBSCRIBER'S NAME inscribed on dial if required.*

THE STANDARD TIME CO., Ltd.

19 & 21, Queen Victoria Street, LONDON, E.C.

BALLS.

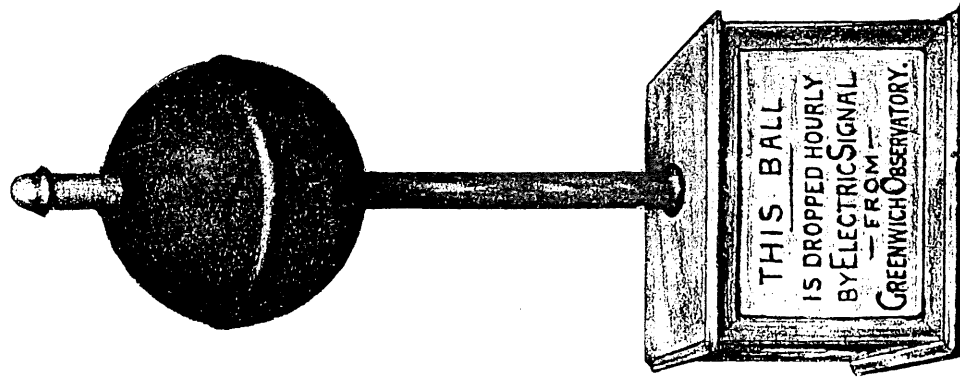
No. 1. Time Balls for outside use.

Aluminium Time Ball, decorated to taste, falling about 4 feet, on 6 ft. iron pole, with finial, necessary gear for hauling up ball by hand, electric release, shoe or bracket for fixing.

[illegible]

Erection is a relatively simple matter and should not, under ordinary circumstances, cost more than £2.

Special quotations for larger Balls.

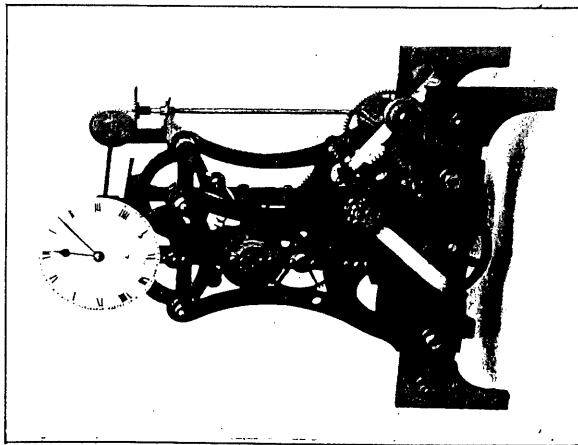


SMALL MODEL FOR WINDOW ATTRACTION:

THE STANDARD TIME CO., Ltd.

19 & 21, Queen Victoria Street, LONDON, E.C.

Electric & Turret Clocks



LATEST ELECTRIC SYSTEM.

The cheapest and best Turret Clock.

Occupying same space as ordinary hall clock.

Reliability Guaranteed.

NO WINDING.

THE STANDARD TIME CO., Ltd.

14

Occupy the smallest space. No Builders' work required in erection. Accurate time-keeping.

THIS is a notable illustration of a 4-ft. dial Turret Clock, erected by the Standard Time Co., for the Mutual Marine Insurance Co., at No. 1, Old Broad Street, E.C., and in common with many others which have been supplied, and are giving full satisfaction, is constructed upon a modification of Hipp's principle, and its performance leaves nothing to be desired.

The entire movement is contained in a box, 24 in. by 14 in. by 9 in. Energy is obtained from the electric light main, with an alternative source provided by a few small dry cells, which come automatically into operation if the current is off the main.

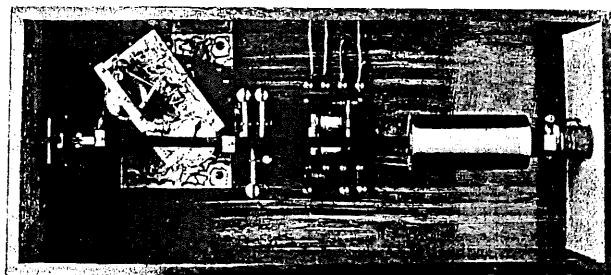
The pendulum weighs 20 lbs., and beats 80 to the minute—a pawl connected with the rod, hooking the escape wheel tooth by tooth, at each alternative swing. The train consists of a worm and wheel, and the ordinary motion work. Under normal conditions, the pendulum takes current every 80 swings, and with heavy wind pressure, from 70 to 75 teeth are reeled off between contacts. Of these there are two sets operated simultaneously, one connected with the lighting main, the other with the battery; so long as there is current on the lighting main the closing of the first contact breaks the battery circuit, but should this current fail, the battery circuit is closed, and excites the magnet which pulls the armature attached to the pendulum bob.

The movement is quite noiseless, and has sufficient energy at the point of the minute hand to lift a 5-lb. weight. There would appear to be no limitation to the power to which time-measuring motors on this principle might be constructed, or to the size of the clock to which they might be applied.

DESIGNS, SPECIFICATIONS and TENDERS for Turret Time-pieces as described, forwarded upon application.

19 & 21, Queen Victoria Street, LONDON, E.C.

15



The Standard 12-in. Dial Clock.

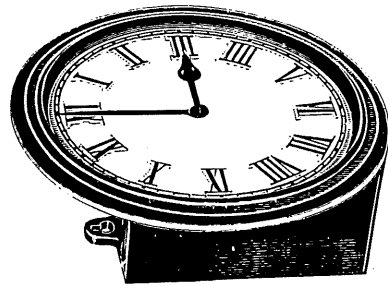
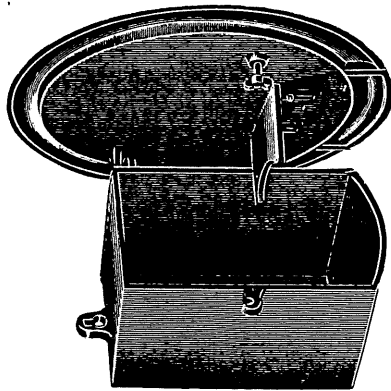
Patent No. 15055.

ENTIRELY OF CAST IRON.

Dust Proof.

Damp Proof.

Indestructible.



RIVALS IN APPEARANCE THE BEST MAHOGANY CASES.

GIVES EASY ACCESS TO MOVEMENT.

AND HAS ADJUSTABLE SEAT-BOARD TAKING ANY SIZE MOVEMENT.

Designed with the object of more efficiently protecting the movements, *no more perfect Case has ever yet been produced.* The adjustable seat-board permits of any size English or other movement being fitted, the dial and rim being hinged to the box and opening like a door, affords easy and perfect access, more so than in any other form of case. It may also be lifted from its hinges with the movement intact leaving the box *in situ.*

It is handsome in appearance and may be used in all places where 12-in. clocks are required, whilst for *mills, factories, offices, railways, laundries, yards, and damp, dusty and exposed situations, being air-tight and immensely strong, it is infinitely superior to the best wood cases.*

The dial being cast with raised figures and minute ring, artistic ability is not necessary when repainting.

Enamelled jet black, with white dial (carriage paid anywhere in England).

Price - £1 5s.

Any name cast on dial to order.

THE STANDARD TIME CO., Ltd.

16

CLOCKS ON LOAN.

We are the only Company who supply Clocks on Loan and synchronise them **hourly**!

59/6 (where number exceeds 10, **29/6**) per annum covers the whole of the subscribers liability, we do **not** charge for expenses of installation; and this amount covers the supply of a 12-inch English dial, wiring, maintenance, and **hourly** synchronisation by electric impulse transmitted over **our own** wires direct from the Mean Solar Clock at Greenwich Observatory.

The system of giving a clock a gaining rate and correcting once every 4 or 12 hours is not sufficiently accurate for modern business requirements; a clock given a gaining rate gets slightly fast each hour, thus the **only** means of rendering a clock exactly synchronous with Greenwich Mean Time is to synchronise it **every** hour.

19 & 21, Queen Victoria Street, LONDON, E.C.

17

The opinions of a few firms who have had a long

THE GREAT NORTHERN AND CITY RAILWAY CO.,

General Manager's Office,

3, Highbury Place, N.

24th February, 1912.

Dear Sirs,

In reply to your letter of the 19th inst., I have pleasure in stating that you have synchronized the majority of the clocks at this Company's Stations from October 1907 to the present time. There has been a great improvement in the working of the clocks since you took them over.

Yours faithfully,

R. P. B.

General Manager.

A few of our

The UNION OF LONDON & SMITHS BANK, Ltd.,

2, Princes Street, London, E.C.

SPICER BROS., Ltd., Union Street, London, S.E.

THE STANDARD TIME CO., Ltd.

18.

experience of our system of Synchronized Clocks.

PETER ROBINSON, LTD.,

200 to 230, Oxford Street, W.

February 23rd, 1912.

Gentlemen,

In reply to your enquiry of the 19th inst., we beg to state that our clocks have been synchronized by you for many years and your work has been satisfactory in every way.

Yours faithfully,

PETER ROBINSON, LTD.

THE ANGLO-AMERICAN TELEGRAPH CO., LTD.,

63, Old Broad Street, E.C.

February 27th, 1912.

Dear Sir,

The synchronized Clock used in this office continues to afford us complete satisfaction. **We have had the system in use since 1877.**

Yours faithfully,

W. WILLIAMS.

Superintendent.

large installations.

THE AMALGAMATED PRESS, Ltd.,

Lavington Street, London, S.E.

BULLOCK BROS. & CO., Ltd.,

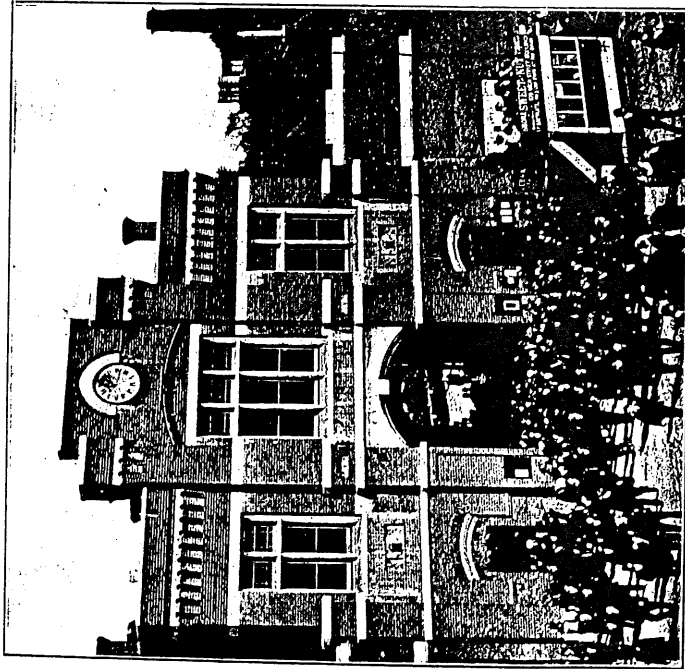
Fenchurch Avenue, London, E.C.

19 & 21, Queen Victoria Street, LONDON, E.C.

19

H.M. Royal Arsenal, Woolwich.

One of the largest electric uniform time-indicating installations in this country is that at H.M. Royal Arsenal, Woolwich. Forty-six dials, of which thirty-three are outdoors and thirteen in the various workshops and offices, are driven by one transmitter, to which they are connected in series on a circuit nearly six and a half miles long.



The system here adopted is one which we can instal and confidently recommend for such installations.

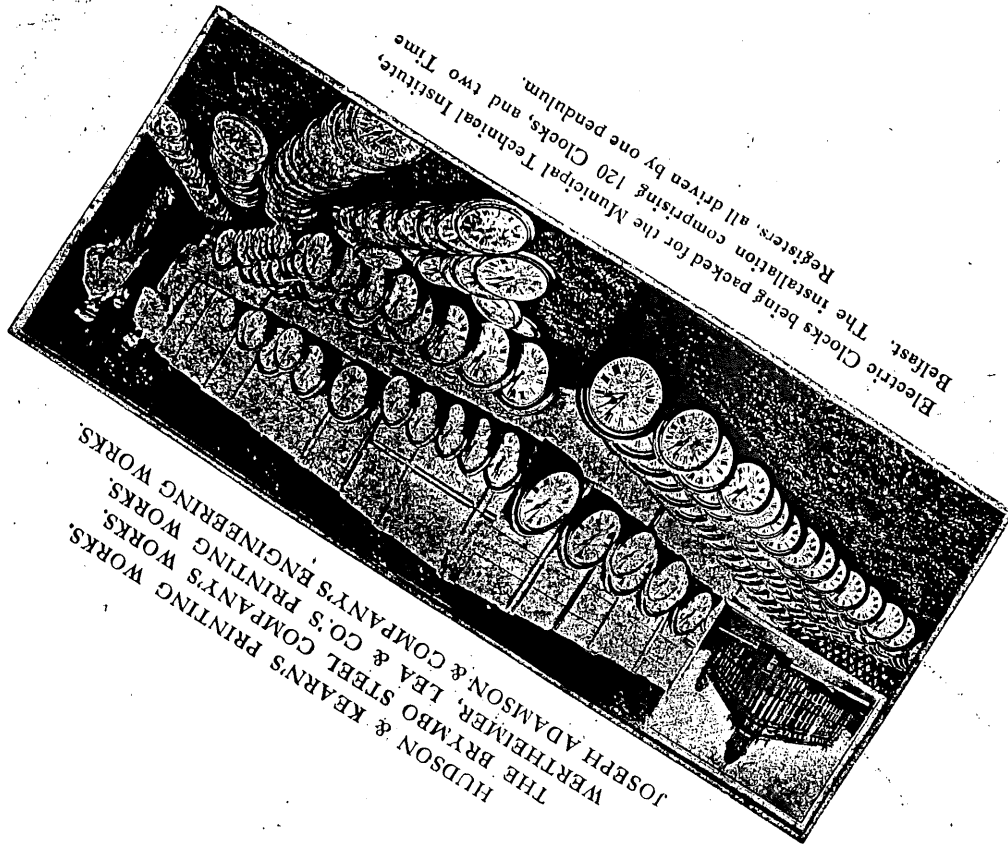
Other systems were tried, but found incapable of satisfactorily coping with an installation of such magnitude, whilst the present system has done so with complete satisfaction for many years past.

The exceptionally good time-keeping of the transmitter here is the subject of most favourable comment, as is also the small number of battery cells required and the increased interval between periodical renewals.

THE STANDARD TIME CO., Ltd.

20

Other ELECTRIC INSTALLATIONS on the same System—Continued.



Electric Clocks being packed for the Municipal Technical Institute, Belfast. The installation comprising 120 Clocks, and two Time Registers, all driven by one pendulum.

THE SOUTH METROPOLITAN GAS COMPANY, including double dial 8-ft. turret Clock, visible to the public.

THE PHOSPHOR BRONZE COMPANY, LTD.

MISSION HALL, STREATHAM, 4-dial turret Clock (public Clock)
Etc., Etc., Etc.

19 & 21, Queen Victoria Street, LONDON, E.C.

21