BRANCHES:—

PARIS:
110 RUE RÉAUMUR.

NEW YORK:
11 BROADWAY.

VIENNA:
VII BURGGASSE 58.

ZURICH:
11-13 PLATTENSTRASSE.

TELEGRAMS:
DIAL, LONDON.

THE MAGNETA COMPANY,

ELECTRIC CLOCK SYSTEMS

WITHOUT BATTERIES OR CONTACTS.

Patented:—ENGLAND, GERMANY, U.S. OF AMERICA, etc.

WINCHESTER HOUSE,
OLD BROAD STREET,
LONDON, E.C.

THE MAGNETA COMPANY,

WINCHESTER HOUSE,

OLD BROAD STREET, E.C.

COLOGNE MUNICIPAL INSTALLATION.

In January last the Magneta Company erected at the Electric Power Station of this town a small installation consisting of one Master Clock and 25 Secondary Clocks, some of which were at a distance of three miles from the Master Clock.

The faultless working of this installation, has resulted in the Company receiving a contract (which is now being executed) for a System consisting of a Master Clock for actuating 200 Secondary Clocks.

The necessary lines are being constructed by the Municipal Authorities.

List of some recent installations of a general nature will be found at end of book, page 9.

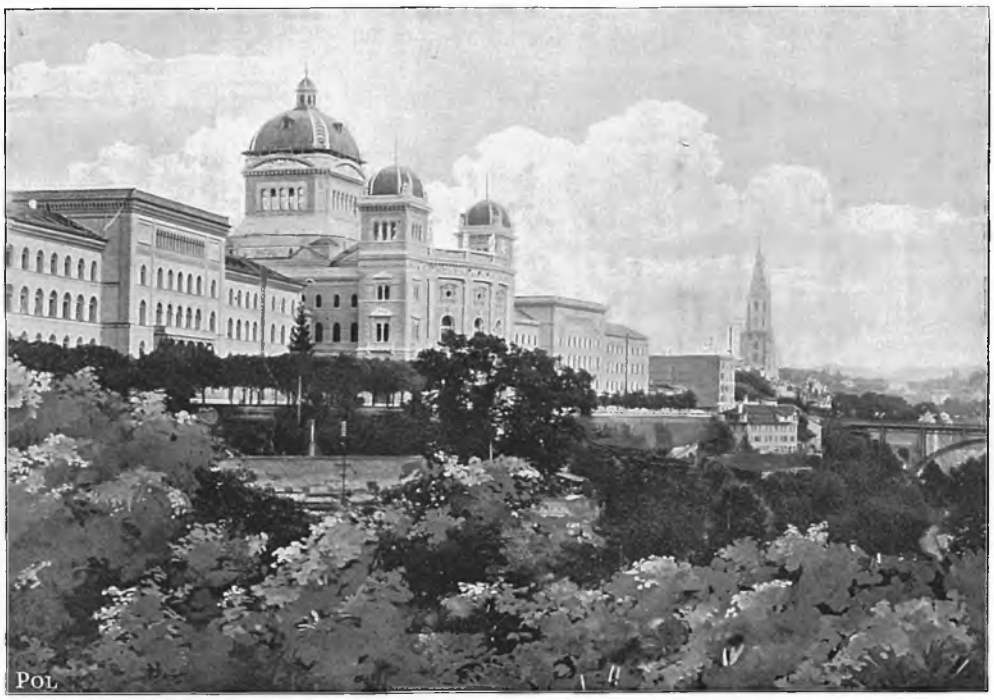
INTRODUCTION.

ELECTRIC ENERGY, from its easy application, and from its affording the means of actuating with absolute precision and certainty any number of distant and widely distributed indicators controlled from a central point, has long been acknowledged as an ideal principle to apply to the problem of providing uniform time systems for large buildings, as well as for entire towns and districts.

From time to time many attempts have been made to devise a thoroughly practical system, and some of these have met with a certain measure of success. The broad principle or method common to all these systems is pretty generally known, even by persons having no special knowledge of the subject, and consists in the use of a battery for generating the necessary electric current, and also contact points, where the current is alternately applied and interrupted, as a means of producing intermittent impulses for actuating the system of distant dials or secondary clocks.

Experience in the practical working of these systems has shown, that the dials themselves worked with completely satisfactory results, but the fundamental weakness lay in the batteries and contact points, the use of which in all systems up to the present time has been absolutely unavoidable. A further disadvantage from a practical point of view was the necessity of frequent inspection and maintenance, entailing skilled attendance and thereby necessitating considerable annual expenditure.

It will be seen from the above that hitherto systems of electric clocks have presented the curious example where one part of the apparatus, namely the dials themselves, worked with the utmost certainty and precision, this good result being immensely discounted, if not almost lost, by the element of uncertainty introduced by the batteries and contact points.



FEDERAL PALACE, BERNE (MAGNETA SYSTEM INSTALLED).

THE MAGNETA COMPANY'S SYSTEM

OF ELECTRIC CLOCKS WITHOUT BATTERIES OR CONTACTS.

THE invention forming the basis of this system is due to Mr. M. Fischer of Zurich, and consists, as is frequently the case with important advances, in the application of a very simple principle. It may almost be assumed

as general knowledge, that the generation of electric current for lighting, motive power and industrial purposes generally, is effected by induction, whereby a closed coil is brought into the influence of a magnetic field (the respective position of the two being properly arranged and disposed), this, the now historic discovery of Faraday, is the basis of all dynamo electric generators. The fundamental quality of this method of producing electric current is its certainty; whenever a closed coil is suddenly brought into or withdrawn from the influence of a magnetic field, then a current of definite strength must always result. This certainty of action has been applied by Mr. Fischer to electric clock systems, and has taken practical shape in the following manner. The clock which is destined to be the controller or master clock of the system, is provided with a magnetic inductor of special form, consisting of an iron core placed within a fixed coil, and so arranged with respect to a permanent magnet that the core becomes alternately magnetized and de-magnetized by a semi-rotation; once every minute, the master clock or controller actuates this inductor, thus generating a momentary current, which passes into the circuit of the secondary clocks, thus giving them an impulse, which takes place synchronously with the movement of the inductor. The wires from the inductor are led away without interruption or break to the circuit of the system with which the circuit of the inductor is permanently joined.

It is claimed for the Magneta Company's apparatus that it provides an absolutely trustworthy and efficient system, and this claim has been more than substantiated by the faultless working of both the large and small installations which the Company has erected. This is further borne out by the fact that although a very short time has elapsed since the Company began to exploit its system, it has erected a large number of leading installations.

The advantages of the system may be summarised as follows:—

Batteries and Contacts of any form entirely superseded, therefore nothing to renew.

Saving of the annual expenditure needed for the maintenance and repair of ordinary clocks.

No supervision, maintenance or attention of any kind, it being merely necessary to wind the master clock in the usual way, and the entire system is then self-acting.

Highest time-keeping qualities, secured by the extreme simplicity of construction.

No incidental or working expense of any kind.

Low cost of installing the system.

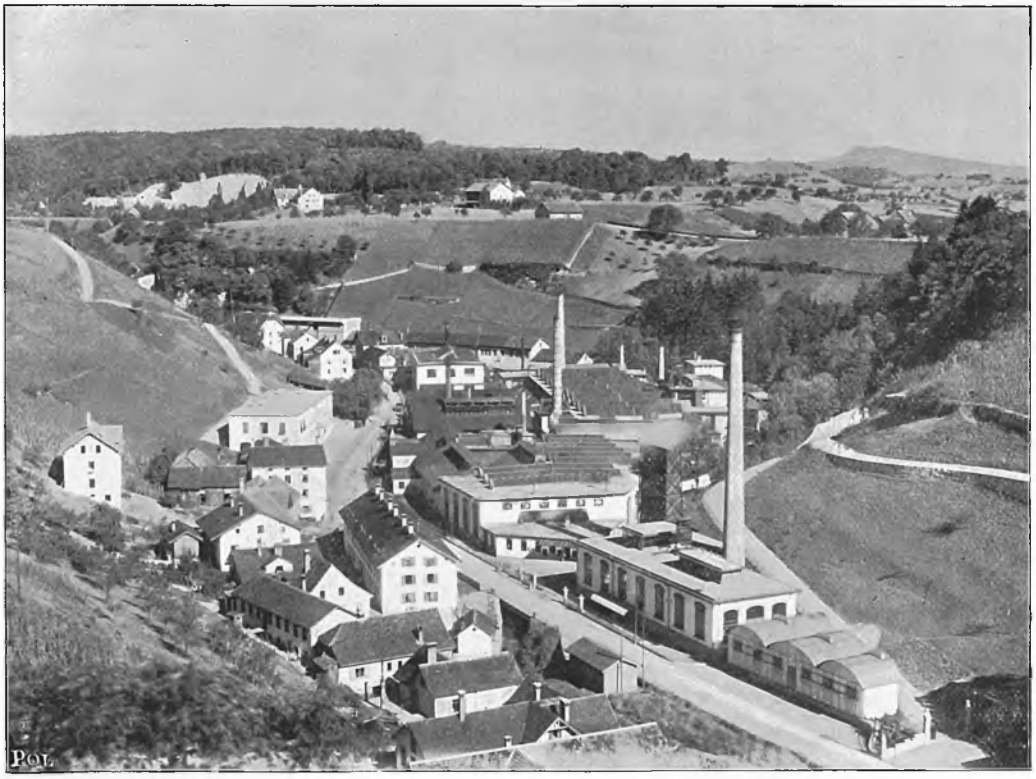
However large the number of dials, or however widely separated in a building or system, they all indicate precisely the same time.

In large buildings provided with the old system of clocks, much inconvenience is caused by the daily or weekly winding and setting and also occasional oiling, necessitating usually the carrying of steps or small ladders for this purpose; with the Company's system these inconveniences disappear.

The Company enters into a three years' guarantee of every installation erected.

These clocks can be placed in workshops where there is much dust, and also in damp places or in positions where they will be exposed to the weather or great changes of temperature.

Installations of electric clocks are particularly useful for towns and smaller communities, factories, postal and telegraph buildings, hotels, schools, railway stations, barracks, business premises, banks, hospitals, theatres, industrial dwellings, private houses, etc. It is a well known fact that in large buildings considerable sums are expended annually for the adjustment, maintenance and repair of their ordinary clocks; all these expenses are avoided when the Company's system is used.



G. FISCHER'S FOUNDRY, SCHAFFHOUSE—WORKS AND VILLAGE.
(MAGNETA SYSTEM INSTALLED).

LIST OF SOME RECENT INSTALLATIONS.

Paris, Grand Hotel de Londres.

London, The London Press Exchange, Ltd.

New York, Complete Installation of 18 story building, 11, Broadway.

Hotel St. Regis, Fifth Avenue.

Complete Installation of the Rhine Port of Cologne.

Complete Installation of the town of Baden (Switzerland).

Complete Installation of Lugano (Switzerland).

Central Post and Telegraph Office, Lindau.

State Railway Station, Glarus.

University, Berne.

Town Hall, Zurich.

Federal Palace, Berne.

Law Courts, Hambourg.

Leu & Co., Bankers, Zurich.

Cantonal Bank, Zurich.

Hydraulic Power Works, Offenbach (Germany).

Cotton Mills, D. Dollfus & Co., Belfort.

Ministry of the Interior, Dresden.

Corso Theatre, Zurich.

Hotel Steinbock, Coire.

Constructional Workshops, Oerlikon.

George Fischer Foundry, Schaffhouse.

Palace Hotel, Fuerstenhof, Frankfort-on-Main.

Sanatorium, Dr. Dornbluth, Frankfort-on-Main.

Officers' Quarters, Thoune.

Board School, Affoltern.

Works, Fessmann & Hecker Zell (Duchy of Baden).

Restaurant, Binding, Frankfort-on-Main.

Sanatorium, Dr. Danegger Davos.

Park Hotel, Vitznau.

Cantonal Hospital, St. Gallen.

Rauschenbach Clock Factory, Schaffhouse.

Maestrani Chocolate Factory, St. Gallen.

Bally & Son, Boot Factory, Schoneword.

Hotel Pontresina, Engadine.

Silk Mills at Gorwihl.

Park Hotel, Munich.

Dr. Schmidt, Private School, St. Gallen.

Secondary School, Nuremberg.

Neues Stahlbad Hotel, St. Moritz.

Grand Hotel, Maloja (Engadine).

Laundry Works, Zurich.

Hartung Mills, Zurich.

Engineers' Instrument Factory, Uzwil.

Cantonal Prison, Regensdorf, Zurich.

"Daily Journal," Zurich.

PRICE LIST

GIVING PARTICULARS OF THE VARIOUS TYPES, AND OTHER DETAILED INFORMATION.

ALL TYPES OF MASTER CLOCKS, SECONDARY CLOCKS, ALARM INDICATORS WITH BELLS,

ALSO

REGULATING APPARATUS FOR TOWER AND TURRET CLOCKS.

MASTER CLOCKS.

I.—To be wound up daily (working period 36 to 50 hours):—

		£	s.	d.
Type a.	Comprising the regulator with weights and pendulum, in oak or walnut case, capable of driving 1 to 8 units (1 unit equal to a secondary clock of 8 to 12 inches diameter of dial)	16	0	0
Type b.	Comprising the precision regulator with weights and pendulum (beating seconds), in oak or walnut case, capable of driving 1 to 18 units	25	0	0
Type c.	Comprising the precision regulator with weights and pendulum (beating seconds), in oak or walnut case, capable of driving 1 to 32 units	34	0	0
Type d.	Comprising the precision regulator with weights and pendulum (beating seconds), in oak or walnut case, capable of driving 1 to 60 units	68	0	0
Type e.	Comprising the precision regulator with weights and pendulum (beating seconds), in oak or walnut case, capable of driving 1 to 100 units	90	0	0
Type f.	Comprising the precision regulator with weights and pendulum (beating seconds), in oak or walnut case, capable of driving 1 to 200 units	110	0	0
Type g.	Comprising the precision regulator with weights and pendulum (beating seconds), in oak or walnut case, capable of driving 1 to 300 units	150	0	0
Type h.	Comprising the precision regulator with weights and pendulum (beating seconds), in oak or walnut case, capable of driving 1 to 500 units	220	0	0

II.—To be wound up weekly (working period 8 days):—

		£	s.	d.
Type A.	Comprising the precision regulator with weights and pendulum (beating seconds), in oak or walnut case, capable of driving 1 to 16 units	34	0	0

Installations on Ships (particulars on application).

SECONDARY CLOCKS.

I.—Comprising electric clock movement, oak or alder wood circular case, white dial, black aluminium hands and stout glass front:—

			£	s.	d.
8 inch diameter of dial (equal to 1 unit)	... ...	@	2	15	0
10 ,, ,, ,, 1 ,,	... ...	,,	3	0	0
12 ,, ,, ,, 1 ,,	... ...	,,	3	5	0
16 ,, ,, ,, 3 ,,	... ...	,,	3	10	0
20 ,, ,, ,, 3 ,,	... ...	,,	3	15	0
26 ,, ,, ,, 5 ,,	... ...	,,	7	10	0
30 ,, ,, ,, 8 ,,	... ...	,,	8	0	0

For smaller and larger dimensions, prices will be quoted on application.

II.—Comprising electric clock movements, enamelled circular metal case, white dial, black aluminium hands and water-tight glass front (**these clocks are specially adapted for damp premises and outdoor use**):

			£	s.	d.
8 inch diameter of dial (equal to 1 unit)	... ...	@	3	10	0
10 ,, ,, ,, 1 ,,	... ...	,,	3	15	0
12 ,, ,, ,, 1 ,,	... ...	,,	4	0	0
16 ,, ,, ,, 3 ,,	... ...	,,	4	10	0
20 ,, ,, ,, 3 ,,	... ...	,,	5	0	0
26 ,, ,, ,, 5 ,,	... ...	,,	9	0	0
30 ,, ,, ,, 8 ,,	... ...	,,	10	0	0
36 ,, ,, ,, 12 ,,	... ...	,,	14	0	0
40 ,, ,, ,, 12 ,,	... ...	,,	15	0	0
48 ,, ,, ,, 18 ,,	... ...	,,	20	0	0
60 ,, ,, ,, 20 ,,	... ...	,,	27	0	0
70 ,, ,, ,, 25 ,,	... ...	,,	31	0	0
80 ,, ,, ,, 30 ,,	... ...	,,	37	0	0

For smaller and larger dimensions, prices will be quoted on application.

ALARM INDICATORS.

	£	s.	d
Comprising the necessary apparatus in the master clock by which alarms can be given at intervals of 5 minutes on one or more bells	6	0	0
Alarm-Bells of 10 inch, including hammer ... ... each	4	0	0

REGULATING APPARATUS FOR TOWER AND TURRET CLOCKS.

	£	s.	d.
This apparatus which can be attached to existing Tower or Turret Clocks without taking them to pieces, allows the automatic regulation of the tower clock with the precision master clock, to which it is connected by wires	10	0	0

ACCESSORIES TO MASTER CLOCKS.

	£	s.	d.
Automatic winding up by an electric motor and chain	16	0	0
Compensation-Pendulum of Nickel Steel	7	0	0

III.—Transparent dials illuminated at night by electric light. Prices on application.

IV.—Dials in carved wood or fancy frames. Prices as per special list.

MASTER CLOCKS.

Type a.

PLAIN OAK CASE

(1 to 8 units).

Working period 50 hours.

Type a.

HEAVY OAK CASE

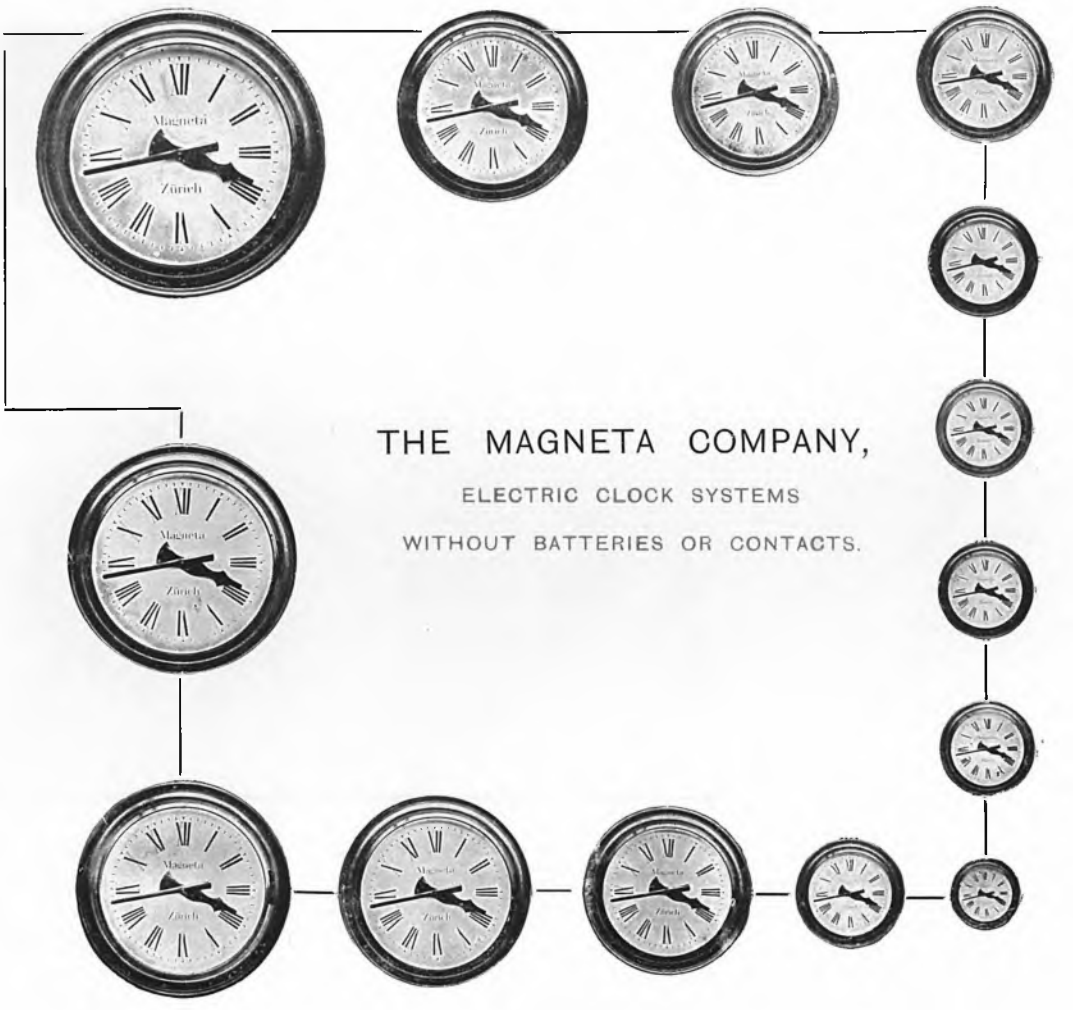
(1 to 8 units).

Type A.

CARVED OLD OAK CASE

(1 to 16 units).

Working period 8 days.


THE MAGNETA COMPANY,
ELECTRIC CLOCK SYSTEMS
WITHOUT BATTERIES OR CONTACTS.

The illustration opposite shows in diagram form a number of Secondary Clocks, which may be of diverse design, shape and size, distributed through the various rooms or departments of a large building, house or other place. They are connected by a fine wire circuit as shown, which circuit ends in the Master Clock which may be placed in the entrance or hall. The Master Clock actuates all the Secondary Clocks throughout the whole system, which neither require any winding, setting, repairs nor oiling.