National Association of WATCH & CLOCK Collectors, Inc.

NAWCC Chapter 52 - Los Padres

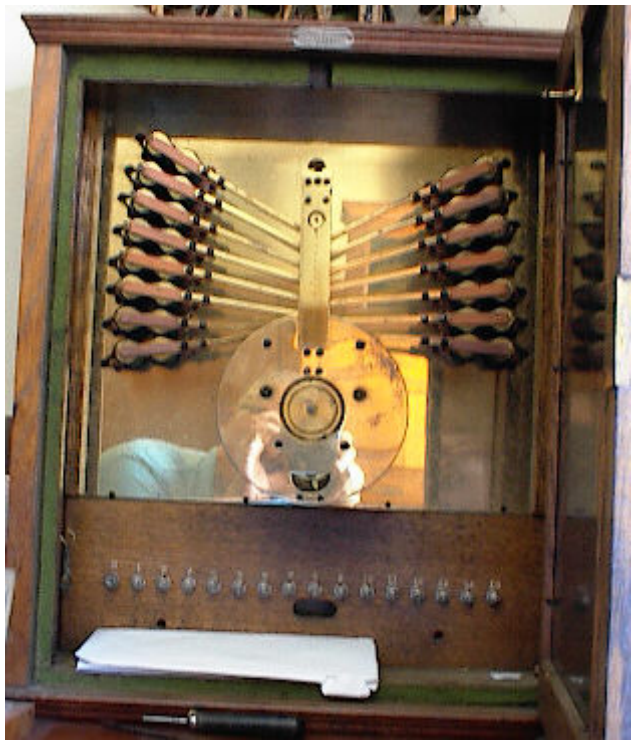
The Holtzer Magneto Clock

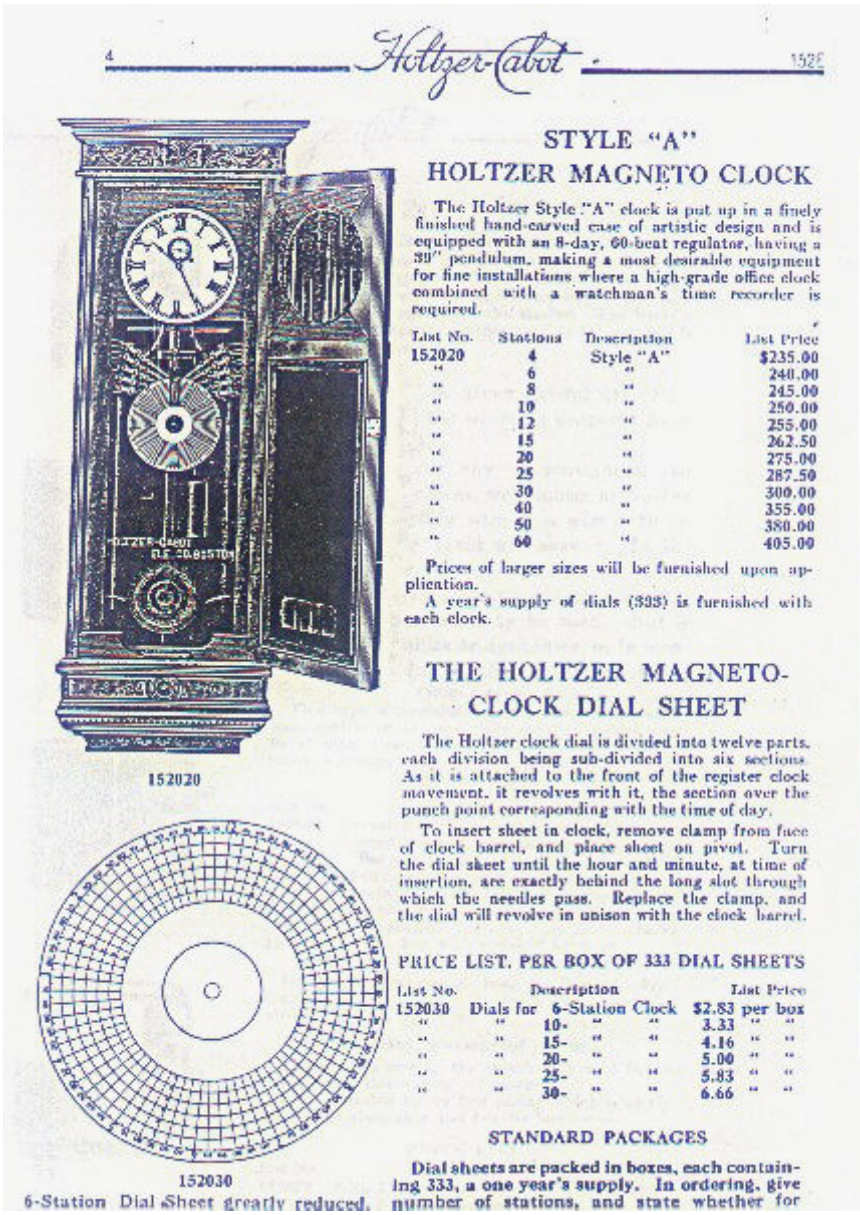
Make sure you scroll down for copies of company pamphlets and historical data!!

Circa 1920's magneto watchman's clock. This company patent no. 342013 issued on May 18, 1886. The factory located at 125 Amory St. Jamaica Plain (Boston)was renovated in 1973 and converted to 184 low and moderate income units for the elderly and disabled.

THIS UNIT STILL WORKS!

15 stations





4 Holtzer-Cabot 152E

STYLE "A" HOLTZER MAGNETO CLOCK

The Holtzer Style "A" clock is put up in a finely finished hand-carved case of artistic design and is equipped with an 8-day, 60-beat regulator, having a 39" pendulum, making a most desirable equipment for fine installations where a high-grade office clock combined with a watchman's time recorder is required.

List No.	Stations	Description	List Price
152020	4	Style "A"	$235.00
"	6	"	240.00
"	8	"	245.00
"	10	"	250.00
"	12	"	255.00
"	15	"	262.50
"	20	"	275.00
"	25	"	287.50
"	30	"	300.00
"	40	"	355.00
"	50	"	380.00
"	60	"	405.00

Prices of larger sizes will be furnished upon application.

A year's supply of dials (333) is furnished with each clock.

152020

THE HOLTZER MAGNETO-CLOCK DIAL SHEET

The Holtzer clock dial is divided into twelve parts, each division being sub-divided into six sections. As it is attached to the front of the register clock movement, it revolves with it, the section over the punch point corresponding with the time of day.

To insert sheet in clock, remove clamp from face of clock barrel, and place sheet on pivot. Turn the dial sheet until the hour and minute, at time of insertion, are exactly behind the long slot through which the needles pass. Replace the clamp, and the dial will revolve in unison with the clock barrel.

152030

6-Station Dial Sheet greatly reduced.

PRICE LIST, PER BOX OF 333 DIAL SHEETS

List No.	Description	List Price
152030	Dials for 6-Station Clock	$2.83 per box
"	" 10- " "	3.33 " "
"	" 15- " "	4.16 " "
"	" 20- " "	5.00 " "
"	" 25- " "	5.83 " "
"	" 30- " "	6.66 " "

STANDARD PACKAGES

Dial sheets are packed in boxes, each containing 333, a one year's supply. In ordering, give number of stations, and state whether for

The above are not in my collection, the one on the right is from Bulletin 152 E, Holtzer Cabot Electric Co. The image on the left I copied from the internet to show the type and quality of the cases.The one below is also from the Holtzer Bulletin

THE HOLTZER-CABOT ELECTRIC CO.

BOSTON, MASS.

EXECUTIVE OFFICE AND FACTORY
125 AMORY ST., BOSTON

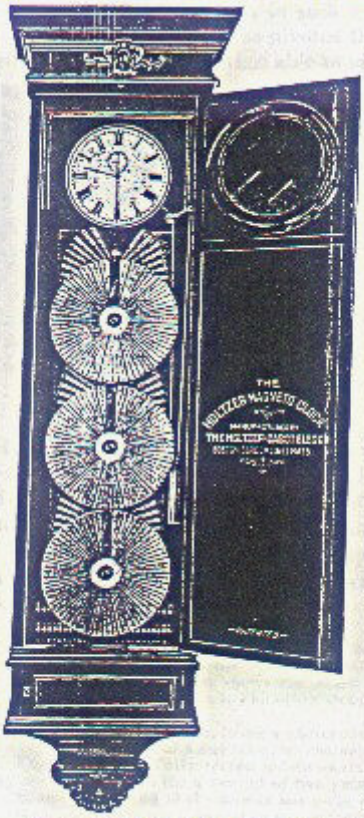
WESTERN BRANCH
6161-65 SO. STATE ST., CHICAGO

NEW YORK OFFICE
101 PARK AVENUE

BALTIMORE OFFICE
1104 UNION TRUST BUILDING

BULLETIN NO. 152E

The Holtzer Magneto Clock



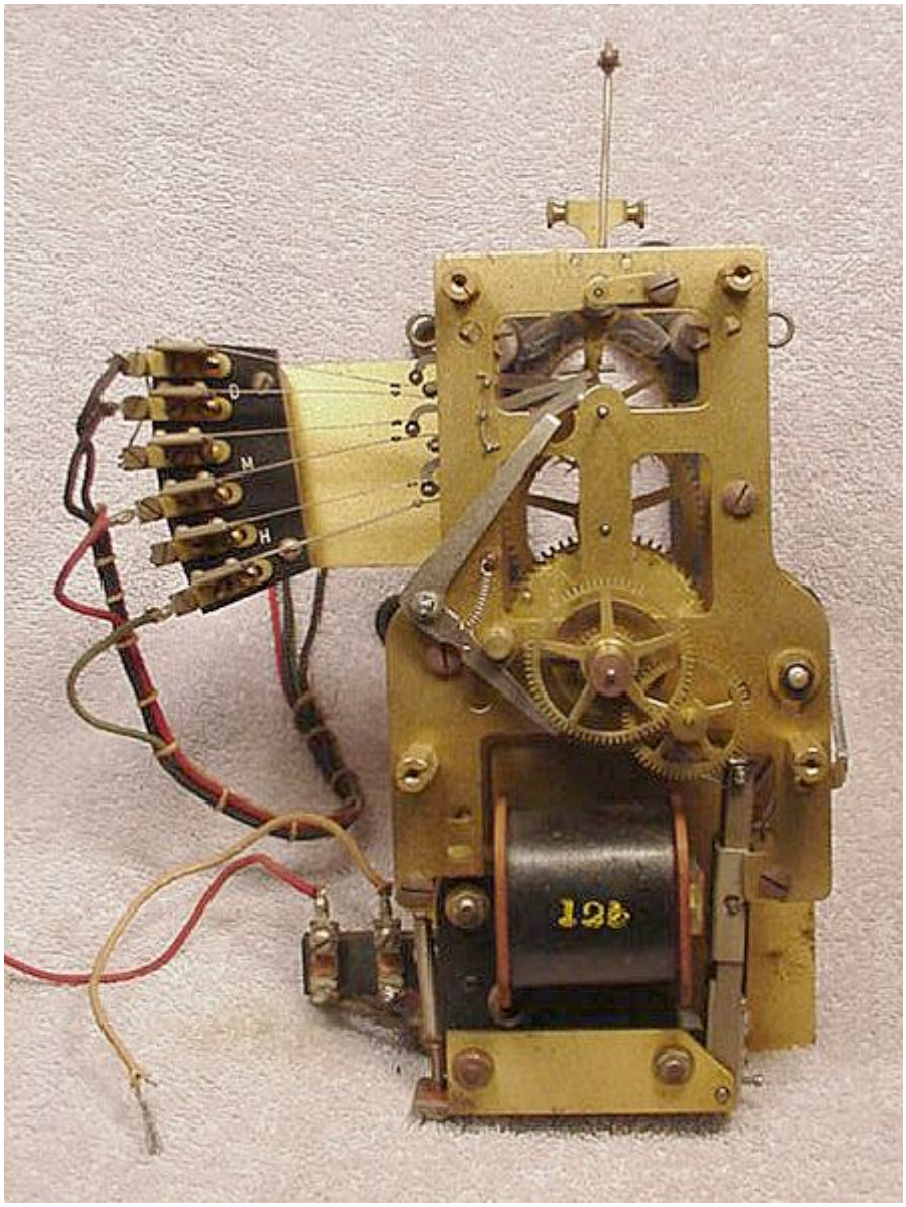
Special Case with Three Dials
(See page 6)

THE Holtzer Magneto Clock is approved by the National Board of Fire Insurance Underwriters. The construction of the apparatus is treated on pages 1 and 2. Its record is an ineffaceable puncture through a paper dial, the mechanism being operated by current from magneto hand generators (similar to those used in telephone service) arranged along the route of the watchman. The clock movement is a thoroughly reliable one, and the dials can be quickly and easily changed. No batteries are used.

The whole mechanism is finished after the fashion of high-class electrical instruments. All brass parts are polished and lacquered, and the armatures and iron parts are copper plated to prevent rusting. The magnets are wound with a silk-covered wire in even layers. The standard case is made of quarter-sawed oak, finely finished. Holtzer clocks will be found to show a higher grade of workmanship than any similar appliances in the market.

The two pictures above are of a circa 1937 Master Clock, the clock is electric, not weight. Haven't seen the movement so am not sure if it uses a self winding device or some other mode to keep the pendulum in play. I have seen this type clock in a 37 catalog and know that it can drive slaves and should have an hourly correcting impulse to keep the slaves synched. The screws holding the dial are positioned the same as self winders and Seth Thomas movements.

The next 4 photos are courtesy of Denis Jahn. Three views of a movement and one of a Dial for a Holtzer Master.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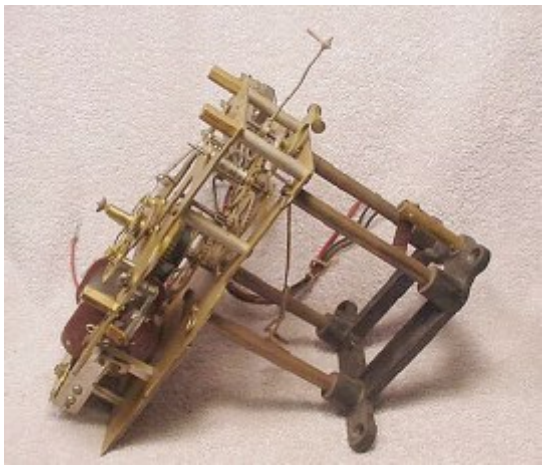


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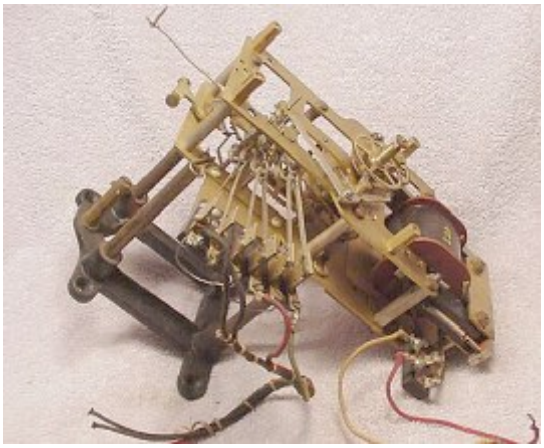

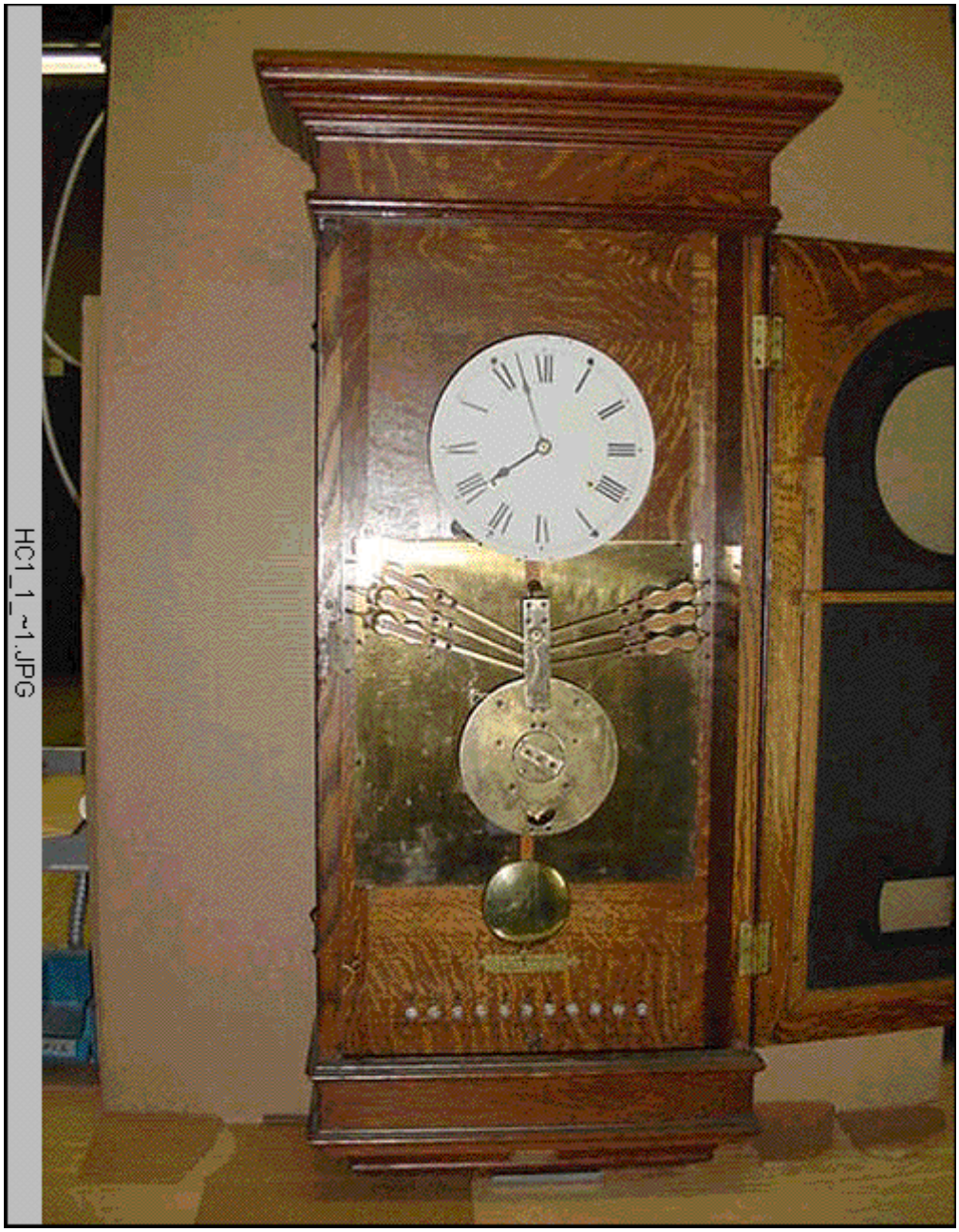
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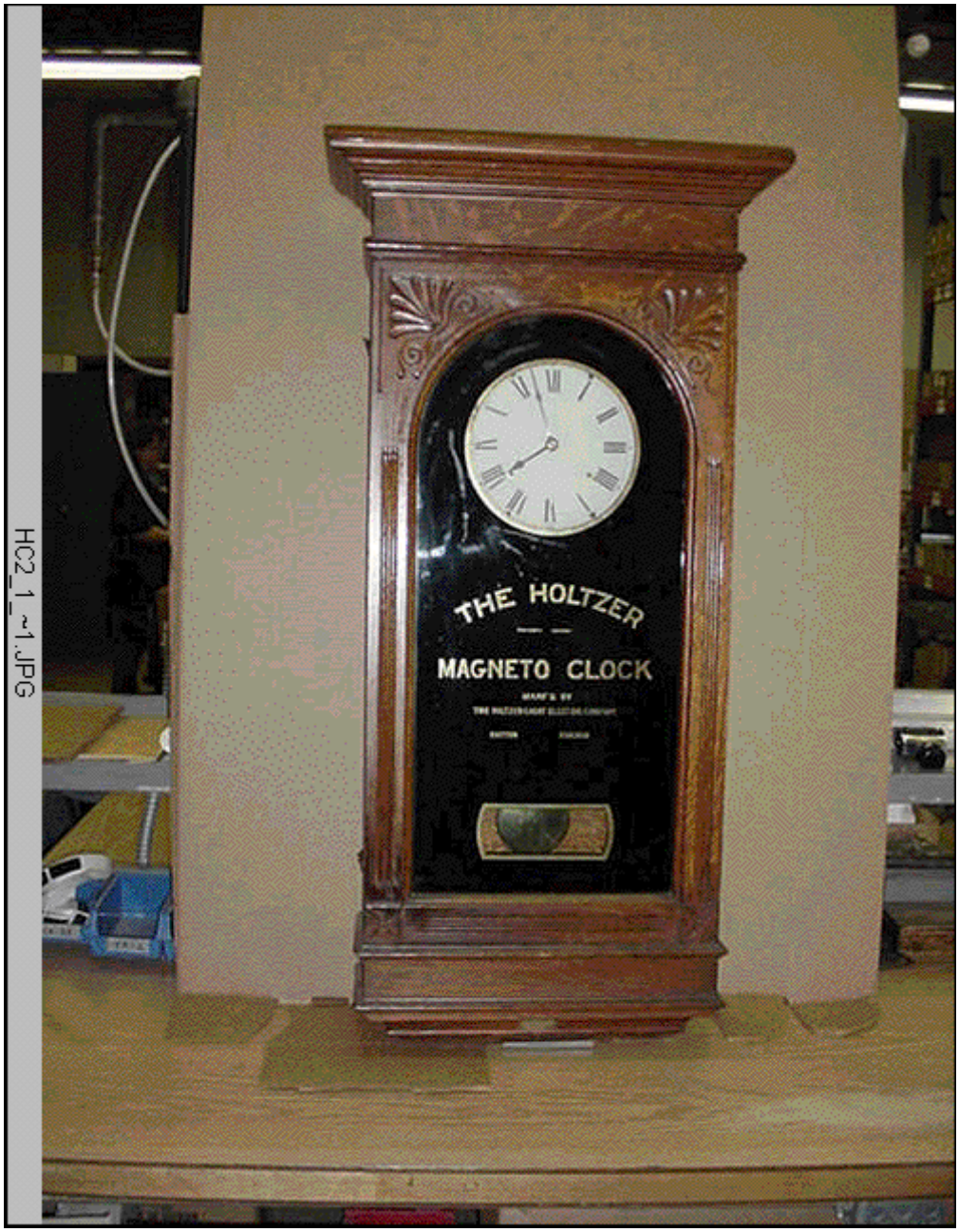
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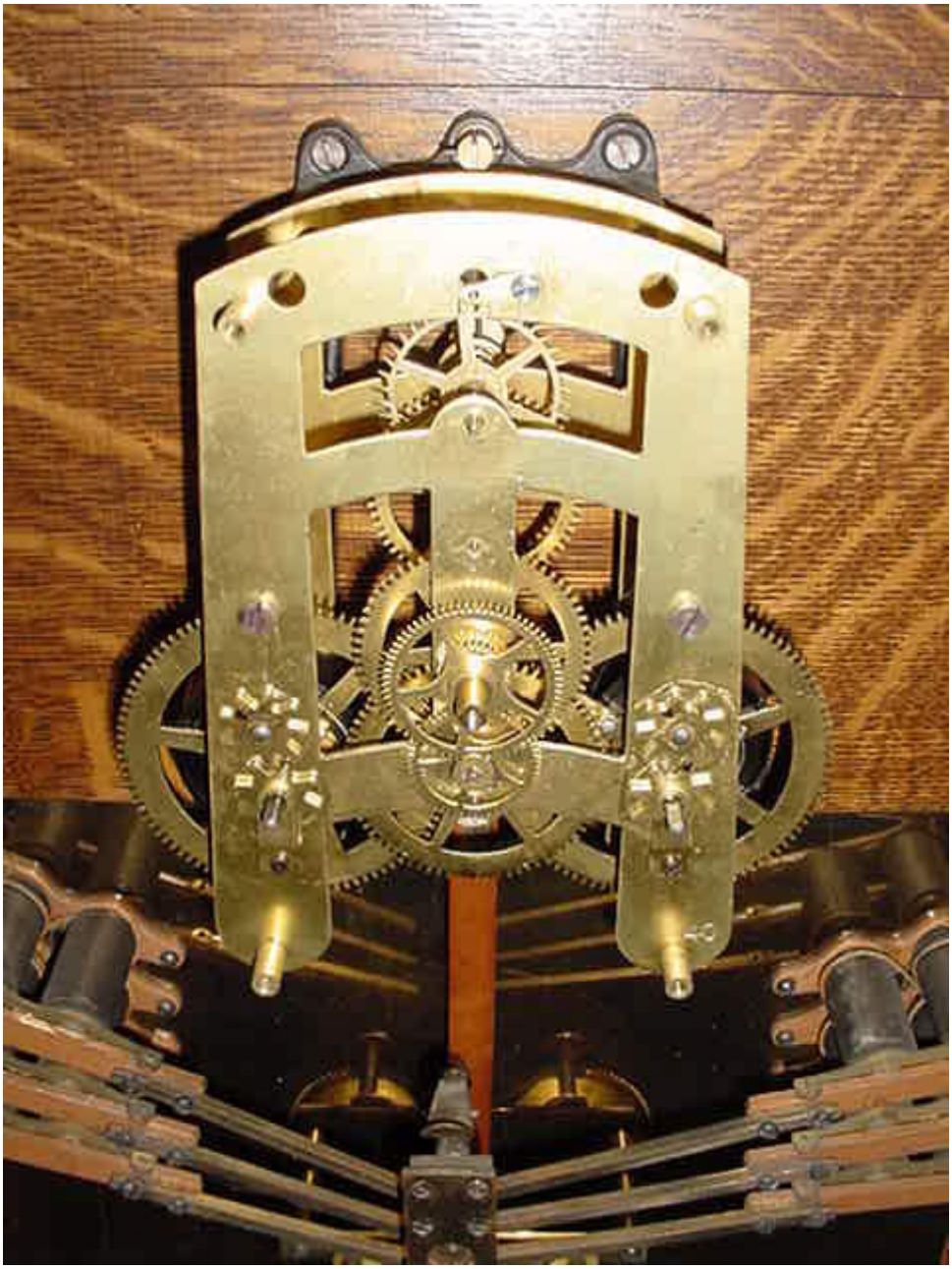
THE HOLTZER
MAGNETO CLOCK

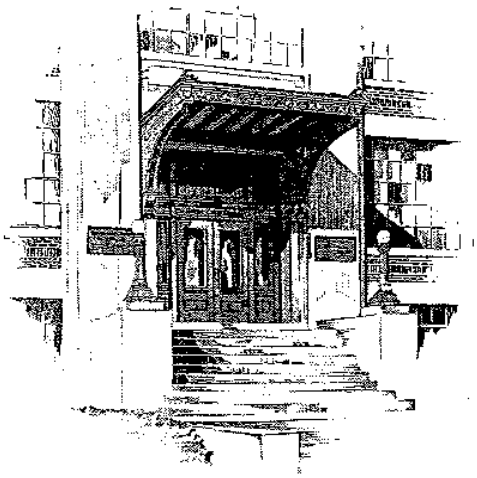


The above four pictures are of a Holtzer watchman's clock with Independent regulator, It is in the Detex Museum in Texas. It is owned by Dr. Paul Harrison. Pictures supplied by Dennis at Detex and Forwarded to me by Denis Jahn.

Owned by a fellow NAWCC collector in KY. D. Phelps. I stole his pic from the NAWCC site.
The lettering on the glass suggests to me that it was reconditioned and resold by "Acme". it is a 20 station and the inside ST movement is identical to all the Holtzers I have seen. The 80 beat 15 day Seth Thomas independent of watchmans device dial powered by ST #10 .

The following is from a company publication produceded in 1925

1875~1925



Entrance to Main Offices and Factory

PUBLISHED IN COMMEMORATION OF
ITS FIFTIETH ANNIVERSARY BY

The Holtzer-Cabot Electric Co.

BOSTON ~ MASSACHUSETTS

FOREWORD

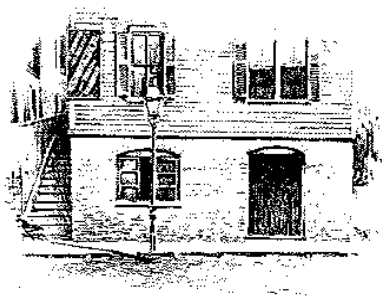
THE CORNER STONE OF THE BUSINESS OF THE HOLTZER-CABOT ELECTRIC COMPANY WAS LAID IN 1875. WE ARE, AT THIS TIME, AFTER THE LAPSE OF FIFTY YEARS, PAUSING FOR A MOMENT TO TAKE ACCOUNT OF OUR PROGRESS, OUR POSITION IN THE MANUFACTURING AND COMMERCIAL FIELD; TO RECOGNIZE THE DEVOTION OF THOSE WHO HAVE GIVEN THEIR WORKING LIVES WHOLLY OR PARTIALLY TO THE ADVANCEMENT OF THE ENTERPRISE; TO ACKNOWLEDGE OUR DEBT TO THOSE WHOSE LOYALTY AND PATRONAGE HAVE MADE OUR CONTINUED EXISTENCE POSSIBLE; AND WITH DUE CEREMONY TO INVEST THE OCCASION WITH THE SOLEMNITY WHICH WE FEEL TO BE FITTING AND PROPER. TO BE A PART OF OUR GOLDEN JUBILEE, THEREFORE, THIS BROCHURE HAS BEEN PREPARED.

The Holtzer-Cabot Electric Co.

HISTORICAL

THE history of The Holtzer-Cabot Electric Company is not in the least spectacular, nor to be compared with that of the many vast organizations of the day. It is a modest story of slow and solid growth. The goal has never been to develop a plant measuring its floor space in acres and distributing its product through an organization of world-wide extent. On the other hand, the plan has been to work toward a compact and efficient manufacturing unit with a complete and modern equipment and a restricted range of product made and sold by an organization all its own,—to concentrate highly and perform well, to keep faith with employee and customer and to make sure that immediate profit should wait upon the permanent good will of those who would use our products.

The Aim



The First Factory—1880

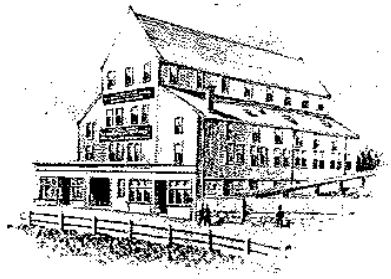
Mr. Holtzer's Birth

The business which came to be that of The Holtzer-Cabot Electric Company was begun in 1875 by Mr. Charles W. Holtzer. Mr. Holtzer was born in Karlsruhe, Germany and received his education at the Institute of La Fontaine, located at that place. After leaving school he served his apprenticeship as a machinist. He came to the United States in 1866. The Civil War had just terminated and interest in military devices was still in evidence. Mr. Holtzer first carried on certain ex-

perimental work in connection with the timing of explosive projectiles, after which he spent some years in the employ of E. S. Ritchie & Sons of Brookline, Massachusetts, makers of philosophical instruments.

The first Shop

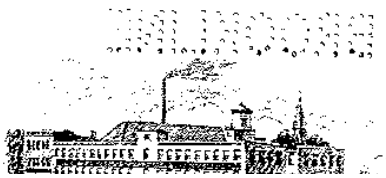
In 1874 Mr. Holtzer engaged in the manufacture of certain simple electrical devices in conjunction with a Mr. Newell under the firm name of Holtzer & Newell and a year later he established a small business of his own still dealing with electrical apparatus. During this latter period Mr. Holtzer operated the first suburban telephone exchange outside of Boston with 14 subscribers and one toll line to Boston. His first shop was in the basement and on the street floor of the Harvard Building, in Harvard Square, Brookline, where his business was carried on for four or five years; after which the first factory building was erected on Boylston Street.



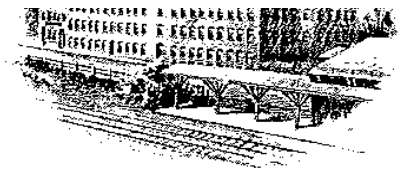
The Brookline Plant in 1885

Expansion

In 1885 Mr. Holtzer purchased the church property on Station Street opposite the Boston & Albany Railroad Station in Brookline. This building he remodeled using a part for manufacturing purposes and leasing the balance for offices and club rooms. It was, however, only a few years before the entire building was required to handle the growing



volume of business. In 1897 an office building of brick, four stories high was built adjoining the plant and in 1899, additional manufacturing space being re-



The Brookline Plant in 1903

additional manufacturing space being required, a brick wing 30′ x 60′, four stories high, was erected, to be followed shortly by a second wing of about the same size.

Farther Growth

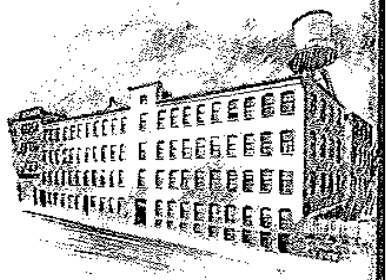
The main building sat back from and at an angle to the street, while the new right and left wings extended to the property line. In 1903, so great was the pressure for floor space, a brick wall was built from the brick office wing on the left to the factory wing on the right, and each floor was carried out to it, thus adding quite a little valuable manufacturing capacity.

The Albany Street Plant

In the meantime, the motor business of the company had increased to such a point that it could no longer be accommodated, and there being no more available land adjacent to the factory, a building 80′ x 100′, five stories high, on Albany Street, Boston, was leased, this to be devoted entirely to the manufacture of electric motors.

The Fire

In 1911 a large portion of the Brookline factory was destroyed by fire, and in order to provide temporary quarters, a number of floors were leased on Bristol Street, Boston and elsewhere, while the main plant was being rebuilt. By the time this was accomplished, however, farther increases in the business had taken place and the Bristol Street space was retained until 1914 when all departments were moved to the new Amory Street plant.



The Rebuilt Brookline Plant—1912

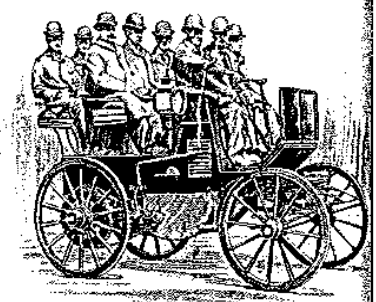
During these years, the need was becoming more and more apparent for a single manufacturing unit to house the scattered branches and provide, so far as the present generation is concerned, a final home for the business.

The New Plant

In 1913 the plans were completed for a modern plant, the last word in convenience, in sanitation and completeness. A year was required in building and about the same period was necessary for moving so that the close of the year 1915 found the company practically installed in its new quarters. The main building is a six story structure of reinforced concrete, with an annex of seven stories containing the service section and certain of the manufacturing departments. The plant contains with its auxiliary departments about 150,000 square feet of floor space. The walls are of brick panelling and the floors of 9″ concrete slabs with a clear height of 11′ 3″ from floor to ceiling. The supporting columns are 20′ apart and are 24″ in diameter with mushroom heads 5′ 6″ in diameter. Clear glass windows set into steel sash and curtained, provide ample and well regulated light.

Electric Carriages

Two electric carriages driven by motors and storage batteries were built by this company for Mr. Fisk Warren, a Boston business man. The first, built in 1891, had a seating capacity of two persons. The second was made in 1893. It weighed 5,100 pounds, seated eight people and was capable of 16 miles an hour on the level. So far as we know, these were the first electric carriages ever built.



Electric Carriage—1893

The First Dynamo

In 1878 a dynamo, designed by William Stanley, had been built and successfully used by E. S. Ritchie & Sons of Brookline for charging compass needles; yet it was not until the years 1890–1895 that the company began to engage seriously in the manufacture of electric motors and generators. During these years lines of direct current motors up to 30 horsepower, generators on corresponding frames, electroplating dynamos, fan motors, etc., were designed; and although the days of the motor driven adding machine, vacuum cleaner and washing machine were yet to come, a few sizes of small single-phase alternating current motors were finding a receptive market. Even in these early days there was some use of motor-generators, required to convert the available power or light current to current of other sorts, to charge batteries, ring bells and for other purposes.

Government Work

About 25 years ago the company became interested in an attractive outlet for its products in the departments of the United States Government, particularly those of the Army and Navy. This apparatus as a rule is built to very rigid specifications drawn by highly trained engineers who demand the very highest quality of work and excellence of design. Since that time a very large amount of Holtzer-Cabot apparatus has been installed in the fortifications of the War Department, on the ships of the Navy, on the submarines and the airplanes. In the

year 1906 when President Roosevelt sent the Battleship Fleet on its memorable cruise around the world, it was equipped with Holtzer-Cabot telephones, being then used for the first time in directing gun fire. Since that date, substantially all the battle ships of the Navy have been similarly equipped with Holtzer-Cabot telephones. During the World War, the submarines of the United States and Allied nations were to a very large extent provided with its motor-generators for use in underwater communication and wireless motor-generators were installed on many of the Naval vessels as well as the merchant vessels used in transporting troops and supplies abroad. In 1912 a Holtzer-Cabot specially constructed generator was installed on an aeroplane by the War Department and wireless communication between the plane and the earth was for the first time successfully accomplished. Some of these types are shown on page 33.

The First Airplane Generator

In 1897 important changes were taking place in the field of telephone operation. The method then employed of signaling the exchange and

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Government Work

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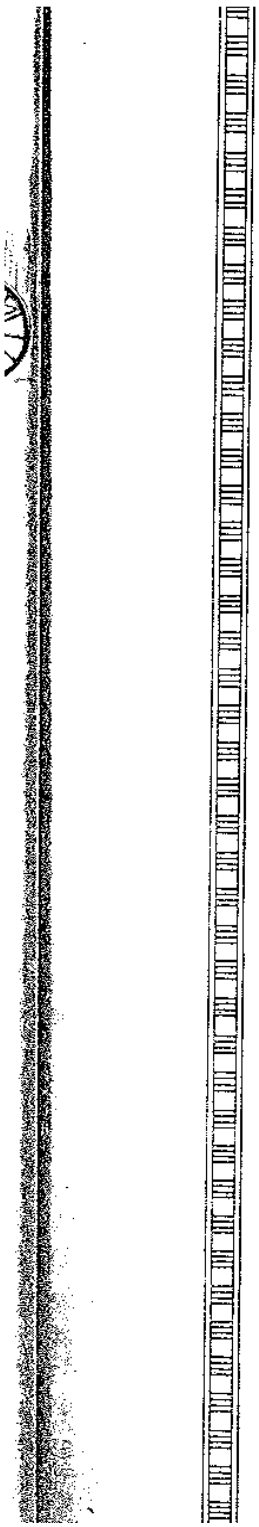


the subscriber by means of a hand operated magneto was giving way to the so-called central energy system. By this is meant that there was a central power plant consisting of storage batteries to supply currents to the talking circuits as well as ringing units to do the signaling. There came naturally a demand for charging apparatus and it was found convenient to be able to charge batteries at the same time drawing therefrom current for actuating the receivers. It was not possible to use commercial generators for this purpose on account of the noise thus introduced into the talking circuits. The Holtzer-Cabot Electric Company at that time designed a line of special noiseless telephone charging generators of special construction for charging the batteries while the latter were still connected to the switchboard and upon occasion to disconnect the batteries and supply the board direct from the generators. This was a most notable engineering achievement. These machines are today installed not only throughout the United States, but in England, Europe, Australia, South America and in many other places and are still being built for this purpose.

Telephone Power Plants

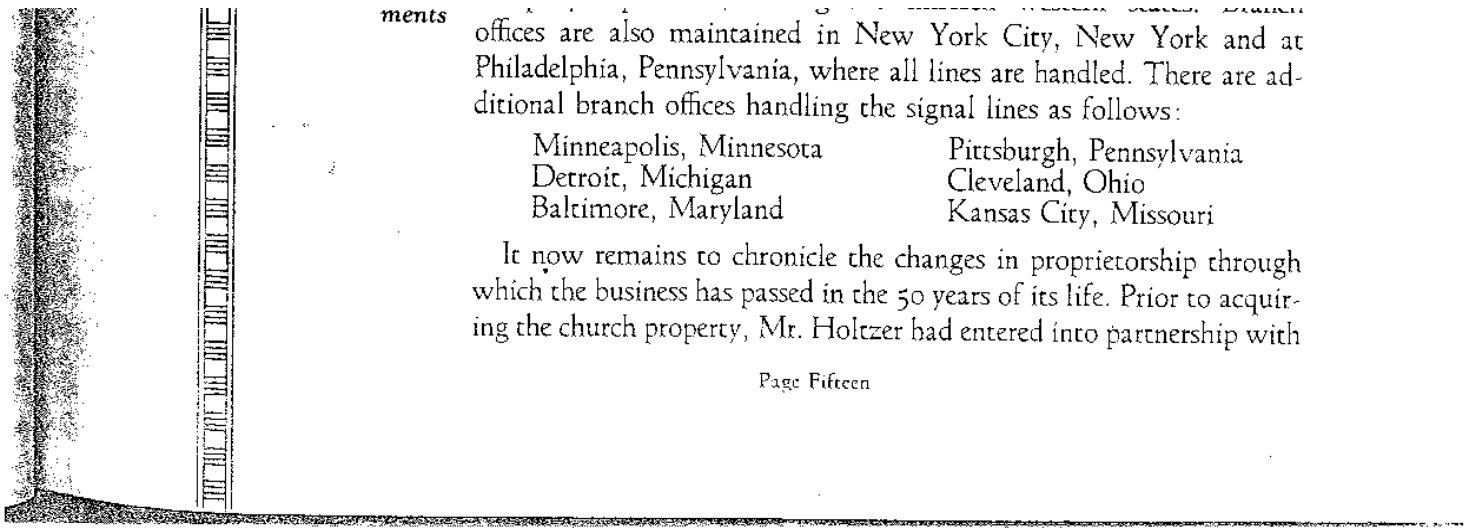
Coincident with this was the development by The Holtzer-Cabot Electric Company of central energy ringing units giving alternating current for ringing bells, for selective ringing on party lines and for supplying the various special signals, such as, the busy, don't answer and also the automatic ringers which when turned on signal periodically until such time as they are cut off; thus, greatly increasing the capacity of the operators in handling calls.

At the present time the product of the Motor Department is confined largely to small motors in the fractional horsepower sizes. These are usually in special forms for adaptation to automatic machines, such as musical instruments, office and domestic appliances, farm and dairy machinery, medical appliances, small elevating devices, coffee mills, meat choppers, fans and blowers, small machine tools, etc.

Products of Motor Department

The product of The Holtzer-Cabot Electric Company is marketed almost exclusively through branch offices under the management of its own executives; the actual selling being done by trained electrical engineers in the company's employ. The oldest branch office is located at 6161 South State Street, Chicago, Illinois. This was established in 1899 and is housed in a building owned by the company and equipped with offices, warehouse and repair shops. This branch handles all of the company's products, throughout thirteen western states. Branch

The Sales Depart-



ments

offices are also maintained in New York City, New York and at Philadelphia, Pennsylvania, where all lines are handled. There are additional branch offices handling the signal lines as follows:

Minneapolis, Minnesota	Pittsburgh, Pennsylvania
Detroit, Michigan	Cleveland, Ohio
Baltimore, Maryland	Kansas City, Missouri

It now remains to chronicle the changes in proprietorship through which the business has passed in the 50 years of its life. Prior to acquiring the church property, Mr. Holtzer had entered into partnership with

Changes in Proprietorship

Mr. Seth W. Fuller, who was engaged in electrical contracting, and the business was conducted for a time under the firm name of Seth W. Fuller & Holtzer. The next step was the opening of a salesroom at 111 Arch Street, Boston, in order to better take care of the contracting end of the business. About this time Mr. George E. Cabot joined forces with the firm of Seth W. Fuller & Holtzer, and the firm name was changed to Fuller, Holtzer & Company. In 1889 this latter concern was dissolved, Mr. Fuller withdrawing to enter into the contracting business on his own account and Mr. Holtzer and Mr. Cabot continuing under the firm name of Holtzer & Cabot.

Later in 1889 the company was incorporated under the present name, The Holtzer-Cabot Electric Company, and moved its Boston Office and Salesroom to 92 Franklin Street, Boston, where, in addition to marketing the products of the Brookline factory, it did a large amount of electrical contracting. In 1892 Mr. Cabot sold his interests

to Mr. Holtzer, and the company withdrew from the contracting business, in order to be free to devote its whole time and energies to manufacturing.

Mutuality of Regard

Mr. Holtzer's attitude towards his employees is always one of kindness carried at times quite to the point of indulgence. It is based upon the deepest affection for them and interest in their welfare. He is at all times accessible to the humblest employee. This attitude is met by the employees in like spirit. They have the utmost faith in his sense of fairness and co-operate with the management in a broad and considerate spirit to meet the problems of the day.

The Shop Committee

For these reasons the machinery for handling the employee relationship is very simple. The employees are organized into a Shop Committee which is comprised of a representative elected by each department. The membership elects the chairman of the Committee who deals with the chairman of the Factory Management Committee, the latter representing the management.

No Labor Difficulties

By reason of this very simple and practical way of maintaining a point of contact between the management and employees, there are no labor difficulties of any kind in the plant of The Holtzer-Cabot Electric Company.

Mutual Benefit Association

In addition to the compensation and liability insurance provided by the company, the employees, aided by the management, established, more than thirty years ago, a Mutual Benefit Association to take care of the ill and to provide certain death benefits.

Savings Club

There has also been in existence for about the same period the Savings Club in which all employees are entitled to participate. Each member pays each week a certain sum depending on the number of shares held. This fund is divided a week before Christmas, thus providing a very convenient method of saving up during the year for the usual expenditures of the Christmas season.

Versatility of the Executive

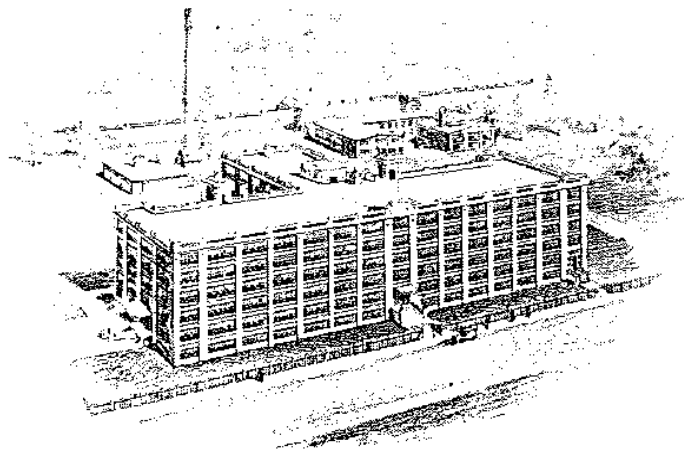
The functions of an institution such as this are many and diverse. There is scarcely a department of human experience that is not required at times to contribute to the decisions that must be made. A great versatility on the part of the chief executive is altogether necessary. There are, of course, certain kinds of training and experience in which he is expert and through which he makes approach to his work, but he must be able also to draw from many other branches of knowledge, to sort out the relevant from the irrelevant and weigh properly the information and advice that comes to him, separating the accurate from the inaccurate, the wise from the unwise.

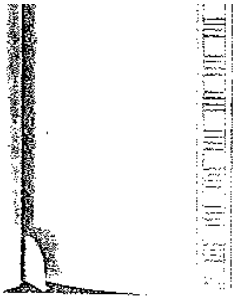
Many Traits Necessary

Other qualities are necessary—perseverance, vision, initiative, the ability to gain the loyalty of his associates which indeed is only a reflection of his own loyalty to them. But, even these traits would not enable an executive to carry year after year the burden of labor and anxiety which never for a moment relaxes. There must be a sustained enthusiasm, a stern sense of duty, love of the work, faith in himself, in his associates and his enterprise.

Deserved Homage

Therefore, when we observe an institution which for half a century has prospered under the guidance of a single personality, we may assume the presence of these virtues, and we may be sure that the homage that comes to Mr. Holtzer upon the fiftieth anniversary of his establishment in business is not undeserved. Surely he may feel and should feel an abiding satisfaction as he contemplates the institution which represents the major effort of his life.





The New Plant—1915

Page Seventeen

The next is a 13 page sales pamphlet from 1905

The Holtzer-Cabot Electric Co.,

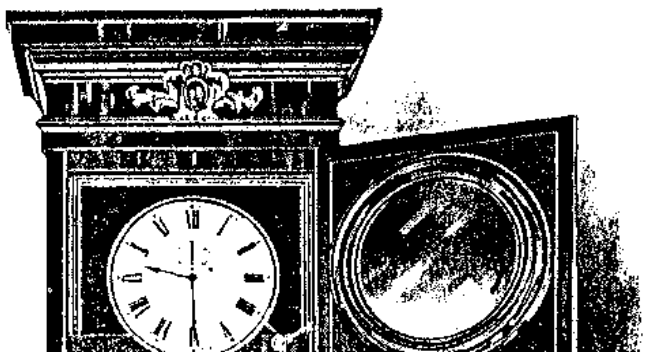
HOME OFFICE AND FACTORY, **BOSTON (Brookline), MASS.**

NEW YORK: 143 Liberty Street.

PHILADELPHIA: 1327-1329 Real Estate Trust Bldg.

CHICAGO: 395 & 397 Dearborn St.

BULLETIN No. 152 A. MARCH 30, 1905.



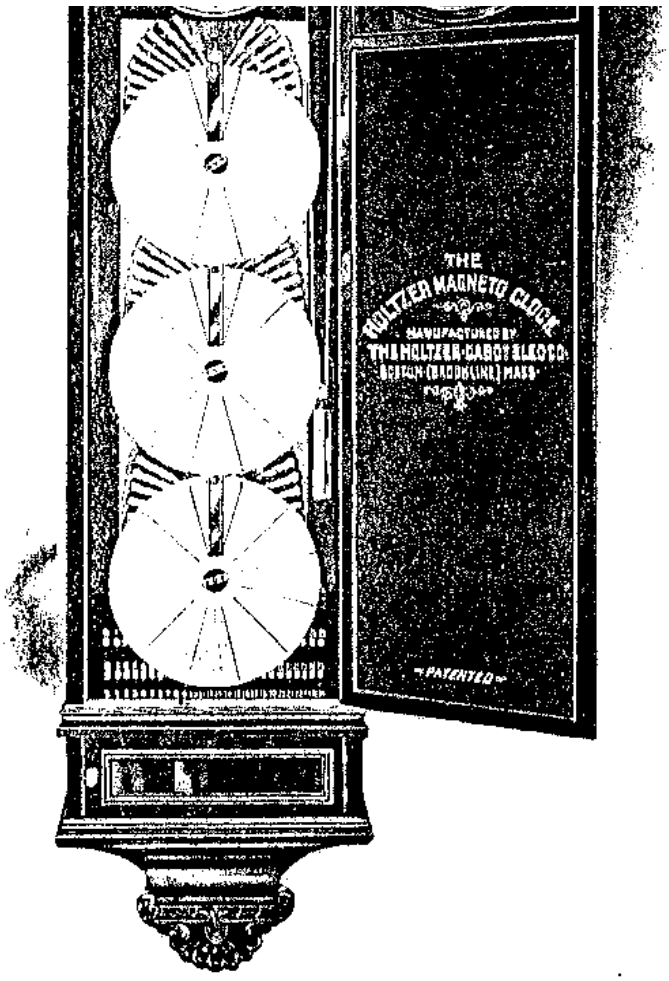


Fig. 1. Special Magneto Clock for Three Watchmen.

THE HOLTZER MAGNETO CLOCK.

Boston. New York. The Holtzer-Cabot Electric Co. Philadelphia. Chicago.

The Holtzer Magneto Clock.

THE Holtzer Magneto Clock is recommended by the Standard and Mutual Insurance Companies and is endorsed by National Fire Insurance Underwriters. The construction of the clock is illustrated and described on pages 3 and 4. It is operated without any batteries whatsoever. Each station on the watchman's route contains a

small magneto generator, similar to that often used in telephone service for sending in a call (see illustrations on page 9). These machines are always ready to supply a powerful current, and require practically no attention. The fact that the watchman has to go to each station to generate the current himself, makes it impossible for him to make a false record by short circuiting the wires. After the first installation there is practically no expense for maintenance, while batteries not only require careful attention but they run down and have to be renewed at frequent intervals. The clock movement employed is a throughly reliable time-piece, and the method by which the dials are attached allows of their being quickly changed and set at the correct time. The last feature is an important one, as with most clocks it is almost impossible to place the dial so it will indicate exactly the correct time.

There is a separate magnet for each station in the system. These magnets make a record on a special paper dial (such as is shown on page 10) by forcing a needle through the paper. It will be noted upon examination that the dial is divided up into concentric circles corresponding to different stations, these circles being intersected by lines radiating from the centre and corresponding to the different hours of the day or night. As each station is operated a puncture is made in the paper between the two circles which indicate the number of the station that is sending the current, while the lines crossing the circle at the point of puncture will indicate at what time this call was sent in.

The "Guardian," a leading organ of the insurance interests, has this to say in regard to watchman's time detectors: "There can be no question that as a means of protection to life and property an effective watchman's clock is one of the most desirable inventions of the age, ... but the fact is that by far the greater number of those that are on the market are not simply good for nothing, but are worse than useless. . . . . Of the multitude of clocks on the market the greater majority can be tampered with. . . . . Such clocks as these are purchased not because there are not good ones in the market — for there are, — but for the sake of saving a few dollars. . . . . The only clock that a property owner can afford to buy or an insurance company can afford to accept is one that is absolutely proof against manipulation."

2

Boston. New York. The Holtzer-Cabot Electric Co. Philadelphia. Chicago.

DESCRIPTION OF OPERATING MECHANISM.

The cut Fig. No. 2 shows the interior mechanism of the Holtzer

Magneto Clock. The movement is protected from dust and dirt by a polished brass casing. The movements as well as the magnets and all working parts are mounted upon a single, heavy brass plate, which keeps them in permanent adjustment and makes the whole a substantial and rigid structure.

A separate electro magnet is used for each station. The punch points or needles are mounted independently of the lever arms, each point being enclosed in a small brass tube containing a spiral spring, which brings it

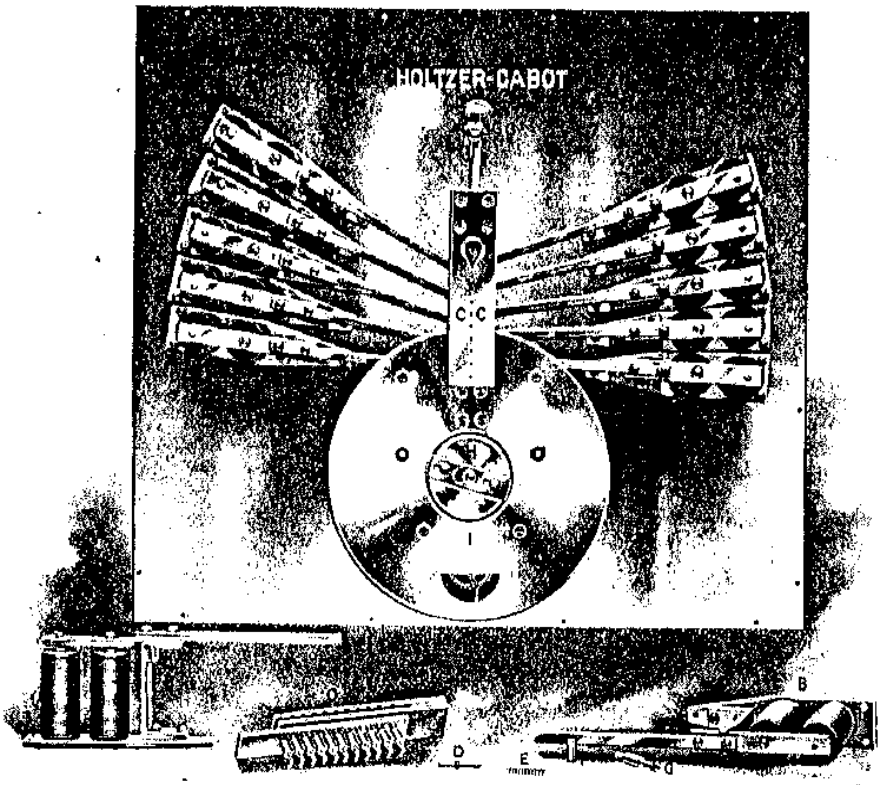


Fig. No. 2.

A Brass base plate holding all working parts.
B Magnet with the armature and striking rod.
C and CC Row of needles and cases with guide for dial. (Note the grooves for the punched portions of the paper to travel in, so that there is no possibility of the dial sticking.)
D Steel needle point for making record.
E Spring for withdrawing needle.
F Individual casing for needle and spring.
G and GG Device for making record whenever door is opened or closed.
H Disc clamp for holding on dial.
I Casing covering clock movement.

back from the dial after it has been forced through the paper in making the registration. This form of construction allows the using of a short pin that is not liable to become bent, and which cannot be thrown out of alignment on the dial. It also becomes impossible for the pins to stick and tear the record. The lever arms which strike the punch points are accurately

balanced, and as they do not engage with the points until they have moved some distance they acquire a movement which results in a quick and powerful blow.

The whole mechanism is given the same finish as that employed in the highest class of electrical instrument work. All brass parts are polished and lacquered, the armatures and iron parts copper-plated to prevent rusting and the magnets wound with silk-covered wire in even layers. The appearance of our clock will be found ahead of anything on the market made for a similar purpose. **We are prepared to furnish estimates on recorders with 24-hour dials when required.**

POINTS OF SUPERIORITY.

We would call to your attention the following points of superiority possessed by our clock:—

1. **It requires** absolutely **no battery.**
2. **It never fails to make a record,** and the **dial sheets cannot be destroyed** through any manipulation of the magnetoes or short-circuiting of the wires.
3. A registration is made on the dial which **shows the exact time that the door is either opened or closed.** This record is of a similar character to that produced by the regular operation of a station, but **appears in a special section** on the dial.
4. The **record is indelible,** being a **puncture in the dial** which **cannot be effaced.**
5. The machanism is of a **substantial** character and built with the greatest care

greatest care.

6. Every detector is **fully tested** before leaving the factory and goes out **working perfectly** and **guaranteed for a period of five years.**

7. **Short-circuiting** of the wires at any point **cannot be made to cause a registration.**

8. It is absolutely necessary for **the watchman to visit each station** to make the proper impression on the dial.

Have you considered how much your insurance rates will be reduced by installing a Watchman's Register?

SPECIAL ATTACHMENT.

When desired we equip our detectors with a special attachment, by means of which, should the watchman fail to make a registration within a set period, of say half an hour, a bell will be rung in the house of the superintendent or some office near by. An additional charge will be made where this attachment, bell, battery, etc., are required.

Boston. New York. The Holtzer-Cabot Electric Co. Philadelphia. Chicago.

STYLE "D" HOLTZER MAGNETO CLOCK.

(Quartered Oak Case.)

This is our most popular style of recorder. It is intended for use as a plain watchman's register and is therefore equipped with a register dial only.

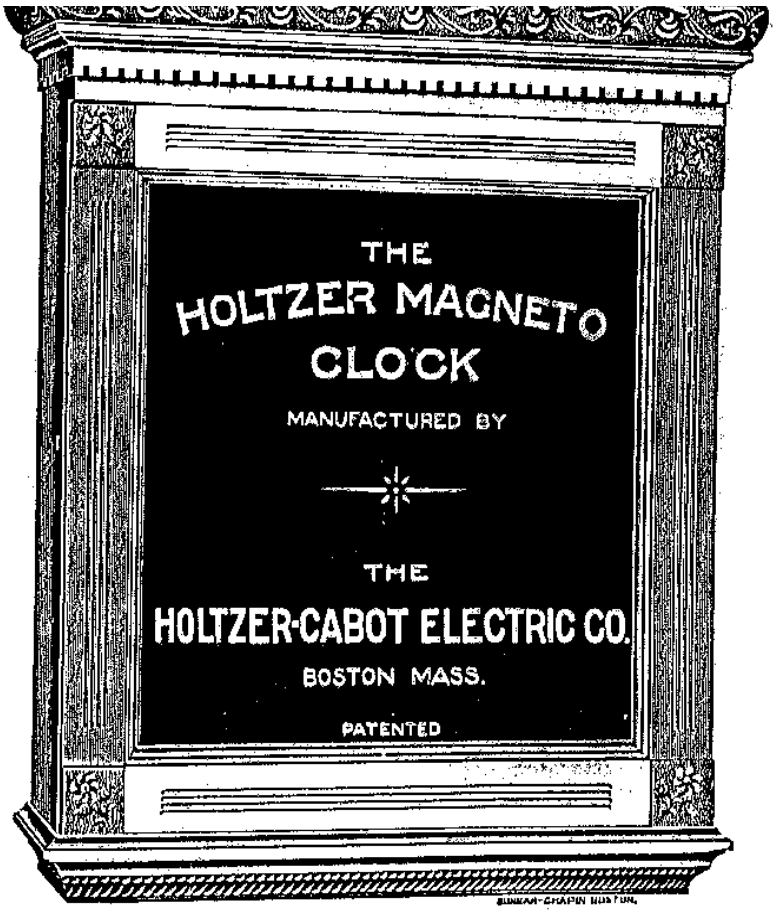


Fig. No. 3. Style "D" Magneto Clock.

PRICE LIST.

Cat. No.	No. Stations.	Description.	List Price.	Code Word.
1-152a.	4	Stations, Style "D" Magneto Clock	$60.00	Labellum.
2-152a.	6	" " "	70.00	Labent.
3-152a.	8	" " "	80.00	Labeo.
4-152a.	10	" " "	90.00	Labrax.
5-152a.	12	" " "	100.00	Labiate.
6-152a.	15	" " "	115.00	Labium.
7-152a.	20	" " "	140.00	Lablab.
8-152a.	25	" " "	165.00	Lacto.

Add $5.00 for each additional station.

A year's supply of dials furnished with each clock.

5

Boston. New York. The Holtzer-Cabot Electric Co. Philadelphia. Chicago.

STYLE "E" HOLTZER MAGNETO CLOCK.

(Quartered Oak Case.)

Our Style "E" Recorder shown in Fig. 4 differs from the Style "D" in that it is put up in a smaller and plainer case and is *not made for more than six stations.*

STYLE "E" PLAIN RECORDER.

PRICE LIST.

Cat. No.	No. Sta.	Price.	Code Word.
9-152a.	3	$45.00	Lache.
10-152a.	4	50.00	Laconism.
11-152a.	5	55.00	Ladkin.
12-152a.	6	60.00	Laddle.

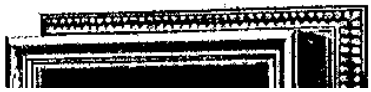
A year's supply of dials furnished with each clock.

Fig. No. 4. Style "E" Magneto Clock.

STYLE "F" HOLTZER MAGNETO CLOCK.

(Plain Oak Case.)

This pattern is made for *one station only.* The clock movement is the same as in Styles "D" and "E" and can



be relied upon to give accurate registrations.

STYLE "F" PLAIN RECORDER.

One Station Only.

PRICE LIST.

Cat. No.	No. Sta.	Price.	Code Word.
14-152a.	1	$30.00	Lad.

A year's supply of dials furnished with each clock.

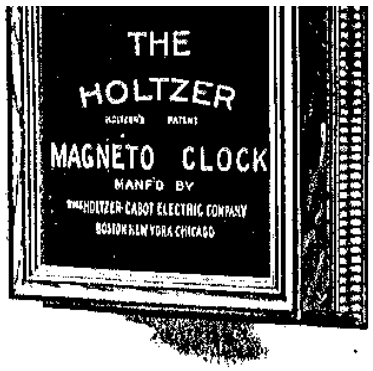


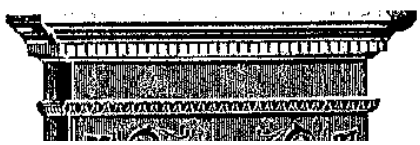
Fig. No. 5. Style "F" Magneto Clock.

Boston. New York. The Holtzer-Cabot Electric Co. Philadelphia. Chicago.

STYLE "C" HOLTZER MAGNETO CLOCK.

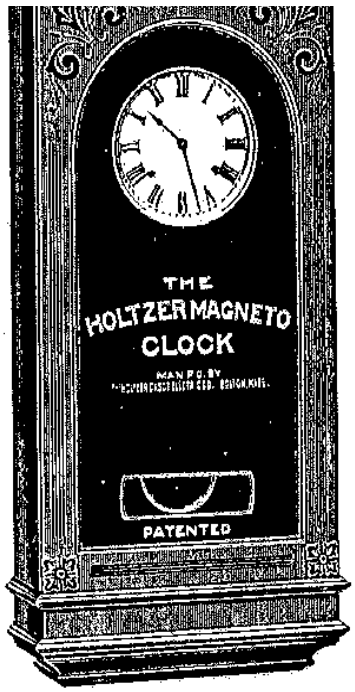
(Quartered Oak Case.)

A COMBINED RECORDER AND OFFICE CLOCK.



This Time Detector has in addition equipment for any manufactur-

tector has, in addition to the dial movement, an 8-day office clock, which is guaranteed to be a reliable time-piece. The case is well made and neat in design. The outfit, combining as it does a good office clock and a watchman's time recorder, both in one case, makes a most desirable



ing plant to install.

We illustrate on page 1, Fig. 1, a special case containing three 20-station dials. This pattern is intended for use where several watchmen are employed, and can be equipped with several dials to suit the purchaser. Prices on application.

Fig. No. 6. Style "C" Magneto Clock.

PRICE LIST.

Cat. No.	No. Stations.	Description.	Price List.	Code Word.
15-152a.	4	Stations, Style "C" Magneto Clock . .	$75.00	Lactage.
16-152a.	6	" " " . .	85.00	Labrum.
17-152a.	8	" " " . .	95.00	Labrose.
18-152a.	10	" " " . .	105.00	Labrus.
19-152a.	12	" " " . .	115.00	Lactific.
20-152a.	15	" " " . .	130.00	Lactifuge.
21-152a.	20	" " " . .	155.00	Labytic.
22-152a.	25	" " " . .	180.00	Laccic.

Add $5.00 for each additional station.

A year's supply of dials furnished with each clock.

Boston. New York. The Holtzer-Cabot Electric Co. Philadelphia. Chicago.

STYLE "A" HOLTZER MAGNETO CLOCK.

8-Day Regulator Movement, 39" Pendulum.

Quartered Oak Case. **Finely Finished.**

This is a more elaborate pattern and is equipped with a regulator movement of the highest grade. The case is artistic in design and handsomely finished. For large corporations this pattern is most appropriate in every way.

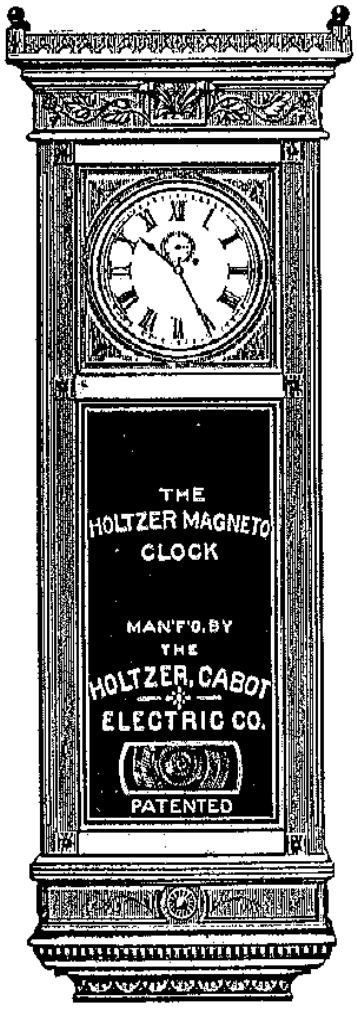


Fig. No. 7.

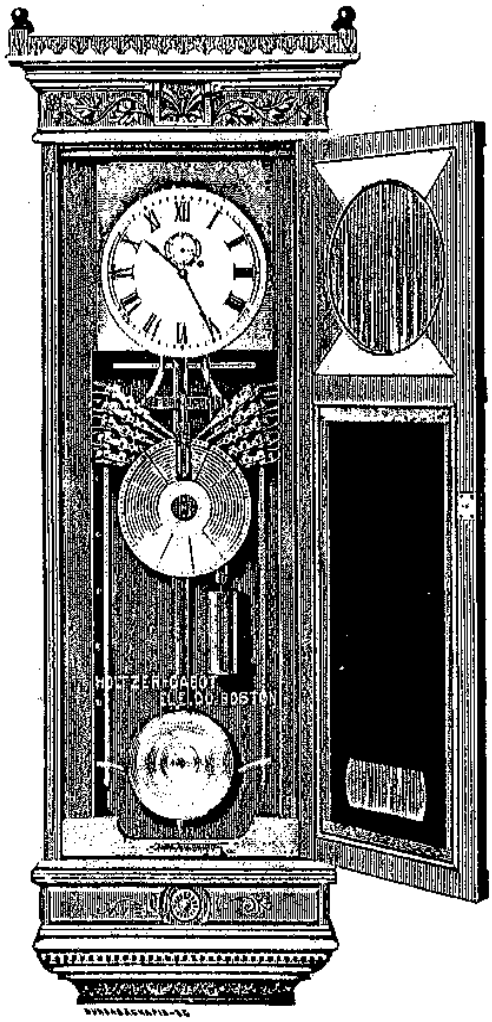


Fig. No. 8.

Style "A" Magneto Clock.

PRICE LIST.

Cat. No.	No. Stations.	Description.	List Price.	Code Word.
23-152a.	4	Stations, Style "A" Magneto Clock . .	$175.00	Lactuca.
24-152a.	6	" " " . .	185.00	Laceman.

25-152a.	8	"	"	"	. .	195.00	Lacerate.
26-152a.	10	"	"	"	. .	205.00	Lacunal.
27-152a.	12	"	"	"	. .	215.00	Lacunose.
28-152a.	15	"	"	"	. .	230.00	Lacertine.
29-152a.	20	"	"	"	. .	255.00	Lacrymal.
30-152a.	25	"	"	"	. .	280.00	Lacrymose.

-- Extra stations, $5.00 each.

A year's supply of dials with each clock.

8

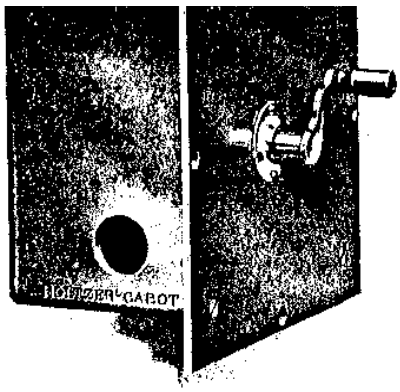
Boston. New York. The Holtzer-Cabot Electric Co. Philadelphia. Chicago.

THE HOLTZER-CABOT MAGNETO STATIONS.

Current Always Available.

Our Magneto Stations are equal in current output to eight or more cells of our well-known cylinder battery, and can always be depended upon for good service. The handle is removable and is carried by the watchman on his rounds.

"FLUSH" PATTERN



Magneto Station.

We are now prepared to furnish the well known H-C Magneto Generator, in flush iron box as shown in the illustration Fig. No. 12. Case finished in aluminum, heavily lacquered.

PRICE LIST.

Cat. No.	Description.	List Price.	Code Word.
39-152a.	Flush Magneto Station.	$8.00	Lacing.

Fig. No. 12. Flush Station.

and possesses all the desirable features of the other style, with the exception of the weather-proof qualities.

Fig. No. 10. Wood Box Station.

PRICE LIST.

Cat. No.	Description.	List Price.	Code Word.
31-152a.	Iron Box Magneto Station	$8.00	Lacinia.
32-152a.	Wood " "	5.00	Laciniate.

Boston. New York. The Holtzer-Cabot Electric Co. Philadelphia. Chicago.

THE HOLTZER-CABOT MAGNETO STATIONS.

Current Always Available.

Our Magneto Stations are equal in current output to eight or more cells of our well-known cylinder battery, and can always be depended upon for good service. The handle is removable and is carried by the watchman on his rounds.

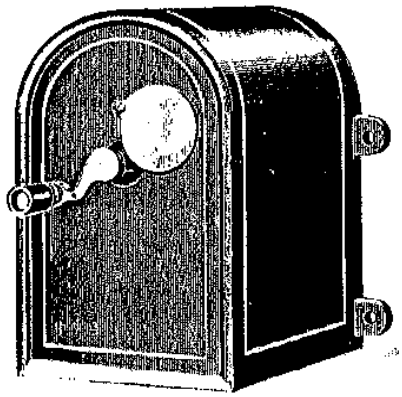


Fig. No. 9. Iron Box Station.

IRON BOX STATIONS.

For out-of-door service, or where the magneto station is exposed to dampness, acid fumes, etc. This instrument consists of a high-grade, H.-C. Magneto Generator, protected by an iron casing, which is nicely finished in aluminum and heavily lacquered. A metal flap slides over the crank opening when not in use, preventing the entrance of dust and moisture.

WOOD BOX STATIONS.

Consisting of the same generator used in the Iron Box Pattern, protected by a Quartered Oak Case nicely finished. This pattern is well suited to many installations and possesses all the desirable features of the other style, with the exception of the weather-proof qualities.

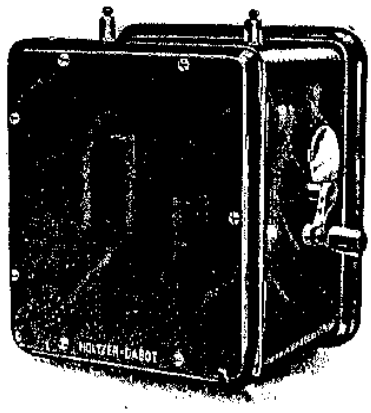


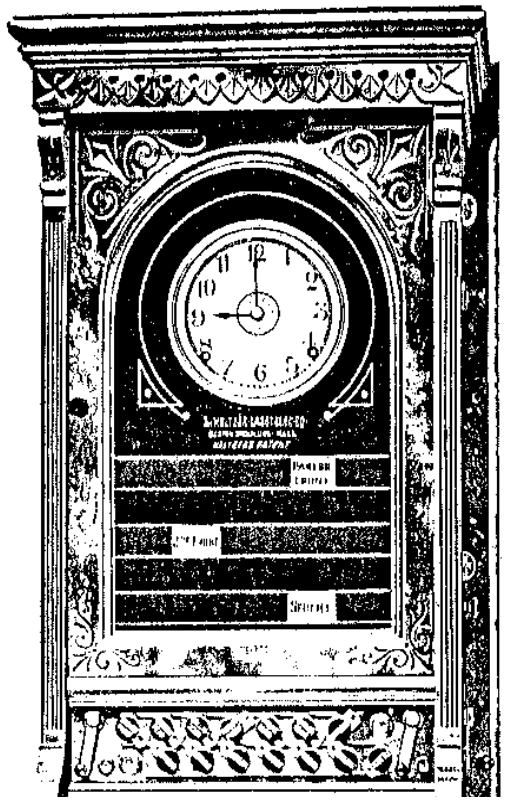
Fig. No. 10. Wood Box Station.

PRICE LIST.

Cat. No.	Description.	List Price.	Code Word.
31-152a.	Iron Box Magneto Station	$8.00	Lacinia.
32-152a.	Wood " "	5.00	Laciniate.

Boston. New York. The Holtzer-Cabot Electric Co. Philadelphia. Chicago.

PROTECT YOUR RESIDENCE ALSO BY INSTALLING ONE OF OUR BURGLAR ALARM ANNUNCIATORS.



All the Latest Attachments.

Battery Test.

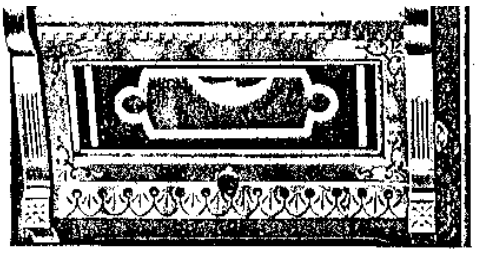
Silent Test.

Sectional Cut-Out.

Automatic Gas-Lighting Attachment if Desired.

Cases Neat and

Servants' Call.



Finely Finished.

Made in Several Patterns. Send for Bulletin No. 150.

Our Bulletins.

Descriptive matter as given in the list below is always at your disposal. Send for any bulletin which may interest you.

No.	Describing
112A.	Telephone Desk Sets.
123A.	Transmitter Arms.
125A.	Gravity Switch Hooks.
127A.	Testing Magnetoes and Linemen's Sets.
142.	Loud Ringing Extension Bells.
147.	Gas Lighting Apparatus.
148.	Interior Telephone Systems.
149A.	Diagrams & Wiring Int. Tel. Systems.
150A.	Annunciators.
151.	Vibrating Electric Bells.
152A.	Magneto Watchman's Clocks.
200.	Magneto Signalling Apparatus.
202.	Telephone Receivers.
206.	Circuit Closers.
207.	Magneto Power Generators.
208.	Improved Lillie Wire Connectors.

No.	Describing.
300.	Type "M" Dynamos and Motors.
301.	Type "E" Motors and Dynamos.
302.	Dynamotors and Motor Generators.
303.	Elevator Motors.
304.	Alternating-Current Motors.
305.	Small Direct-Current Motors.
306.	Type "M" Plating Machines.
307A.	Buffing and Grinding Motors.
308.	Dental Lathe Motors.
Booklets—	Dental Lathe Motors, No. 144A.
"	Holtzer-Cabot Specialties.
"	Ness Telephone (list of users).
"	Special Applications of Motors to Machinery.
"	Interior Telephones, No. 148A.

[Form No. 229.]

Boston. New York. The Holtzer-Cabot Electric Co. Philadelphia. Chicago.

INSTRUCTIONS FOR THE INSTALLATION OF THE HOLTZER MAGNETO CLOCK.

The Clock Movements Used in the Holtzer Magneto Clock are High Grade and Should be Unpacked and Handled Very Carefully.

WIRING HOLTZER MAGNETO CLOCK.

The installation of the Holtzer Magneto Clock system should be given careful attenton. No matter how well a detector is constructed, unless the wiring is properly done, satisfactory service cannot be expected. Where circuits have to be run in damp places — stables, dye-houses, or other locations where they would be exposed to acid fumes, the best grade of No. 16 gauge rubber-covered wire should be used, and it should be supported on porcelain knobs or cleats. For out-door work weatherproof wire supported on glass or porcelain insulators should be used. In rough buildings, factories, mills, etc., which are free from dampness, weatherproof wire may be used; while for offices, warehouses, and other places which are thoroughly dry and clean, office wire, or wire with an inner weather-proof insulation and outer office braid will answer. In the latter case wiring may be supported by wooden cleats.

The different circuits (from the point where they come together and run into the clock) should be bunched and taped, or a cable might be used for such stretch of wiring. Where more than two wires are run together for any distance, the same plan should be followed, or such wires may be run in moulding with capping. This will prevent abrasion of the insulation as well as tampering with the wires.

In passing through floors or walls, porcelain tubing should be used, and in running circuits through elevator shafts, or shafts with electric light circuits, they should be inclosed in iron conduits. All joints should be carefully soldered and taped. Care must be taken to keep the detector wires well away from the electric light, or other high potential circuits, and where crosses must occur suitable precautions should be taken to prevent accidental contact with these systems. In any case, the wiring must be done, in all respects, so as to conform to the rules and requirements of the National Board of Fire Underwriters.

Annunciator wire should not be used under any circumstances; nor should wiring be put up with staples.

Magneto stations located outside or in damp places, or places subject to extreme heat, must be inclosed in weatherproof iron boxes.

Remember that careful attention to the above instructions regarding installation is necessary in order to secure satisfactory service.

Boston. New York. The Holtzer-Cabot Electric Co. Philadelphia. Chicago.

THE HOLTZER MAGNETO CLOCK DIAL SHEET.

Registrations Simple. Accurate, Distinct, and cannot be altered or effaced.

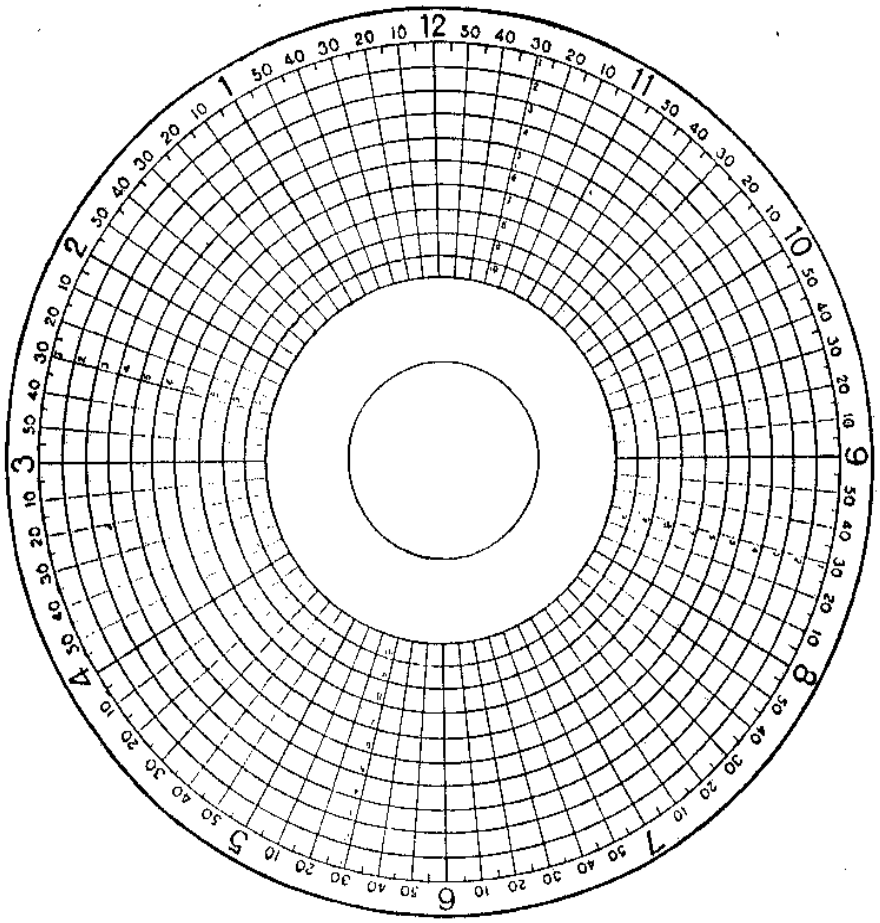


Fig. No. 11.

10-Station Dial Sheet greatly reduced — Actual Size of 10-Station Sheets 9 3-4".

DESCRIPTION. — Our Dial is divided into twelve parts, each division