

[The following is a partial reproduction of an undated brochure entitled Instructions For Care And Installation, Style "A" Master Clock Made By International Time Recording Co. of New York with general offices at 50 Broad Street in New York City and manufacturing facilities in Endicott, N.Y.]

This Master Clock is designed for use on small low voltage electric time systems (those operating on up to 10 volts).

Fig. 1 is a face view of the clock.

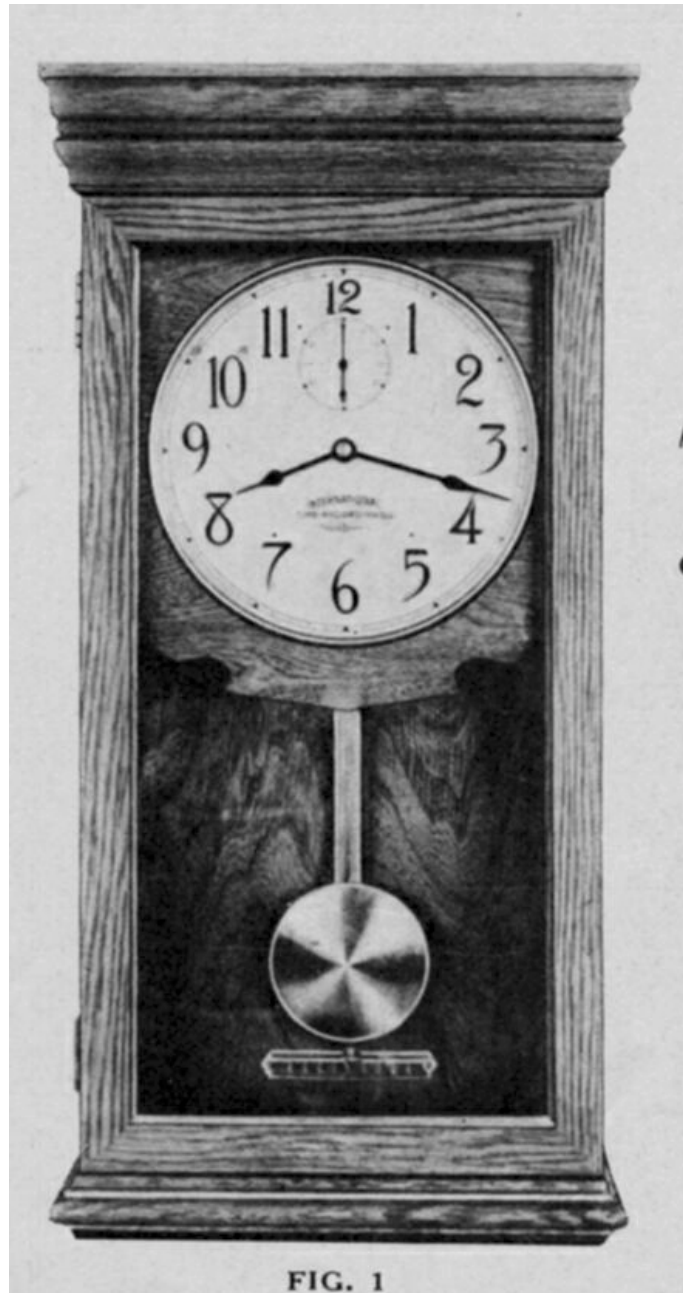


Fig. 2 is a diagram of the circuits of the clock itself.

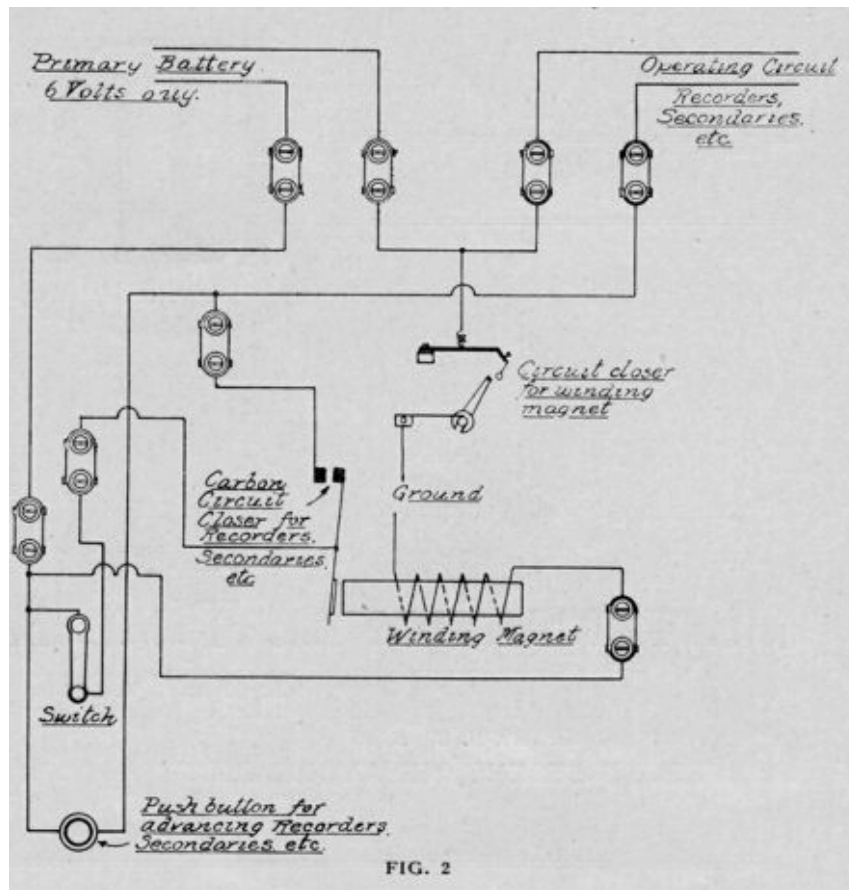


Fig. 3 shows the minute contact and indicates its proper adjustment.

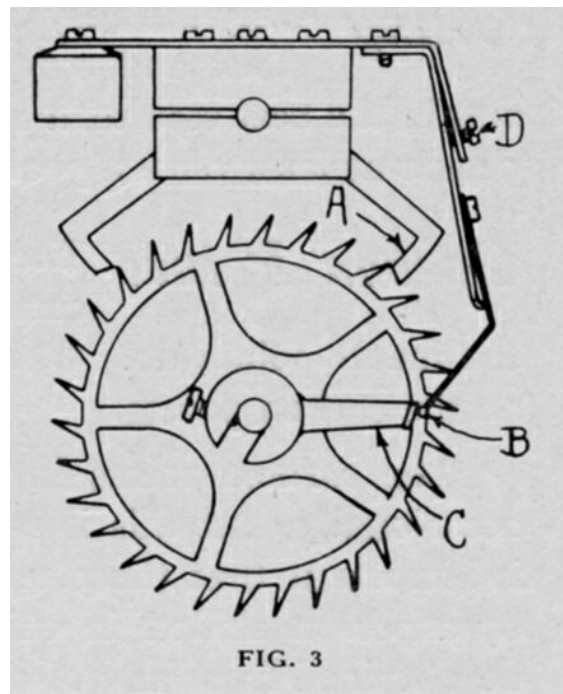


Fig. 4 is a face view of the clock movement removed from the case and with face and hands removed.

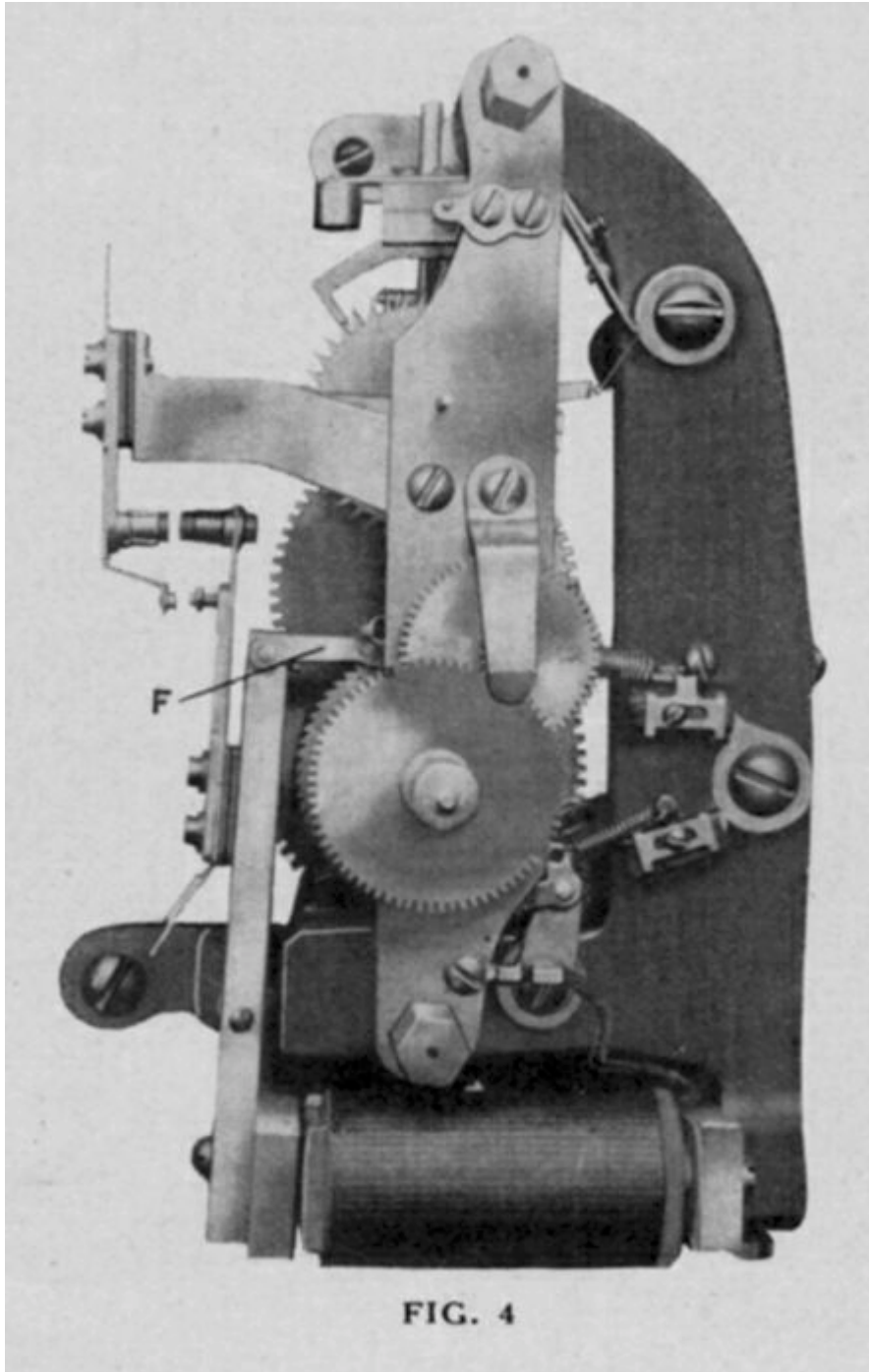
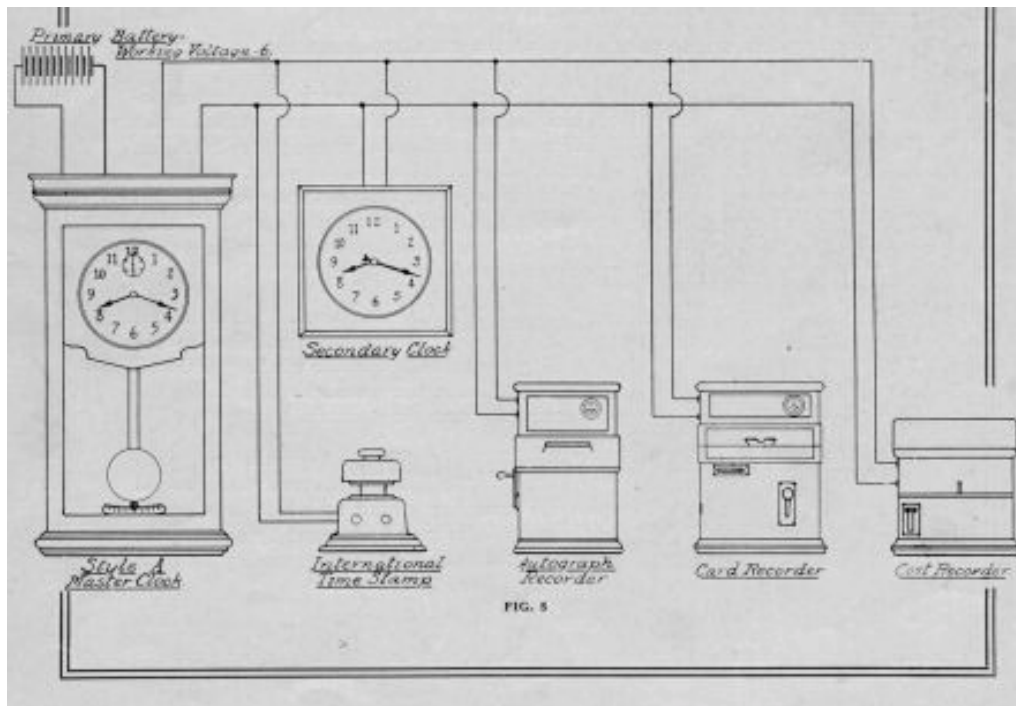


Fig. 5 is a diagram of the wiring of a specimen system, showing connections to battery.



Hanging the Clock

The clock should be hung in a place as free from dirt, dust and vibration as possible. Place a screw in a solid wall or partition 6 feet from the floor, to bring the dial at a convenient height for reading the time. Hang the clock by the hook at the top of the case, open the door and remove the wood block from the pendulum ball. Move the bottom of case sideways until lower end of pendulum ball hangs directly over center of pendulum scale, also be sure that the back of the case is plumb. Fasten the clock securely to wall by putting one screw through the hole in bottom of clock case.

Wiring

Figure 2 shows the arrangement of the wiring from the batteries to the master clock and from the master clock to the secondaries, the batteries being connected to the two connectors at the left on the top of the clock case, and the secondaries to the two connectors at the right.

Voltage

The master clock is arranged and wired to operate on 6 volt system. Where Edison Primary Batteries are used, the voltage on open circuit is approximately 9 volts on a set of 10 cells, but on closed circuit the voltage drops with normal load to approximately 6 volts. After the batteries are connected, start the pendulum swinging moderately so that it swings at least to the $2\frac{1}{4}$ mark on the pendulum scale.

Winding

When the master clock is shipped from the factory, it is fully wound and if the batteries are attached before the pendulum is started it will not be necessary to wind it further. In case the

movement needs winding this may be done by pressing on the armature to the right and releasing it a number of times sufficient to wind it fully.

Fifty impulses are necessary to wind the main spring up to a full wound position.

The contacts for operating the winding circuits are shown by Fig. 3, and should be so adjusted that when the escape wheel tooth has advanced until it touches the pallet, as at "A," Fig. 3, the Contact "B" will have just touched near its upper end the contact on arm "C" thus allowing the escape-wheel to advance before the contact is made.

Second Hand

The second hand should be set in relation to the winding operation so that the winding occurs on the even minute, the same operation closing the contacts for secondary circuit.

Secondary Circuit

A switch and push button are provided on the secondary circuit by which impulses to the secondaries may be stopped by opening the switch, or impulses added by pressing the push button. (See Fig. 2.)

Regulating

A three-quarter turn of the pendulum nut will cause the clock to gain or lose approximately 1 minute each day. Turning to the right will cause the clock to gain and to the left will cause it to lose.

Oiling

Only the very best grade of clock oil should be used in oiling the master clock and only a very small quantity applied to each bearing. To obtain the best results, a master clock should be cleaned and oiled by a competent person at least once a year.

Carbon Points

The secondary circuit closer should be so adjusted that the carbon points close before the metal points and open after the metal points do. This will cause any sparking which may occur to appear on the carbon points.

The carbon points in the secondary circuit closer will have to be renewed occasionally, but this is so seldom that we mention it only from the fact that it is important that the proper grade of carbon be used and that the work be done by a person skilled in this particular kind of work. These carbon points may be obtained from any of our various service stations.

[The following are the text and illustrations of a one-page insert included in the original brochure.]

STYLE A MASTER CLOCK WITH SIGNAL CONTACT FOR CONTROLLING BELLS

Signal Contacts:

2407ACE1

The signal contact on the style A master clock for controlling bells consists of two finger contacts between which the circuit is closed by a cam pin on the second hand bushing.

Fig. 1 shows the wiring of the circuits from the master clock to the program device and to the bells.

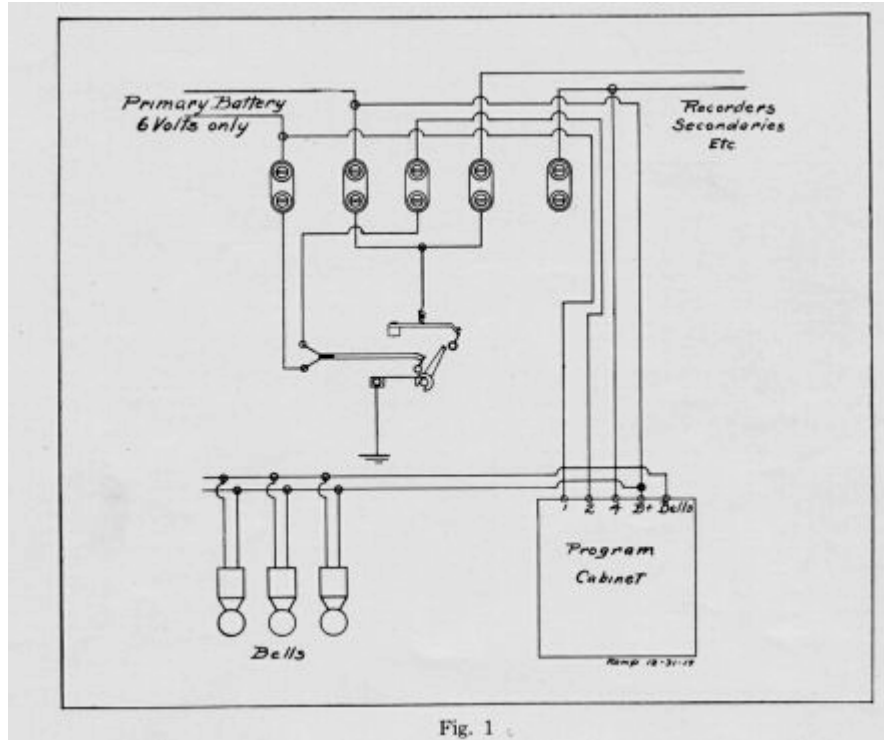


Fig. 1

Fig. 2 is a detail diagram showing more clearly the construction of the contact fingers. An eccentric stud "S" is provided which changes the setting of the fingers in relation to the cam pin on the second hand bushing, causing the contact to be made for a longer or shorter period. The maximum length of contact is approximately 8 seconds. A longer contact than this causes excessive drag on the escape wheel shaft and has a tendency to retard its action and stop the clock movement.

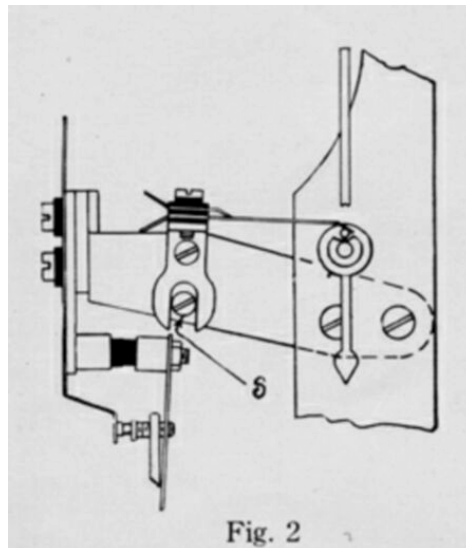


Fig. 2