Volume XXXVI, Issue #3

August 2010

The Journal of the Electrical Horology Society

Chapter #78 National Association of Watch and Clock Collectors



- The Journal has a new format.
 Check it out!
- Pat Loftus, provides some background information on a Crown Electric Clock he recently found.
- · New section for internet links

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President's Message

Fellow Horologists:

Please allow me to apologize for the delay in sending out this issue of the "Journal of the Electric Horology Society". It took longer to get everything set-up than we had anticipated. The observant among us may have noticed a few changes in this issue. Our new editor, Tony Bolek, felt that it was time to retire the old gentleman along with his watch and the sundial that has graced our Journal for many years. I hope that you agree and that you like the new format.

I wish that I had something positive to report on the changes required to allow the IRS to treat Chapter #78 as a tax exempt organization. Unfortunately, all that I can report is that applications for tax exempt status for both NAWCC Inc., and for Chapter #78 continue to wend their way through various bureaucracies. The latest word is that we are near the final steps and that the results will be known soon. It has been a long journey and I will keep you informed.

One of the requirements for 501(c)(3) tax exempt status is that the organization offer educational activities for its members and for the public. One of the ways we can fulfill this requirement is through informal meetings of the Chapter held at the National Convention and at various Regionals. Unfortunately, at the York, Pennsylvania National Convention held this year, our meeting was scheduled at the last possible time before the close of the Convention. This time combined with a dirt floor for the meeting location resulted in a very small attendance. However, those that did participate in the meeting had an enlightening and pleasant meeting. I appreciate those who did attend. At the Mid-West Regional, twenty eight people attended our chapter meeting. This meeting was advertised in the NAWCC "Mart" and was announced several times prior to the actual meeting during the Regional mart. There were good discussions and several show and tell items. These informal meetings are very enjoyable and I encourage all to try to hold similar meetings at your local Regional.

There are a few items in this issue that I would like to call your attention to. Please take note of the information concerning a Crown Electric Clock. These clocks are very rare and Chapter #78 member, Pat Loftus was kind enough to share his recent find. Thank you Pat. Our Editor is always looking for articles of this type, so please let him know if you are willing to share your clocks and information. Also included in this issue is a copy of the Owner's instructions for Poole Clocks. The original instructions were found folded once lengthwise and then rolled around the three batteries in an early Poole "candlestick" clock.

In addition to the above items in the Journal, this issue contains the first part of a two part service manual for Revere Electric Clocks. Unfortunately, we do not have the second part of the service manual. If any of our members has part two, we would appreciate a copy for reproduction. This issue also includes some information regarding the "Selticon" clocks. These very 1950's styled clocks are interesting to own but difficult to keep running.

This issue of the Journal contains what I hope will be a continuing feature: a listing of Electric Horology links to the internet. Whenever you find an interesting link or useful site, please let us know. Finally, if you have not explored the NAWCC web site, you should do so. It is very well done and provides a good indication of what is possible when we enter the internet and the information age. For example, all of the issues of the NAWCC Bulletin are now available on the web site. The Bulletin articles are also indexed so that it is a relatively quick and easy task to review all of the information available in past Bulletin articles concerning a particular clock.

Please enjoy this issue of the Journal and enjoy the fall season. Also, let Tony know what you think of the new format and feel free to send him your suggestions.

Bill Ellison, FNAWCC Tony Bolek President Secretary-Treasurer

Crown Electric Clock

The book "150 Years of Electric Horology" contains a section on Herschede & and Revere electric chime clocks. There is one sentence that refers to the Crown Clock: "Finally, in 1933, a line of inexpensive electrics, Crown Clocks, was introduced, but it was only to last a year or so".

This example of a Crown Clock has a simple gothic-styled case that is 11" high x 7-1/2" wide x 4-3/16" deep. It is covered by mahogany veneer with two lighter accent pieces on the front. The bezel is 5-5/16" in diameter.

The movement is constructed of brass and has an integral motor, which must be manually started, and operates on 115V/60Hz.

As this was an attempt to market a less expensive electric mantel clock, it has the following design characteristics that

differ from standard Herschede/Revere practice of the early 1930's:

- Stamped brass bezel with plain convex glass and without hinge. Herschede and Revere mantel clocks of the period had cast brass bezels that were hinged and contained a beveled glass.
- Paper dial. Herschede and Revere mantel clocks of the period had silvered brass dials.
- No back access panel. Herschede and Revere mantel clocks of the period had hinged wood back panels.
- Integral manually-started motor. Hereschede and Revere electric mantel clocks of the period used self-starting Telechron type "B" motors.
- No chimes or hour strike. Herschede and Revere mantel clocks of the period either had Westminister chimes, both Westminster and Cantebury chimes, or hour strike on a chime rod.





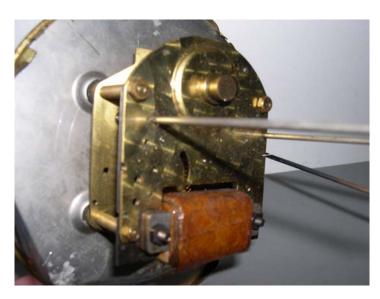
Crown Electric Clock (continued)

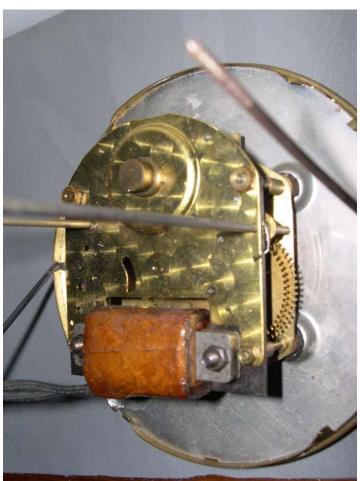
Herschede and Revere clocks have the case number stamped into the bottom of the case, and serial and patent numbers stamped into the back plate of the movement, along with the company name. The Crown Clock does not have any of these identification marks. However, the dial shown below is marked "CROWN CLOCKS – CINCINNATI".

Although Crown Clocks were designed to compete with less expensive alternatives to the Hershcede and Revere mantel electric clocks of the early 1930's, this example is a good quality clock that is still in running condition, and runs without noticeable motor noise.

A research request was sent to the NAWCC library, but they could not provide any information about Crown Clocks. It would be interesting to know what other case styles or movements were available.

- Pat Loftus

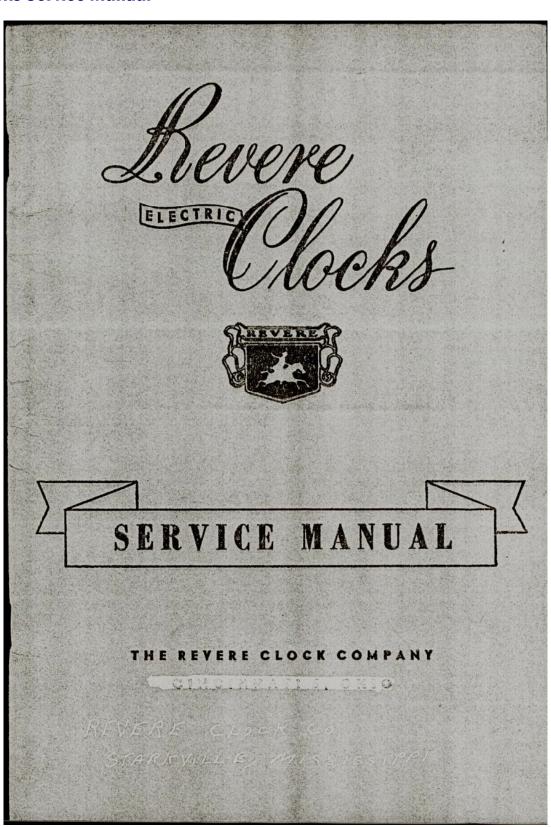






Revere Electric Clocks Service Manual

- Walter Hershchede started the Revere Clock Company around 1926.
- Walter decided to keep the Revere Clock Company separate from the Herschedes Clock company to reduce his risk incase electric clocks did not catch on.
- Revere went on to become one of the most recognized names in electric clocks.
- The Revere Clock company made clocks from 1928 to about 1972.
- This issue of the Journal features the Revere Electric Clock Service Manual for mantel models.
- An interesting website about Revere Clocks can be found using the following link: http:// revereclocks.com/ index.php?
 p=1_9_History-of-Revere-GE-Clocks



Revere Clocks SERVICE MANUAL

INTRODUCTION

These movements are carefully made and assembled by expert clock-makers. After thorough inspection a complete running test is made to observe any defects. They are then mounted into cases and chime hammers are adjusted. The next step is a general inspection of the casing, dial and parts entering into the mounting of the movement into the case. The clock is then given another running test and a careful final inspection before it is packed. Every effort is made to ship each clock in the best possible condition.

Occasionally, due to rough handling, it is possible that some part may become disarranged and need a little adjustment. Each clock should be tested by the retailer before he delivers it to the consumer; at least, it should be plugged in and the hands moved around for a few hours allowing it to chime at each quarter. When the retailer has alternating current in his store he should endeavor to run each clock at least a few hours and if possible 24 hours. Careful attention should be given to the instruction on inside of back door before attempting to set up the clock.

When unpacking mantel clock remove with care the wood block that holds the chime bars secure while clock is being shipped. If the clock operates satisfactorily by moving the hands forward the sound of the chime should be particularly noted. If they do not sound clear, see that all hammers are '/s" away from the chime bars and are directly over the center of the bar. All bars should be straight in line. If a bar should touch the case when vibrating bend it down slightly by pressing gently at the point where bar joins chime holder. Bend sideways if bars should touch each other.

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MANTEL MODEL	FLOOR MODEL
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MANTEL CHIME MOVEMENT

This "Westminster Chime" clock is operated by a Telechron synchronous motor. The rotor unit is hermetically sealed, contains oil and never needs oiling. The motor is very easily removed, if it should ever be necessary, by removing movement from the case, loosening the two fastening screws found in back of the coil and then loosening the set screw on the motor gear which is on the motor shaft.

REMOVING MANTEL CLOCK MOVEMENT FROM CASE

Remove the bezel and glass assembly by pressing fastening stud on inside front of case and pulling assembly from front of case which is held on to case with friction bushing.

Remove second hand, which is also held on by friction. Remove hour and minute hands.

Remove dial which is held in place by four small screws on its outer rim.

Untie knot in electric cord where it enters rear of case. Newer type cases have a slot in lower left corner of back door frame. This allows the electric cord and movement to be removed from the case together.

Loosen movement from case by removing the three movement support screws. These screws are found in the front of the case after the dial is removed. While removing screws hold the movement through the rear door to prevent it from falling to the bottom of the case, thus injuring the chime hammer attachment and chime rods. Hold hammer levers up so as not to catch on chime rods. Remove movement from case.

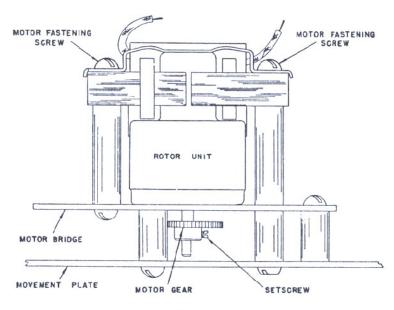


Figure !

EXPLANATION OF

Chime

MOVEMENT AND CONTROL

See Figure 2, Page 5

The chime is controlled by four pins, A, B, C and D on lifting disc E. These pins operate the first, second, third and fourth quarter chimes. Pins A, B, C and D move the lifting lever F to the right, permitting the shifting lever hook H to drop over the shift pin J which is on the chime gear arm V. The lift should be far enough to permit a $\frac{1}{32}$ " clearance between the shift pin J and the shifting lever hook H. Each pin should be tested.

One of the four pins on the lifting disc E is nearer the outer rim of the disc than the other three. This pin D operates the self-adjusting feature at the hour which will be explained later. If the lift is not enough to afford the above clearance the lifting lever F should be bent slightly to the left and if too much, bend it to the right at the end that comes in contact with lifting pins A, B, C, and D.

As the lifting lever F drops off one of the pins A, B, C and D on lifting disc E, it is pulled back to almost its original position by the small coil spring L, and since the shifting lever hook H has hooked the shift pin J on the gear arm V, the gear arm V is pulled with it toward the left of the movement, thus engaging the chime gear arm gear W with the center wheel Y which is constantly under power. The shifting lever hook H holds onto the shifting pin J and holds the gear arm gear W in mesh through the complete chiming at each quarter. The shifting lever hook H is released by the chime release lever K, which in turn is operated by the locking disc N. The locking disc N has four pins, 1, 2, 3 and 4 around its rim. These pins 1, 2, 3 and 4 raise the release lever K which releases the shifting lever hook H, allowing the clock to stop chiming. Bend top arm of K upwards for 32" clearance over pin J. The locking disc N determines the proper quarters on the chimes by the distance between pins 1, 2, 3 and 4. The locking disc N also has around its outer rim four steps O, P, Q and R. These steps are to hold the chime gear arm gear W in mesh with center wheel Y after the shifting lever hook H has released and until the chime has been completed. The chime gear arm V has another pin M that protrudes through the movement plate at the rim of the locking disc N. When the gear arm V is released from the shifting lever hook H, pin M will hit one of the steps O, P, Q or R on locking disc N and then drop off the step thus releasing the chime gear arm V.

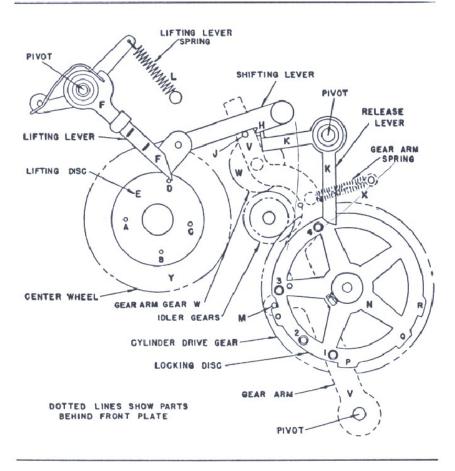


Figure 2

SELF ADJUSTING FEATURE

Step O on the locking disc N has a depression in front of it. This step O represents the hour or fourth quarter chime. When pin M on gear arm V is in the depression at the fourth quarter step O, it takes a longer movement of the lifting lever F to disengage pin M from the depression than it does to disengage it from steps P, Q and R. Pins A, B and C will not disengage pin M when it is in the depression at step O. Pin D on lifting disc E will give the lifting lever F a longer throw and is the only pin that will permit the shifting lever hook H to drop behind the shift pin J when pin M on gear arm V is at the hour step O on locking disc N. This is the self-adjusting feature as the fourth quarter bars will only chime at the hour.

SETTING CYLINDER

See Figure 3, Page 7

Loosen the set screw 5 in locking disc N. Insert a piece of wire about the size of the hole in locking disc N into the hole in the locking disc, then through the bushed hole in movement plate. This hole is found to the extreme right side of movement plate under the rim of locking disc N. Turn the cylinder until a large hole in the cylinder drive gear is found. Push the wire through this hole and then into the small hole in the first cylinder disc. Keeping the wire in place tighten set screw 5 in locking disc and then remove the wire. The cylinder will then be set in correct relation with the locking disc and the chimes will be set.

HOUR CONTROL

See Figure 4, Page 7

As the cylinder is turning and chiming the fourth quarter, the tail of the hour rack 1 hits the square rack operating stud 2 and the hour rack 4 is drawn out from behind the hour disc thus exposing the teeth on the hour rack 4. The hour rack 4 is locked into operating position by the rack support lever 3. When the last note of the hour chime has been struck, the first tooth on the hour rack 4 will lift the hour lever 5 on the chime hammer attachment. The two hammers that strike the hour will continue to strike until the correct hour has been struck. The instant the last strike of the hour has been struck, the rack support lever 3 will engage pin 6, 7 or 8 (as noted below) in the hour control wheel and release the hour rack 4 and allow it to fall back into its original position and allow the teeth on the hour rack 4 to clear the hour lever 5 on the chime hammer attachment. The hour control wheel has three pins, 6, 7 and 8 equally spaced and equal distant from the rim. The hour control wheel makes one revolution every 36 hours. Each pin (6, 7 and 8) operates the rack support lever 3 for a period of twelve hours. The pin 6, 7 or 8 that operates the rack support lever in any particular hour is advanced the same distance each hour thus allowing the rack support lever 3 to hold the hour rack in operating position for one more tooth each hour.

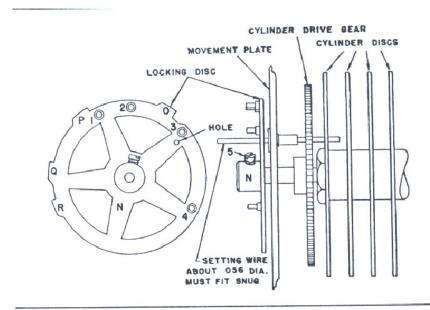


Figure 3

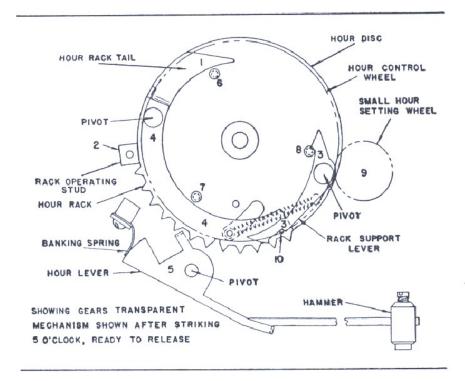


Figure 4

SETTING THE HOUR

See Figure 5, Page 8

Turn the hand set knob until the lifting lever F just drops off hour pin D on lifting disc E. Loosen the two screws 13 in hour setting wheel 12. This will allow the hour control wheel to spin free. On the back of the cylinder bridge is a bushed hole (hour setting bushing). Insert a wire about the size of hole through the hole and then turn the hour control wheel until the wire enters a hole in the hour control wheel. Without removing the wire, tighten the two screws 13 in hour setting wheel 12 and then remove the wire. The hour will always be set correctly.

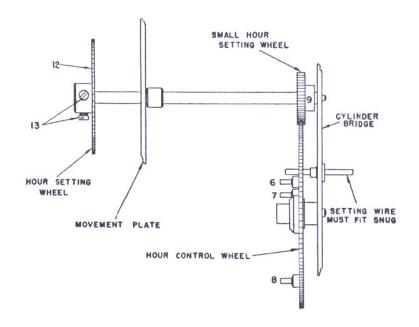


Figure 5

IF CLOCK FAILS TO CHIME

See Figure 2, Page 5

Lifting lever F may not throw over far enough to let the shifting lever hook H drop behind shifting pin J. Bend lifting lever slightly to the left where it comes in contact with pins A, B, C and D on lifting disc E. Each pin should be tested. Lifting lever spring L may be broken or too weak and will not pull chime gear arm gear W into mesh with center wheel Y. Lifting lever spring L should be strong enough to overcome the gear arm spring X.

Cut off two or three coils to make spring L stronger or replace with new spring.

Pin A, B, C or D may be broken from lifting disc E. Pin must be replaced or a new minute tube assembly, containing lifting disc, inserted — in which case minute hand must be reset for drop off.

The meshing of the chime gear arm gear W with the center wheel Y should be about ¾ of the tooth so they will not bind. If the gears are meshing too deep, by using pliers bend the top of the chime gear arm V toward the banking pin which is found on the movement plate at the top of the chime gear arm V. If the gears do not mesh deep enough, hend the top of the gear arm away from the banking pin.

IF CLOCK CONTINUES TO CHIME See Figure 2, Page 5

Chime gear arm spring X may be too weak or broken and will not pull the gear arm gear W out of mesh. Strengthen by cutting off two or three coils or replace with new spring.

The chime release lever K may not be lifting high enough to release the shift lever hook H. Bend the top arm of the release lever K upwards for clearance.

A shaft or gears in mesh may be binding. Be sure that all shafts, bearings and gears in mesh are free.

A pin 1, 2, 3, or 4, in the locking disc N may be broken. Replace with new pin or a new locking disc.

IF CLOCK STOPS ON CHIME

Rotor unit may be weak. Must be replaced. See Figure 1, Page 3. The gear arm gear W may be meshing too deep with the center wheel Y. Bend the top of the gear arm V toward the banking pin. See Figure 2, Page 5.

While the clock is chiming the hour the hour rack 4 is being thrown out into operating position to strike the hour. If the hour rack tail 1 is not polished enough it may bind as it slides along the rack operating stud 2. Polish the tail of the rack 1 and make sure that the rack operating stud 2 has no burr. See Figure 4, Page 7.

IF CLOCK FAILS TO STRIKE

See Figure 4, Page 7

The square rack operating stud 2 may be broken off and not allowing the hour rack 4 to be placed in operating position. Stud must be replaced.

IF CLOCK CONTINUES TO STRIKE See Figure 4, Page 7

The clock may continue to strike but it will never strike more than twelve times in any one hour. If the clock should strike twelve when it should strike another hour, check and see if one of the pins, 6, 7 or 8 in the hour control wheel has broken off. If pin is broken the clock will strike twelve every hour for a twelve hour period.

Replace with new hour control wheel.

IF CLOCK STOPS ON STRIKE

Rotor unit may be weak. Unit must be replaced. See Figure 1, Page 3.

Strike hour lever 5 may lift the strike hammers too high and they may hit the hand set shaft. Bend the hour lever 5 down at the point where it lifts the two hammers and then take up the extra slack by bending the banking spring in. See Figure 4, Page 7.

There may be a bind in the cylinder drive gear or a rough tooth on one of the cylinder discs. See Figure 3, Page 7.

Setting-Up Directions MANTEL CLOCK

Release chime bars by removing cord at bottom or wood block. Release chime hammers by moving hammer guard straight down.

This clock operates only on 110 volt, 60 cycle (or that cycle marked on motor) alternating current.

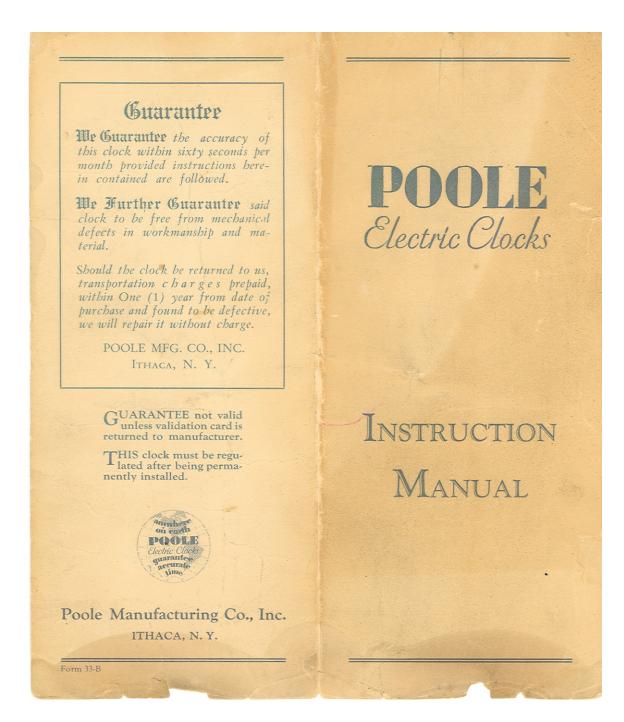
Plug in socket and second hand will move if current has been supplied. Set hands to CORRECT time by moving minute hand forward. Chimes and hour strike will automatically adjust themselves at next hour. Chimes sometimes do not operate when adjusting themselves. Set hands by using knob in back of case.

Chimes can be silenced by lever at bottom of movement inside of case.

CAUTION — Do not place any loose object in the bottom of case as it will set up a vibration when chimes are operating.

To remove our new featured bezel and glass, press fastening stud on inside front of case.

Poole Electric Clock Instruction Manual



Poole Electric Clock Instruction Manual (continued)

INSTRUCTIONS

For Setting Up and Regulating

WARNING—To obtain best results this clock must be placed on a solid foundation and *left undisturbed*.

SUSPENSION SPRING— PIN PENDULLUM U ROD HOCKS FIRST—Place battery in holder in back of case. See that metal contact at top is bent down far enough to insure good contact with battery.

THEN—Place clock in permanent position.

THEN — Remove locking wire from regulating wheel at bottom of pendulum, with fingers, being careful not to turn the wheel.

READ THIS COMPLETE PARAGRAPH AND SEE ILLUSTRATION BEFORE HANGING PENDULUM.

Holding pendulum on right or left side of clock, insert pendulum on right or left side of clock, insert pendulum or od between crutch forks by entering narrow edge of rod into opening at point of forks, slightly springing forks toward front of clock.

BE VERY CAREFUL NOT TO BEND CRUTCH. Then raise pendulum and turn with polished surface toward front, placing pendulum rod hooks over pin protruding from each side of suspension spring.

THEN—Level the clock by turning the three leveling wheels in the base until the bubble in the spirit level on the base is between the two lines, and pendulum is hanging directly over the line on the plate beneath it.

THEN—Set clock by turning minute hand only in either direction to correct time

THEN—Start clock by swinging pendulum to left or right as far as it will go without forcing and let swing.

TO REGULATE—Turning the regulating wheel at bottom of pendulum bob to the right makes the clock run faster—to the left, slower. A turn of one tooth makes the clock gain or lose approximately 6 seconds in 24 hours. Ten teeth make a difference of one minute in 24 hours.

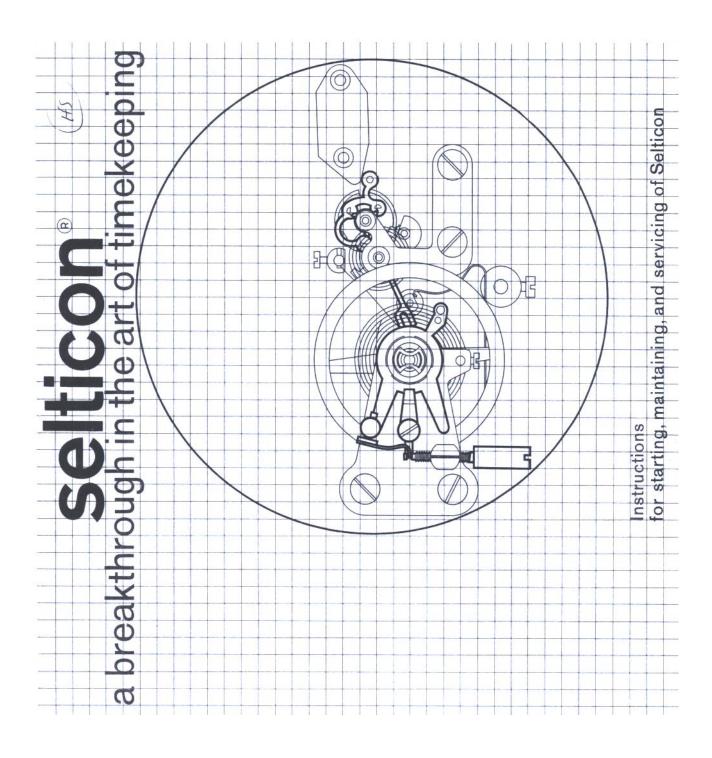
IMPORTANT—Use a reliable source for setting or regulating your clock.

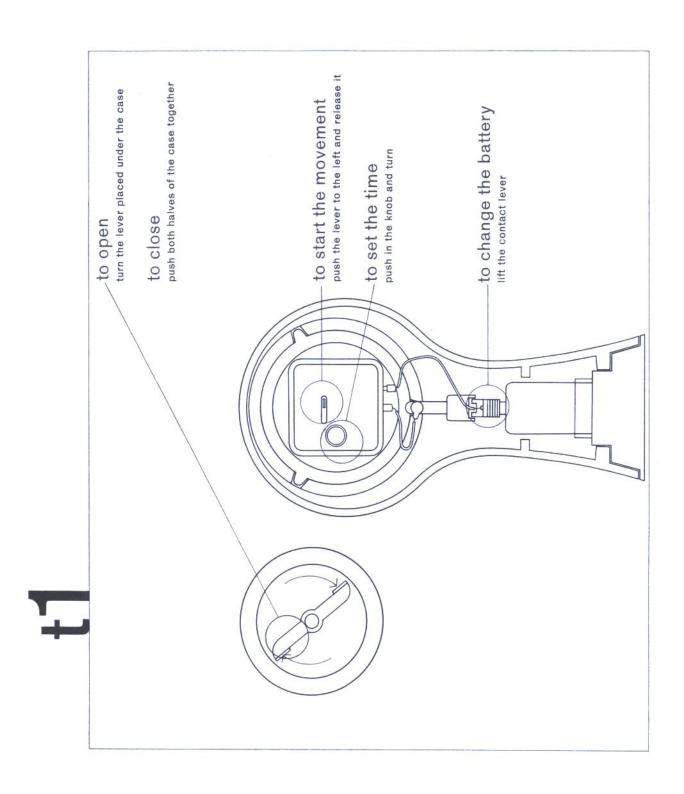
If you have a glass-domed clock and return it for repairs, do not send the dome.

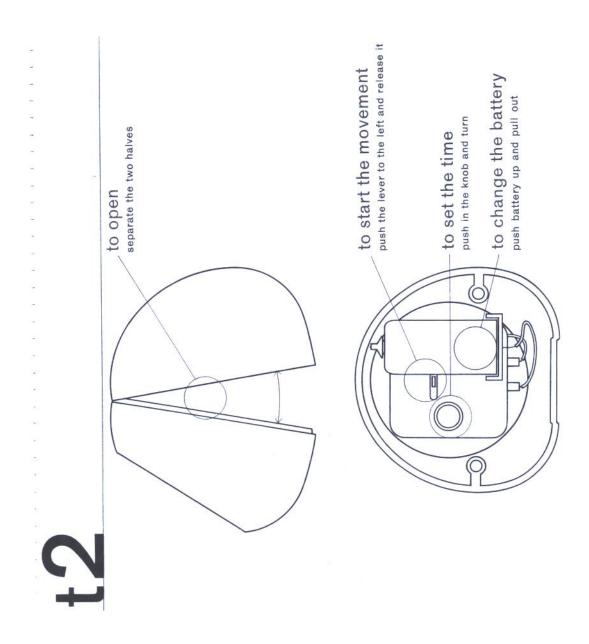
IMPORTANT
Never Oil This Clock!

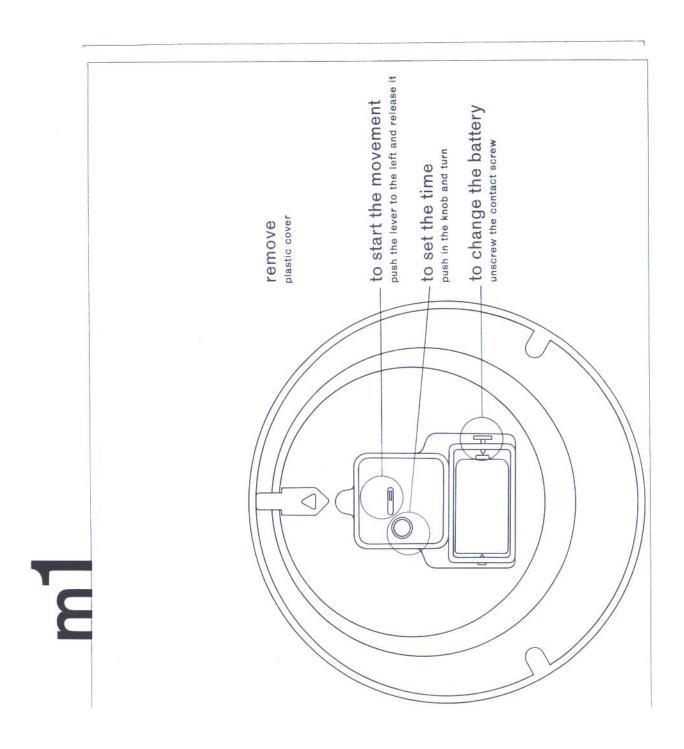
PRESERVE THIS INSTRUCTION MANUAL. READ IT CAREFULLY THEN PLACE IN BATTERY HOLDER BEFORE INSTALLING BATTERY

Selticon

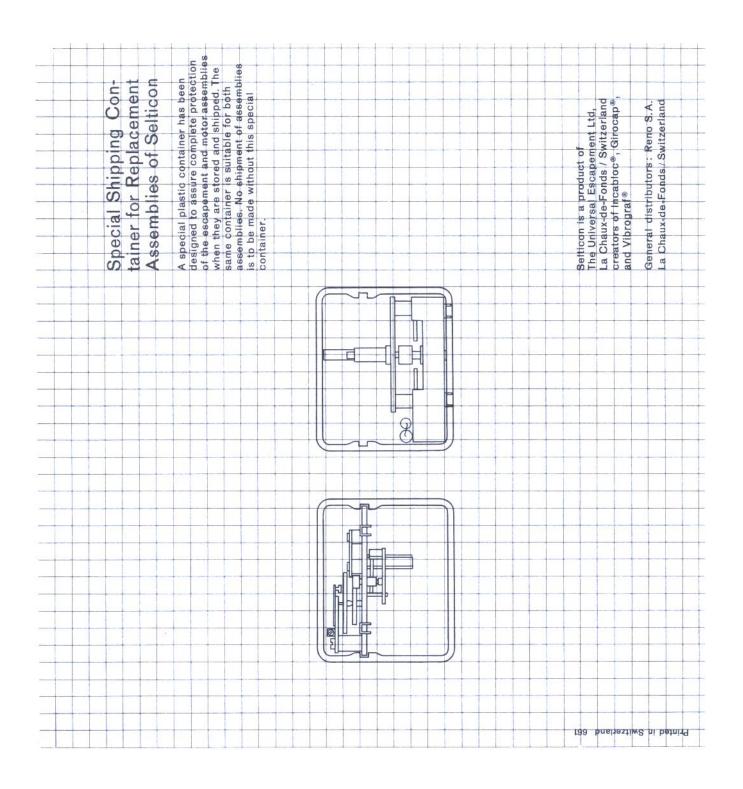








Service Center for complete examination. the holding plate with the reduction wheels assembly); if still unsatisfactory, replace start the movement if the motor turns normally but without moving the hands, replace the escapeescapement assembly are mounted on 1 replace the battery with a new battery If, after replacing battery and both assemblies (top and bottom), the Selticon still does not work, return to Should the Selticon stop, proceed as the holding plate. To dismount them, overhauling. It is comprised of these Servicing and Repairs release the two levers and pull out. 4 if the motor does not turn normally, also the escapement assembly (top designed to facilitate servicing and replace the motor assembly (lower Both the motor assembly and the The Selticon movement has been ment assembly (top assembly) the escapement assembly a the holding plate with b the motor assembly three basic units: of Selticon assembly) follows: 4 0 escapement assembly motor assembly holding plate



Electric Horology Links

Calling all Members:

If you have a link to an interesting internet site you think other members may enjoy visiting, let us know and we build a list in the Journal. Of course it should be about electric clocks or watches. Sites with information about repair and restoration tips and techniques are also encouraged.



Here are a few links to get things started. We can categorize the list as it grows

- 1) http://revereclocks.com/index.php?p=1_9_History-of-Revere-GE-Clocks
- 2) http://clockhistory.com/telechron/warrenclockco/
- 3) http://www.ahsoc.demon.co.uk/ehg/electricalindex.html
- 4) http://www.roger-russell.com/jeffers/jefhour.htm

Mart Ads



All Mart Ads are FREE:

- Send copy to the attention of the Editor: Tony Bolek 55500 Cleveland Shelby Township, MI 48316
- Limit 3 Lines

Hard to Find Parts

BULLE Suspension assemblies, fabric type, just like originals. TIFFANY Single Contact suspensions springs (.004") The Horolovar Co., Box 264, St. Clair Shores, MI 48080; (313) 882-9380

TIFFANY Double Contact Suspension Springs: Use a Hamilton Ladies Watch Mainspring, Specifications: HAMILTON 6/0 #2521, 1.4mmx 0.12mm x 11 $\frac{1}{4}$ ". Available from: Bill Schroeder @ &3.00 each + postage. 6033 N. Sheridan Rd., #31H, Chicago, IL 60660; (773) 275-2563. Also available from most watch parts suppliers.

For Sale

Telechron B rotors rebuilt using Telechron factory tooling, parts and paperwork. Most commonly used rotors are in stock for a quick turnaround. Also repair service offered for Telechron, GE, Revere and Hershede electric clocks. All Good Time Clock Service, 119-B Courtland St., Rockford, MI 49341; (866) 914-8463

Glass dome for the large Bulle clock. We also have glass domes for the Tiffany Never Wind, Barr, Poole, and Kundo clocks. If I don't have it in stock, I'll try to get it. Ben Bowen, PO Box 4718 Dowling Park, FL 32064; (386) 658-1167; E-mail me at www.glassdomes.com.

CD containing over 100 electric clock systems, such as ATO, Brillie, Bulle, Campiche, Eureka, Garnier, Gent, Hipp, Holden, Magneta, Poole, Scott, Shortt, Synchronome, Tiffany, Vaucanson, Wagner, Warren & many more. Price \$30, includes shipping. J. E. Bosschieter; E-mail me at BoscoClocks@Zonnet.nl.

"A Guide to Electrical Horology" by Martin Swetsky, FNAWCC. A step by step book on the repair and servicing of Tiffany Never Wind, Poole & Barr, Bulle, Eureka, Synchronome, Self Winding, American Clock Co. (Chicago), Standard Electric, ATO, Sempire, NoKey, Brille, Pulsynetic, etc. Cost \$42.00 Post Paid. Contact Michell Swetsky, 10 Chelsea Way, Fairport, NY 11450; E-mail me at www.SwetskyNY.net/agteh or MSwetsky@Rochester.rr.com.

Electronic "master clock" for old slave dials: \$50. "Governor" makes Eureka clocks keep quartz-acccuratetime with no change to the clock: \$95. Voltage regulators: \$35 to \$55. Bryan Mumford, 3933 Antone Road, Santa Barbara, CA 93110; (805) 687-5116; E-Mail www.bmumford.com.

BANGOR Electric Clock Parts, New Factory original parts ... too many to list separately. Call or e-mail with your needs. Elmer Crum; (727) 868-0181; E-mail at electrichorology@juno.com.

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