



Preservation, Conservation, Restoration, Repair and the Santa Barbara Courthouse Clock

by Mostyn Gale

Much has been said and written on the topics of preservation, conservation, restoration, and repair. One of the best resources I have run into on these topics is in “The Guidelines for the Repair, Restoration, Conservation, Preservation, and Maintenance of Turret Clocks”, written by Chris McKay. In this article I will use the definitions written by Chris (*in bold italics*) to illustrate my approach to the overhaul of the Santa Barbara Courthouse tower clock.

Preservation is the process that attempts to arrest or delay the processes of wear and decay in a clock and leave it as found, with no parts added or taken away.

Preservation, by its definition, is impossible if the clock is going to be operating. An operating clock will always be wearing out. Since my intent is to keep the clock operating, I will not be preserving it. That is not to say that I will be ignoring this altogether. Old worn parts will be kept and labeled so as to preserve the history of the original parts. A detailed record of the overhaul will be maintained with the courthouse so that all work performed will be able to be understood by those who will decide its fate in the future.

Conservation is the process that aims to arrest or delay the processes of wear and decay and maintain the historical integrity of a clock, while allowing it to continue as a working mechanism.

This is the primary approach I have been taking. The clock will be an operating clock and as much of the originality of the clock is being preserved as possible. Most of the parts on the clock are original, so maintaining as much of the original paint as possible has been my main focus. To do this I experimented with different tools, techniques, and materials to come up with what I felt was the best overall

balance of considerations. I ended up using Vulpex (a cleaner made by Picreator) diluted 10:1 with a brass wire brush.

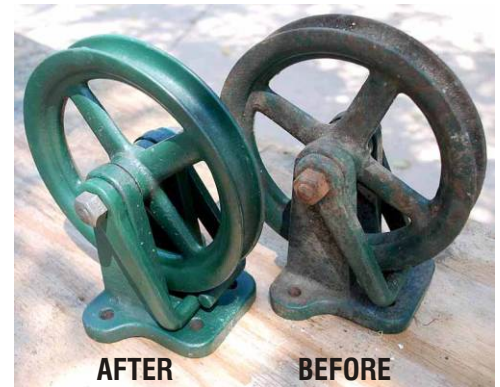


CLEANING MATERIALS

Gentle scrubbing did a good job of picking up the grease and not dissolving the paint. Too much scrubbing did take off some paint, so I was careful not to be too aggressive. Sometime this meant that “stains” from old oil were not able to be removed. This is a good example of a compromise in order to preserve the historical integrity while maintaining the clock in good working order.

Restoration is the process of attempting to return a clock to its original state, or a state at a defined date in its history. A significant part of the effort on this clock has been restoration oriented. If you have been following these articles, you know that the strike and time trains have never been operated. For some reason, bells were never purchased. All of the parts for these trains have been stored virtually untouched for 80 years in their original shipping crates. This project will “restore these trains to working order.

Faux bells will be made and mounted. The original hardware for these trains will be cleaned, mounted, and operated – as they were originally intended to do. A high fidelity electronic sound system will be used to simulate the sounds of the hammer striking the bells. Parts with chipped or loose paint have been cleaned and repainted with paint carefully matched to the original.



CABLE PULLEY

Repair is the replacement, mending or re-shaping of a worn, broken, or missing part or parts. There has been some necessary repair. The main items here were the motion works and the chain sprocket on the time train. The sprocket showed significant wear on the teeth and three of the teeth were actually broken completely off. A previous article discusses the replacement of this part. As is typical on most clock overhauls, bearings have been rebushed. New motors will have to be purchased since the original have worn out and been thrown away. Limit switches for controlling the motor rewind have also long since worn out and been discarded. Two of the thermal cutout switches for the motor circuit are still in the electrical boxes. These will be retained but not used.

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PRESIDENTS MESSAGE

By Mike Schmidt

As Chapter 190 approaches the beginning of its 5th year, we are trying to respond to the changes that are taking place in the NAWCC and our local Chapter memberships. One of the major changes is the increased interest in wrist watch collecting. If you have attended the LA Regional or any of the recent Chapter Marts, you surely would have noticed the tremendous activities around the wrist watch tables. While I suspect that a lot of the activity is pure investment goals, a great amount of interest by many are in the history, artistic, and mechanical aspects of wrist watch collecting. For all who have a wrist watch collection, the question soon arises on how one maintains a collection. To help address that question Chapter 190 has the honor of offering the very first Field Suitcase Workshop for Beginning Wrist Watch Repair the FSW 302. The workshop will be offered January 28-31, 2011 and the instructor will be Ferdinand Geitner. The 4day class will be held at Ventura Community College. The coordinator for the class will be "Zaki" Salahudidn. 805 654 8552 email phoenix@cimm.net. The class is limited to a maximum of nine students.



Our Public Relations Director, Laurie Conti, will present a wonderful program at the October meeting. "Introduction to Dental Techniques used in Case Repair." Laurie is one of the first California Registered Dental Assistants and has extensive experience in all aspects of dental assisting lab procedures and now enjoys a supervisory position at two successful dental corporations.

Laurie will show us how to duplicate missing parts and ornaments and how to repair a damaged corner, dented, or broken. This information will be very interesting and useful in clock, furniture, and fine antique repair. A follow up full day Chapter workshop will be available in 2011.

The coordinators, instructors, and I have scheduled the seven progressive Field Suitcase Workshops for 2011. You can find them listed in the newsletter and on the NAWCC website. If you have or are going to have the prerequisites and want to take a class, please contact the coordinator. Interest is strong and class sizes are limited.

A thank you to Tom Beard for donating the mystery door prizes for several meetings. The prizes have added some fun to the meeting.

The Workshop for our Sunday morning meeting will be led by George Gaglini. George is owner of "The Clock Gallery." George and his wife, Donna, have a long time clock repair business that serves all of Ventura county and adjoining areas. Their main business is in the repair of Grandfather clocks. George is going to begin our workshop by talking about how to properly pack and move a grandfather clock. Please bring your questions about grandfather clocks or any other clocks or watches. The coffee will be ready early.

Mike



Happy Birthday

Larry Lopes and Richard Schall

Modern alternatives to these are contained in the new motors. New limit switches will be purchased which are not the same as the originals. I was unable to find out what the originals looked like. The new switches will be placed in the old electrical boxes so as to reduce the undesirable contrast in appearance between old and new. Even if I had found old limit switches, this may be one area where I would have opted for a modern device for the purpose of reducing the maintenance required. The old switches undoubtedly were not made as well as modern ones and wore out quickly. This is a case where use of a modern device is preferable.



**BEFORE
CLEANING**

**AFTER
CLEANING**

In summary, no one method has been used consistently throughout the clock overhaul. All approaches have been considered in each different situation to arrive at a balanced approach so that the public can gain an excellent appreciation for the operation of the clock and, at the same time, as much of the historical integrity has been preserved as possible. ■

BOOK REVIEWS

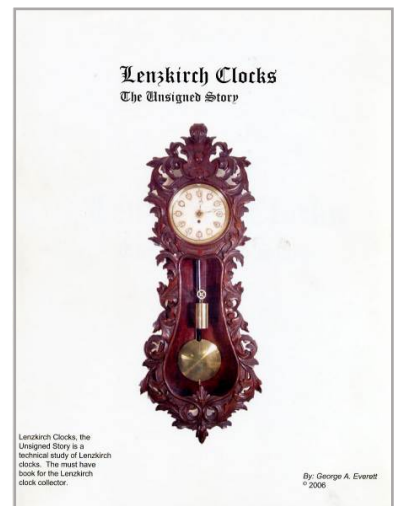
by Ken McWilliams

At last month's meeting, Giorgio Perissinotto brought a beautiful Lenzkirch clock for show and tell. It was a signed ceramic wall clock that he has done a magnificent job of restoration on. The serial number was 157280, which dates it at 1868. Researching a Lenzkirch movement is easy when they are serialized and signed. But, what about when they are not serialized or signed. That is the subject of my book review this month.

George Everett's book, "*Lenzkirch Clocks, The Unsigned Story*", addresses this issue. George dedicated 10 years to researching and writing this book. It is an in-depth technical study of Lenzkirch clocks, a must-have book for the Lenzkirch clock collector.

Prior to Mr. Everett's book the only information that was available on Lenzkirch clocks, was a small book written by Karl Kochmann. Karl's book covers both Lenzkirch and Winterhalder clocks. It is 5.5" x 8.5", a total of 136 pages, covers the history of Lenzkirch clocks and contains many photos and illustrations. Mr. Kochmann's book "*Lenzkirch Clock Factory, Winterhalder & Hofmeir Clocks*" can be found at Merritts.com for \$14.50 or on eBay for \$16.50.

Lenzkirch clocks have for many years been known for their quality and beauty. They have become objects of desire for collectors of European clocks, many being the crown jewel of their collections. Mr. Everett's book is an 8.5" x 11.25" hardbound with 315 pages consisting of many illustrations, full-color photographs, and a wealth of information on these wonderful clocks. This book will please the serious collector as well as the clock repair man. George goes into great detail in describing how to recognize and interpret manufacturer's markings on various parts in the unsigned movements.



Mr. Everett's book is, by far, the most complete work to date on the Lenzkirch clock. His writing is excellent and easily understood, and there are hundreds of illustrations and full-color photographs. A total of 1600 books were printed in 2006 and there will not be a second printing, when these are gone they're gone. The only place that I have found this book to be available is on his website: www.antique-clock.com. The price is \$44.95 plus \$10.70 shipping.

I will bring both of these books to our October meeting for you to evaluate. ■

**The next Meeting & Mart for Chapter 190
is October 17, 2010**

Sellers may start setting up at 11:30

The Mart is open from 12:00 til 1:15

The Meeting starts at 1:15

PROGRAM

**"Introduction to Dental Techniques
For Use in Clock Case Repair"**

Presented by Laurie Conti

**This is a very interesting program and
one that you aren't likely to see anywhere else.**

SHOW & TELL

"Musical clocks or any others items you want to share"

IT'S NEVER TOO EARLY TO LEARN

by: *Dave Coatsworth*

Earlier this year, my wife informed me that her 8 year old grand-nephew, Joshua, would be spending the summer with us. This would be his first airplane trip and his first visit with us. Never having been a parent myself, I wasn't quite sure what to expect as far as having a child stay with us for an extended period of time.

Joshua arrived in Los Angeles with his mother during the third week in June. His mother spent the following week here and we did all of the essential tourist activities, such as Hollywood, Santa Barbara, and so forth. Joshua's mother then returned home, leaving Joshua to stay with us until the end of August, when he was to return home to start the second grade.

Very early in his visit, Joshua showed a keen interest in my clock and watch collection, as well as the tools used to repair them. I think I set a world record for answering the question, "What's that, Uncle Dave?" Not that I minded one bit! Here was someone who wanted to know everything there was to know about my clocks, watches, and tools and I was happy to oblige. It became something of a daily ritual for us to spend an hour or two in my office exploring some part of my collection.

On June 25, I took him with me to the Chapter 75 Mini-Mart. Talk about exciting! Here was a room full of clocks and watches and an equal number of people to talk to about them. Joshua is a very outgoing and engaging young man and he made the most of this event. He thoroughly enjoyed meeting the Chapter 75 and Chapter 190 members who attended the Mini-Mart. To cap the afternoon off, he bought his first watch (a digital wristwatch) from Jorge Montoya. By the time we got back home, he had the watch completely figured out. He was hooked.

It did not take long until simply talking about watches was not enough. Joshua actually wanted to work on one! I decided to take the plunge with an 18-size, 15 jewel, Elgin pocket watch. The watch ran, but sluggishly. I had recently picked it up at an estate sale and had no idea

when it was last serviced. I figured that, at least, Joshua could help me by removing the larger screws and other simpler tasks associated with disassembling a watch. So, I let down the mainspring, put the movement in a holder, and then told him which screws to remove. He did this easily and then carefully picked up the screws with his tweezers and put them in the parts tray.

I took off the top plate and he again picked up his tweezers and removed the gears. I tried him out on some of the smaller screws in the movement and he had no problem with those either. After cleaning all the parts, I wasn't quite sure how he was going to help with the reassembly. I again had him help with screws. Much to my amazement, he also picked up the gears with his tweezers and dropped them in their pivot holes. Finally the watch was together and ticking away. What a proud moment for both of us!

Joshua did not know this before we started, but it was my plan to give him this watch if we were successful in getting it to tick reliably. This we did, so the watch was his. We made a chain for him, and he started wearing the watch everywhere.

Joshua continued to ask about different tools and wanted to learn how to use them. He spent a few hours one afternoon just learning how to use the mainspring winder by removing and re-inserting a mainspring in an 18-size barrel. He needed my help for the first several tries at re-inserting and getting the T-end into its hole, but soon he was doing it by himself. Another day, he was looking in my bench and found a tool for straightening wheels, so I bent a bunch of scrap wheels and he spent the next hour straightening them out. The same scene was repeated day after day for several of the tools in my bench.

Joshua had an unquenchable thirst for knowledge and a mechanical ability uncommon for an 8-year-old.

Alas, it was time for him to leave and a time that I will never forget, came to a close. As much as Joshua learned about watches and clocks, I believe I learned more about life with a young child. At last report, the Elgin pocket watch is still ticking away. ■



Tales From the Bench

by Ferdinand Geitner

Hidden Treasures

One should never judge a book by its cover. The same can be said about a watch. From the outside it looks like an ordinary, key wind, pocket watch, maybe fusee.

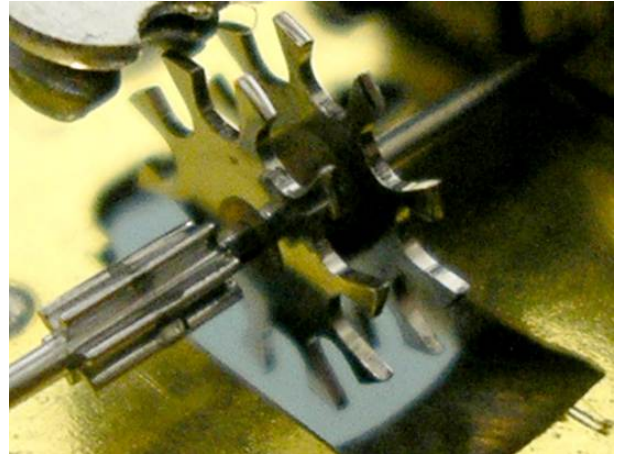
After a closer look at the back plate, it looks like an early verge escapement, until one removes (very carefully) the balance bridge and balance. Then, you will notice, there is NO roller to speak of, and no roller jewel, just half a disk. Is it broken?

Checking out the rest of the movement reveals that there is no pallet and has a very unusual escape wheel!



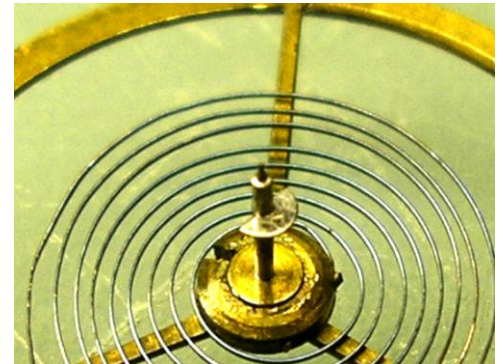
We are looking at a Debaufre Escapement invented by no other than Peter Debaufre around 1704. It is claimed to be the first frictional-rest watch escapement. It consists of two escape wheels mounted on a pinion next to each other with staggered teeth driven by a contrate wheel. They work alternately on a half disk mounted on the balance staff.

The escape wheel teeth have a slanted impulse surface which pushes against the edge of the balance disk giving impulse and pushing the other half of the disk into



the path of the other escape wheel and so on and on (one hopes). There is lock before impulse and one has to make sure it is sufficient or time keeping will be very erratic.

There is quite a lot of end thrust on the balance staff and a polished steel plate or end cap jewel is provided.



It is an improvement over the verge escapement but never became very popular. According to records, the escapement started to come into use about 1800 in Ormskirk, Lancashire, but production ceased around 1830. The escapement is also called Ormskirk Club Foot Verge or Chaff-cutter. ■

This month's Mini-Workshop

will be an open workshop.

Any subject is open for discussion, any clock, watch, or tool may be brought.

George Gaglini will open this month's workshop with instructions on properly packing a grandfather clock for shipment.

The workshop begins at 10:30 AM. Free to members

MAN AND HIS TIME

by Henri Bonnet

"Time and I, against any two". Napoleon Bonaparte is reputed to have made that statement some two hundred years ago, thereby expressing his belief in the power of time. The only sure thing that one can say about time is, that it is a unidirectional, uninterrupted succession of events, directly effecting human condition and destiny. Man knows how to use time, but no one can claim knowledge of what time really is. Albert Einstein, in the early twentieth century, drastically changed our notion of time, by proposing his theory of relativity. Einstein's physics not only altered the Newtonian idea of time, but it made our perception of it even more mysterious. His theory of relativity could work, only if time (as well as space), were considered "deformable." Albert Einstein's theory of relativity is now over 105 years old, yet no one has ever travelled into space at velocities approaching the speed of light, (100,000 km per sec.) when time is supposed to "slow down", and it is a safe bet to assume that no one ever will.

That brings us back to time and its effect on every single one of us here on earth. Obviously, neither Napoleon, nor Einstein discovered time, not even the means of its measurement. However, there is ample evidence to the fact that time itself, has been of common interest and concern to humanity throughout history.

Popular sayings such as: "time flies", "time is money", "timing is everything", "time waits for no one", "quality time", among others, are well known to everyone. It is not the purpose of this article to review the methods by which man has used to measure time. What concerns us here is primarily how man has perceived and been affected by time throughout the ages.

Great leaders of the past were very conscious of time as well as of its measurement. In 46 BC, Julius Caesar, promulgated a calendar that still bears his name, (the Julian calendar), and in the 16th century, Pope Gregory the VIII updated the Julian calendar for the one we use today (the Gregorian calendar). Virtually, all

people on earth now run their lives according to this calendar. Biblical narratives allude to the fact of man's relationship to time. Time was considered a divine gift to man and indeed equivalent to life itself (Ecclesiastes).

Early devices to measure time were artfully crafted and decorated, to render homage to its power, be it a sun dial, a clepsydra, a sand timer, or a mechanical clock. Such craftsmanship was typical primarily for objects representing power or divinity. The old definition of a second was relatively easy to comprehend by practically everyone, (1/86,400 of one day). The modern

definition of a second (in a nutshell) is measured by the frequency of changes in energy levels of an atom of caesium 133, (9,192,631,770 periods per second). This property of caesium 133 is used in what is known today as the atomic clock, which has become the international standard. I am cognizant of the fact that the atomic clock makes countless modern technological wonders possible, but the problem with it, in my view, is that it makes time even more incomprehensible to the average person. Most of all, it seems somehow to distance time from its most important user; man. The analog depiction of time on the face of a clock or a watch, is not incidental. It clearly simulates where one stands with respect to a future (or past) event, thereby visibly relating time to human activity. Numerous studies have been conducted as to the human

brain's capacity to perceive patterns, versus numbers. The current revival of the analog wristwatch, for example, is one of the results of such studies. The development of time measuring devices throughout the ages was closely related to the human condition, first serving religious purposes, and later on for secular applications. In the distant past, religious and secular potentates were in control of time, and dictated its use to the populace.

History has shown that common man's pervasive acquisition and possession of personal time measuring devices coincided with his emancipation from the powerful "timekeepers", ultimately resulting in personal freedom and independence. What do you think? ■



CLASSIFIED PAGE

This page is dedicated to advertising for Chapter 190 members. It is, of course, free to members.

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The Montecito Clock Gallery

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- Chronometer -

Hamilton 21 Marine Chronometer in running condition, with
inner box and gimbals; outer box not essential.

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E-mail: giorgio@spanport.ucsb.edu

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watchmaker's tools.

Please contact:
David Clarkin Tel: 805-988-4384

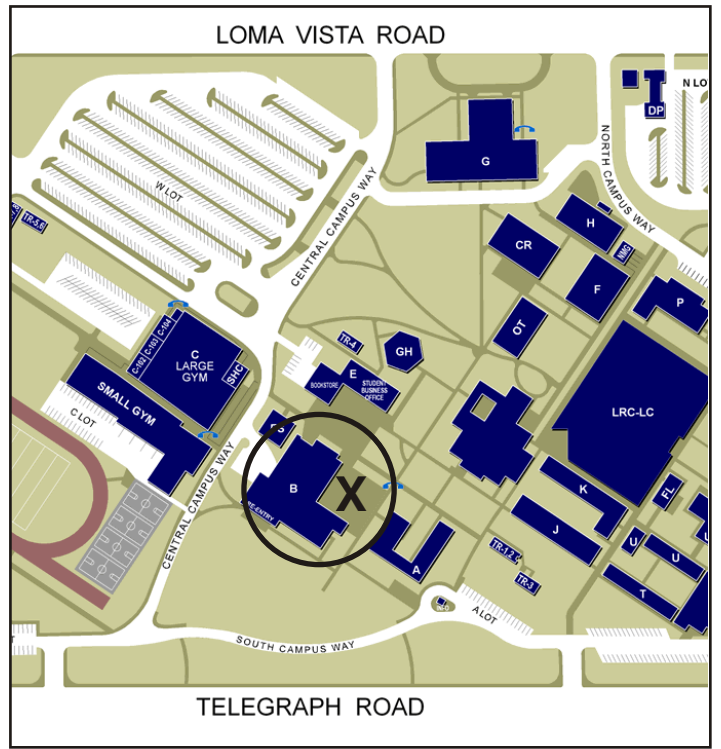
I need a few watch item,

- (1) 18 size Howard staff for Series III...(Coles Escapement)
- (2) I have the collet for an Adams & Perry watch...needs hairspring and stub to fit in balance cock, or someone to replace what is missing and give the timepiece a good cleaning so that it runs correctly, without breaking the bank!

NEW

Dan Weiss (Pennsylvania 190 member)
Contact: (215) 725-5463 • dweiss17@verizon.net

The Chapter 190 meetings are held the third Sunday of each month. (No meeting in December)
 We will meet in the cafeteria on the Ventura College campus. The cafeteria is located in building "B", east of the gym and athletic field.



Hope to see you there!

October 2010 Issue

NEXT MEETING
OCT 17



If Undeliverable return To:
 17738 Superior St. Unit 21
 Northridge, CA 91325

Chrono Times

THE EXTRA PAGE

FACES SEEN AT SEPTEMBER'S MEETING



George Antinarelli & Ernie Jenson led the pre-meeting workshop last month, recapping some of the work done on the S.B. tower clock. Ferdinand Geitner studies the minute arbor assembly.



Jorge Montoya and visitor.



Ferdinand & Laurie Conti chat with a visitor.



Tom McKnett checks out a tear drop clock.



Mostyn, Georgie and Zacky.



Georgio & Mostyn clock shopping.



Ray Brown, from chapter 133, presented a program on early electric automobile clocks.



Georgio with his Lenzkirch and "mystery" clock.



Darlene Chinery & Jorge

Welcome New Member

Richard Purnell
from Camarillo

