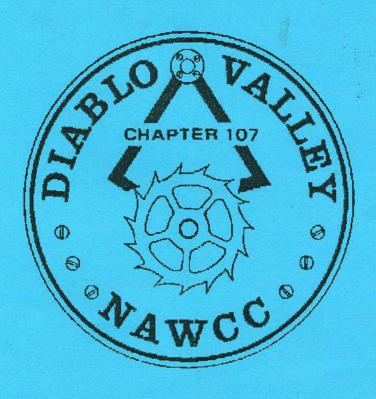
BULLETIN



April 2015 Volume 218

DIABLO VALLEY

Chapter 107
National Association of Watch and Clock Collectors
www.community.nawcc.org/chapter107
email account chapter107nawcc@gmail.com

Chapter Established March 5, 1978

"Accent on Education"

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Note new Mart and Meeting times
Grange Hall has a Sunday morning meeting
scheduled every week.
We need to adjust our meeting time.

Meeting Notice

April 12, 2015

Mart set up will open at 10:30 please do not come earlier the Meeting will start at 12:00.

This should be the time for all future meetings. It's important that we do not interfere with the group that is meeting before us.

Grange Hall 743 Diablo Road Danville

This month's Topic and Speaker

RAILROAD OPERATION'S OTHER CLOCKS

By Bob Simon

The presentation is a summary of (a to be published in the Bulletin Article) on certain railroad clocks used for signal systems, train operations, track side communication systems and other "timers" from the late 1800s to the mid 20th century.

These clockwork mechanisms were as important to railroad safety

and technical improvements as equal to the railroad pocket watch and the Standard Clock. Combining railroad engineering and operation history together with detailed analysis of the clockwork mechanisms and the photos and documentation for the article has been a 20 + year effort.

More pictures on page 5



President's Message

For our April 12th meeting we have arranged with **Markus Harris** communications director of the NAWCC to send out an email blast announcement to all NAWCC members in our area. The number of invitations sent out should be around 400. While most will not attend we are hoping to have a good response. We are asking all our members to become greeters and be sure to extend a warm welcome to our guests.

Besides our normal Mart we will also set up a Silent Auction area. Any one may bring items for the Silent Auction and set the starting bid. At a random time from 11:40 to 11:50 a whistle blow will end the auction. Please feel free to bring items you are ready to part with as they will become someone else's treasure.

Ron Bechler sent me a link to a number of very interesting instructional videos. Check them out at: http://lititzwatchtechnicum.org/videos/

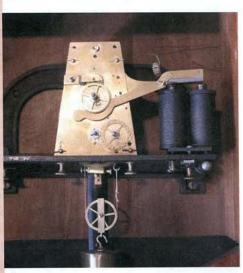
If anyone knows of other interesting sites on the web pass them on to me so I can list them for all our members to enjoy.

I would also like to thank **Pam Lindenberger** member services and office manager for the NAWCC. She has been very helpful in sending the National's registration program and roster updates for our upcoming 2015 Silver Dollar Regional. We have already sold 15% of our mart tables. If you are interested in having mart space at the Regional be sure to pick up a registration form at our April meeting.

Silver Dollar Regional August 29-30, 2015 J A Nugget and Casino Resort, Sparks, NV John







33 CLOCK WORK TIME RELEASE

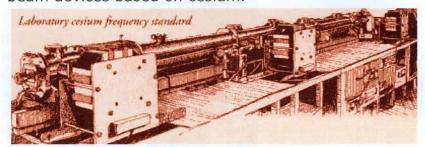


The Invention of Clocks

Part 4: Atomic Clocks and Time Standards

Scientists had long realized that atoms (and molecules) have resonances; each chemical element and compound absorbs and emits electromagnetic radiation at its own characteristic frequencies. These resonances are inherently stable over time and space. An atom of hydrogen or cesium here today is exactly like one a million years ago or in another galaxy. Here was a potential "pendulum" with a reproducible rate that could form the basis for more accurate clocks.

The development of <u>radar</u> and extremely high frequency radio communications in the 1930s and 1940s made possible the generation of the kind of electromagnetic waves (<u>microwaves</u>) needed to interact with the atoms. Research aimed at developing an <u>atomic clock</u> focused first on microwave resonances in the ammonia molecule. In 1949, NIST built the first <u>atomic clock</u>, which was based on ammonia. However, its performance wasn't much better than existing standards, and attention shifted almost immediately to more-promising, atomic-beam devices based on cesium.



In 1957, NIST completed its first cesium atomic beam device, and soon after a second NIST unit was built for comparison testing. By 1960, cesium standards had been refined enough to be incorporated into the official timekeeping system of NIST.

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In 1967, the cesium atom's natural frequency was formally recognized as the new international unit of time: the second was defined as exactly 9,192,631,770 oscillations or cycles of the cesium atom's resonant frequency replacing the old second that was defined in terms of the earth's motions. The second quickly became the physical quantity most accurately measured by scientists. The best primary cesium standards now keep time to about one-millionth of a second per year.

Much of modern life has come to depend on precise time. The day is long past when we could get by with a timepiece accurate to the nearest quarter hour. Transportation, communication, manufacturing, electric power

and many other technologies have become dependent on super-accurate clocks. Scientific research and the demands of modern technology continue to drive our search for ever more accurate clocks. The next generation of cesium time standards is presently under development at NIST's Boulder laboratory and other laboratories around the world.



TIME TO RENEW MEMBERSHIPS

Chapter dues are \$25.00 (spouse included). If you did not renew on the luncheon sign-up sheet, mail a check payable to "Diablo Valley Chapter 107" to Jerry Konicek, 29185 Rockport Way, Hayward, CA 94544. If you include a self-addressed, stamped envelope, your badge will be mailed to you. This will help Jerry and give us a chance to confirm your contact information.

Bob Simon

FEBRUARY 2015 Meeting



Cyrus Wind Dancer



Ray Luciano



Seth Finkelstein



Jerry Konicek





Nile Godfrey

Vince Angel



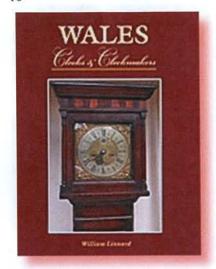
Price Russ



Dale Gardner



Walt Hubrig



WALES Clocks & Clockmakers

by William Linnard

This completely new and comprehensive reference book treats the subject from the earliest records of medieval Welsh clocks and their makers, through the classical period of clockmaking in the eighteenth century, right up to the decline of traditional clockmaking towards the end of the nineteenth century. The book includes: early turret clocks in Welsh cathedrals and churches; the first records of domestic clocks in Wales; and the inventories of Welsh clockmakers. Fully illustrated accounts are given of brassdial and painted-dial longcase clocks, and distinctively Welsh features of dial decoration and

case design are described. Further chapters cover special topics such as: tidaldial clocks from around the coast of Wales, and the many Welshmen who worked as clockmakers and watchmakers in London, Bristol and Shrewsbury. There are also detailed descriptions of some outstanding individual Welsh clocks.

Continued from page 10

A major part of this book is the comprehensive illustrated alphabetical list, giving details of well over 2,000 individual Welsh clockmakers and their clocks, while the geographical and subject indexes facilitate searches and cross-referencing. This book contains over 240 illustrations.

This book, the first on the clocks and clockmakers of Wales in over a quarter of a century, incorporates the latest research, much of it never before published. Much needed and long awaited, Wales: Clocks & Clockmakers is an essential resource for horologists, antique collectors, and Welsh historians alike.

****** Have you visited our website community nawcc.org/chapter107? It now contains meeting notices, past programs, Bulletins (2009-current), the Library Catalog, and other items. ***

A conversation with Chip Kumparak lead to looking up Bird Precision, manufacturers of precision jewels. It turns out the company was founded by an ex-employee of Waltham Watch - see



http://www.birdprecision.com/company/history.cfm

Large mahogany three train bracket clock signed Dobell, Hastings. c1860

A very substantial three train quarter chiming bracket clock signed Dobell, Hastings. The break-

arch topped mahogany case has four corner cast brass pineapple finials and a larger central finial. It is decorated with cast brass and pierced mounts, similar frets to the sides and stands on heavily cast "scroll and foliate" brass feet. Both front and rear doors are glazed. The front door has brass fluted columns with Corinthian capitals.

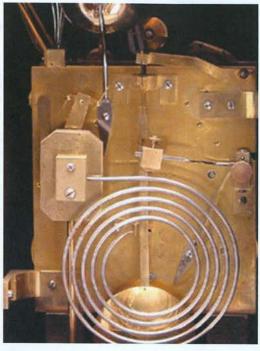




The dial is 6 ½" wide and is silvered and engraved with black Roman chapters and signed Dobell, Hastings. The hands are blued steel and of the trefoil design. There are three subsidiary dial to the full arch; Fast/Slow regulation, Chime/Silent and Full Chime/Westminster Chime. The tunes are controlled by a pin drum.

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This clock has a very heavy brass plated three fusee chain drive movement. Anchor escapement and rack striking. Hours on a rear mounted gong and chiming on eight bells. The pendulum with 3 ½" diameter bob also has a screw down hold fast.



Height 23 ½", Width at base 16", depth at base 10", weight approximately 42 lbs.

Disclaimer

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Statements of opinion and/or fact made by authors of papers or articles read before or appearing in the publications of the Chapter are to be accepted as the author's own. The Chapter assumes no responsibility for the accuracy or correctness of any statement of its contributors. This statement of responsibility shall appear in each issue of the Bulletin containing any of the foregoing.

CHAPTER #107 MEETINGS

Second Sunday of the Even Numbered Months

Mart:

10:30AM

Chapter:

12:00PM

Board:

after the Chapter Meeting

Future Meeting Dates

June 14, 2015

August 9, 2015

October 11, 2015

December 13, 2015

February 14, 2016

We want to keep our members coming to the chapter meetings on a regular basis. If you have problems with transportation to and from meetings, let a director or officer know so we can help you find a carpool.

Only NAWCC members can participate (buy or sell) in our Mart. Be prepared to show your current membership card.

Chapter	Meeting Address	Meetings	
De Anza #94	Odd Fellows Lodge 20589 Homestead Rd Cupertino, CA	2 nd Sunday even months (except April)	
Monterey Bay #70	Live Oak Grange Hall 1900 17th Ave Santa Cruz, CA	3 rd Sunday odd months	
Sacramento #71	Sacramento Garden Center 3330 McKinley Blvd. Sacramento, CA	4 th Sunday odd months	
San Francisco #5	Boys and Girls Club 401 Marina Blvd. San Leandro, CA	2 nd Sunday odd months	

DIRECTIONS TO CHAPTER MEETINGS

(except August and December)

743 Diablo Road, Danville

Take Interstate 680 to the Diablo Road exit in Danville. Go east on Diablo Road for 0.6 mile. The Grange Hall will be on your right. Parking is available in the front and rear. Enter from the front; *i.e.*, street side. Facing the building from the street, there is a ramp on the right side for handicap and cart access.

CHAPTER LIBRARIES



BOOK: The Chapter book library is located at Classical Clocks and Antiques, 1082 E. Stanley Blvd., Livermore. Contact Nile Godfrey (925-449-2127) for more information.

VIDEO: Chapters 107 and 5 share a DVD video library. Contact Price Russ (925-937-9231) for information.

TOOL: Contact Walt Hubrig (925-685-0260) or Price Russ (925-937-9231) for information on the tools and parts available for use by Chapter members.

NOTICES FOR MEMBERS

(The Bulletin accepts notices from Chapter members for all items/subjects horological - wanted, for sale, giveaway, services, and so forth. There is no charge. All you have to do is supply copy to the editor.)

Wanted: Articles for the *Bulletin*. Contact Tina Thomas (209) 481-3930.

Category	2014 Actual	2014 Budget	2015 Budget
INCOME	3,676.92	2,350.00	4,100.00
CD INTEREST	82.92	100.00	80.00
MEMBERSHIPS	1,375.00	1,200.00	1,300.00
Refunds	-45.00	0.00	0.00
OTHER INCOME	 2,219.00	1,050.00	2,720.00
Auction Sales	1,104.00	100.00	220.00
Chapter Pins	0.00	0.00	0.00
Christmas Lunch	1,090.00	950.00	1,000.00
Refunds	-105.00	0.00	0.00
Donations	25.00	0.00	0.00
Library Sales	0.00	0.00	0.00
Programs	0.00	0.00	0.00
Regional	0.00	0.00	1,500.00
Tools	0.00	0.00	0.00
10013	0.00	0.00	0.00
EXPENSES	4,168.32	2,350.00	2,600.00
BULLETIN & NOTICES	46.05	80.00	100.00
Other	4.89	50.00	50.00
Postage	41.16	30.00	50.00
Printing	0.00	0.00	0.00
FOOD, DRINK, & SUPPLIES	1,762.08	1,550.00	1,730.00
Christmas	1,382.72	1,200.00	1,300.00
Meetings	190.86	150.00	230.00
Picnic	188.50	200.00	200.00
LIBRARY	314.19	0.00	100.00
Books	0.00	0.00	0.00
Tools	314.19	0.00	100.00
MISCELLANEOUS	 0.00	0.00	0.00
Bank Charges	0.00	0.00	0.00
Donations	0.00	0.00	0.00
Door Prizes	0.00	0.00	0.00
P.O.BOX	186.00	190.00	190.00
PHOTOS	0.00	0.00	0.00
PROGRAMS	1,500.00	50.00	0.00
RENTALS	 360.00	480.00	480.00
Grange Hall Danville	360.00	480.00	480.00
let Difference:	 -491.40	0.00	1,500.00

In 2014 the Chapter expenses were over budget by \$491 due to the advance of \$1500 to the Silver Dollar Regional in August 2015. Without this expense the Chapter would have been \$1009 under budget.

In 2015 the budget shows an income over expenses of \$1500 with the return of the advance to the Silver Dollar Regional.