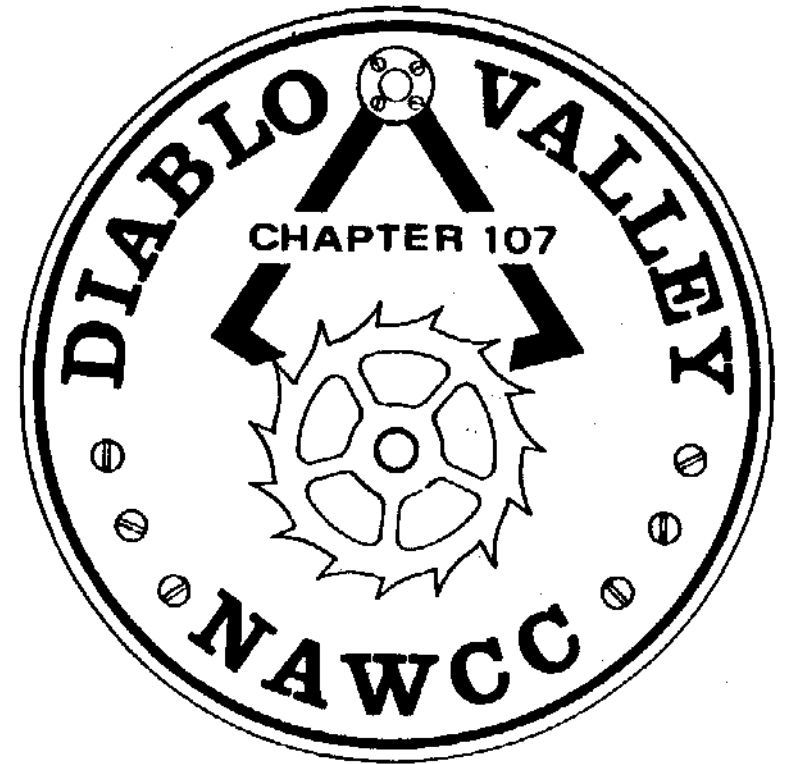


# BULLETIN



**December 2006**  
**Volume 168**

# DIABLO VALLEY

## Chapter 107

National Association of Watch and Clock Collectors

Chapter Established March 5, 1978

**"Accent on Education"**

### OFFICERS

President	Jack Coulter	925-284-1031	
Vice Pres.	Clarence Kobel	925-447-3383	
Vice Pres.	Roy Clark	925-376-6356	
Secretary	John Stohr	925-376-6476	jstohr@sbcglobal.net
Treasurer	Walt Hubrig	925-685-0260	dottiewalt@ca.astound.net
Past Pres.	Bob Wahrer	925-462-4912	jbwahrer@pacbell.net

### DIRECTORS

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2006	Miles Maynard	925-933-8549	mmaynard@pacbell.net
2006-2007	Sandy Cuthill	925-686-3144	
2006-2007	Earl Watrous	510-569-4175	efwatrous@yahoo.com
2006-2007	Dean Thomas	925-455-0929	

### COMMITTEE CHAIRS

Display	****open****		
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Refreshment	Lois Naye	925-934-4557	lnaye@aol.com
Tool Library	Walt Hubrig	925-685-0260	dottiewalt@ca.astound.net

## Meeting Notice

December 10  
11:30 AM - 2:30 PM

## Annual Holiday Program

Election of Officers  
Luncheon

Auction of Quality Pieces

Hungry Hunter Restaurant

3201 Mount Diablo Blvd.

Lafayette

(Corner Pleasant Hill Rd & Highway 24)

If you have not made your reservation, contact Walt Hubrig immediately.

### TIME TO RENEW MEMBERSHIPS

Chapter dues are still \$15.00 (spouse included). You may pay at the next meeting or mail a check to Roy Holman at 4300 Everett Ave., Oakland, CA 94602. Make checks payable to Diablo Valley Chapter 107.

## *President's Message*

First, Season's Greetings to everyone. This month is our big year-end meeting.

First-- lunch at the Hungry Hunter. Then-- election of officers. The high point is the auction of the "Good Stuff" as Bob Wahrer described it last year. Bring a clock, watch or two that you no longer want. It will be auctioned and you keep the proceeds. So bring your items and your check books. While you are at it, pay your dues for 2007. It's the best present you can give to Roy and Walt.

Thanks to everyone for your help this past year.

In closing I would like to acknowledge and welcome those who joined the Chapter in 2006:

William Baldwin  
Phil and Lucy Hart  
Tom Kochmann  
Chip Kumparak

Welcome! I hope you will find participation in Chapter activities as rewarding as I have.

*Jack*



Clock case in the Basilica dei Frari, Venice

## *Editor's Section*

As usual, it is hard to believe another year has passed. I hope it was a good one for you and wish you all the best in 2007.

I can finally announce that the list of library holdings is ready for publication. It will be distributed as a supplemental issue of the *Bulletin*. With a little luck, Chapter members will receive it before the December meeting. Thanks to Sandy Cuthill, Earl Watrous, and Cheryl Thomas for all the work you did to make this possible.

Thanks also to Tom Armour for sharing his favorite clock with us and to Dean Thomas and Earl Watrous for providing input to this *Bulletin*. Keep it up folks.

If you are interested in the subject of precision timekeeping using pendulum clocks, I can recommend the three volume work, *Precision Pendulum Clocks*, by Derek Roberts. On one level they are pretty coffee-table books with lots of pictures. On another level, they hold a wealth of information about the development of precision pendulum clocks. These volumes also contain extensive reference lists.

Reading about precision clocks caused me to wonder how precise my clocks are. Now that inexpensive battery-powered clocks that set themselves to the National Institutes of Science and Technology time standard are readily available, it is easy to monitor deviations and drift to within one second. I am currently monitoring the performance of three meter-pendulum clocks. Over a period of a few weeks, it appears that drifts in rate of considerably less than a second per day are easy to obtain. Longer term performance may be a different story. If others are interested in this subject and would like to compare performance, let me hear from you.

*Price*

## WADOKEI

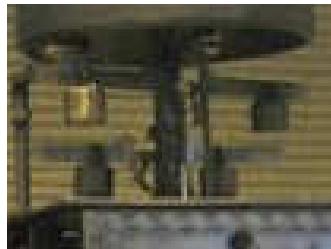
A wadokei (literally Japanese clock) is a mechanical clock that tells traditional Japanese time. They were of the lantern clock design, made of brass or iron, used verge and foliot escapements, and were typically weight driven.

Japanese time uses unequal temporal hours: six daytime units from local sunrise to local sunset, and six nighttime units from sunset to sunrise. As such, the length of the hours varied with the seasons. The hours were designated by zodiac signs and numbered from 9 to 4. The hour numbers 1 through 3 were not used because of religious reasons. The numbers ran backwards from noon until midnight because the earliest Japanese artificial timekeepers used the burning of incense to count down the time. Dawn and dusk were both marked as the sixth hour.

Various schemes such as adjustable dials were used to mark the changing length of the hours during the year. To make a striking clock, clockmakers resorted to a system that ran two different foliots, one slow and one fast; the appropriate escapement was swapped in and out automatically as the time moved from day to night. The picture at the right is an enlargement showing the two foliots.

Clock making was introduced to Japan from the West in the 16<sup>th</sup> century. The clock illustrated is from the 18<sup>th</sup> century. Japan adopted equal hours and the Gregorian calendar in 1873.

Japan also had a rich tradition of automata (karakuri) based on clockwork mechanism.



## MASTERCRAFTERS CLOCK COMPANY

Collectors of novelty electric clocks will be familiar with the name Mastercrafters. This company was founded shortly after World War II as the Mastercrafters Clock and Radio Co. It designed and produced a wide variety of novelty clocks. The chief designer until his death in 1976 was John Lane Hancock. The company survived until the 1980's. A great deal of information on the company and individuals involved can be found on the web in an article by Roger Russell. Three of Hancock's designs are described below.

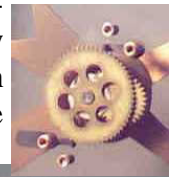
The *Waterfall* was inspired by Hamm's beer display ads. A rotating cylinder animates the water and campfire.



The Model 47 *Action Starlight* tube clock was inspired by a German liqueur with flakes of gold suspended in it. (The liqueur is sold under the brand name *Goldschlager*.) Lamps under the columns heat the liquid and cause the metallic (not gold) flakes to move about.



The *Fantasy* resembles Jefferson Electric's *Golden Hour* and other mystery clocks except that it has a rectangular face that can not be rotated to move the hands. Instead they are moved by a layer of plastic that moves back and forth advancing pawls that turn motion works (see insert). Smith English Clocks produced a similar unit in which the pawls and wheels are less obvious.



It should be noted that Mastercrafters also produced a cheap electric-powered imitation of the Atmos clock.

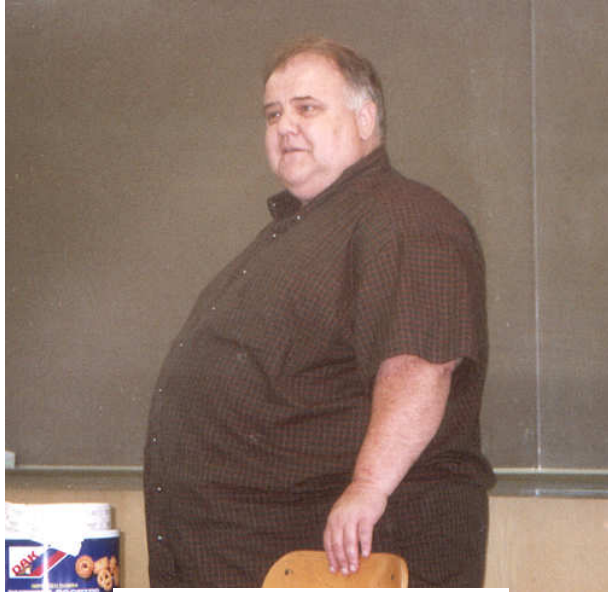




Earl Watrous

# October 2006 Meeting

Photos by Sophia Gardner



Tom Kochmann, speaker



Dean Thomas and Jim McElroy



Linda Towers



Clarence Kobel



Jan and Bob Wahrer

## FAVORITE CLOCK

It's hard to choose among my clocks for a favorite one, like being pinned down to announce one's favorite child. I'll settle on my Seth Thomas Regulator #2. I bought it in the late 40's or early 50's, one of my first clock purchases. Carolyn and I were a newly married couple, with several babies and very little money to spend on frivolous things.

This was the age just after WWII when there was a fine line, if any, separating most antique stores and junk stores. The scene was a storefront shop on old Grove Street near San Pablo in Oakland. The proprietor was a little older man named Sam Berger, a savvy merchant who had a vast knowledge of second hand furniture and as-is antiques. It was a store so full of goodies, you had to walk sideways through narrow aisles (if you could find them) to the back of the store. Over the years I bought many treasures from Sam. For me, the visit was always an exciting adventure.

My Seth Thomas Regulator # 2 was hanging in Sam's store window and going, as it told time for Sam, his customers, and all that walked by on Grove Street.

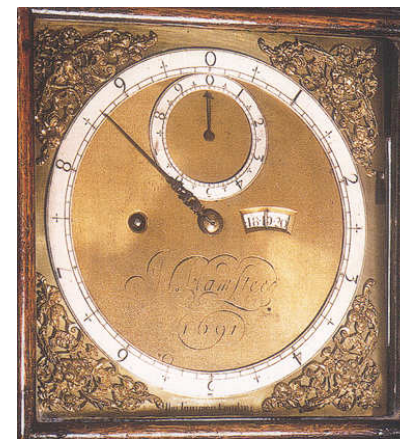
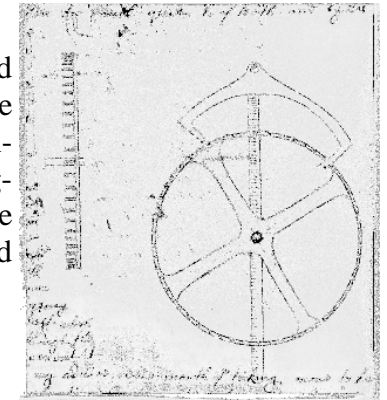


I bargained with Sam and he sold it to me for \$35, a lot of money for me. I had to pay him in several timed-payments while Sam and the neighborhood, in the meantime, had use of my working Seth Thomas in the window. When paid for, I took it home and hung it on the wall and kept it wound and running. Over time, I stripped off the old mahogany finish (which I wouldn't do today). It ran many years before I finally cleaned and serviced the movement in Royal's Class. It's always been a special, trouble-free clock for me and my family. A good old reliable and handsome friend.

*Tom Armour*

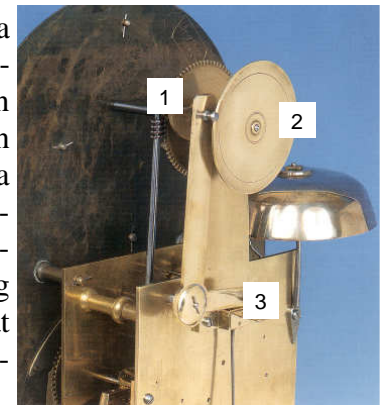
## Wait. Don't Tell Me!

This is a 1675 drawing of a dead beat escapement by Tompion. The dead beat is a refined form of anchor escapement. What was the significance of the development of the anchor escapement? Who is credited with its invention?



This is the dial from a tall case clock built by Tompion for Flamsteed in 1691 for observatory use. Note the unusual dial. What measure of time is shown on this dial?

This is the mechanism from a clock (ca. 1720) by Joseph Williamson. It keeps solar rather than mean time. The arm (1) riding on the cam (2), which rotates once a year, raises and lowers the pendulum suspension (3) thereby changing the pendulum's length causing the clock to keep solar time. What other clocks use a similar mechanism to adjust the rate?



## OK, Now Tell Me.

The anchor escapement permitted the use of smaller arcs of swing than the verge escapement. This allowed the use of longer pendulums, more constant application of power to the pendulum, and more constant arc of swing, which reduced circular error. It also made the use of seconds hands practical. The overall effect was to improve accuracy from minutes to seconds per week. There is debate about the invention of the anchor and dead beat escapements. George Graham was probably the first person to successfully use the dead beat escapement.

The dial is from a “degree clock” with what is said to be a  $2/3^{\text{rds}}$  seconds pendulum. The clock kept sidereal time displayed in degrees rather than hours. The divisions on the inset disk correspond to 10 degrees. The outer chapter ring is marked in degrees and tenths. The top dial reads to thousands of a degree. If the pendulum is literally  $2/3^{\text{rds}}$  seconds, each swing of the pendulum corresponds to 10 arc seconds or 0.0028 degree. It would have been difficult to read the time because each advance of the hand does not correspond to a division on the dial. It seems more likely the period was 0.72 seconds which would advance the top hand by three units on the dial. Sidereal clocks are more conventionally indicate hours, minutes, and seconds. “Right ascension” of stars is measured in these units rather than degrees.

Achille Brocot of Paris (1817-1878) is probably most famous for the Brocot pin-pallet escapement common in French clocks. He also invented the pendulum suspension mechanism, common on French clocks, that allows one to regulate a clock by moving close-fitting chops up and down the suspension spring. By changing the effect length of the spring, the period of the pendulum is changed. This is basically the same mechanism that Williamson used a century earlier but for a slightly different reason.

## HELPFUL HINTS

Clocks sometimes include thermometers in their cases. Often as a result of severe overheating or being dropped, gas bubbles get trapped in the liquid (alcohol or mercury). With care these thermometers can be repaired. First try shaking the thermometer to see if the liquid will recombine. If this does not work, make a slurry of ice and salt water and cool the bulb then drop the thermometer bulb onto a block of wood. The low temperature will bring most of the fluid into the bulb. Dropping the bulb onto the wood will tend to force the liquid down around the bubble. The bulb won't break if moderation is used. Repeat the process many times. The liquid will gradually move down past the bubbles. Keep repeating the process until all the bubbles have been removed. It should be possible to restore a thermometer in about 30 minutes. (This information was supplied by Brian Andresen of Livermore.)

## CHAPTER LIBRARIES

**BOOK:** The Chapter book library is located at **Classical Clocks and Antiques**, 1086 E. Stanley Blvd., Livermore. Contact **Nile Godfrey** (925-449-2127) for more information.

**VIDEO:** Chapters 107 and 5 share a 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 FROM 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.)

**CHAPTER #107 MEETINGS**

**Days and Times**

Mart Second Sunday 11:30AM Even numbered months  
 Chapter Second Sunday 12:30PM Even numbered months  
 Board Second Sunday after the Chapter Meeting  
 Evening First Friday 7:30PM Odd numbered months

**Future Meeting Dates**

**FRIDAY**

January 5, 2007  
 March 2, 2007  
 May 4, 2007  
 July 2007 - None  
 September 2007 - None  
 November 2, 2007

**SUNDAY & BOARD**

February 11, 2007  
 April 8, 2007 (?)  
 June 10, 2007  
 August 12, 2007  
 October 14, 2007  
 December 9, 2007

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.

Other NAWCC Chapter Meetings in Northern California		
Chapter	Meeting Address	Meetings
<b>De Anza #94</b>	Odd Fellows Lodge 20589 Homestead Rd Cupertino, CA	2 <sup>nd</sup> Sunday even months (except April)
<b>Monterey Bay #70</b>	Live Oak Grange Hall 1900 17th Ave Santa Cruz, CA	3 <sup>rd</sup> Sunday odd months
<b>Sacramento #71</b>	Sacramento Garden Center 3330 McKinley Blvd. Sacramento, CA	4 <sup>th</sup> Sunday odd months
<b>San Francisco #5</b>	Boys and Girls Club 401 Marina Blvd. San Leandro, CA	2 <sup>nd</sup> Sunday odd months (1 <sup>st</sup> Sunday in May)

**DIRECTIONS TO CHAPTER MEETINGS**

***Sunday Meetings***  
*(except August and December)*

**From Oakland - Highway 24 going East**

Take Pleasant Hill Road South exit.  
 At light, turn right onto Pleasant Hill Rd.  
 At end, turn left on Olympic Blvd. Go 0.9 miles.  
 At light, turn right onto Tice Valley Blvd. Go 0.6 miles.  
 Turn right into Acalanes Adult Center (1963 Tice Valley Blvd.).

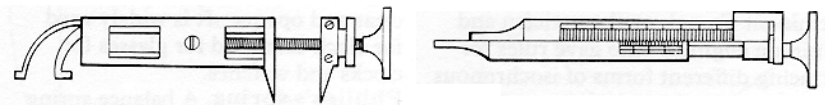
**From San Ramon - Highway 680 going North**

Take Olympic Blvd. exit.  
 Left on Olympic Blvd. Go 0.9 mile.  
 At light, turn left onto Tice Valley Blvd. Go 0.6 miles.  
 Turn right into Acalanes Adult Center (1963 Tice Valley Blvd.).

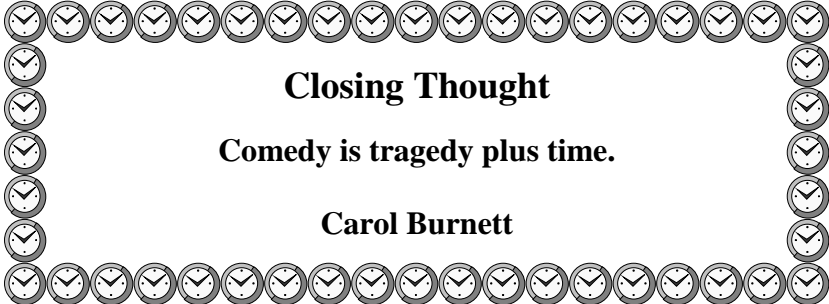
**From Benicia - Highway 680 going South**

Take Olympic Blvd. exit.  
 Right on Olympic Blvd. Go 0.8 mile.  
 At light, turn left onto Tice Valley Blvd. Go 0.6 miles.  
 Turn right into Acalanes Adult Center (1963 Tice Valley Blvd.).

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



Pinion Height Tool (2 views)


  
**Closing Thought**  
**Comedy is tragedy plus time.**  
  
**Carol Burnett**