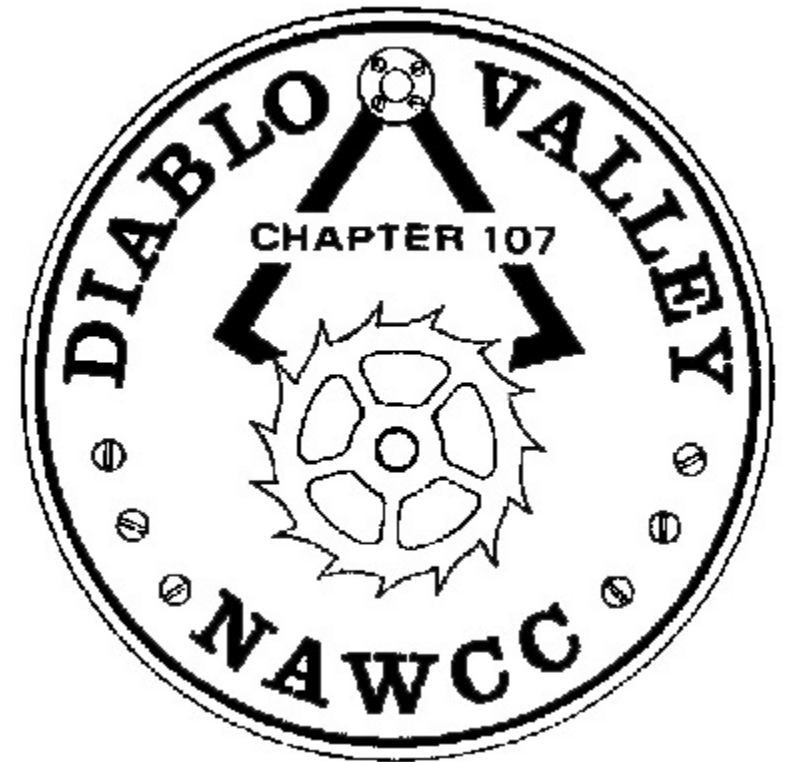


BULLETIN



June 2005
Volume 159

DIABLO VALLEY

Chapter 107

National Association of Watch and Clock Collectors

Chapter Established March 5, 1978

"Accent on Education"

OFFICERS

President	Bob Wahrer	925-462-4912	jbwahrer@pacbell.net
Vice Pres.	Dale Gardner	510-531-7565	
Vice Pres.	Jack Coulter	925-284-1031	
Secretary	John Stohr	925-376-6476	jstohr@sbcglobal.net
Treasurer	Walt Hubrig	925-685-0260	dottiewalt@ca.astound.net
Past Pres.	Jason Evans	925-376-0654	vette66@aol.com

DIRECTORS

2005-2006	Gareth Busher	925-686-5983	
2005-2006	Miles Maynard	925-933-8549	mmaynard@pacbell.net
2005	Sandy Cuthill	925-686-3144	
2005	Roy Clark	925-376-6356	
2005	Earl Watrous	510-569-4175	

COMMITTEE CHAIRS

Display	****open****		
Editor	Price Russ	925-937-9231	gpruss@pacbell.net
Library	Sandy Cuthill	925-686-3144	
	Nile Godfrey	925-449-2127	jng3@aol.com
Mart	****open****		
Membership	Roy Holman	510-530-5428	rholmanjr@juno.com
Nominating	John Stohr	925-376-6476	jstohr@sbcglobal.net
Photo	Sophia Gardner	510-531-7565	
Program	Dale Gardner	510-531-7565	
Program	Tom Armour	510-654-3363	armourtom@aol.com
Raffle	Jack Coulter	925-284-1031	
Refreshment	Lois Naye	925-934-4557	lnaye@aol.com
Tool Library	Walt Hubrig	925-685-0260	dottiewalt@ca.astound.net

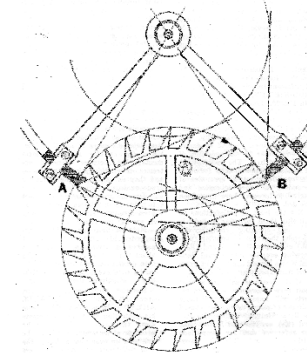
Meeting Notice

June 12, 2005

Mart 11:30, Meeting 12:30

Room B-8

Acalanes Adult Center



The Deadbeat Escapement

by
Jack Coulter

Dale Gardner will also make a short presentation on an early, very fine S. B. Terry shelf clock he recently acquired.

President's Message

I'm sitting here, and wondering what to write about. When after a while, I hear each of four cuckoo clocks taking their turn in notifying me of the passing of time. They are, of course, all wrong, and I wonder why I keep them running. It certainly isn't to tell time! Nowadays we have quartz watches and clocks for that. And, if your \$5.99 watch is not accurate enough, you can have an "ATOMIC" clock, locked in to NIST. Accurate to better than any one could (or should) care.

There are many reasons for collecting clocks, and everyone has different reasons. One that I personally find significant is that a running clock seems to be "alive". Not only chiming and cuckoo clocks but also the ticking of any working clock. Each clock has its own personality, and they contain some portion of their builder's life. In most instances, the previous owners and "repairmen" have also left their marks. These all combine to make each clock unique in some way. In collecting, we are preserving, not only an example of the art, designs and skills of the past, but also a small part of the daily life in the past.

Try to think about why a particular clock was made. Was it to measure time as accurately as possible under adverse conditions such as a ship's chronometer? Was it made primarily for decoration or to "show off" in your mansion? Was it made to meet certain cost goals while providing an acceptable accuracy for every day life? As collectors of clocks and other antiques, I think that these thoughts can provide even more meaning and enjoyment to our collections. In closing, although the cuckoo clocks are not as accurate as Chanticleer, I think I'll keep them on the wall and running as well as originally intended.

See you at the next meeting.

Bob

Editor's Section

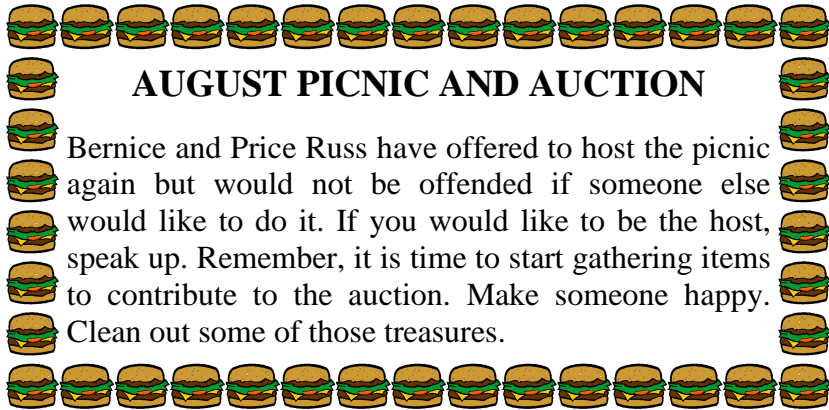
One of the many nice things about being the editor is that I get to acknowledge the special contributions of our members and others in the community. In this issue, I want to thank several people. David Coulter kindly translated a booklet on the clocks in the Bargello Museum of Florence. His translation will provide material for several *Bulletin* articles. Bert Bradley and Earl Watrous provided what Earl called "fodder for the *Bulletin*". I call it contributing to the success of the Chapter. Ron Bechler helped me repair the escapement for a Chelsea ship's bell clock destined for the Hospice Stores. Finally I would like to recognize the many clock overhauls that Walt Hubrig makes for Hospice.

I am not above making mistakes - large and small. In the last issue I misidentified Jim McElroy as a guest. He is in fact a long term member. Sorry Jim.

For those who are interested in time on large scales, I can recommend two books. *Mapping Time: The Calendar and its History* by Richards and *Parallel Worlds* by Kaku. The former as its name suggests is a history and explanation of the calendars of the world's major cultures. If you always wondered about such things as how to figure out the date for Easter, this is the book for you. The latter addresses modern ideas in cosmology in layman's terms. Time does not get any longer or shorter than this. For those who have seen references to the big bang, dark matter, parallel universes, and so on but did not have a clue what it was all about, this is a good introduction to the world of modern physics.

Helpful Tip: Small wide-mouth jars are handy for many jobs ranging from diluting small amounts of lacquer to storing parts. I have found individual-serving, glass jelly/syrup jars particularly handy. These are often found in hotel restaurants and sometimes on airplanes. Wherever they are used will have

Continued on page 7



AUGUST PICNIC AND AUCTION

Bernice and Price Russ have offered to host the picnic again but would not be offended if someone else would like to do it. If you would like to be the host, speak up. Remember, it is time to start gathering items to contribute to the auction. Make someone happy. Clean out some of those treasures.

JOSEPH IVES

Although not generally considered one of the most important participants in the development of the American clock industry, Joseph Ives (1782 - 1862) introduced many interesting, though not always commercially successful, innovations during his 52 years in the industry.

As early as 1811, he was making clocks with rolling lantern pinions. He finally patented a method of making rolling pinions in 1833. Unfortunately for him, his competitors figured out that fixed lantern pinions, such as those used for centuries on mill machinery, worked just as well. (The debate on the importance of lantern pinions rolling still goes on.)

He is believed to have been the first person in America to make a clock from wrought brass. Because of the expense of brass, he introduced the use of riveted strips of brass in place of solid plates. In the 1820s, he perfected the "wagon spring" clock that used a flat rather than coiled spring - another cost cutting initiative.

Connecticut Clockmaking (NAWCC Sup. 6), Bailey's *Two Hundred Years of American Clocks and Watches*, and Robert's *Contributions of Joseph Ives to Connecticut Clock Technology* can be consulted for more information.

ONLINE WATCH "PUBLICATION"

Those interested in current developments in the watch industry may want to take a look at www.europastar.com. This is the "eZine" of *Europa Star* a printed magazine devoted to the global watch industry. There is also an email newsletter to which one can subscribe. Along with promotional material and stunning photographs, considerable technical detail is presented.

The watch shown is an example of the type of pieces presented. This one by Antoine Prezioso has three toubillons that operate somewhat like the teacup amusement park ride - the kind where the teacups rotate on their own axis while turning with the unit - a sort of double rotational movement. While originally designed for looks more than performance, the three balances vibrate in resonance. That is to say they assume the same period. This greatly improves the stability of the beat frequency and hence the rate. This is not the first movement to take advantage of resonance. In the 1960s, Accutron built a chronometer operating on the same principal with multiple tuning forks. Thanks to Bert Bradley for mentioning the newsletter and web site.



Editor's Section continued

lots of them headed for the trash. They will be happy to give you some. I even had a cabin attendant wash a batch for me. The jars that contact lenses come in are also handy. Any optometrist will have them.

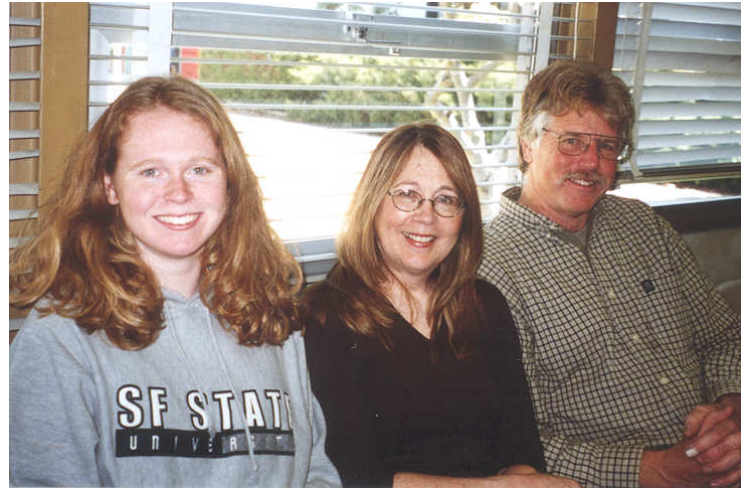
Price



Linda Tower and Jean Busher

April 2005 Meeting

Photos by Sophia Gardner



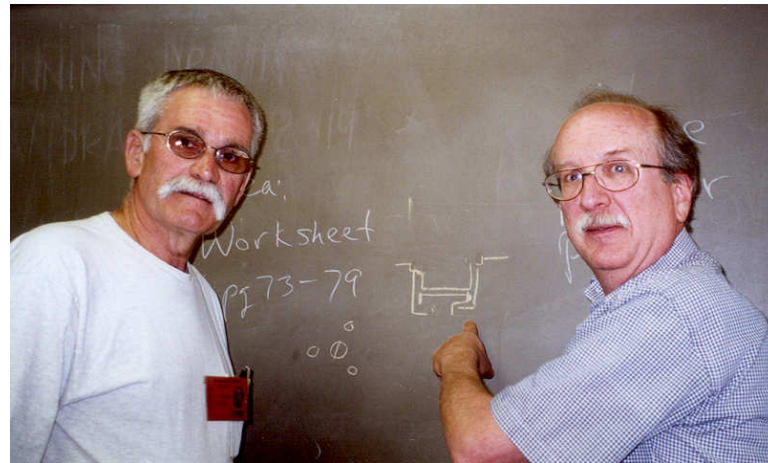
Dorian's Crew: Sam, Bonnie, and Eric Saxon



Gareth Busher and Jim McElroy



Martin and Florene Turkington



Dorian Clair (speaker for the meeting) and Price Russ discussing a jewelery problem



Nile Godfrey

CLOCKS IN THE BARGELLO (1)

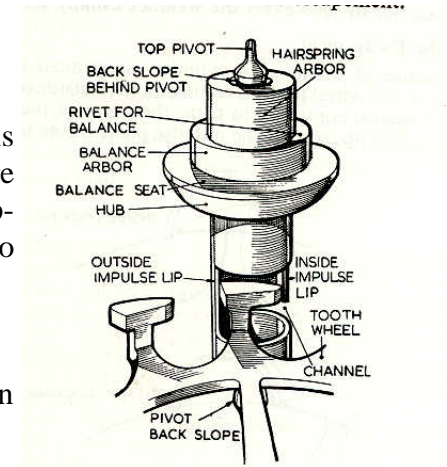
The Bargello was built in 1255 as the town hall of Florence. It has served many roles including that of prison and execution ground. For the last 150 years or so, it has been a museum. It is primarily known for its collection of Florentine Renaissance sculpture. It is also the home of the Jean Baptiste Carrand (1792-1871) collection of scientific instruments including timepieces. Carrand was a French collector of Renaissance and Medieval antiquities. The collection was donated to Florence by his son. If you find yourself in the Bargello, this collection is worth a look. A few of the pieces will be featured over the next few issues. The descriptive text is from David Coulter's translation of the catalog of the collection.

Pocket Clock by Jean Baptiste Vallier, Lyon. Silver, gilded bronze, rock crystal. 5 x 3 cm; height of mechanism 2.5 cm. Personal clock in the form of an elongated octagon. The case is decorated with two plates of rock crystal incised and beveled. The case is hinged. The dial is engraved with figures and various ornaments. The hours are indicated with Roman numerals. The hands are placed in the center. On the reverse side of the case you can read the signature: "J Vallier a Lyon". Vallier worked in Lyon from the beginning of the 17th century and died in 1649. He was one of the most gifted craftsmen of his time. His clocks can be found in the Louvre, the British Museum, the Kunsthistorisches Museum in Vienna, the Fitzwilliam in Cambridge, as well as in the Metropolitan in New York and in the Museum of Lyon.



Wait. Don't Tell Me!

What kind of escapement is this? What horologists are associated with its development? How does it relate to the deadbeat escapement?



Why is recoil not a concern in a lever watch?



George Graham, who you will remember invented the mercury compensated pendulum and discovered the diurnal variation in earth's magnetic field, invented the deadbeat escapement. How does the deadbeat escapement used in Vienna regulators differ from the Graham design? What is the advantage of the Vienna variant? (Note the pendulum in the background of the picture.)

What is a tithi?

Who was the Chanticleer referred to in the President's Message?

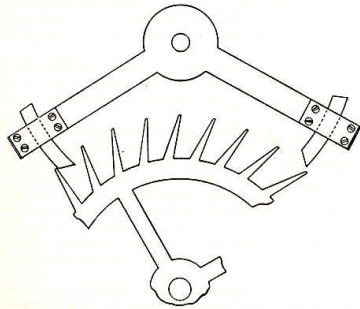
Answers are on page 12

OK, Now Tell Me.

The cylinder or “horizontal” escapement was widely used in watches, particularly before the detached level was developed. It was invented by Tompion, improved by George Graham, and widely used by Breguet. It is equivalent to the pendulum deadbeat escapement except that it has been modified to work with a balance wheel.

In lever watches the balance is “detached”. As it swings, the pallets are not carried with it, so there is no recoil regardless of pallet and tooth shape. There is also less wear than with a cylinder because there is little sliding friction between the escape wheel and pallets.

In Vienna regulators, the pallet pads are separate units clamped to the arms. When the pallets are worn, they can be reversed and readjusted. This is equivalent to having a new set of pallets supplied with the clock. Gazeley's *Clock and Watch Escapements* and NAWCC Supplement 8 are good references for deadbeats.



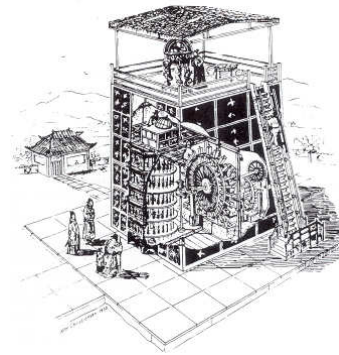
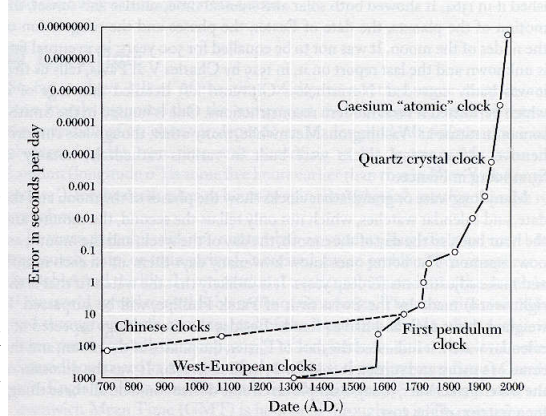
A tithi is $1/30^{\text{th}}$ of a lunar cycle (on average ~ 0.98 days). It was used in India as the basis of calendars. The idea originated in Babylon. Various Indian festivals are still scheduled by this calendar.

In al the land of crowng nas^o his peer.
His voys was murier^o than the myrie orgon
On massedayes that in the chirche gon.^o
Wel sikerer^o was his crowng in his logge^o
Than is a clokke or any abbey orlogge.^o

Chaucer, *The Nun's Priest's Tale* (*Canterbury Tales*).
(gon = plays, sikerer = more accurate)

ACCURACY OF CLOCKS

This figure from *Mapping Time*, shows several interesting facts. The improvement in the best obtainable accuracy of timekeeping has been truly dramatic over the last century. The Chinese had clocks a thousand years ago that were nearly as accurate as many of the ones we try to restore, and it took western Europeans a thousand years to build clocks that were more accurate than those built in China.



The famous water clock built by Su Sung in 1090 is shown to the left. Note the sized of the clock compared to the people. It was controlled by a mechanism that allowed the waterwheel to advance when one of the buckets on its edge was full. It also had a variety of “complications” including the ability to track a star.

TOOL LIBRARY

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. These are available at no cost.

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

July 2005 - None
 September 2005 - None
 November 4, 2005
 January 6, 2006
 March 3, 2006
 May 14, 2006

SUNDAY & BOARD

August 14, 2005
 October 9, 2005
 December 11, 2005
 February 12, 2006
 April 9, 2006
 June 3, 2006

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
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 (1 st 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 a current membership card.

Closing Thought

They say that time changes things, but you actually have to change them yourself.

Andy Warhol (1928 - 1987)