## BULLETIN



April 2007
Volume 170

DIABLO VALLEY

Chapter 107
National Association of Watch and Clock Collectors
Chapter Established March 5, 1978
"Accent on Education"

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## Meeting Notice

## April 15

## Mart 11:30 Meeting 12:30

Room B-8<br>Acalanes Adult Center<br>Platform Escapements And Other Balance Wheel Problems:<br>A Forensics Approach<br>by<br>Brian Andresen<br><br>Because of Easter, this meeting will be held on the third Sunday of April

## President's Message

Here it is April and we are just about to the hot weather. Well I haven't got much to say as I have been trying just to get to work. I hope that you have had a good spring. I have been looking forward to the speaker and trying to think of some questions that I can ask. Hope that you will and that we can have a great day.

Clarance


Archduke Karl, brother of Austrian Emperor Franz II, by A. Olbrich, Vienna (first quarter of $19^{\text {th }}$ century, chime with 2 tunes, Viennese grande sonnerie, repeater, 291/4" high).

## Editar's Section

Brian Andresen, the speaker for the upcoming meeting and contributor of an article in this Bulletin, is a very interesting person. He is widely recognized in the field of forensic chemistry and micro-analysis of organic compounds. You may have seen him on television discussing his forensic work. You may also recall his name from the hint on repairing thermometers that appeared in the December 2006 issue. Brian holds roughly twenty patents including one for fiber-optic candy. He retired from Lawrence Livermore National Laboratory a few years ago and took up watch and clock repair, which he now does on a nearly full-time basis. You will see from his article on page 6 that he is very inventive. I think you will enjoy his talk and getting to know him. We will all profit if he continues to provide articles for the Bulletin.

In addition to Brian, Roy Holman and Bob Wahrer have contributed to this issue. Thank you. Let's encourage Roy to bring in his clock to show. Perhaps he would be willing to make a presentation about Dutch clocks.

In the August 2006 issue, I credited Rolex with the invention of the self-winding or automatic watch. This was not exactly correct. It is appropriate to credit Rolex with making the first successful automatic wristwatch, but the first automatic watch predated this by 150 or so years. Abraham-Louis Perrelet (1729-1826) is usually cited as the inventor, but that has also been contested. An article on Perrelet and the automatic watch will appear in a future Bulletin.

While searching for material for this issue, I found a web site with the complete text of a number of horological books and pamphlets - www.watkinsr.id.au. The works are all in English thanks to translations by Richard Watkins, the person who posted the material. Richard is also the author of several recent articles in the NAWCC Bulletin.

## Price

## TRICKS FOR MAKING SMALL PARTS

Often, during the repair of clocks and watches, broken parts are discovered. To complete the repairs, parts are needed and often are taken from partially working movements, found at swap meets, or from the scrap bin full of discarded movements. Searching around for "the right part" can significantly delay the repair process. Unfortunately, many times these parts just can not be found (either purchased or cannibalized from other movements). Therefore, we are often forced to set our movements aside or tell the customer that, "...we are sorry, but parts for your clock are no longer available". However, not all is lost. Small components can be fabricated easily and quickly using the broken part as a template and a felt-tipped pen as a spray paint (ink stain) source.

The following example demonstrates how simple tools (canned air, large felt-tip pen, Superglue and a Dremel tool with carborundum disk) were used to fabricate of a new spring for a watch gear lever.

1) First, if canned air is blown over the tip of a marking pen held felt-tip down, ink will be drawn out by the air stream and sprayed forward. The ink will dry instantly on any surface and makes a very thin coating. With a little practice you can use a pen just like a spray can of paint. This is the trick to make an outline of the broken part.
2) In this example a small piece of sheet metal (of the appropriate thickness) was drilled to form a small hole of the exact size of the broken spring.
3) The broken spring parts were positioned properly and then glued down on the stock metal with very small spots of Superglue to hold all in place when sprayed with the ink. The glue is allowed to set up for 1-2 minutes and then sprayed with a black felt-tipped marking pen. The ink stain will make an exact outline of the part to be reproduced.
4) The broken spring was then carefully lifted off the blank
piece of metal with a razor blade. A perfect outline of the spring remains on the metal surface.
5) The outline was then cut out with a thin Dremel disk and filed to exactly match the broken part. A small pin hole ( $0.007{ }^{\prime \prime}$ ) was drilled and fitted with a small pin. A slot was cut to form the spring. The new spring clip was then flame heated and quenched in water to form a hard spring. It was tested and found to work perfectly to advance each wheel at the proper interval.

By arranging and gluing down the broken parts on a suitably thick piece of metal (followed by ink staining and cutting), small, "hard to fine" parts can be made quickly and easily. The new gears, clip springs, levers, or other unique clock or watch parts can also be polished and electroplated to make a perfect replacement for some of the finest movements. But, this is a trick for a future Bulletin.

Brian Andresen



Lois Naye and Florene Turkington

February 2007 Meeting
Photos by Sophia Gardner

H. C. Cox

Clarance Kobel


Tosh Yumae (new member)



Mike Kooken (new member)

## FAVORITE CLOCK

Twenty years ago, my wife Joan and I visited the Netherlands and discovered Dutch clocks. The one we really liked was what is known as a Friesland Stoelklock (stool clock). I looked at a few in Amersterdam clock stores, but was leery of purchasing something in a foreign country. A few months after returning home, I found one advertised in the NAWCC Mart. It seems a man in New England had purchased a collection of old American clocks and this was among them. He knew nothing about it and didn't want it. I bought it sight unseen from his description and had it shipped. The shelf had broken away from the bracket in shipping, which was repaired by a furniture restorer, and I worked over the movement, mostly just cleaning and oiling. I had it looked at by a man recommended by Royal English. He figured it to be about 1805 vintage, to be very original, and if returned to the Netherlands would be highly valued.

The movement is in a box, which sits on a four-legged stool. The stool sits on a shelf that is attached to a wall bracket. Over the
 movement, a roof is attached to the top of the wall bracket. The pendulum is mounted on the bracket and swings between the back of the box and the bracket. A wire that extends out the rear of the box drives the pendulum.

The whole clock is highly decorated with mermaids and pewter grille work. It shows phases of the moon as well as the date, and has a unique striking sequence. On the top of the box, there are two bells, the smaller nestled under the larger one. The hour is struck at the top of each hour on the large bell, while quarter past is struck with one hit on the large bell. On the half-hour, the upcoming hour is struck on the small bell, and at quarter to, there is one hit on the small bell. By Continued next page

Wait. Don't Tell Me!

Mechanical pedometers have similarities to self-winding watches. Is there a connection between these devices? If so what?

Who was the first comic-book character to appear on the face of a watch? When were such watches introduced? What effect did one of these characters have on Ingersoll-Waterbury?


Watches are one of the rare possessions where "mine is smaller than yours" constitutes a bragging right. What company holds the record for the thinnest watch?

Who invented keyless winding for watches?


## Continued from previous page

knowing the different bell sounds, you can hear what time it is every half-hour, and distinguish between quarter to, and quarter after. In the Dutch method of referencing time, half past 3 is "half 4 ", half past 4 is "half 5 ", and so on. There is a time train and a strike train, both driven by one weight on a single continuous chain loop.

A few years ago I took the clock down to have our hardwood floors refinished, and it still is in storage, partly disassembled in our basement. If I ever get around to reassembling it, I hope to bring it to a future meeting before re-hanging it in our family room.

Ray Halman

## OK, Now Tell Me.

The invention of the pedometer has been attributed to such diverse people as Thomas Jefferson and Leonardo da Vinci. The $17^{\text {th }}$ century philosopher and mathematician Leibniz is said to have gotten the idea for a mechanical calculator from a pedometer he had seen in Paris prior to 1685. Montres Perrelet, the modern company tracing its origins to Abraham-Louis Perrelet, claims he invented the pedometer "towards 1780". Early automatic watches were sometimes called pedometer watches, but the company history differentiates between the invention of the automatic watch and the pedometer. If anyone has any knowledge on this subject, please, share it with us.

Comic-characters appeared on watches in 1933. New Haven Watch Co. and Ingersoll-Waterbury both introduced comic-character wristwatches in 1933, the year of the Chicago World's Fair. New Haven's first the three characters offered were Orphan Annie, Dick Tracy, and Smitty. Mickey Mouse, introduced by Ingersoll-Waterbury, has been credited with saving them from
 bankruptcy.

There are many answers to the thinnest watch question. Overall the Concord Delirium IV (1980, quartz) holds the record at $0.98 \mathrm{~mm}(0.04$ "). The records for a mechanical pocket watch (1925, 1.32 mm ) and an automatic movement ( $1967,2.45 \mathrm{~mm}$ ) are held by Audemars Piguet. The automatic was developed in cooperation with Jaeger LeCoultre.

Breguet introduced stem winding in 1830. Patek Philippe introduced stem setting in 1841. Jaeger LeCoultre claims to have invented the first reliable system for winding and setting in 1847. In short the answer depends on who you ask.

## THE CUCKOO WITHIN

How many birds are in a cuckoo clock? The photo is of an "8-day Schatz" clock. I was surprised to find the second cuckoo cut in the brass plate. The plate is marked "JAHRESUHREN- FABRIK 50". (Year Clock Factory). See Karl Kochmann, Clock, Watch Trademark Index, page 42. I don't know the date that this clock was made. Maybe someone can help me?


Bal Watrer

## 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.

There is no cost to borrow items from these collections.

## 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.)

Earl Watrous, 510-569-4175, is looking for a Sessions motor assembly of the type shown to the right.


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

May 4, 2007
July 2007 - None
September 2007 - None
November 2, 2007
January 4, 2008
March 7, 2008

## SUNDAY \& BOARD

June 10, 2007
August 12, 2007
October 14, 2007
December 9, 2007
February 10, 2008
April 13, 2008

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 <br> \#94 | Odd Fellows Lodge <br> 20589 Homestead Rd <br> Cupertino, CA | $2^{\text {nd }}$ Sunday <br> even months <br> (except April) |
| Monterey Bay <br> \#70 | Live Oak Grange Hall <br> 1900 17th Ave <br> Santa Cruz, CA | $3^{\text {rd }}$ Sunday <br> odd months |
| Sacramento |  |  |
| \#71 | Sacramento Garden Center <br> 3330 McKinley Blvd. <br> Sacramento, CA | $4^{\text {th }}$ Sunday <br> odd months |
| San Francisco |  |  |
| \#5 | Boys and Girls Club <br> 401 Marina Blvd. <br> San Leandro, CA | $2^{\text {nd }}$ Sunday <br> odd months |

## DIRECTIONS TO CHAPTER MEETINGS

## Sunday Meetings <br> (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.


Waterbury 1889 advertisement from Richard Watkins' web site.


