



SAN FERNANDO VALLEY REGULATOR



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Hand Made Watch Hands

by Donald W. Corson

The hands form one of the most important identifying elements of every watch. I do not like simple flat, thin hands and make mine very thick and 3-Dimensional. For the present watch the hands are in 18k gold. Here



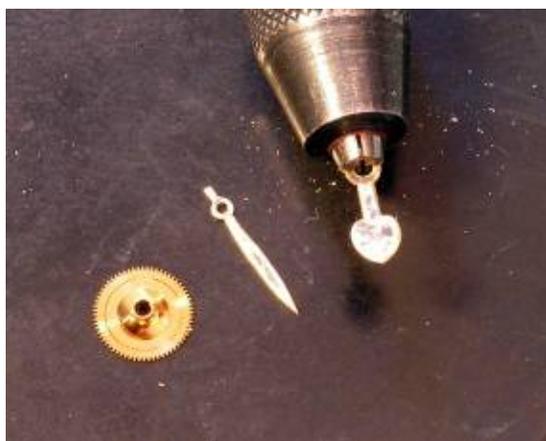
the gold hands above working hands in brass that are mounted on the movement.

This is how they started

out, holes drilled and cut out of a piece of 0.25mm thick gold sheet on the milling machine. This way I can be reasonably certain that the important dimensions and hole diameters are correct before starting out. I hammered the sheet to harden it some and bring the thickness from 0.3mm down to 0.25mm before cutting.



That doesn't look too promising, but after some work around the edges it is possible to see that those scraps of metal could become watch hands.



The second

hand with about one half of the meanders cleaned up:



Here three cleane shape and rounding this point I small pin them working. course, as steel, than brass, careful the works allows work from all sides.



are all hands d up to ready for out. Up 'til have used a vise to hold while Gold is, of not as stable but more so so being pin vice well and easy access to



The hands are now rounded and ready for polishing.

These are the tools that I have used up 'til now, a small pin vise, long handled needle files of several different forms and a cork for supporting the work during filing.



PRESIDENTS MESSAGE

by Ken McWilliams



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We have several annual marts coming up this month and in November.

On Saturday, October 20th, The Santa Anita chapter 116 will hold its annual *Halloween Supermart*. It will be held at the Arcadia City Community Center, 365 Campus drive, Arcadia. The mart opens at 9:30 A.M. Complimentary coffee and donut with admission and as always, a lasagna luncheon for only \$3.00.

This is a very nice mart and I'm sure that you will see many familiar faces there. I know mine will be among them. Last year I brought home a very nice and unusual Bulle clock. The year before I found a very rare Gustav Becker table clock.

Chapter 59 will be hosting their annual *South West Regional Mart* on November 16th (Friday) and 17th (Saturday) at the Del Mar Fairgrounds. This is the second largest mart on the west coast. (The Greater Los Angeles Regional in February is the largest) For more information and directions go to their website at www.nawcc59.org or call (619) 282-8414.

For those that enjoy a little drive now and then, Chapter 118 will be hosting the *Big Fresno Mart* on Saturday, October 27th. It will be held at the American Legion Post 509 Banquet room, 3509 N. First St., Fresno CA 93726. For additional information call John Edwards (559) 435-0216.

I haven't been to this one yet, but the people that I have talked to that have been call it one of the friendliest and fun marts that they have attended. There will be some flyers available for this mart at our meeting this month.

I have some not-so-good-news for our watch repair members. ETA is in the process of closing its Hong Kong distribution center for replacement movements. This was the source for low cost nickle plated ETA replacement movements for their original gold plated movements. (Nickle plated movements are marked "Swiss parts" whereas the original gold plated movements are marked "Swiss made.")

Since June I have been soliciting input from our membership on ways to increase our knowledge of horology through our meetings, programs and workshops. We need your ideas and suggestions if we want to grow as individuals and as a club.

See you all at the October meeting,

Ken

OCTOBER MEETING PROGRAM:

UNIQUE TIMEPIECES

"UNIQUE" is defined as whatever *you* think is unique.
Please bring in your unusual timepieces to share with the rest of us.

BRAG A LITTLE!!



CLOCK TOWERS & TOWER CLOCKS



By Laurie Conti

The Umatilla County Historic Clock Tower, Pendleton, Oregon

With this retirement not too far off in January 1987, Roy Thurman, an employee of the Umatilla County Road Department in Pendleton, Oregon told the East Oregonian newspaper, "I'd like to see it <the old county courthouse clock> restored before I retire because when I'm gone some scrap dealer will probably get it".

Having helped take the Seth Thomas clock down in 1954 when the 1888 Umatilla County Courthouse was torn down, Roy kept an eye on the clock

worried that it might end up in a dump during a house cleaning project. The clock was donated to the City of Pendleton with the stipulation that it be placed atop City Hall. Modifications to accommodate this were never done, and the clock sat in a warehouse for nearly 30 years. Roy rescued the clock and it was returned the County where he could keep an eye on it in the Road Department shops.

After Roy approached the County Commissioners in early 1987, a Clock Restoration Committee was formed to oversee a restoration and rehousing of the clock.

Over a hundred years earlier, prominent County physician, Dr. Fred W. Vincent felt the area was in desperate need of some real, civilizing culture and lobbied the County Court long and hard to replace the existing two story courthouse. The plans for the new courthouse included a clock and clock tower.

Architect George Babcock's design featured a central clock tower and three smaller surrounding towers. The high, steep Mansard roof atop the tower featured arched dormers big black holes, the future homes of the four faces of the Seth Thomas clock.

The clockworks, a model #17 tower clock, developed by A.S. Hotchkiss, a Seth Thomas



design engineer were to be housed below in a large room lighted by 8 windows and were ordered in 1889 from the Seth Thomas Clock Company in San Francisco. The clock would have four dials, six feet in diameter consisting of a sheet of zinc-backed glass, gilded numerals, gilded cedar hands glass and a bell that rung to mark the hour. The bases of all the numerals faced the center, so the hours from 4 to 8 were read up-side down. Additionally, the numeral 4 was shown as four I's instead of the usual I and V, to visually and esthetically balance the VIII on the opposite side of the dial.

The clock mechanism consisted of cast-iron, brass and steel, situated one story below the dials. A drive shaft extended up to a set of gears atop a small derrick-like frame. Smaller shafts extended out from the gears through the holes in the middle of each face to drive the minute and hour hands.

A 1000 pound bell was run mechanically powered by 1200 pound weights dangling at the end of 70 feet of cable. The weights and cable that ran the time train was a comparably modest 170 pounds. Winding twice a week was a task that took approximately ten minutes.

The cost of the clock in 1889 was \$884.10. Roy Thurman had done a fine job as unofficial keeper of the clock, and when it was reassembled 33 years after its removal in 1954, it could still tick. However, funds for building were needed; Funds in the amount of \$235,000.

The fundraising was creatively accomplished by first marketing name inscribed bricks at \$25 per name to pave the pathway and courtyard at the base of the tower, then the Committee began the "sale" of each of the legs of the tower for \$10,000 each, in \$1000 increments. Next, mugs with the Restoration Committee Logo, and then limited edition porcelain plates. Later, hats, visors, key rings and balloons



courtyard were "sold" at \$3000 a piece upon which to view the glass enclosed clockworks.

If you happen to be passing through Pendleton, Oregon, stop by to see this restoration, and hopefully you'll see the reflection of a retired gentleman, who I bet is still keeping an eye out for that old clock.

Confessions of a Clock Addict

And the tools to feed that addiction

By Kathi Sheffrey

Prior to my addiction to clocks, I had a basic set of hand tools in a small toolbox in my home. There were different sizes and types of screwdrivers, pliers, measuring tapes, putty knives, a couple of hammers and a few other items in this box. I also had a small set of plastic drawers with screws and nails and other household necessities.



Today, that has changed drastically. What my husband commonly refers to, as my junk room, (I call it my work room) is crammed with a variety of items I consider necessary to pander to my addiction to clocks. Or maybe I should call it an addiction to tools. I have progressed from one basic toolbox to multiple toolboxes in varying sizes. I have acquired a spring winder, a bushing tool, a drill press, a bench grinder, an ultrasonic cleaner, 2 lathes, a rotary tool, a 4-inch bench vise, and a whole bunch of other hand tools that I never knew existed before I started working on clocks. I am sure there are many of you who have this same problem.

How did this come to pass? It is a natural progression for a clock addict. The first clock that I took apart, cleaned and reassembled was completed with the tools I already owned along with a spring winder from my dad. Granted, there were no major problems with the clock to start with, but as a novice, I was very proud of myself for putting it back together and having it run correctly. I was now hooked. Because I wanted to learn more, I took several of the NAWCC 4-day FSW classes sponsored by Chapter 75. I learned a lot from these classes but there was a down side. I wanted their clock

tools and equipment.

I solved this problem by asking my husband for presents. Other wives might ask for jewelry or perfume as a gift. I asked mine for tools. Fortunately, my husband, who is an "old car addict" and needs specific tools to feed his addiction, understands that it is necessary to have the right tool for the job. He proved this by giving me a Bergeon bushing tool for Christmas. I have also given myself several lovely gifts such as a Sherline lathe with accessories.

In conclusion I should say that I probably have all the tools I really need. But as a "clock addict", I am always on the lookout for something new. There is bound to be a special clock with a special problem that requires a new tool or piece of equipment that I don't have or else hasn't been invented yet. If it is out there, I want it! 🕒

Scenes from the September Meeting

Here are a few photos from the September meeting. If you weren't there, you missed a great educational presentation on escapements by Jim Chamberlain. Don't miss more opportunities to increase your knowledge of horology. Attend the October meeting, Sunday, October 21st. Chapter 75 has all new digital projection



equipment that provides unbelievably high quality, detailed, visual presentations, including live video projection of the movement being discussed.

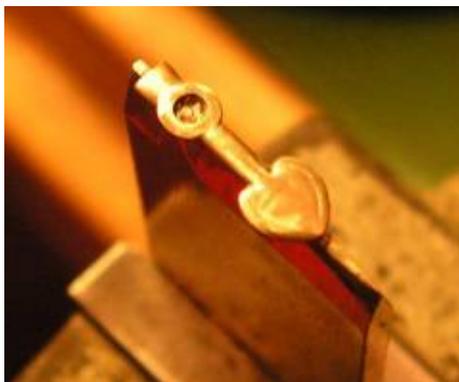


Hand Made Watch Hands

by Donald W. Corson (Continued from page 1)

Now I attack with lapping film glued on a small half-round steel rod to get the surface ready for final polishing. First 9um, then 3um and finally 1um lapping film which is already a good polish. Although not a problem with the 9um film, the 3 and 1um films clog up quickly with gold and need to be replaced often so they don't start to leave scratches. I have made a fixture onto which I glue the

hands to be able to support them while working. The fixture is just a piece of brass cut and filed as needed. To glue the hand to the fixture I use Cyanolit (Crazy Glue). It glues fast, holds well and



can be unglued just as fast as it glues. Just heat the piece to about 60°C in a flame and it becomes unglued, then dunk in acetone to remove the remaining glue. In this picture you can see the fine sheen on the surface left by 3um lapping film.

After the lapping film the final polishing is done with jewelers an elder support. hands soaking alcohol remove of



rouge on pith Here the are in to the rests rouge.

You can see the difference between the polished minute and hour hands and the not yet polished seconds hand.

Here is the seconds hand finished, still glued to the jig for polishing and with some deposits of rouge around the



edges. Polishing can take an exceptional amount of time. When going from filing to the different grits of lapping film to the polish it is necessary to be certain that all the scratches from the previous level have been taken out

each time. Otherwise there will be much backtracking and starting over. And you can forget using any kind of rotating tool, Dremel etc., these pieces are just too delicate and you don't have the necessary control. This time things went pretty well and I only needed about 8 hours for the transformation of the strip of 18k gold at the beginning to the polished hands below.



Those hands are now mounted on the movement, the dial is black Tahiti mother-of-pearl. Below that



is a picture of the completed watch.

If you are interested, you can see more pictures of the evolution of this watch at:

<http://www.corson.ch/watch2.html>

HOROLOGICAL DATES IN HISTORY

The Dudley Watch Co. Was founded in 1920.

E. Ingraham obtained a patent for "Mosaic" 1871

Eli Terry, Jr. Died in Terryville, Connecticut, with an estate of \$75,000 (\$1,461,842.62 in 2006) in 1841

CHAPTER #75 HOROLOGY CLASSES FOR 2008

REVERSE PAINTING ON GLASS

We have several people interested in a class on reverse painting on glass for antique clocks. The class proposed is through the NAWCC Suitcase Training Program and is offered over four days. The program will be taught by Phil Gregory, the current NAWCC Board Chairman, and his time is limited. He is available on January 17 through 20; January 19 through 22; and February 21 through 24, 2008. Please call Jim Gilmore at 805-492-1827, 805-341-2204 or see him at the Chapter meeting to make arrangements to attend. The cost is \$275 to the NAWCC for the four day class. There will be some minimal material costs.

ADVANCED SHERLINE LATHE CLASS

Last year we had a group that took a Sherline Lathe Class over two days, taught by Jerry Kieffer of Wisconsin. We have arranged an advanced class over two days with him sometime in the early spring. We have a preliminary set of topics for the class, but Jerry can adjust the class topic to fit the group. Please talk with Jim Gilmore at 805-492-1827 or 805-341-2204 with topics you would hope to cover. This will be an on going class with students from the first class. If you wish to take a beginning class let Jim know so we can arrange one in the future. The cost will be around \$150 each to cover the instructor expenses.

E-mail contact: bgil100765@aol.com

FYI: What is a second?

The unit of time, the second, was defined originally as the fraction $1/86\,400$ of the mean solar day. The exact definition of "mean solar day" was left to astronomical theories. However, measurement showed that irregularities in the rotation of the Earth could not be taken into account by the theory; and has the effect that this definition does not allow the required accuracy to be achieved. In order to define the unit of time more precisely, the 11th CGPM (1960) adopted a definition given by the International Astronomical Union which was based on the tropical year. Experimental work had, however, already shown that an atomic standard of time-interval, based on a transition between two energy levels of an atom or a molecule, could be realized and reproduced much more precisely. Considering that a very precise definition of the unit of time is indispensable for the International System, the 13th CGPM (1967) decided to replace the definition of the second by the following (affirmed by the CIPM in 1997 that this definition refers to a cesium atom in its ground state at a

temperature of 0 K): *The second is the duration of 9 192 631 770 periods of the radiation corresponding to the transition between the two hyperfine levels of the ground state of the cesium 133 atom.*

Source: The National Institute of Standards and Measurements.



Chapter 75 General Meeting, September 25, 2007

President, Ken McWilliams called the meeting to order at 1:40 P.M. Ken announced that an advanced Sherline lathe class was being planned for either December or early Spring, 2008 with Jerry Kieffer as the instructor. Anyone interested should contact Jim Gilmore for more information. Ken announced that Chapter 116's mini mart would be held October 20th in Arcadia. Fliers were available. Vice-president, Bill Robinson reminded everyone about October's upcoming Round Table on "Unique Clocks."

Program

Jim Chamberlain presented a wonderful program on "Escapements". Jim is very knowledgeable about almost anything to do with horology and his expertise was made very evident in this program. He created an informative film using clocks from his own collection and information from the NAWCC library. Jim showed us a variety of unusual escapements with explanation of how they worked. These included a grasshopper escapement, a cylinder escapement, a duplex escapement, a 3-legged escapement, a double-legged escape wheel, a bi-contrate escape wheel, a deadbeat dual escapement, a conical escapement and many others. His commentary and description of how these escapements operated was detailed and easily understood by those of us less knowledgeable. He explained that many of these unusual escapements could be seen and demonstrated at the NAWCC museum. The Dr. Beeler Collection, consists of 18 unusual escapements that Dr. Beeler built. Everyone enjoyed the program immensely and was enthusiastic in their thanks to Jim.

Show and Tell

Harry Larson brought two examples of "rolling eye" clocks to share. These clocks were made in the Black Forest in the Fribure area. About 700 of these clocks were made before the Second World War. The first example Harry showed was the "Sheik". Harry said this example is one of the rarest. The "Sheik" was made of some type of plaster rather than wood. The other example he showed was the "Owl" which is made of wood. To anyone not familiar with these clocks, Harry explained that the right eye rolled to show the hour and the left rolled to show the minutes. He explained these clocks were 30-hour clocks and attempts to make an 8-day version failed because the spring would connect with the side of the case after about 2 1/2 days. All present were appreciative of Harry's unusual clocks.

McWilliams adjourned the meeting at 3:00 P.M.
Submitted by: Kathi Sheffrey, Secretary



Become a Member!

I am interested in membership in the NAWCC (required) and Chapter 75
 I am a member of the NAWCC and am interested in membership in Chapter 75

Your Name: _____
 Address: _____
 City: _____ State/ZIP: _____
 Phone: _____ Email: _____
 Preferred method of contact: US Postal Service E-mail

Please fill out and return to: Laurie Conti 4950 Bowie Court, Simi Valley, CA 93063
 or visit our website at: <http://www.nawcc-ch75.com>

Chapter 75 Welcomes New Members



Membership Chair Laurie Conti welcomes new member Kevin Keever at the membership table which will greet all new and perspective Chapter 75 members at each monthly meeting. Invite your friends and family to attend a chapter meeting as your guest to introduce them to the world of watch and clock collecting.



ANNOUNCEMENTS

The Chapter's new website is now up and running.

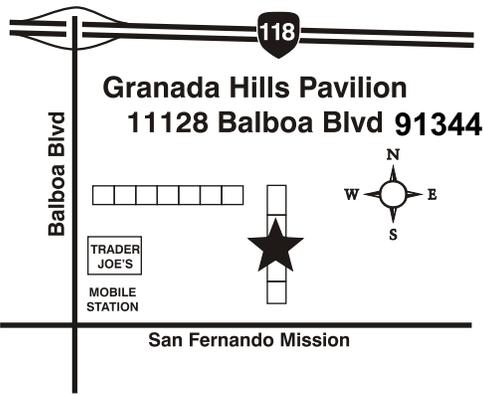
www.nawcc-ch75.com

As of now, it has the following features:

- All 2007 downloadable and printable Regulator newsletters.
- Downloadable and printable membership application form.
- List of board members.
- 2007 meeting schedule, times and maps.
- Chapter activities. (This is where we will list workshops, GLAR info, special chapter awards, photos etc).
- Clock info.
- Watch info and helpful articles.
- Member Business links. Any member can have his or her clock/watch related business listed hear.
- Links to other horology sites (We have about 30 listed so far).

This site will be updated every month, rain or shine, with the latest newsletter and pertinent news items. If you have any suggestions or things to add to it, contact Ken McWilliams.

MEETING LOCATION



Chapter 75 meets the 4th Sunday of every month, except December. **Visitors are welcome.** For more information, phone Ken McWilliams @ 818-718-8300

Unique Time Pieces

THIS MONTH'S PROGRAM

October 21

THIS MONTH'S MEETING:

Set-up Time: 11:30 • Operating: 12:00 to 2:30
Meeting: 2:30 to 3:30
Board meets at 10:30 All members welcome



If Undeliverable return To: The Regulator
4950 Bowie Court
Simi Valley, CA 93063