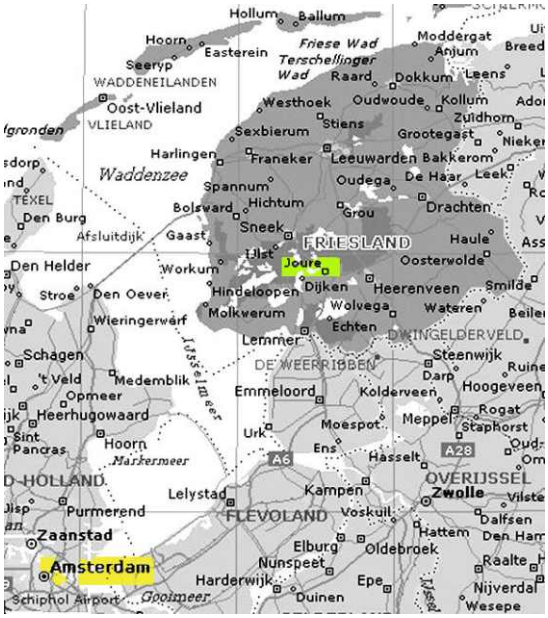
VENTURA COUNTY
Chrono Times
Established 2006 Newsletter for Chapter 190 of The National Association of Watch and Clock Collectors March 2009

A DUTCH STAARTKLOK

by Bill Robinson

Dutch Staartklokken (tail clocks) were made in the Friesland region of The Netherlands from about 1800 to 1880. The town of Joure (see map) became the center of Staartklok production during the later years of this period with only a few made elsewhere.



The example (shown at the right) is 58 inches from the bottom of the case to the extreme tip of the top ornament. To allow for the fall of the single weight, the extreme tip of the ornament must be about 8½ feet above the floor.

The case is made of oak, colored and polished red, the ornaments are thin pressed brass (photo 2). A few clocks of this type were made with cast brass ornamentation and very early examples sometimes had gilded cast lead ornamentation around the glazed pendulum opening. The top of this clock is covered with old "oil-cloth."

Some households placed an embroidered protective cloth called a klokkekleedjes, (photo 3) over the top of the clock, although this was more common with an earlier type of Friesland clock, the Stoelklok.

Photo 2

Photo 3

The pendulum is covered in front by a vertically sliding panel which is held in place by a pin (kastpennen). The pendulum of this clock oscillates at about 66 beats per minute. At 8½ feet from floor to the top of the ornaments the clock will run about 16 hours per complete winding of the single weight. I have seen these advertised as 30 hour clocks but I am very skeptical about the accuracy of this claim. The single large weight supplies power for both the time and strike trains using an "endless" chain.

The clock strikes at 15 minute intervals with the hour (e.g. 5:00) struck on a large bell and the first quarter hour indicated by one strike on the same large bell. The half hour (e.g. 5:30) is indicated by striking a number of blows indicating the NEXT hour (e.g. 6:00) on the small bell; 5:30 is considered as "half 6:00".The third quarter is indicated by one blow on the small bell. The small weight shown on the right front below the dial is for an alarm train. The small weight powers a verge and crown-wheel in order to oscillate a t-shaped hammer which sounds the alarm on the large bell.

The movement (photo 4) of the clock has two horizontal iron plates with vertical brass strips providing support for the wheel arbors. The top and bottom plates are covered with protective paint as are most of the arbors and other pieces which are outside of the two horizontal plates. The back of the dial plate is also painted. The gear arbors are unhardened iron as are the pinions and pivots.

(continued on page 6)

Photo 4

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PRESIDENTS MESSAGE

By Mike Schmidt

GOOD NEWS: Chapter 190 has successfully renewed it's membership for 2009. Our Membership Chairman George Gaglini informed the Board that 85% of our members have renewed, and we have added three new members for 2009.

"Old Clocks & Watches & Planes", the 2nd Annual Clock and Watch Mart for May 15, is under way. Chairman, Ernie Jenson and the Mart committee are busy organizing and planning for another great event at the CAF WW II Air Museum in Camarillo. The First Annual Mart sold out with 65 tables and 267 buyers. Do not miss out on this great event so make your reservations early. 805 482-6021 or e-mail:erniejenson@roadrunner.com

Vice President and Editor, Ken McWilliams recently commented to me that this is the 28th Edition of the "CHRONO TIMES". Thanks to Ken's expertise and all the contributing authors plus the wonderful photography of Bill Robinson the "CHRONO TIMES" is a much respected and well read newsletter.

Congratulations to our member, Bob Roan for his thought-provoking article in the February *BULLETIN* "The Next Generation of Clocks" found on page 13. Bob's clocks are the prominent feature on the very artful cover.

The topic for the March 15th workshop will be, "Tools You Have Made or Your Favorite Bench Tool". The workshop will start at 10:30 A. M.

The Program for the March meeting will be "SWING CLOCKS" and will be presented by Jim Chamberlain. This will be a fascinating and interesting program on who invented and made these interesting clocks. How these unusual clocks work, and how to adjust the pendulum will be topics of the program.

Chapter 190 Educational Opportunities:
FSW 102 "Time & Strike Spring Barrel" April 3-6, 2009. The coordinator for this class is Paul Skeels 805 525 7325- Email plskeelsatty@verizon.net .

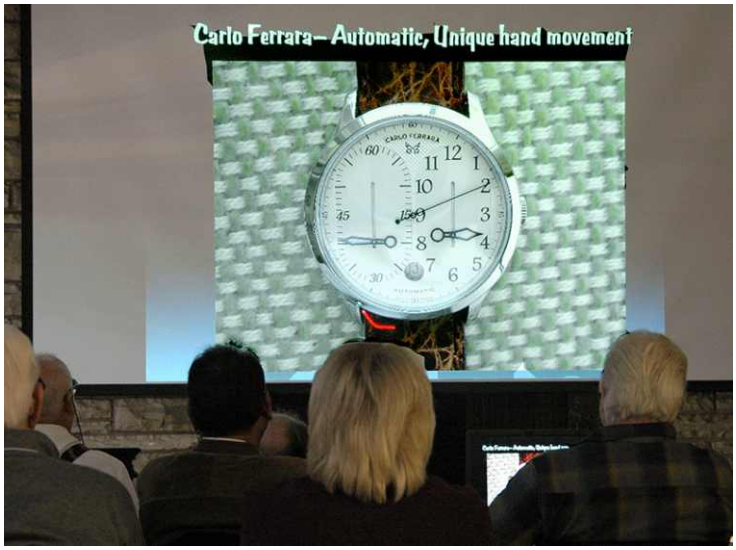
FSW 200 "Fundamental Skills for Clock Repair & Lathe Preparation" May 1-4, 2009. The coordinator for this class is Alan Davis 805 659-7148-Email jesoda.1@netzero.net

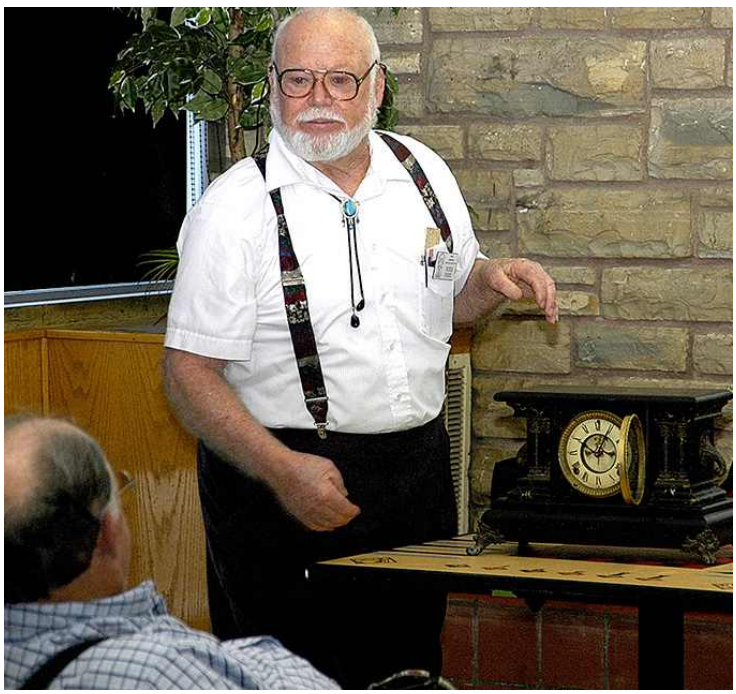
The Show & Tell topic for this months meeting is "Clocks or Watches With Adornments, Statutes etc." Bring clocks and watches that were embellished and enhanced to make them desirable at their time in history. Any clock or watch or just a good story is welcome for sharing.

Come join us for a great workshop, mart, interesting program, fellowship and the best $5 lunch in town.

Mike

Faces Seen At The February Meeting





The next Meeting & Mart for Chapter 190
is March 15, 2009
Sellers may start setting up at 11:30
The Mart is open from 12:00 til 1:15
The Meeting starts at 1:15

PROGRAM

"Swinging Clocks"

Presented by Jim Chamberlain

Jim will show us some examples
and explain how these intriguing clocks work.

SHOW & TELL

"Clocks or Watches with Adornments, Statutes etc"

Welcome New Members

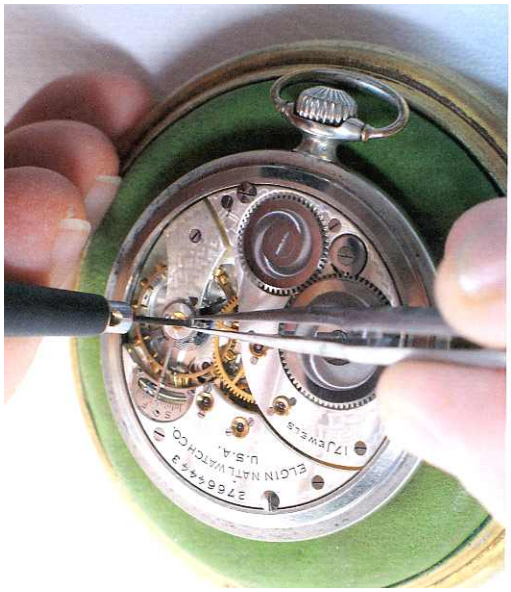
Lex Rooker, Norwalk
Matt Bonaccorso, La Canada/Flintridge

A Handy Tool For The Amature Watchmaker

by Henri Bonnet

Most of us amature watchmakers wish we had the skills of a professional. In our awkward attempts to service the wristwatches we collect, we often face daunting problems that professionals seldom seem to experience. The obvious difference between the skills of a professional and those of an amateur is practice. Here, as in most endeavors, practice indeed makes perfect. An amateur who services a wristwatch, say, once a month, can never hope to achieve the skill level of a professional who repairs four or five watches a day.

Unfortunately, there is virtually no literature or repair manuals specifically designed for use by the amateur. In addition, the tools used in the trade are designed for professionals, even if some of them can readily be used by an amateur. A good example of that is the handling of exceedingly tiny screws that can hardly be seen by the naked eye. For instance, the two small screws securing a cap jewel in a pocket watch or a wristwatch. These screws are so elusive that even professional watchmakers are reluctant to remove them. At best, they usually remove only one of the screws and swing the cap jewel to the side, held in place by the other, to permit cleaning and lubrication. Of course, if you should ask a watchmaker why he doesn't remove both screws, the answer is likely to be: "to save time".



Having been an apprentice watchmaker, I have worked alongside professionals long enough to know that there is a much more compelling reason than this one. Regardless of their skill level, virtually all professional watchmakers loose screws, as well as other small parts. A mere fraction of a second of inattention, a minute tremor of the hand, or the very act of breathing, does it. A cap jewel screw that flies off tweezers or a screwdriver is virtually never to be seen again. I cannot count the times that I have seen professional watchmakers on the floor, on all four, looking in vain for a small screw that has flown into oblivion. Flashlights and magnets are of no use.

When it happens to a professional, and he has an inventory of the same screws on hand, it is merely a minor nuisance. For an amateur, however, losing a cap jewel screw, is an unmitigated disaster. The problem for the amateur lies primarily with the screwdriver. Even if you succeed in placing the screw properly with the tweezers, you still have to insert it into its thread by turning it with a screwdriver. You have carefully selected the proper size screwdriver, inserted it into the slot, and now comes the clincher. You must turn the darn screw while simultaneously holding it upright, all this with one hand. That's when disaster strikes. I find it virtually impossible to maintain command of both motions simultaneously, without the potential of something going haywire. Before you even realize what has happened, the screw has disappeared and is gone forever.

If watch screws had Philips heads, I suspect that things would be much easier, but unfortunately, they do not.

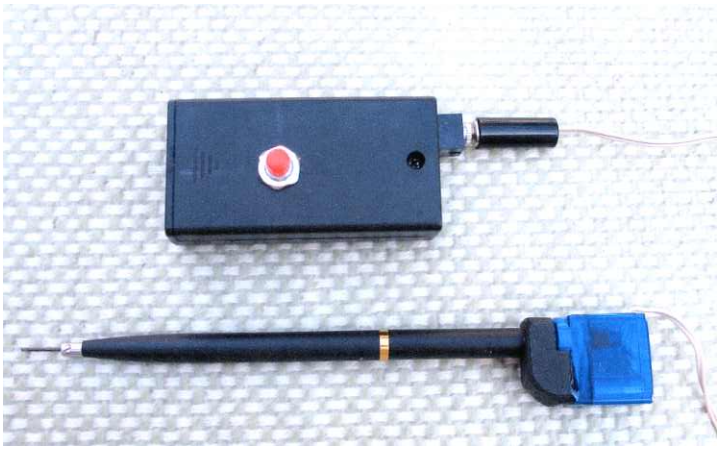
So what's an amateur to do? My solution to that nagging problem was to make myself a special tool, a screw starter. Here is the concept: first, I am holding the tiny screw with the tweezers, or at the end of a tiny piece of Rodico. Then, with a special screwdriver of my own making, I hold the screw upright. The turning action itself is done slowly by a tiny micro-motor. Once the screw catches the thread, I finish the job with a regular screwdriver, without fear of losing the screw.

So, that's how the motorized screw starter for the amateur watchmaker was born. I purchased a micro servomotor from a hobby shop and modified it, to convert intermittent to continuous circular motion, with a revolution of approximately one turn every two seconds, (30 RPM). I took an old pen and mounted the tiny motor and reduction gear combo at the end of it. I then machined a small diameter aluminum shaft and mounted a small screwdriver blade at one end, and connected the other end to the micro motor assembly. I then connected the motor to a thin flexible wire, approximately four foot long, leading to a small box containing two AAA batteries. I installed a small momentary pushbutton switch on the box to start the power flowing to the motor. The box itself, I attached to my knee with a special belt.

When I want the screwdriver to turn, I simply press my knee against the side of my workbench or against my other knee. Alternately, I can mount the switch box directly to the side of the work bench with a piece of velcro and press on the switch with my knee. The entire device took me only a few hours to make, and cost me around fifteen dollars, all told.

I am now happy to report that I tried it, and it works beautifully! I kept removing and reinstalling cap jewel screws several times without the slightest fear of losing them. In addition, I found that I derive considerable satisfaction and fun by doing it. I wouldn't go as far as to say that I will no longer loose any cap jewel screws. All am saying is that the likelihood of it happening has now significantly been reduced.

This device makes reassembly of tiny screws much more tolerant to my modest skill level. Obviously, some further improvements could be made, such as varying the direction of rotation and the speed, for instance. But for the time being, that tool will serve its purpose very nicely as it is. Maybe, even some professional watchmakers might be interested. In the past I have known a few who should be. What do you think? ■



Tales From the Bench

by Ferdinand Geitner

A Question Of Power

A common occurrence, a mainspring is broken and nobody knows if it was the original or someone already replaced it with a different size and strength. How does one determine the right size and correct strength (torque) for the mechanism.

On movements with closed (or running) barrels, one can measure the inside depth of the barrel (subtracting the thickness of the barrel lid) to obtain the correct width. Then measure the inside diameter of the barrel and the thickness of the barrel arbor to calculate the length.

One can still order mainsprings for American clocks by make and model but it is preferable to understand the design parameters to determine the overall spring dimensions.

On open spring (no barrel) American clocks you measure the distance between the plate and the great wheel (taking a little off for play) to obtain the correct width. The average American clock tends to be overpowered to compensate for cheaper manufacturing and therefore higher friction.

But this does not apply to French, English or German clocks where the gearing is cut much more precisely and smoother which makes the transfer of power more uniform.

I do have one exception, English fusee clock movements. This includes Skeleton, Pub, and Bracket clocks from the 1800s that have a strong spring and if one replaces it with the exact same dimensions they will actually be overpowered as the elasticity and torque of the same size modern springs is far superior to the original.

In some Skeleton clocks that I have restored, the anchor actually struck the bottom of the escape wheel due to too much power, creating erratic timekeeping, gaining at the end of the week due to the Fusee overcompensating the power curve.

In general, the strength of a spring is proportional to the cube of the thickness: if you double the thickness, the spring is eight (2 x 2 x 2) times stronger. The width is directly proportional to the strength: if you double the width, you double the strength. This assumes, of course, that the steel and the temper are the same in both springs being compared, which cannot easily be ascertained, but we can at least use this information as a guideline at the bench.

This formula can be used to determine the correct mainspring length:

$$L = \frac{\pi}{2T}\ (R_b^2 - R_a^2)$$

Where L is length, T is thickness, R(a) is the arbor radius (half the diameter of the arbor), and R(b) is the barrel radius (half the inner diameter of the barrel).

Mr. Dan Henderson, a Senior Manufacturing Technology Engineer at 3M, developed this formula for springs:

$$f = kbh^3$$

Where ***f*** is force (or strength), ***b*** is the base (or width of the mainspring), and ***h*** is the height (or thickness of the mainspring). ***k*** in the above formula is a constant, or a number. It reflects other factors that affect the strength of the spring. These include the shape of the spring, the temper and composition of the metal, variations in thickness along the length of the spring, whether the spring is new or several years old, to name a few. Since it is very unlikely that two springs will be of the same temper, etc., this formula does not provide a precise measure of strength: it can, however, provide a guideline for a clockmaker comparing two springs that appear to be similar, such as two new mainsprings from the same manufacturer, but of different thicknesses.

$$f\% = \frac{\left[\frac{h1}{h2}\right]^3}{\left[\frac{h2}{h2}\right]^3} = \frac{\left[\frac{0.014}{0.018}\right]^3}{\left[\frac{0.018}{0.018}\right]^3} = \frac{0.47}{1} = 47\%$$

This means that the 0.014 inch mainspring has 47% of the strength of the 0.018 spring. I would be very careful in replacing a mainspring with one that is less than half as strong as the former.

Timesavers is selling a new mainspring for American clocks, part number 18790. It is 3/4" wide, 0.0165" thick, and 96" long. By the above formula, we can approximate it to have 77% of the strength of a similar 0.018" thick spring. If you believe that the mainspring in your American clock is too strong, I recommend that you try this mainspring. I have used it several times. I feel that a more moderate reduction in power would be more prudent. ■

Tributes to Mark Headrick

This month's Mini-Workshop will be

Tools That Make Repairs Easier

"The right tool can make the difference between success or failure"

Ken McWilliams will be the moderator.

This is an open forum workshop and will be an excellent opportunity to learn what tools others have made or acquired to make watch/clock repair easier and better. Bring your favorites to share with others.

The workshop begins at 10:30 am. Free to members

Continued from page one

It has an anchor escapement which is pivoted outside of the top plate .The large count-wheel (photo 5) on the back of the movement is geared to a crude hand-filed open pinion on the rear extreme of the strike train great-wheel. The count wheel is double-cut to allow for the extra striking on the half-hour.

After 1880, clock manufacturing in Joure was in serious decline. Factory-made German Black Forest clocks were being imported and became more popular than the hand-crafted local products. Importers were offering rebates on old Dutch clocks. Many old movements were melted down for scrap while the cases were broken up.

After 1945, a few small independent shops were revived to again make the traditional Dutch Stoelklok as well as a few Staartkloks. These craft shops used many of the old techniques and tools as well as traditional case and movement designs. A few improvements were adopted such as hardened steel for arbors and pivots as well modern tooth profiles. In addition to traditional revivals, one can find outright reproductions using German two weight movements.

I am indebted to the following references for all historical references and Dutch vocabulary:

E.J. Tyler, NAWCC Bulletin, December 1950 Vol IV, No. 6 , Page 241 ff.

EJ. Tyler NAWCC Bulletin, June 1953 , Vol V, No.9, Page 411 ff.

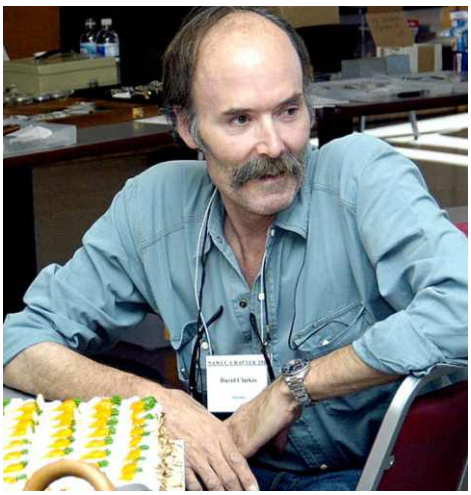
E.J. Tyler, European Clocks, Hawthorn Books, Inc., 1969, Pages 85 -108.

Happy Birthday

RICHARD BRINSER,
LAURIE CONTI, ALAN DAVIS,
ROBERT GARY, RICHARD GLENN,
JORGE MONTOYA, & TOM MUSSELMAN.

Ventura Chapter 190 people

By George Gaglini



David Clarkin

By the time David was 28 years old he had moved 27 times. That's what happens when your Dad is in the United States Navy. David's father used to tell family and friends that he was a Destroyer Driver. Becoming Commanding Officer of the Naval Personnel Research and Developing Center in Point Loma, California, Captain Clarkin capped a remarkable military career. His civilian life also included highlights like singing the National Anthem at Yankee Stadium when he was just a boy; the youngest person ever to do it.

After all that moving around, David attended San Diego City College where he studied cabinet making. His skills were honed at the Salk Institute in San Diego where he designed and built laboratory equipment and fixtures. One of his projects enabled Salk Institute scientists to conduct microscopic experiments and observe cellular activity in an incubator using video and stop motion photography. Twenty years later, a prominent University of California, Santa Barbara molecular biologist claimed David's device represented a state of the art that could not be improved upon. Another important person at the Salk Institute, a Research Technician named Kris, was also impressed with David's work. She later became Mrs. Clarkin.

Helping his Grandmother move to join the family at La Jolla, David found in her attic two watches that belonged to his Great Grandfather. This prompted him to join the National Association of Watch and Clock Collectors and explore the wonders of watch making. Several years later, Kris and David became friends with their neighbor from across the street, Chapter 190's President Mike Schmidt. When Mike stated his intention to spearhead a new NAWCC Chapter in Ventura County, David was immediately inclined to join the Chapter and attend all of its Field Suitcase classes in watch making. He also has attended the two exclusive lathe classes conducted for the Chapter by Mr. Ray Marsolek. Using an assembly microscope along with other special optical devices, David is able to repair watches in spite of what he terms a physical inconvenience with his eyesight.

With their magnificent pet, a Greater Swiss Mountain Dog, David and Kris reside in Oxnard, reminiscing fondly the 1400 (one thousand-four hundred) sky dives he has made from aircraft over the Southern California landscape. ■

CLASSIFIED PAGE

This page is dedicated to advertising for Chapter 190 members. It is, of course, free to members.

SERVICES OFFERED

The Montecito Clock Gallery
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E-mail: jorgemont2001@netzero.net

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Loren Miller proprietor.
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Monday through Saturday 10:00 to 6:00 pm.
Tel. 805-650-8800

FOR SALE

Watch Repair Tools & More!
I will have a huge selection of watch repair tools and other items from my latest estate buy at the *March* Chapter 190 meeting.

Dave Coatsworth
dave@daveswatchparts.com

WANTED

URGENTLY NEEDED,
VISIBLE ESCAPEMENT MOVEMENT
French type-platform escapement (no pendulum)
Winding hole spacing of 38.9 mm, (1.53“)
Repairable, other details available on request.
Bob Reichel, welchdoc@yahoo.com ***Ph: 1-206-364-7374***

I'm looking for a five inch piecrust bezel for an Ansonia clock.
Contact:
Tom McKnett
805-444-6383

Antique French 2 or 3 dial calendar clocks.
Antique English 2 or 3 gear-train skeleton clock.

Loren Miller, **Pacific Coast Clocks**
4255 E. Main St., No. 15, Ventura, Ca.
Located in Firehouse Plaza (Main St. & Telephone Rd.)
Tel. 805-650-8800

- Chronometer -
Hamilton 21 Marine Chronometer in running condition, with inner box and gimbals; outer box not essential.
Please contact: Giorgio Perissinotto
E-mail: **giorgio@spanport.ucsb.edu**
(I'm teaching in Spain so there is no local California phone)

- Watch Repair Tools -
I'm just starting out and need just about everything. I would prefer to purchase an entire collection of old watchmaker's tools.
Please contact:
David Clarkin **Tel: 805-988-4384**

Chrono Times

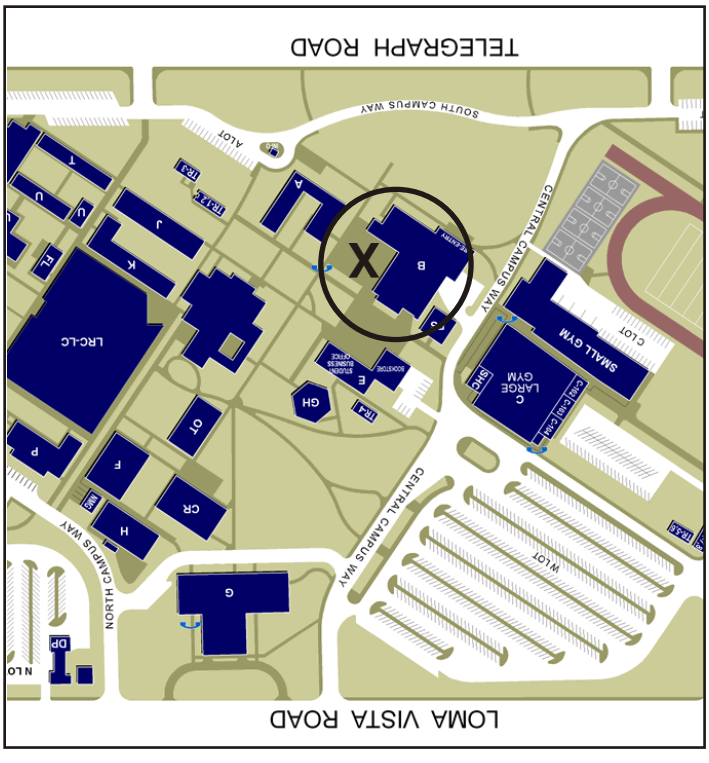
If Undeliverable return To:
17738 Superior St. Unit 21
Northridge, CA 91325

NEXT MEETING

MAR 15

March 2009 Issue

Hope to see you there!



The Chapter 190 meetings are held the third Sunday of each month. (No meeting in December) We will meet in the cafeteria on the Ventura College campus. The cafeteria is located in building "B", east of the gym and athletic field.