



A Lathe Project: Making a Barrel Arbor Cup

by Dave Coatsworth

As many of you know, my horological collecting focus is American keywind watches. Within that category, one of the lines that I pursue is the early "Private Label" watches produced by the Illinois Watch Company (organized in 1869 as the Illinois Springfield Watch Co.). Private Label watches are watches that were produced for a specific jeweler or retailer and carried that retailer's name, or a name of their choosing, instead of the manufacturer's name. Most American watch companies made private label watches for a small fee or in order to secure a large order from a retailer. Given this collecting focus, I could not resist buying a "Great Western Watch Co" 18-size Illinois key wind when it was offered. Other than a lot of dirt, the only significant flaw to the watch is that it was missing its barrel arbor cup, which is the cup that fits around the winding arbor. Unfortunately, I did not have a spare Illinois barrel arbor cup.

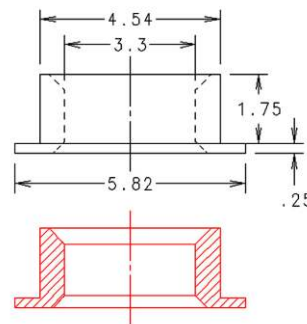
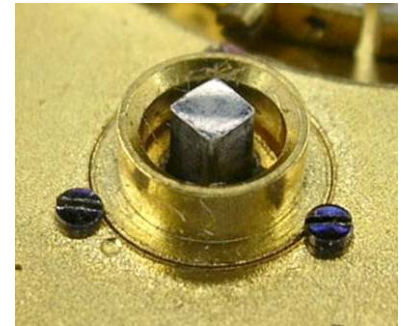


Having recently completed the F201 Lathe Skills field suitcase

class, I thought it might be an interesting exercise to try to make a replacement barrel arbor cup. It did indeed prove interesting, providing the opportunity to use several skills obtained in the class and, at the same time, providing an opportunity to work on something a little smaller than the assigned F201 class projects. After completing this barrel arbor cup, I thought other members of our Chapter might enjoy trying this exercise, as well. (I will bring some 1/4" brass stock to the next Chapter 190 meeting for anyone who does want to give it a try.)

The following steps describe the approach that I took in making this part. This is by no means the only possible or even the best approach. If you feel a different approach may work better for you, I would encourage you to try it. (As one example, in hindsight, I think it might have been better to turn the 1/4" rod down to 5.82mm first, in order to avoid having to work so close to the collet face when turning down the base diameter in Step 7.)

The photo on the right shows a correct, original barrel arbor cup on another early Illinois watch. I removed this barrel arbor cup and measured it. The dimensions are shown in the drawing below.



Step 1 - Finding the center: I decided that it might be best to bore the center out before removing too much material from the sides, so that was to be my first step. After mounting the 1/4" stock in a #64 collet, I set my T-rest so

that it was parallel to the end of the rod. (A 4-jaw chuck, or some other adjustable chuck, should work fine if you don't have a #64 collet.) I then cut a clean face on the end. After that, I used the graver point to make a small center hole so that the drill would center properly in the next step.



Step 2 - Boring the center hole: I chucked up a #30 (0.128") drill bit in my collet holding tailstock and started the lathe. I pushed the tailstock runner forward until the drill had gone about 8mm into the rod, pulling out occasionally to clear the hole of chips. It didn't take long with the brass and I was happy to see that the hole was nicely centered. As we learned in the F201 class, a pin vise could be used to hold the drill bit if a collet holding tailstock is not available.



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PRESIDENTS MESSAGE

By Mike Schmidt

The recent complications, concerns, and noise of our current world can at times be trying. It's a welcome relief to become involved with one's horological pursuits. It's a great privilege to be able to go out into one's workshop or work area and get deeply involved in repairing a clock or watch, refinish a case, or just clean up your work area. The quiet concentration can be so very soothing.

Congratulations to all the students who have completed the recent FSW 101 class.

The FSW 301 Watch Repair offered for Nov. 7-10 is now full.

The next class to be offered is the FSW 202 "Advanced Lathe Class". This class is scheduled for January 9-12, 2009. The coordinator for this class will be Paul Skeels, 805 525 7325- Email plskeelsatty@verizon.net.

A one day presentation and workshop "DENTAL TECHNIQUES USED IN CLOCK CASE REPAIR" will be held Saturday November 1st from 10:00 AM -5:00 PM, and will be presented by Laurie Conti, 805 813 2216 - Email Remember_The_Clock@mac.com. The workshop will be held at the Historic Dudley House in Ventura. The fee is \$32.50 which includes materials, lunch, and a tour of the Dudley House. This workshop is limited and is filling up fast. Additional details for classes and the workshop can be found on the Chapter website.

The monthly meeting workshops continue to be very popular. The roundtable discussions have provided a lot of useful information and with the help from fellow members solved many clock and watch problems. The workshop for Sunday, October 19 at 10:30 AM will be "How to properly disassemble and maintain a Jewelers Lathe". George Antinarelli will lead the discussion.

The program for October will be "HIPP Toggle Clocks with Prolonged Impulse" The program will be presented by Chapter member Ernie Jenson. Ernie will share his twelve month clock project, and research on Frank Hope-Jones and his special clocks.

The show & Tell for September will be "Electric Clocks". If you have an Electric clock, bring it to the meeting. Any clock watch or horological item and a good story is always welcome for Show & Tell.

TIP- If you have Tran Duy Ly books or other horological books with price guides, it may be to your benefit to upgrade your price guides periodically. Some timepieces have decreased in value while other have doubled and tripled in value.

Remember, you never know when or what you are looking for, or not looking for, will appear at a Mart. Some of the best clocks and watches for your collections have left the Mart with someone else. Bring something to sell or trade at the Mart.

See you all at the meeting.

Mike



Welcome New Members

Eric Markarian
and Robert Malcomb



(Continued from page 1)

Step 3 - Cutting the body to size: The main body of the barrel arbor cup is 1.75mm tall and 4.54mm wide. I used a caliper with the lathe running slowly to make a mark 1.75mm in from the end. After placing the T-rest parallel to the rod, I reduced the diameter of this end section to 4.54mm, making sure I had also left a square shoulder with the base.

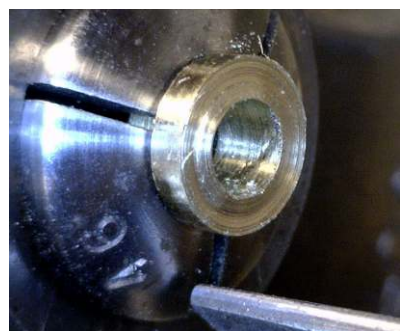


Step 4 - Cutting the top inside bevel: If you look inside the original barrel arbor cup, you

will see that there is a bevel. This bevel extends a little over half the distance to the outer edge, perhaps as much as 75%. Before starting the bevel, I verified that the area I cut away in Step 3 was indeed 1.75mm. With this height correct, I turned the graver and, while keeping it on the T-rest, extended the tip into the hole and cut the bevel. I was careful not to extend the graver too far into the hole while doing this, as I did not want to catch the tip of the graver on the inner surface of the hole.



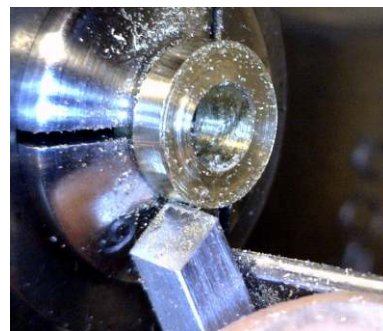
Step 5 - Parting off the cup: The work on the top part of the barrel arbor cup was now complete and the part needed to be cut off from the unused part of the rod so I could work on the base. I used a parting graver for this, but could have also used a jeweler's saw. Even though the height of the base is only .25mm, I left over 1mm instead of trying to cut too close and possibly cutting off too much. This would be easy to clean up and reduce to the exact size later.



Step 6 - Turn the part around. The diameter of the top of the barrel arbor cup is 4.54mm, making the #46 collet the correct collet to hold it while working on the base. I would hesitate to use anything other than a #46 collet because other

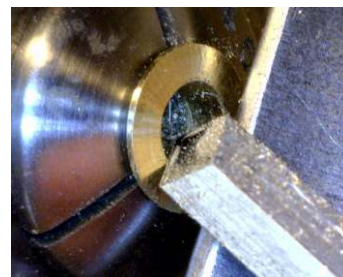
chucks (such as a 3 or 4 jaw chuck) might distort the top of the barrel arbor cup as the wall is now relatively thin. To ensure that the barrel arbor cup would run true, I pushed it as far as it would go into the collet and then pulled it back slightly. How far you pull it back depends on how comfortable you feel working close to the face of the collet. The farther into the collet you keep it, the truer it will run. (This is the reason I mentioned earlier that it might have been wiser to reduce the overall diameter of the rod as a first step rather than trying to reduce the base so close to the surface of the collet now.) Once mounted, I turned the lathe slowly to make sure the part was running true.

Step 7 - Cutting the base to size: With the T-rest again turned parallel to the part, I reduced the base diameter until it measured 5.82mm, being careful to not let the tip of the graver touch the collet surface.

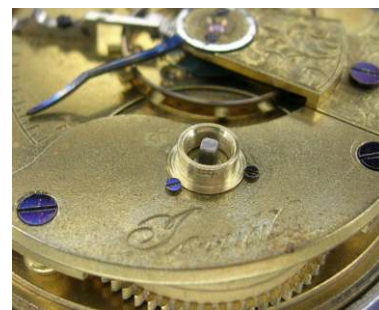


Step 8 - Cutting the base height: With the base diameter correct, I turned the T-rest parallel to the base once again and reduced the thickness of the base to .25mm. This is difficult to measure accurately with the part mounted in the lathe so, when I thought I was close, I took the part out of the collet to measure it with my digital caliper. I was at .32mm. I put the part back into the collet and again I was careful to make sure the part was running true. I then cut a little more off the base to bring the thickness down to .25mm.

Step 9 - Cutting the inside bevel: The cup hole is also beveled on the base end. You can see on the photo of the watch with the missing cup that the area immediately around the winding arbor is raised slightly. The bevel that is cut in the base end of the hole needs to be large enough to clear this raised portion but not so large that there is very little metal left between the top part of the cup and the base.



Step 10 - Test fitting: I removed my barrel arbor cup from the lathe and tried fitting it to the movement. I found that the base diameter was perfect but that the inside base bevel was too small as the cup was resting on the raised area of the plate around the winding arbor. After remounting the part in the lathe and making the inside bevel a little larger, the fit was perfect.



Certainly, no one is going to mistake my barrel arbor cup for an original, if for no other reason than the finish is bright brass instead of gilt like the original, but I am reasonably pleased with the result and appreciative of the practical lathe practice that this project provided. ■

Tales From the Bench

by Ferdinand Geitner

Once again, a simple repair to an antique French striking movement turned into an “insurmountable” problem and the restorer had to tap his resourcefulness to find a solution.

A beautiful Antique French Writing Desk with a unique curved top incorporating a striking clock movement. A standard French striking mechanism found in many different style cases with a Cylinder Platform escapement, but this one is in a 10 inch deep hole, barely 3 ½ inches in diameter, in the top of the desk. It had the usual mounting with two straps on either side of the bezel connecting it to the pierced back plate and clamping the mechanism into the desk.

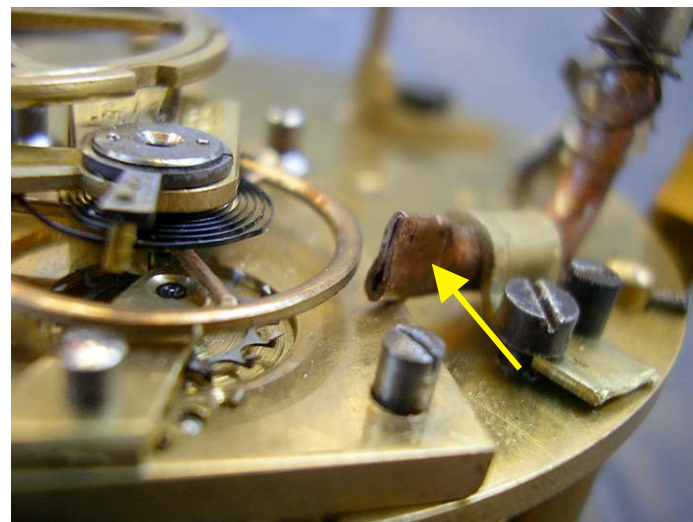
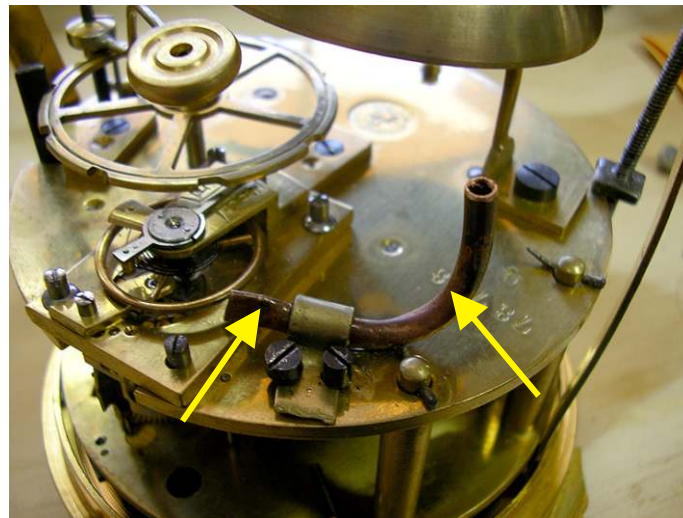
Now here is the problem! Cylinder Escapements are by design high friction and when you have an older one, with some wear on the Cylinder and at the tip of the escape wheel teeth, it just doesn't like to start. Old Cylinder Platform escapement are not reliable self starters.

When the owner goes on vacation and the clock stops, how does the owner start the balance swinging after winding? Picking up the desk and shaking it is not an option. Sticking a long thin object through the

hole in the back to “gently” and “softly” touch the Balance wheel to start it requires exceptional skill and dexterity. A long thin feather? What are the options???

One thought was to install a spindle with a fine hairspring bent towards the balance wheel, a method already used in stopwatches, which could be turned via a long flexible shaft protruding out through the back, thus starting the balance wheel spinning. The spindle would have a spring attached, returning it to a neutral position out of the balances way.

This would require making a bridge, spindle, recoil spring, flexible shaft and attaching it to the mechanism. An epiphany came to me over dinner one evening **“Blow on it!”** Make a small curved jet, attach it on the movement in a position to point at the balance wheel from the side, and connect a thin clear (unobtrusive) plastic tube out through the back. Then one would have to find a small rubber or plastic hand blower, (watchmakers use them and they are also available in pharmacies), push it gently into the tube and squeeze it, thereby “blowing” the balance wheel from the side to start it swinging. Guess what, IT WORKS!!! ■



The Vanishing Swiss Watch

by Henri Bonet

When I bought my first Swiss wristwatch, in the early sixties, a Longines Conquest Calendar, the retailer congratulated me and assured me that buying a Swiss wristwatch made by a reputable company was a lifetime guarantee of satisfaction. And he was right.

In those days the mere mention of the words "Swiss Made" was synonymous with the highest quality in timepieces. In addition, at that time there was no doubt that a Swiss watch was actually manufactured in Switzerland. However, times have changed. Nowadays, when a watch buyer purchases a "Swiss Watch", he may be surprised to find how little of it, is in fact, made in that country.

Over the past couple of decades, I found that the words, "Swiss Made", meant that only the majority of the watch parts were actually produced in Switzerland, while the rest have been imported from various sources around the world, mainly from Asia. Recently, I learned that for a wristwatch to qualify as "Swiss Made", only fifty percent of it actually needs to be made in Switzerland. I also discovered that under the current prevailing regulations, fifty percent applies only to the value of the movement. In addition, I learned that the entire movement itself represents not more than twenty five to thirty percent of a typical watch total value. The rest, presumably, accounts for the value of the case, the dial, the hands, the bracelet, plus the cost of assembly labor. This being the case, it would seem that perhaps ten to twenty percent of an entire wristwatch needs to be actually manufactured in Switzerland in order for such a watch to be legally referred to as "Swiss Made".

This came as quite a shock to me. There is no reason to believe, of course, that watch components made in Asia or elsewhere couldn't be of equal quality to those manufactured in Switzerland. My only question is, why is it still called "a Swiss watch"? If the present trend continues, I wonder how little of a watch needs to be manufactured in Switzerland for it to be called "Swiss Made"? Knowing the relatively high cost of Swiss labor, is it possible that a watch entirely made in Asia but only assembled or decorated in Switzerland could be legally called "Swiss Made"? So, if "half truths" aren't deemed deceptive just because they're sanctioned by the government, then what is the difference between a counterfeit wristwatch made in Hong Kong and a wristwatch only ten to twenty percent made in Switzerland? Both could say "Swiss Made", the deception being only a matter of degree. One could make a case that it would be better, and indeed more truthful, if the country of origin didn't appear on the watch at all.

This whole situation seems to explain why some of the so called "Swiss" wristwatches that I had purchased recently have failed to live up to the quality and performance of those I had bought in the early sixties which are now referred to as

vintage timepieces. I heard recently that some of the major Swiss houses are now pushing for tighter standards before a watch may be qualified as "Swiss Made". Even if these companies would be successful, I heard rumors that it would be an uphill battle. All indications are that we would be lucky if the decision makers would call a timepiece "Swiss Made", if only sixty percent is in, fact, made in Switzerland. Is it possible that the days of a wristwatch one hundred percent Swiss made are gone forever?



I heard mentioned that if a higher percentage of a wristwatch was actually made in Switzerland it would result in increased prices. Are we led to believe that under the current situation a watch only partially made in Switzerland is inexpensive? In the current market one would be hard pressed to buy an average quality "Swiss" timepiece for less than five thousand dollars. Obviously one can ask whether it matters at all where a wristwatch is actually made. I suspect that a Cuban cigar would not be quite the same to the person spending over twenty dollars a piece for it, if he knew that more than half of the tobacco in

it actually came from China. Like Cuban cigars, the appeal of Swiss watches is to a great extent determined by its origin. How can one explain the fact that the Swiss watch industry is growing at a rate in excess of four percent a year? It seems to me that either the people who buy those so called "Swiss Watches" erroneously believe that they are entirely made in Switzerland, or else they don't care one way or the other.



There seems to be an erosion as to what extent the quality of a product can be represented by its country of origin. One can buy "Swiss cheese" of equal quality perhaps, that is actually made in Wisconsin. I wonder if the future of so called "Swiss watches" will join that of Swiss cheese and actually represent a generic product with no relationship at all to its place of origin. The only question yet to be answered is whether it would be good or bad for those of us who still value quality Swiss timepieces. Only the future will tell. Perhaps the time has come for the Swiss to descend from the high pedestal on which they stood for so many years when their watches were entirely made in Switzerland. Maybe it

is time for the Swiss to relinquish that lofty position to someone else. To the Germans perhaps, or the Japanese? I, for one, would consider this prospect with considerable sadness. Having been raised to appreciate and value Swiss timepieces, I don't believe that it is something that I would find easy to relinquish. It is my wish that the Swiss would soon come to their senses and indeed take pride once again in timepieces entirely made in their own country. Until that happens I doubt that I would be interested in buying another so called "Swiss Made" wristwatch. What do you think?

See photos of two recently purchased "Swiss" watches with unsatisfactory quality and performance. Omega automatic stops running when worn on the wrist continuously. Longines day of the week indicator stopped functioning after one week of use. ■

Editor's Oops

By Ken McWilliams

In September's "Ventura Chapter 190 People" that featured Jeanette Barcroft, I inadvertently added the word "tape" before "recorder" in the sentence "*..she played medieval and baroque music on a tape recorder.*"

I used the word "inadvertently" above because it sounds better than "stupidly." I have since learned that there is a musical instrument called a Recorder.

The recorder is an is end-blown, woodwind musical instrument. It was very popular in medieval times but it's popularity declined during the eighteenth century in favor of orchestral woodwind instruments, such as the flute, oboe, and clarinet. During its heyday, the recorder was traditionally associated with birds, shepherds, miraculous events, funerals, marriages and amorous scenes. Images of recorders can be found in literature and artwork associated with all these.

Sorry Jeanette.



Ventura Chapter 190 people

Each issue of our newsletter will feature members of our chapter with a short biography or some of their horological interests to help us get to know them better.

Alan Davis

By George Gaglini



Born in Chicago, Illinois, Alan moved with his parents to Southern California when he was still a toddler. He graduated from San Diego State University in 1987 with a degree in Civil Engineering and helped his father in a family business that specialized in store equipment, shelving and fixtures.

Later, when foreign imports began to compete heavily with domestic manufacturing, Alan left the family business and went to work for Caltrans as an engineering inspector for the State. He worked extensively on State construction specializing in bridges and overpasses of the L. A. Freeway system and other roadways.

In 1994, he moved to Ventura where he became a Resident Engineer in charge of retrofitting the City's bridges, traffic interchanges and overpasses. Currently, he provides oversight on State road projects and evaluates construction proposals while issuing State permits to contractors.

As a pre-teen, Alan began taking apart small clocks and pocket watches. He doesn't recall ever getting them back together again but the experience led him to seek some formal training in clock and watch making. In 1993, prior to moving to Ventura, he attended a Covina Adult education class on basic clock and watch making skills. The course motivated him to become a member of the NAWCC in 1994.

In response to a call from Chapter President Mike Schmidt, Alan became a member of Chapter 190 in 2007. He was encouraged by Chapter Secretary Paul Skeels to be coordinator for the #101 Field Suitcase Class and he quickly signed up enough students (including himself) to schedule the class for October 10 - 13, 2008 at the Oddfellows Hall in Santa Paula. Alan resides with his wife Jessica in Ventura. ■

The next Meeting & Mart for Chapter 190

is October 19, 2008

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

"HIPP Toggle Clocks with Prolonged Impulse"

Presented by Ernie Jenson

*The Hipp Toggle is a significant invention in timekeeping.
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SHOW & TELL

"Electric Clocks."



Happy Birthday

**Jim Ingersoll, Larry Lopes,
and Richard Schall**

CLASSIFIED PAGE

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E-mail: giorgio@spanport.ucsb.edu

(I'm teaching in Spain so there is no local California phone)

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I'm just starting out and need just about everything.
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Please contact:

David Clarkin Tel: 805-988-4384

Antique French 2 or 3 dial calendar clocks.
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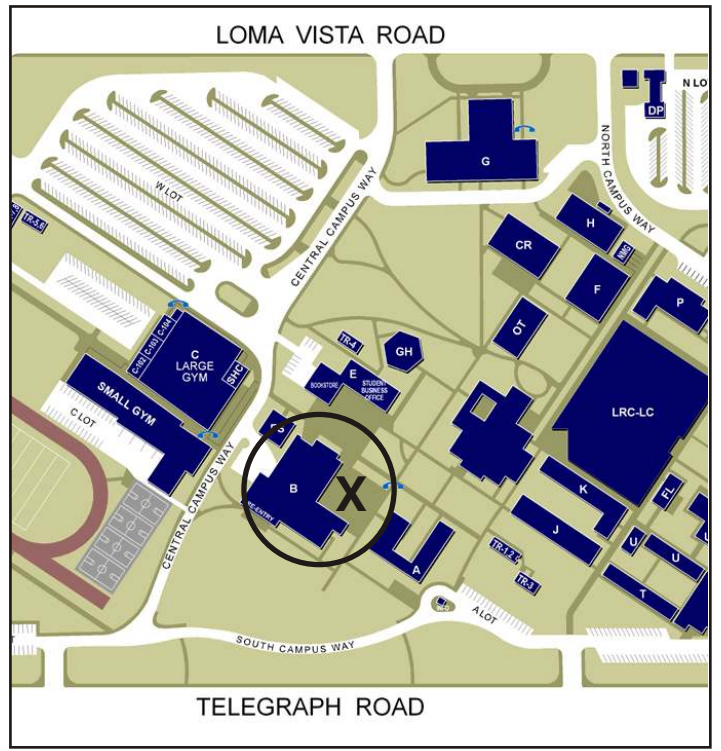
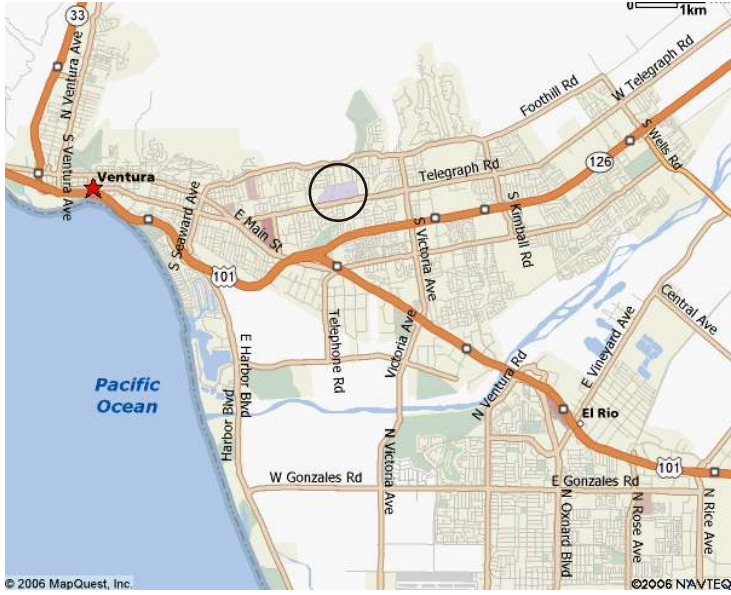
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The Chapter 190 meetings are held the third Sunday of each month. (No meeting in December)
We will meet in the cafeteria on the Ventura College campus. The cafeteria is located in building "B", east of the gym and athletic field.



Hope to see you there!

October 2008 Issue

OCT 19
NEXT MEETING

If Undeliverable return To:
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Chrono Times