



Tales From the Bench

by *Ferdinand Geitner*
Repairs?

I learned not to take anything for granted in this business, so it was no surprise what I found when I dismantled an old English Fusee pocket watch for servicing; a multitude of previous repairs and broken teeth.

Early English Fusee pocket watches tend to be verge escapements but this one had a cylinder escapement and showed some wear. I think someone replaced the mainspring with a stronger one (to possibly make it work better) which put extra strain on the gear train.



The clock is driven by a fusee watch movement

The next repair was a missing tooth on the cylinder escape wheel which was quite an expert replacement as you can see from the picture.



A



B



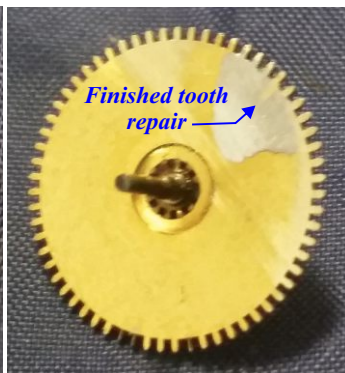
After cleaning the parts, I replaced the mainspring with one about 20% weaker to take excessive pressure off the gears. As the cylinder escapement is a "constant friction escapement", it gets more power from a stronger mainspring, but this is more than offset by the extra friction on the cylinder slowing the amplitude.

So far it's running very well for an old workhorse! ■



Slot cut into wheel to accept brass insert for new tooth

Two teeth replaced with steel pins



Finished tooth repair

Several teeth on the center wheel had broken and were replaced by drilling and placing steel pins in their place.

Another tooth had broken and I replaced that one by cutting a slot, soldering a piece of brass into the space and then shaping it into the correct tooth shape. Note: this wheel is about the size of a dime.

The third wheel had at one time lost ALL its teeth. Someone found a matching wheel and soldered it on top of the existing wheel remnants and managed to keep it central so it works quite well. (See photos A & B)

Welcome New Members

★ **John Swift**
from Newbury Park

Bob Lefkowitz
from Camarillo

★ **Irving Camhi** ★
from Thousand Oaks



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PRESIDENTS MESSAGE

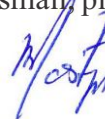
By Mostyn Gale

It seems that it has been a long break since we were together last and indeed it has but that is not to say that all has been idle.

We owe Lex Rooker a great debt for having made a very significant beginning to a new set of classes that we hope everyone will take advantage of. Over the weekend of the 6th & 7th of May, Lex and Ron Maricich led a two day workshop that we are calling, "Workshop 190-1A; The American Count Wheel Striking Clock". By all accounts it was a huge success—thanks Lex and Ron! This workshop is designed to follow our introductory class for those who might be interested in learning some more of the hands-on aspect of clock repair and maintenance as well as gain an understanding of how count wheel striking works and is setup. We are planning other workshops to follow on from this—stay tuned. I am pleased to say that several of our members have offered to help with teaching these classes and I would like to ask if there is anyone who would like to become administrator for them—taking over for Mike Schmidt who has been doing this job for more than a decade. Please talk to Mike or myself if you would like to help.

At the end of this month, I will travel to Chicago to attend the annual conference of the American Institute for Conservation of Historic and Artistic works (AIC). At this conference I will present the poster version of my thesis which was "Exploring methods for determining the manufacturing date of clock mainsprings". You might have seen this when I brought it to our Chapter meeting last year. Whilst most of the talks there will not be dealing specifically with clocks, there will be one talk about, "The Great Historical Clock of America". This clock is one of the "monumental" clocks made in America in the last part of the 19th century and similar to the Engle clock now in the NAWCC museum. It was purchased by the Smithsonian in 1979 after having spent years in a New Hampshire barn. This clock stands 13 feet tall and 8 feet wide. I'm glad that it now has been conserved and takes a place of honor at the Smithsonian—perhaps, one day, I will get to see it there.

I thank all of you for your participation in Chapter 190 and for the ways in which you help make it a fun and educational group to be part of. If you would like to help out in any way, big or small, please let me know. I hope to see you at our next meeting—May 21st.



Happy Birthday

May

George Antinarelli, Ron Boogren, John Darby, George Gaglini,
Mostyn Gale, Rand Huffman, Frank Huttlinger,
Julie Palladino, & Miguel Valdes.

June

Mat Bonaccorso, Irving Camhi, Phil Keys, Ron & Jean Maricichi,
Chris Martin, Tom Mcknett, Giorgio Perissinotto,
Ricky Rodriguez, & Darrel Wilson.

SOMETIMES WE MUST BE CREATIVE

by Mostyn Gale

This week I began the task of replacing a pivot in a longcase center arbor which is toilsome enough, at least for me, but it was made even harder by the fact that holding the arbor was difficult. I placed one end of the arbor in the head stock with a chuck, but the other end of the arbor was 2½" away from the head stock and not stable or centered enough to drill for a pivot. The center wheel was right at



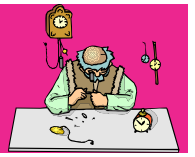
the end of the arbor leaving no room for a typical steady rest and the pinion, which was rather wide and right next to the other side of the wheel.



So I made a custom steady from a scrap of brass that I drilled to just under the size of the arbor, then broached it out to the exact size and placed the steady in the cross slide tool mount. With a touch of oil the arbor was able to rotate easily without being loose. This allowed me to position and hold the arbor in exactly the right position to drill and mount a new pivot. ■



Clock Repair Tips



by David Sprong

Mainspring Clamp – Typically when installing a hole-end mainspring (m/s) into a barrel the coiled m/s, held in a clamp, is placed on the spring winder arbor with hole-end of the m/s free. The barrel is then held in the left hand and slid over the m/s and the hole in the spring locked on the pin inside the barrel.

The m/s is then wound sufficiently for the clamp to be removed and then the click on the m/s winder is released and the m/s is allowed to unwind inside the barrel. Finally the m/s/barrel combination is removed from the spring winder. However, as the m/s unwinds, its torque must be opposed by the left hand gripping the barrel. When the spring is small and relatively weak this is no problem, but when the spring is strong as in a fusee movement or as ones grip is reduced with age a m/s barrel clamp is useful as shown in Figure 1.

The disassembled m/s barrel clamp is shown in Figure 2. It uses a hose clamp, a wooden handle, and a U-shaped saddle. None of the dimensions are critical. A copy of my sketch with dimensions can be had by emailing me at davidspong@gmail.com

Prior to attaching the clamp to the barrel, masking tape is wound around it for protection. Then proceed as normal to insert the spring in the barrel with a reduced chance of hurting your hand. ■

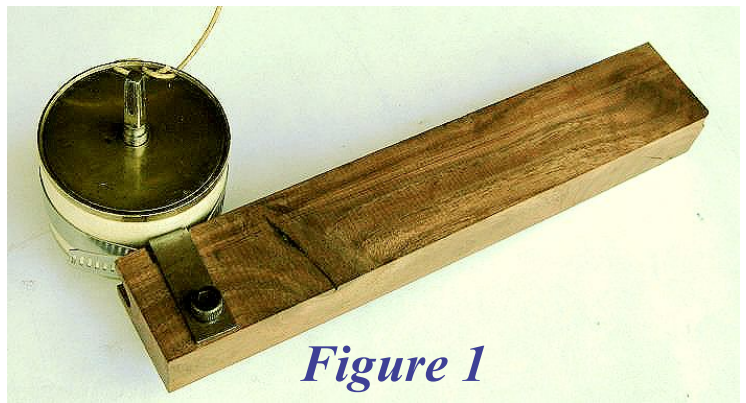


Figure 1

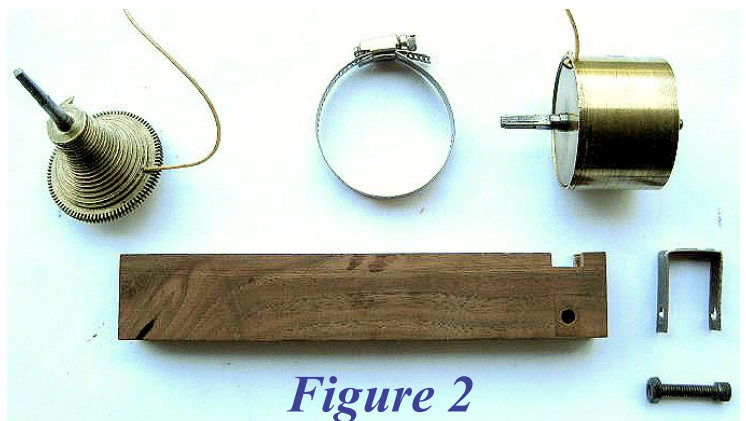


Figure 2

Chapter 190 People

Interviewed by Walter Pickett

If you are married, do you have any children?

I'm married and have two children.

Where were you born and where did you reside before landing here?

I was born in the city of Leon in Nicaragua, Central America. I lived for 10 year in Honduras as a refugee. From there I moved to California with a refugee status. Eventually, I became a citizen of the United States.



Jorge Montoya

Did you go to college?

No, because the war in my country prevented it. I was able to complete high school only. Since then, I have attended the Rolex school in Switzerland, and I am certified by most of the major watch manufacturers.

Are you presently employed?

I own my own watch repair center. I have the latest watch testing and calibrating equipment. I have better equipment than most watch repair shops.

Do you have any hobbies?

I love to dance, swim, watch science fiction movies, and collect time pieces.

Tell us about your interest in horology?

I started learning to repair watches at the age of 7 from my parents. I love to repair watch movements, and to build small parts for wrist watches.

Have you participated in any NAWCC activities?

Yes, I'm a member of the Chapter 116 Arcadia ,Chapter 75 in San Fernando, and in Chapter 190 in Ventura

Do you have any clock or watch stories.

In 1990 I arrived in the United States from Honduras. I was fortunate enough to be hired by a Rolex Repair Center in the first 5 days I was in the country. It was an amazing adventure to have the opportunity to not only work, but to further my education in watchmaking. I was able to work there for 13 years until I finally left and started my own repair center, Montoya Watch Service Center. ■

Photos from the new count wheel workshop



UNUSUAL VIENNA REGULATOR TALL CASE CLOCK

by Ken McWilliams

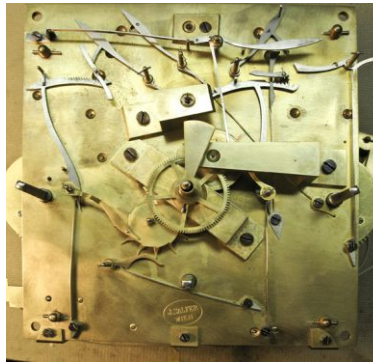
I am currently overhauling a Vienna tall case clock. It is a three weight, 14 day, grand sonnerie, with an incredible, intricately carved case. The dial, weights, and pendulum were also beautifully engraved.

The Austrian clock is marked "J Salfer, Wien." There were several prolific Austrian families whose clocks were popular in their time and still are today today. Probably the best known of these families are Schoenberger, Marenzeller, and Salfer.

Johann Salfer's workshop was located in Vienna from 1874 until his death in 1914. He made pendulum clocks that struck on the quarter hour (what is commonly referred to today as "grand sonnerie-striking" clocks), clocks of a yearlong duration, spring-driven clocks, clocks for homes, and regulators with compensating pendulums.

Johann received a silver medal at the Vienna Exhibition of 1880, a significant honor, because he was competing against the finest makers in the world! Johann did not make his clocks all by himself. He had apprentices, journeymen, other master clockmakers, and a slew of children and artisans working for him. The clock that I am working on now is a 3-weight, floor-standing Salfer with a two week-duration. Salfer's mechanisms are robust and very well made with fairly large pivots (by Viennese standards). Salfer's casework is exceptional and very detailed, and the engraving on his dials is out of this world! The Salfer pillars and plates are thicker. Salfer uses 5-spoke gears for the two largest wheels in each train. Five spokes provide more support for the outer ring of teeth but are also more costly to produce. He used springs machined from solid pieces of spring steel. Most manufacturers use springs made from bent flat stock and are prone to cracking where they are bent.

Most strike fans are made from a flat piece of brass with cutouts which are then bent to accommodate the arbor. The Salfer fan is typical for Viennese mechanisms: it was machined out of a solid piece of brass. They also have significantly larger pinion diameters, although each pinion has the same number of gear teeth as its competitors. Salfer used larger pivots than typically found in Viennese mechanisms. This, in turn, would suggest that this Salfer mechanism requires a heavier weight to run the trains than would be found in a more typical Viennese piece. To give you an idea of the difference between Salfer's pivot diameters and those usually found in a Viennese mechanism, the fan pivots typically are 0.013



Every part of the movement is very well made and polished.



logo on back plate

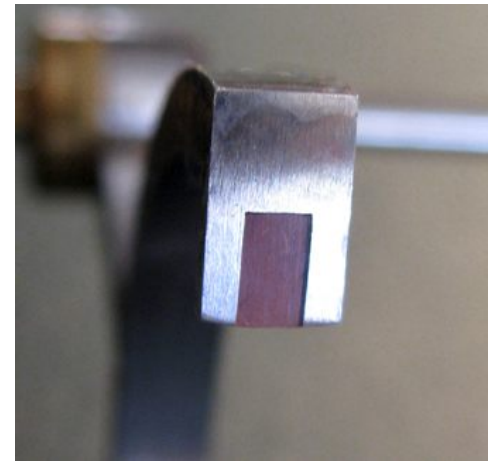
inch in diameter, with some as small as 0.009 inch, while Salfer used pivots that were up to 0.020" in diameter. This is a very significant difference! Pivots in German clocks are rarely burnished and often show quite a bit of wear, while Viennese pivots are typically burnished and show very little wear. This makes sense when one realizes that burnishing a pivot both hardens the metal and makes the surface significantly smoother than a non-burnished pivot. Even with the larger pivots, Salfer's clocks do not seem to require additional weight. The striking weights on the clock that I'm working on are both 5 pounds. An equivalent Gastav Becker typically requires 8 to 10 pounds.

While these differences are interesting, the item that really got my attention was the Graham deadbeat escapement. Specifically, the pallets. Each pallet had a cutout and a jeweled contact surface was inserted. It was done with



Dead beat anchor

extreme precision and polished. The material is transparent and had a slight reddish cast to it, possibly synthetic ruby or whatever the available equivalent was in 1890. As you can see in the photo, there is absolutely



Contact surface for escape wheel

no indication of wear on the locking surface, or the impulse surface. I have to assume that these are the original pallets, because I can't imagine any clockmaker today trying to duplicate these if they had to be replaced. They would simply replace it with a new all steel assembly. I have never seen an escapement like this before, and if any of you have, I would very much like to hear about it. ■



EDUCATIONAL OPPORTUNITIES

by Mike Schmidt

The May Chapter 190 Meeting
is May 21, 2017
Sellers may start setting up at 11:30
The Mart is open from 12:00 til 1:15
The Meeting starts at 1:15

"The National Watch & Clock Museum"
Presented by, Noel Poirier

Bring a clock, watch, tool,
book, or a good story to
this meeting to share with
your fellow members.

**NO MEETING IN JUNE,
FATHER'S DAY**



The Sunday morning workshops held prior to the monthly meetings are free and open to all. This is a great opportunity to learn many new repair techniques. It is an opportunity to bring clocks and watches and receive assistance with perplexing repair problems. Guests are always welcome. The workshop begins at 11:00 and the coffee will be on.

The topic for this month's workshop is 'Bench Tools You Made' a chance to share tools and gadgets you made to solve a specific problem or a better idea than a tool you can buy.

"Introduction to Antique Clock Collecting, Repair & Maintenance # 12" Open to members, friends and the public. The only prerequisite for this workshop is "Interest & Curiosity" in mechanical clocks. All tools, movements, and knowledge will be supplied. The next workshop is September/October 2017. For further information, contact Mike Schmidt 805 988 1764 or email EagleCreekClocks@msn.com

190-1A American Count Wheel 2 train movement Workshop is scheduled for Nov. 4 & 5 2017. The workshop will be held at the Historic Odd Fellows Lodge in Santa Paula. Prerequisite is the "Introduction Workshop" or equivalent. The cost of this workshop is \$210. Contact Mike Schmidt - email EagleCreekClocks@msn.com for registration

Congratulations to all eight students who completed the May Chapter 190 Workshop 190-1A "American Count Wheel Striking Clock".

Special Kudos!!! to instructor Lex Rooker. Who spent countless hours and days designing and preparing this new workshop. With the help of assistant instructor Ron Maricich all the students learned how the challenging American movement works, comes apart and goes back together. Lex used a concept where the workshop provides all the same movements for students and with teamwork and perseverance, all students gained a working knowledge.

All workshop information, registration and payments can be made thru the Chapter 190 Website or contact me-Mike Schmidt

Please let me know what workshops or instructions you desire.

Contact Mike Schmidt at e-mail
eaglecreekclocks@msn.com

CLASSIFIED PAGE

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

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WANTED

Reward

Wanted - Information

Chapter 190 is looking to receive any information Regarding the
present location of the Ventura County Courthouse Clock. The Seth
Thomas model 15 clock was installed in the 1875 courthouse in
1900. The last sighting of this clock and its bell was a display at the
1987 NAWCC National Convention at Anaheim.

Contact Mike Schmidt at: eaglecreekclocks@msn.com

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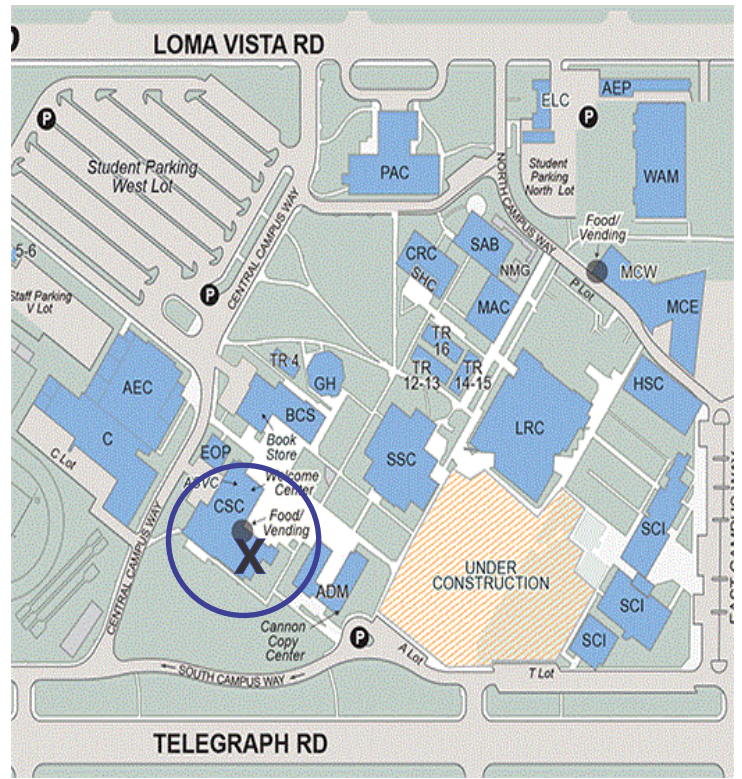
- Chronometer -

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**

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



May - June 2017 Issue

NO MEETING IN JUNE!
IT IS FATHER'S DAY

NEXT MEETINGS

MAY 21

T



If Undeliverable return To:
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Chrono Times