

# Bytown Times

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**NEXT MEETING**

**WHEN:**

Sunday, May 16, 2010  
 Meeting begins at 1:11 PM  
 Workshop begins at 11:30 AM

**WHERE:**

Qualicum & Graham Park  
 Community Centre  
 25 Esquimault Ave., Ottawa

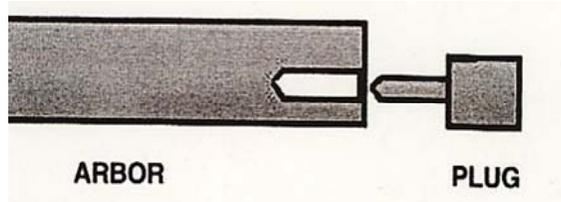
**MEETING AGENDA:**

- To Be Determined
- Show and Tell

## CORRECTING AN OFF-CENTER PIVOT HOLE

Clock pivots sometimes need replacement. A new pivot hole is drilled, however as can happen the drill bit moves off-center. This article deals with a method to plug an off-center hole and still end up with a pivot that will be centered and run true.

A plug needs to be made. One end will be machined to a diameter that will be a snug fit in the drilled hole. The hole should be at least 3 times as deep as the intended diameter of the pivot. The outside diameter of the



*Continued on page 2...*

Figure 1, on the left, shows the off-center hole and the new plug

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## IMPORTANT NOTICE:

The May meeting will take place one week early. Instead of the 4th Sunday of the month, the meeting will be held on  
**May 16th, 2010**

## MAY OPEN-WORKSHOP

There will be an open workshop at the May meeting. Members are welcome to come and discuss any technical/repair related problems or questions they may have. Jordan Renaud and Dan Hudon will be pleased to offer suggestions or ideas that hopefully will be of benefit. The article on repivoting in this issue of the Bytown Times can serve as a starting point for discussion.

The workshop will begin at 11:30am. The duration will depend on participant interest.

*Information provided by Dan Hudon*

## OFF-CENTER PIVOT HOLE, CONTINUED...

plug needs to be greater than the drilled hole to allow sufficient material to form the pivot. The plug will be lop-sided on the arbor.

As the arbor turns in the chuck, the cutting tool will remove material from the high side of the plug first. If using a cross slide, very light cuts are recommended to avoid snapping off the pivot material.

I use a file with a file-rest, which helps control the file. I grind the plug material with a flat diamond file as the lathe is turning. Grind until the plug becomes cylindrical in shape and the file begins to cut into the low side of the plug. Only light pressure is applied as the file removes material quickly. When close to the target diameter of the pivot, switch to either to a pivot file or a fine India stone. Bring the pivot to the correct diameter and the metal to a high polish. Finish by burnishing the pivot.

The result is a pivot, which should be equivalent to the original.



Figure 2, above, shows the inserted plug with the material needing removal shown in yellow

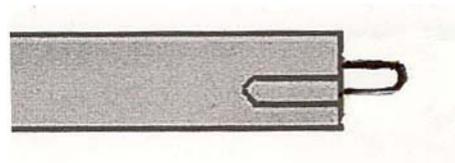


Figure 3, above, shows the completed pivot

*Article provided by Dan Hudon*

## UPDATE ON TRAINING ACTIVITIES

### NAWCC Field Suitcase Course F202: Lathe II Skills for Clock Repair

Building on what was learned in the F200 and F201 Suitcase Courses, students will expand their skills needed to make selected clock parts and tools using a cross-slide.

Prerequisites: F200 and F201 Field Suitcase Courses

When: May 21 through 24, 2010, inclusive

Where: Ottawa (exact location to be announced)

For more information, contact Grant Perry.

### NAWCC Field Suitcase Course F101: Intro to Basic Time & Strike - The American Kitchen Clock

This is a call for students for the NAWCC-F101 Introduction to Basic Time and Strike – The American Kitchen Clock. This is only the second time that this course has been offered in Canada.

This is an excellent opportunity for anyone interested in repairing and/or maintaining antique clocks. This four-day course, offered by the NAWCC, is the first course in an expanding series of clock repair offerings. This course is the required prerequisite to other NAWCC clock repair courses.

The course will be offered in Ottawa, May 21 through 24, 2010.

If you are interested in taking the course please contact Grant Perry as soon as possible, as he will be making a decision on the running of this course based on enrolments.

*Training info provided by Grant Perry, who can be reached by email at [paretime@rogers.com](mailto:paretime@rogers.com)*

## CANADIAN QUARTZ CONNECTION

Part mechanics, part alchemy, and all science, the quartz movement revolutionized the early 20th century world of horology with its precision time-keeping. If kept properly, quartz movements will lose a mere second each decade; a level of reliability not to be outdone until the 1960's with the introduction of the atomic clock. This ground-breaking invention was due in large part to the Canadian-born inventor Warren Marrison.

Born in 1896, Warren Marrison was raised in the central Ontario town of Inverary. Marrison studied at nearby Queens University, where he received his Bachelors of Science degree. He later moved to the U.S. to continue his education, earning his Masters at Harvard. He then settled in New York, where he came to work as a telecommunications engineer at Bell Telephone Laboratories.

It was during his work at Bell where he, and fellow scientist J.W. Horton, created the first clock to run on the highly regular vibrations of an electrical circuit containing a quartz crystal. Quartz movements gain their reliability from the quartz crystal's direct piezoelectrical qualities (the ability to gener-

ate an electric field or electric potential when mechanical stress is applied) and reverse piezoelectrical qualities (the ability to produce a stress or strain when an electric field is applied). These piezoelectrical qualities allow the quartz to generate a regular and reliable series of electrical pulses which can be used to mark time.

Marrison and Horton based their research on prior studies of the properties of quartz. It was Jacques and Pierre Curie who first discovered the piezoelectrical qualities of quartz in 1880. Walter G. Cady built the first quartz oscillator in 1921. In 1923, both Marrison and D.W. Dye of the U.K. produced precision time signal sequences with quartz oscillators. Marrison's and Horton's clock followed in 1927.

Much like early computers, the first quartz clock filled most of a small room. Today, quartz movements have been much reduced in size, and are still commonly used not only in clocks and watches, but calculators and computers as well.

*Written by Erin Fox*

### May 30th - Trip to Museum

**In celebration of the Canadian Clock Museum's 10th Anniversary, our Chapter will be visiting the museum in Deep River, ON, on May 30th, 2010.**

### HOT TOPICS

**Are you bursting with grand ideas for the club? Have a great idea for a topic you'd like to see presented at a meeting? Want to get more involved? Let us know!**

**We're looking for your ideas and input!**

### ANCIENT SUNDIALS



*Above: pictures of 2000 year-old sundials, recently on exhibit in the National Capital Region.*

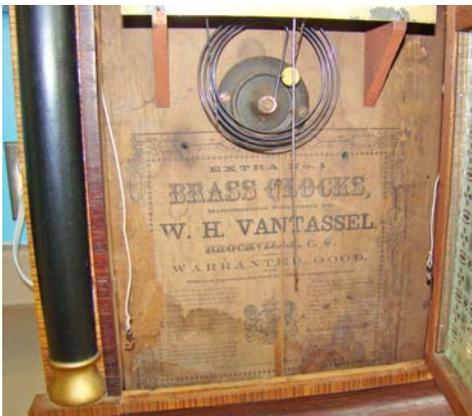
### Upcoming Meeting Dates

- 16 May 2010: Meeting
- 28 November 2010: Meeting
- July: Picnic (exact date TBD)
- November: Holiday Party (exact date TBD)
- 26 September 2010: Meeting

# MARCH 2010 MEETING - PICTURES



## PICTURES, CONT'D



### Summer Heat Means Tasty Treats!

Don't forget that our annual picnic is just around the corner. Notice will be sent out soon for the July event!

## RECOMMENDED READS

An avid reader of horological magazines, chapter member Dan Hudon recommends the following articles as "good reads". Note that these magazines are available to borrow from the Chapter 111 Library.

- "Making a snail by hand" by Laurie Penman, Clocks Magazine, March 2010
- "Replacing motionwork teeth" by Ian Beilby, Clocks Magazine, February 2010
- an article that will interest Westclox fans (the 1929 Canadian made Westclox Sleep-Meter is discussed), Clocks Magazine, January 2010
- an article on an 18th century French 'Normandy' clock, Clocks Magazine, January 2010
- an article on repivoting (with good quality color photos; of interest is the use of straight fluted Eureka drills as opposed to twist drills), Clocks Magazine, December 2009
- an article on reamers and how they are used, Model Engineer's Workshop, October 2009

If you have also come across some good articles, books, websites, etc., please email your recommendations to [erinfoxnawcc111@gmail.com](mailto:erinfoxnawcc111@gmail.com).

## LIST OF LOCAL SUPPLY SHOPS

- Metal Supermarkets: 2900 Old Sheffield Rd., Unit 1, Ottawa, 613-747-7511, [www.metalsupermarkets.com](http://www.metalsupermarkets.com)  
[All metal, sheets, rod plates, in small amounts]
- Dowd Supply Co.: 36 Rosemount Ave., Ottawa, 613-236-9493, [www.dowdsupply.com](http://www.dowdsupply.com)  
[Jeweler's Tools, and Equipment (Grobet USA)]
- Lee Valley Tools: 900 Morrison Drive, Ottawa, 613-596-9202, [www.leevalley.com](http://www.leevalley.com)  
[Tools and round Brass Stock]
- Fastenal: 6 Bexley Place, Unit 102, Ottawa, 613-288-1470, [www.fastenal.com](http://www.fastenal.com)  
[Some Metal]
- Busy Bee Tools: 2251 Gladwin Cres., Ottawa, 613-526-4696, [www.busybeetools.com](http://www.busybeetools.com)
- Legere Industrial Supplies Ltd.: 1120 Morrison Drive, Ottawa, 613-829-8010, [www.legereindustrial.com](http://www.legereindustrial.com)  
[Machine mechanical supplies]
- Ottawa Fastener Supply Ltd.: 175 Robertson Road, Ottawa (Bells Corners), 613-828-4117, [www.ottawafastenersupply.com](http://www.ottawafastenersupply.com)  
[All metric and standard fasteners, Tools]
- Dynamic Hobbies: 21 Concourse Gate, Unit 6, Ottawa, 613-225-9634, [www.dynamichobbies.com](http://www.dynamichobbies.com)  
[small brass rods and small diameter piano wire]

## Club Information

This club acts as a meeting place for antique clock and watch enthusiasts. Members are interested in a wide array of topics: some collect, some do research, some do repairs.

Formal club meetings take place five times each year, on the fourth Sunday of every second month, with a break in the summer. Meetings are held in January, March, May, September, and November. Doors open at 12:00 PM.

Club members also enjoy two annual social events: a Wine and Cheese party each November, and a Picnic BBQ each July.

Courses on clock and watch repair are held throughout the year.

The Bytown Times is published five times each year.

Annual Dues for club membership is \$16. Club members should also have memberships to the National Association of Watch and Clock Collectors (NAWCC).

## Club Officers & Contacts

**President & Librarian:** Wally Clemens  
Box 311, 4970 Opeongo Road, RR#3  
Woodlawn, ON, K0A 3M0  
(613) 832-3085

**Vice President:** Georges Royer

**Auditor:** Jean Paul Tourigny

**Membership Chair:** Veronica West

**Secretary &**

**Bytown Times Writer & Editor:** Erin Fox

**Treasurer &**

**Show and Display Coordinator:** Grant Perry

**Immediate Past President:** Maynard Dokken

**Program & Social Director:** Tim Bryans

**Education & Workshop Chairman:** Dan Hudon



## Secretary's Corner

I would like to thank Dan Hudon, Wally Clemens, Ben Roberts, and Grant Perry for their contributions to this issue.

As usual, I would like to welcome members to submit their own articles for the newsletter. Topics can be anything: a review of your collection with pictures, a summary of some research you've gathered, 'how-to' or instructional information, museums and other horological sites you've visited, etc. Articles and pictures can be emailed to me at:

**[erinfoxnawcc111@gmail.com](mailto:erinfoxnawcc111@gmail.com)**

Please visit our website:

**[www.ottawaclocksandwatches.ca](http://www.ottawaclocksandwatches.ca)**

## Notes from the President's Desk



A reminder that our next meeting will be held a week early (on 16 May 2010), so as not to conflict with either the F202 Field Suitcase course, or other long-weekend activities.

Don't forget to bring your show and tell items, and a dry pair of shoes!

I look forward to seeing you at the next meeting.