7:00pm Wednesday June 18, 2014 – Keynote Address
*The Life and Accomplishments of Mathias Schwalbach – Ed Buc*

Ed Buc is an environmental engineer specializing in the remediation of soil and groundwater contamination at historical properties. Over the course of his career, he has employed many techniques for researching historical property information. He is currently the Secretary for NAWCC Chapter 47, periodically writing the ‘spot a clock’ column for the chapter newsletter which provides members with information about local public clocks.

As a result of a chance meeting with the great-great grandson of Mathias Schwalbach, Ed utilized his research skills to learn more about the work of this Milwaukee clockmaker and the local buildings in which these unique timepieces reside.

9:00am to 10:00am Thursday June 19th, 2014
*Style, Design, and Time: How the Disposable Wristwatch Helped Save the Swiss Watchmaking Industry – Amelia Osterud*

Amelia Klem Osterud is a librarian and historian in Milwaukee, Wisconsin, who writes and speaks on circus, sideshow and tattoo history, and is the author of *The Tattooed Lady: A History*. She holds master’s degrees from the University of Wisconsin-Milwaukee in History and Library Science and loves Swatch watches, both to collect and to wear.

This presentation is about how an inexpensive plastic timepiece marketed by Swatch evolved into a watch that was all about fashion and design. In 1983, Nicolas Hayek, a Lebanese-born Swiss entrepreneur, introduced the concept of the “second watch,” or Swatch, as it came to be known, as a way to rescue the failing Swiss watchmaking industry. This radical idea of a Swiss watch company selling an inexpensive plastic timepiece that was also fun, quirky, and expressive created a successful company with an international reputation for both quality watches in addition to fashion and style. Amelia will cover the company’s history, talk about the different styles of Swatches, the artists and designers the company worked with to create quirky timepieces with limited edition packaging, and the transformation of watches into fashion. The inexpensive plastic watch brought Swatch Group eventual ownership of some of the most prominent names in modern wristwatches, including Omega, Longines, and Breguet.
**10:30am to 11:30am Thursday June 19th, 2014**

*The Evolution of Tower Clock Movements and Their Design Over the Past 800 Years – Mark Franks*

Born in 1957, Mark Frank received his B.A. in economics and mechanical engineering from the University of Michigan and his M.B.A. from Michigan State University. He works in Chicago in residential real estate management and land development. For the past 25 years he has been researching and collecting timepieces, in particular, tower and skeleton clocks that exhibit interesting mechanical characteristics as demonstrated through complexity, novelty or visual appeal. His current project is the commission of one of the more complex astronomical clocks ever made, a project that will span a decade of work.

This presentation will explore the visual and mechanical aspects of tower clock movements and how they evolved from their first appearance from 1100 to 1200 through the end of the commercially economical mechanical era in the 1950’s. These concepts will be exemplified by an examination of the various frame designs, escapements, types of remontoire, and strike systems.

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**9:30 to 10:30 am Friday June 20th, 2014**

*A Revolutionary War Hero and the Discovery of the Earliest American Clock Making Tools – Richard Newman*

Richard Newman has published numerous articles for the NAWCC where he also serves as President of British Horology Chapter 159, board advisor to Chicago Chapter 3, and member of the NAWCC Finance Committee. His research website on colonial and early American watches is www.colonialwatches.com.

Nathaniel and Samuel Mulliken produced some of the finest American colonial clocks ever made. Prompted by the recent discovery of Nathaniel’s clock making tools and supplies, apparently the earliest surviving examples in America, Richard will discuss the fascinating history of the family and these artifacts and how they both became entwined in the fight for independence at the first battle of the Revolutionary War.
Laila Radage grew up in Finland and then moved to England to study, where she met and married her husband Dennis, and together they emigrated to Canada. Laila became a Registered Nurse in Canada specializing in emergency and occupational health. She is currently a partner of Pacific Antique Clocks in Vancouver.

Laila is a member of the NAWCC and a Freeman of the Worshipful Company of Clockmakers, UK. She is co-authoring a book with Dennis on the 17th century clockmaker Charles Gretton, undertaking the research into Gretton’s life, history and his legacies.

Dennis Radage graduated in Electronics and control in the UK in 1964. He retired from corporate life in 2003 to focus on his passion for clocks. He and his wife live in Vancouver, BC. Dennis has been collecting clocks for more than thirty years; he collects mostly English clocks spanning the period 1675 to 1875.

Dennis is a Star Fellow of the NAWCC, a Past President of BC Chapter 121 and is also a member of the NAWCC National Program Committee. He is a member and Vice President of the NAWCC British Horology Chapter 159 and Chair of the Antiquarian Horological Society Western Canada Section. Dennis is a Freeman and Liveryman of the UK-based Worshipful Company of Clockmakers. Dennis writes articles for the Bulletin, Clocks Magazine (UK) and Antiquarian Horology (UK).

The first part of the program will focus on Charles Gretton as a professional living in the 17th century. Laila opens by discussing Gretton’s Lincolnshire roots, his childhood home, followed by his journey at the age of fourteen from Claypole to London. Next is his apprenticeship from 1662 until 1670 to Humphrey Downing, through the years of the Plague and Great Fire, his freedom in 1672 by the Worshipful Company of Clockmakers, and the opening of his first workshop on Fleet Street. Laila will also discuss his marriage and move into his lifelong workshop, The Ship, also on Fleet Street. Gretton raised a family but endured heartbreaking events, his family life is discussed. He worked his way through the Clockmaker’s Company, becoming master in 1700. He became a wealthy and generous man who created charities that lasted well over a hundred years. Laila concludes by describing his last days and the legacies he left behind.

The second part of the program will be about Charles Gretton as renowned watch and clockmaker. He was amongst just a handful of elite makers who took advantage of the rapidly changing technology of the period. Dennis will describe clockmaking in the 1660’s, the time period that Gretton was an apprentice. He produced his first timepieces in the first half of the 1670’s, a time period that included advancements such as the fusee starting to replace the going
barrel, the development of the anchor escapement, which quickly saw the introduction of the seconds beating pendulum for longcase clocks, while spring clocks continued to use the verge and crownwheel escapement.

Dennis illustrates various timepieces made by Gretton, first through lantern clocks, then watches, followed by longcase clocks and further by examining various Gretton spring clocks. Dennis discusses Gretton’s working staff and his apprentices, one of whom is recognized as a great clockmaker even though his businesses all failed. Dennis concludes by suggesting what the output of Gretton’s workshop was during his years of greatest production.

1:00pm to 2:00pm Friday June 20th, 2014
*John Harrison Meets Rube Goldberg - A Machine Engineered To Amaze* – Mark Franks

This presentation describes the ongoing construction of a large-scale astronomical skeleton clock. Various aspects explored are the design, fabrication, and engineering concepts that are employed to make a movement which will eventually contain approximately 350 wheels, 30 complications, 3 remontoire and over 8000 parts, but as practical as possible through the use of modular design and the elimination of oil. This will probably be the last extremely complex machine of its kind to be made by hand without the benefit of computer aided design or manufacturing.

2:30pm to 3:30pm Friday June 20th, 2014
*History and Development of the Self-Winding Wristwatch* – Bruce Shawkey

Bruce Shawkey has been a wristwatch dealer and historian since 1988, and for the past 17 years has been the wristwatch columnist for *Watch & Clock Bulletin*, the flagship publication of the NAWCC. He has written and published a book on Gruen wristwatches, and is the owner of brucesvintagewatches.com, an online sales venue for vintage wristwatches. He resides in Evansville, Wisconsin.

From the early "Rolls" and "Wig Wag," to the extraordinary "Micro Rotor," wristwatch historian Bruce Shawkey will discuss the wristwatches that wind themselves by the smallest motions of one's wrist. Emphasis is on the *history* of these timepieces rather than the technical details of the movements themselves. Did the self-winding watch hasten the demise of the American watch industry? Come find out!
2:30pm to 3:30pm Friday June 20th, 2014
The English Longcase Clock - Lecture for British Horology Chapter 159
Lecturer – Dennis Radage

This is a brief story of the English longcase clock focusing mostly on early clocks and the development of styles and functionality. The presentation starts by describing the first longcase clocks from about 1658, the case style, the movement and the dial features. The introduction of the anchor escapement greatly improved accuracy while the introduction of the rack and snail striking control, replacing the countwheel, allowed for increased striking consistency and simpler repeating. Dennis explains why the full transition from countwheel striking control to the rack and snail took some fifty years to complete. The evolution in case styles is illustrated along with the changing wood preferences from ebony and walnut to marquetry, then back to walnut before mahogany started to dominate case finishes. The evolution of marquetry is illustrated over its thirty years of dominance as a case finish. The characteristics of the movement are described and why these differ so much from those used in spring clocks of the day. Next to the aesthetics of the case, the dial is the most significant component of the longcase clock, and dial features and their evolution are discussed in detail. Dennis explains how a clock can be dated using the case style, movement features, and particularly the dial features and engraving. The program concludes by examining what characteristics to look for in identifying marriages and alterations.

4:00pm to 5:00pm Friday June 20th, 2014
Timepieces for the Turkish Market – DannO Osterud

DannO Osterud has been a NAWCC member since 2005 and is currently the Treasurer of Menomonee Valley Chapter 47 and is a member of the organizing committee for the 2014 National Convention. His primary areas of interest are English Verge Fusee pocket watches and clocks and watches made for the Turkish market. He also dabbles in cleaning, repair and restoration of clocks and pocket watches.

In this presentation DannO will explain what those funny symbols on Turkish market timepieces are, their origins, and how to read them. He will cover aspects of Ottoman history and culture and how they relate to timekeeping in the Ottoman Empire. He will also talk about trade, both import and domestic, as well as fashions in Ottoman timepieces and prominent makers for the Turkish market.
As a boy Joel Warren started honing his wood carving skills with scraps of wood and a pen knife. He became interested in clocks in 1961 after an introduction to Harry Dean, who worked at the Ithaca Calendar Clock Company from 1904 – 1914 and was its’ last surviving employee. Joel was responsible for the reestablishment of the Ithaca Calendar Clock Company in 1979 and was in charge of all case production until his departure in 1983. He then established Joel Warren Clocks as the source of a broad range of Ithaca Calendar Clock restoration parts. As of 2013 he has been working with the current owners of the E. Howard Company, establishing a line of new and re-issue clocks. Joel is a Fellow in the NAWCC and has been a member since 1976. He received the National Craft Competition People’s Choice Awards three times, along with numerous First Place Honors. The current issue of the Bulletin features his article on making last year’s People’s Choice clock. He has held lectures, exhibits and workshops at several Regionals, National Conventions and the Ward Francillon Time Symposium.

In this lecture Joel will take the audience, step by step, from research to completion, of a large, highly carved Victorian period E. Howard #49 wall clock. The steps include, in order: Scale to actual size drawings; Woodworking hold downs and fixtures; Case construction, mouldings and turnings; Wood carving; Specific Gravity Calculations for a Mercury Pendulum; Machining a four jar pendulum; Movement weight calculations; Graphic art work and dial fabrication. Followed by a question and answer period.

There will also be a table exhibit of drawings, fixtures, mouldings and end cuts, where people can have direct interaction with the project.