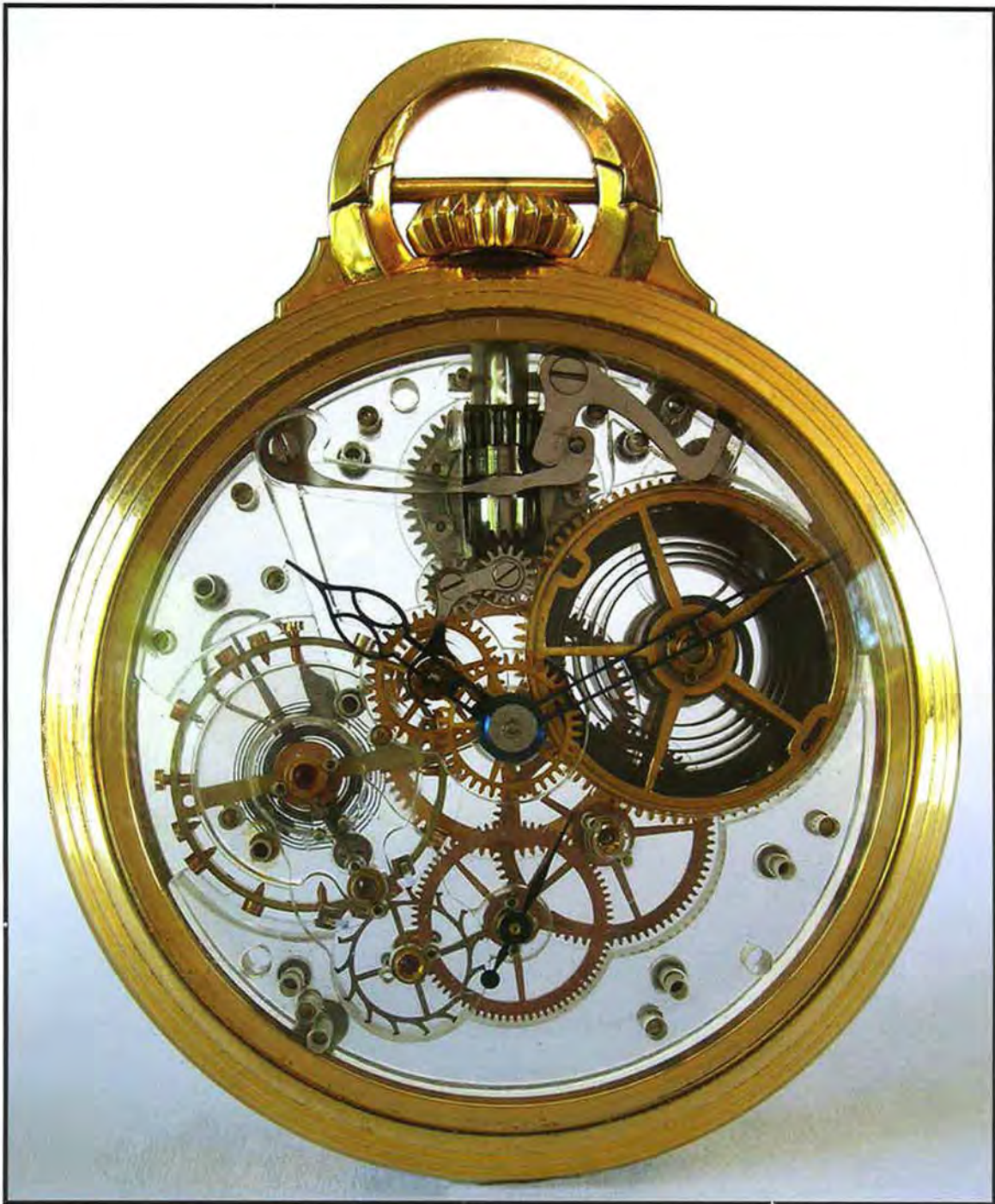


# HOROLOGICAL™ TIMES

May 2007



*American Watchmakers-Clockmakers Institute*



THOSE WHO PUT  
THEIR NAME  
ON THE OUTSIDE,  
PREFER OUR NAME  
ON THE INSIDE.



©2007 Maxell Corporation of America



RECEIVE (1) FREE \$20.00 TARGET  
GIFTCARD FOR EVERY 1,000 MAXELL  
SR, CR AND LR MICRO-BATTERY  
TEAR STRIPS PURCHASED.

OFFER VALID MAY 1 - JUNE 30, 2007.  
SOME RESTRICTIONS MAY APPLY.

THE BULLSEYE DESIGN AND TARGET ARE REGISTERED TRADEMARKS AND TARGET  
GIFTCARD IS A SERVICE MARK OF TARGET BRANDS, INC. ALL RIGHTS RESERVED.  
TARGET IS NOT A PARTICIPATING PARTNER IN OR SPONSOR OF THIS OFFER.

**maxell** 

THE WORLD LEADER IN MICROBATTERY TECHNOLOGY





## President's Message

Dennis Warner, CW21

It is with enthusiasm and great expectations that AWCI is entering into the second half of the year. If you have been keeping abreast of AWCI happenings in the *Horological Times*, *AWI Matters*, and our website, you know the bright future we face.

It was not so long ago that watchmakers and clockmakers were looked on as a bunch of "tink-erers" who should do repairs for people because we love to do them so much. Forget earning a profit.

Finally that has changed with the inception of AWCI's Mission Statement. It reads as follows:

"AWCI is the premier professional international organization dedicated to preserving and promoting the highest standards of workmanship in the horological crafts. It is the role of AWCI to set the standard of excellence to be applied to the quality of instruction for both the repair and restoration practices that are taught worldwide to watch and clock makers."

The future of the professional clockmaker and watchmaker is bright and rewarding.

For years we have needed a way to inform the jewelers about our goals for the future and how they can favorably impact their businesses. We are taking a major step in that direction with a display of a fully equipped shop that will be unveiled at the JCK Show in Las Vegas, June 1- 5, 2007. Those who are planning to attend should stop by and see our booth, No. 33085, in the Hall of Time.

(Continued on page 34.)



## Executive Director's Message

James E. Lubic, CMW21

I have three things that I would like to bring to your attention this month: AWCI's Annual Meeting and Educational Symposium, the AWCI JCK Trade Fair Booth Project, and AWCI's Career Center.

Our Annual Meeting and Educational Symposium is scheduled for Thursday, August 2<sup>nd</sup> through Sunday, August 5<sup>th</sup>. We have another great slate of speakers for the Educational Symposium which takes place Saturday, August 4<sup>th</sup>. The ELM Charitable Trust will host an auction at AWCI in the evening Friday, August 3<sup>rd</sup>. If you have anything (watches, clocks, or tools) that you would like to donate to the ELM Charitable Trust for this fundraising auction please mail the item/s to AWCI ELM Auction, 701 Enterprise Drive, Harrison, Ohio 45030. Your gift may be tax deductible as the AWCI ELM Charitable Trust is an IRS designated 501©3 not-for-profit organization. Be sure to check page 36 for all the details pertaining to the Annual Meeting and Educational Symposium.

For the first time ever AWCI will have a booth at JCK Las Vegas. The show dates at June 1<sup>st</sup> through June 5<sup>th</sup>. If you are planning to attend the show be sure to come by our booth. The Booth number is 33085 and is located in the "Hall of Time." This has been a very exciting project and will be very beneficial to AWCI as we have the opportunity to share what AWCI is all about with the retailers that sell watches. Next month the *HT* will be an expanded version that will still have the technical information as it always does, and will also contain a lot of additional information. A list of REC Schools, Affiliate Chapters, IAB members and information that will answer a lot of questions pertaining to our trade. What is Watchmaker and Clockmaker Certification? How much space should be dedicated to a shop? How should my shop be laid out? What equipment should I have in my shop? Where can I go to be trained? What tools should I own before I go to work for someone, and how much do they cost? How much should I pay? How much should I make? In other words, answers to all the questions pertaining to being involved in our trade.

(Continued on page 34.)

# *Energizer*<sup>®</sup>

## BETTER THAN EVER

*Energizer*<sup>®</sup> invented the world's first watch battery and is proud to be the only watch battery manufacturer in the USA. Today, our exclusive multi drain technology is evidence that our commitment to innovation is unyielding. State-of-the-art engineering also delivers world-class capacity, shelf-life and leakage resistance.

In addition, we offer a complete line of battery accessories and reference materials. *Energizer*<sup>®</sup> has the business tools available to help your business Keep Going<sup>®</sup>... and growing!



For more information about *Energizer*<sup>®</sup> batteries and battery accessories, call 1-800-426-8268, ext. 7534.



**Keep  
Going<sup>®</sup>**



David A. Christianson,  
CMW21, FAWI

# Questions & Answers

## Question

I have taken photos of a customer's pocket watch movement.

I would appreciate any information.

*Emil Heyler, San Jose, California*

## Answer

Your pocket watch is an early chronograph with a fly-back recording center second hand. The timepiece itself is a pin-set Swiss bar movement with the name of the retailer on the movement and dial. There is no name of the maker on the movement. The pin-setting mechanism was in common use in Europe between 1870 and 1900.

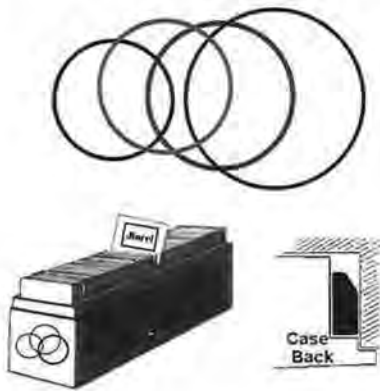


The first chronograph mechanism capable of returning the second hand to the zero position was patented by Adolph Nicole as United Kingdom Patent #1461, on May 14, 1862. This stopwatch feature was achieved by a push button system incorporating a castle ratchet (also known as a column-wheel) so that the stopwatch mechanism could be started, stopped and reset without stopping the time train. Resetting the second hand was achieved by a heart cam patented by Adolph Nicole in 1844.

Initially the chronograph mechanism was under the dial, like yours, but after 1868 it appeared on the top plate (back of movement). With this information I can comfortably date your watch at around 1870, give or take a year or so.

The dial can record to the nearest 1/5 of a second. There is no minute recorder; the sub dial that you see on the dial is the running seconds hand for the timekeeping movement.

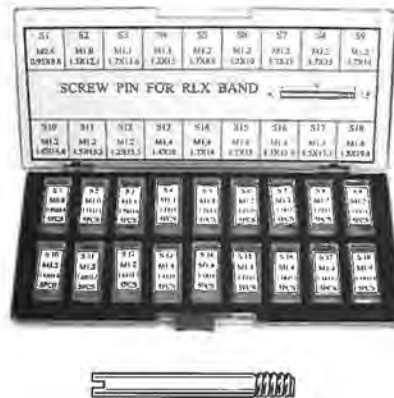


**Borel****For the Latest in Watchmaker's Tools & Parts**visit [www.JulesBorel.com](http://www.JulesBorel.com) click on products**Borel**

### Red "I" Style Caseback Gasket Asst.

A newer style gasket used by Omega, Gucci, Cartier and others. Rather stiff and similar to a glass crystal gasket but for use on certain style casebacks. Red in color. Contains 1 each of 30 sizes ranging from 18.5 to 33 outside dia. All have a cross-section of .58 x .9mm.

**JBG-3090 Gasket Asst. \$ 32.00**



### Band Screws for RX brand

This assortment of steel band screws contains 5 each of 18 different sizes for a total of 60 pieces in a plastic cabinet. Lengths range from 8.6 to 19.4mm, diameters of .9 to 1.7mm, and with threads of .8 to 1.4mm.

**MBS-32 Screw Asst \$ 24.95**

### ETA Chron Tools



### ETA Chron Tools

These tools are necessary for working on ETACHRON mechanical movements. One tool has a small fork shaped tip for removing the stud block. The other is for adjusting the regulator pins. 2.25 inches overall length, black handles. From ETA.

**STK 1111 Remover \$ 23.95**  
**STK 1112 Adjuster \$ 23.95**

**Order one of each for \$ 21.95ea.**



### Seiko 2-Part Crystal Epoxy

From Seiko, specially formulated for cementing in watch crystals. Very strong and resistant to shocks. Mix equal parts of parts A & B. Packaged in a small red & white box with instructions. Cures in 24 hours at normal temperatures.

**CE310 Seiko Epoxy \$ 12.20**



### Swiss Luminous Compound

Contains a bottle of luminous compound (1gr.), cement, solvent, applicator, and mixing cup. Pour a small amount of glue into cup, add the luminous powder gradually, stir with a stick of peg wood until you get the desired consistency. If the paste thickens add a drop of the solvent to bring it back to working consistency.

**CE13254 White \$ 34.60**  
**CE13252 Light Green 34.60**  
**CE13253 Yellow 36.40**  
**CE13255 Pink 38.20**

### Ultra-violet Curing Lamp for Crystal Cementing

For use with ultra-violet (UV) activated cements. UV Cements offer unlimited working time as they only start to harden when exposed to UV light. This 4 tube lamp saves time with its intensity and 180 degree coverage. Measures 8.7 x 10 x 4". 110 volts, from Switzerland.

**LM174.210 UV Lamp \$ 139.00**  
**CE342 UV Cement 6.95**

**Borel****Jules Borel & Co.**1110 Grand Boulevard  
Kansas City, MO 64106-2348

Order Desk

Order FAX

Local

800-776-6858

800-776-6862

816-421-6110

**Borel**



René Rondeau

# The Ultimate Skeleton Watch

*René Rondeau is a watchmaker and dealer who has been collecting Hamilton watches since 1984. A specialist in Hamilton Electric watches of the 1950s and 1960s, he is the author of *The Watch of the Future*, first published in 1989 and now in its fourth edition, as well as *Hamilton Wristwatches - A Collector's Guide*, published in 1999. He has also contributed many articles about the Hamilton Watch Company to the NAWCC Bulletin. As a Hamilton authority Rondeau has frequently been interviewed and quoted in watch-related books and magazines, and has served as the historian for the Hamilton Watch Company since 1998. He is a member of the National Association of Watch and Clock Collectors and the American Watchmakers-Clockmakers Institute for twenty years.*

At the Florida regional convention of the NAWCC in 2001, a dealer friend called me over and said “I have something for you.” He reached into his bag under the table and pulled out the most amazing Hamilton watch I had ever seen—a completely transparent 992E with plates and bridges made of clear plastic. My first reaction was that this was the ultimate skeleton watch. (As it

turns out, that exact same phrase was recited by almost everyone who has subsequently seen it in person!)

He explained that he had gotten it from a former Hamilton employee, but beyond that he really knew nothing about the piece. As it happens, I knew the retired employee well, and I also knew the dealer to be trustworthy,



*Cased front*



*Cased back*



so I had no doubts whatsoever about its authenticity. However, others who saw it were less certain. One pocket watch authority to which I later showed the watch dismissed it saying that ‘someone in New England made those as novelties.’ Frankly, I found that rather hard to imagine given the complexity of the piece. But despite my conviction of its authenticity based on its provenance, there was no irrefutable proof.

Prior to taking the watch to the show the seller had it overhauled by fellow AWCI member Ernest R. Tope, CMW21, who put it into perfect running order and drafted a letter detailing his technical impressions. This was an important accompanying document but it still left the question of authenticity open. Mr. Tope was intrigued by the watch and concluded his summary by writing “Naturally I am curious about the origin of the watch and would like to know if it was produced by the folks at Hamilton.”

Much later, after I had researched the watch, I called Mr. Tope to discuss it. We talked about the idea of publishing a history in *Horological Times*, and he graciously agreed to write a technical summary about the watch, which accompanies this article. (See page 10.)

When I first got the watch I had a nagging feeling that I’d seen this before—not the actual watch, but a photograph. In my ongoing Hamilton research over almost 20 years I had pored over literally thousands of pages of factory documents and published papers, and I was sure that this watch had been illustrated somewhere among all those pages.

The moment I returned home from Florida, literally before unpacking my suitcase, I started digging through some of my own materials.



*Complete movement embedded in a solid block of Lucite*

I looked first in the Hamilton history *Time For America*, by Don Sauers. It was not to be found. Then I started flipping through the endless pages of *Timely Topics*, a magazine published for Hamilton employees, of which I have a complete collection from 1955 to 1970 and a few dozen scattered issues from the 1940s, as well as some earlier issues of the preceding *Watch Words*. A quick perusal came up dry.

Then I had a sudden thought: maybe I had seen it in the 1947 Hamilton publicity movie *What Makes a Fine Watch Fine*. I pulled out a VHS tape of the film and popped it into the player. There it was, prominently shown in the opening title sequence! I rewound and replayed the sequence over and over, looking back and forth

from the screen to the actual watch in my hand. There was no doubt whatsoever; this was the exact same watch. Every single detail matched precisely. Then I checked another Hamilton movie, *How a Watch Works*, made in 1950, and found it also appeared in the opening and closing sequences of that film, in full color. (Both of these movies are in the public domain and can be viewed or downloaded on the Internet—<http://www.archive.org/details/WhatMake1947> and <http://www.archive.org/details/HowaWate1949>. They are also available for purchase on eBay in DVD format. Depending upon the seller these cost \$4 to \$10 for both films on one disk. These are excellent movies and any watchmaker is sure to find them fascinating and very enjoyable.)



Watch parts embedded in a solid block of Lucite

Now that I had positively verified its authenticity I set out to learn the full story. I wrote to a retired Hamilton employee whom I knew well, a veteran of the Research & Development Department. He replied soon thereafter saying, “Bob Hartman recalls the watch. The watch was a promotional piece and he remembers taking it with him on a plane to a jeweler’s show. My hunch is that it was made in our Model Shop which made the Mars Clock, giant size Marine Chronometer, etc.”

Some months later I was back in Columbia, Pennsylvania and went to the NAWCC museum and library to dig further. I hit the jackpot in some back issues of *Timely Topics* and *The Hamilton Traveler*, a magazine for Hamilton salesmen.

Hamilton had first discovered the possibilities of plastic in the 1930s, for advertising fixtures and presentation boxes for new watches. In 1938 the Research Department began to investigate a new form of plastic, a crystal-clear polymer resin that is now known as Lucite or Plexiglas. By 1940, working with a specialty plastics company, Hamilton had succeeded in making a variety of displays with complete movements or watch parts embedded in solid blocks of Lucite.

Unfortunately it is not known when some enterprising Hamilton researcher first came up with the idea of making a complete, running watch out of plastic. Such arcane bits of Hamilton history are often best reported in the company’s employee

magazine, which kept workers up to date on the latest news. However there was a hiatus between 1936 and 1943, during which time the employee magazine was discontinued. This is exactly the timeframe when Hamilton’s plastic research began.

There is a photograph of an oversized wristwatch, five times actual size, with a Lucite 987 movement shown in the May 18, 1939 issue of *The Hamilton Traveler*. Hamilton was obviously on the way to making more such displays when WWII shut down any further experiments.

The next published reference appears in *Timely Topics* on September 9, 1946. An article about Hamilton’s exhibits at jeweler trade shows in New York and Chicago mentions that “Featured in the technical

exhibit, which received the greatest attention were [...] several operating samples of watch and chronometer movements made in completely transparent material.” On October 7, 1946, the next issue of *Timely Topics* described a local exhibit planned for Lancaster, Pennsylvania, mentioning that the display would include “samples of watch movements and timepieces made of transparent plastic so that the timepiece can be seen actually operating.” An article entitled *Hamilton on Display in Chicago and N.Y.* was published the following year, on July 31, 1947. This report states “many technical illustrations of Hamilton’s superiority such as transparent models of Hamilton watches will be on display.”

As far as is known today, only two of these actual-size, working timepieces still survive. One is a Model 21 Marine Chronometer in which not only all of the bridges and plates are plastic, but the dial, the entire box, and even the tub housing the movement are also cast or machined out of Lucite. Only the gears and springs are metal, revealing this complex timepiece in all of its glory. This amazing piece, now in the NAWCC museum, clearly had to have been made sometime after WWII ended in 1945 since the Model 21 was not designed until after the war had already begun, and Hamilton was far too preoccupied with military production during the war to be bothered with a display item.

The only other survivor is the 992E, but there remains a mystery—was it made before or after WWII? The 992E was a variation of the earlier 992, the only difference being a new hairspring made of Elinvar antimagnetic alloy. The 992E was made from 1930 to late 1940, when it was replaced by the entirely redesigned 992B. It would therefore seem likely that the Lucite 992E was made be-



*What makes a Fine Watch Fine?*

tween 1938 and 1940, while the movement grade was still current. However no references survive, and it is not entirely improbable that the watch was made in late 1945 or early 1946 when the acrylic Model 21 was apparently made. Although several years had passed since the 992E was discontinued, those years were devoted to military production. From a manufacturing and commercial standpoint the watches of 1940 and 1946 were closely linked.

It remains to be discovered if the watch was made prior to the war and set aside, or if older tooling was used in 1946 to make a display piece. What is clear is that the watch was widely displayed in the late 1940s.

It is certainly an amazing movement. It has often been compared to the beautiful Waltham “Stone Mountain” watches with rock crystal plates. The Lucite Hamilton 992E railroad watch takes the Waltham concept a step further, inasmuch as it is fully skeletonized, with no dial

to block the view from the front. Every detail of the operation is fully visible from both sides.

It must have become apparent to Hamilton that these actual-size, operating watches could only be appreciated under close inspection, preferably with a loupe. In a display case the details are lost to the viewer, especially the general public, severely limiting their impact. By the early 1950s Hamilton reverted to their earlier idea of making oversized working models to clearly show the layout and motion of a fine movement. A few such large models survive, including a Hamilton 747, a Thin-O-Matic, and Hamilton 500, 500A and 505 Electrics.

But to a watchmaker, nothing can begin to compare with the visual impact of a complete, actual-size, operating railroad watch made of clear plastic! It truly is the Ultimate Skeleton Watch.





Ernest R. Tope, CMW21

# Restoration of Hamilton 992E with Lucite Plates

*I was born and raised in Tampa, Florida. In college I studied science and engineering yet did not choose those as a career. I became a motorcycle mechanic, then professional firefighter, then cabinetmaker and finally a watchmaker. I had found my bliss. As the watchmaker for a high-grade jewelry store, I repaired many Rolex and Patek Philippe watches, etc. While I have attended several bench courses and seminars, I am primarily a self-taught perfectionist. On April 9, 1991 I received the title of CMW. Since then I have been restoring rare, unusual, complicated, and antique watches in my own shop. Recently I upgraded my AWCI Certification to CMW21. You can learn more about me by visiting [www.watchrestoration.com](http://www.watchrestoration.com).*

The watch, which René Rondeau describes, was delivered to me for restoration a few years ago. I was immediately intrigued and wondered who had made the watch. It had all the features of a Hamilton 992E but with clear plastic plates and bridges giving it a marvelous skeleton effect. At first I thought some skilled craftsman had custom made it from a regular watch. The more I worked with it the clearer it became to me.

Whoever the skilled craftsman was, the work was excellent with hardly any imperfection.

The wheels were upright and properly depthed with the exception of the barrel, which had shifted slightly. There were provisions made for supporting stress points compensating for the softer plate material. It was designed to last and function properly. There were several special

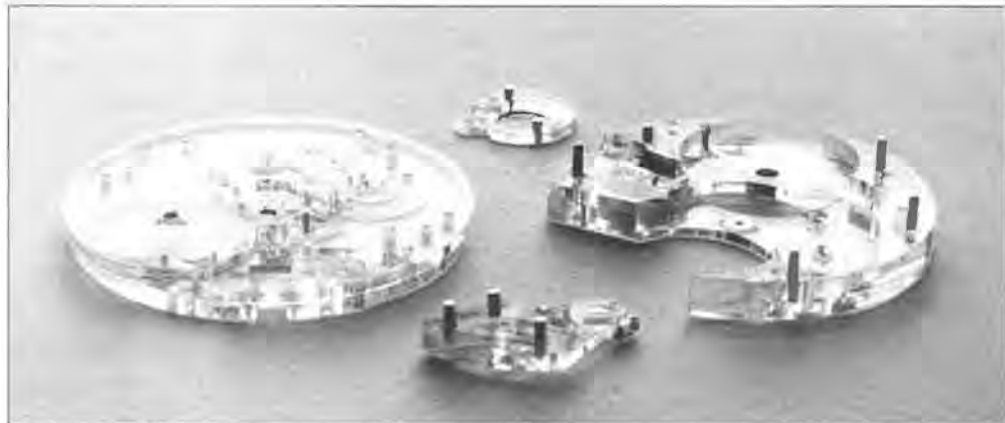


Figure 1



Figure 2

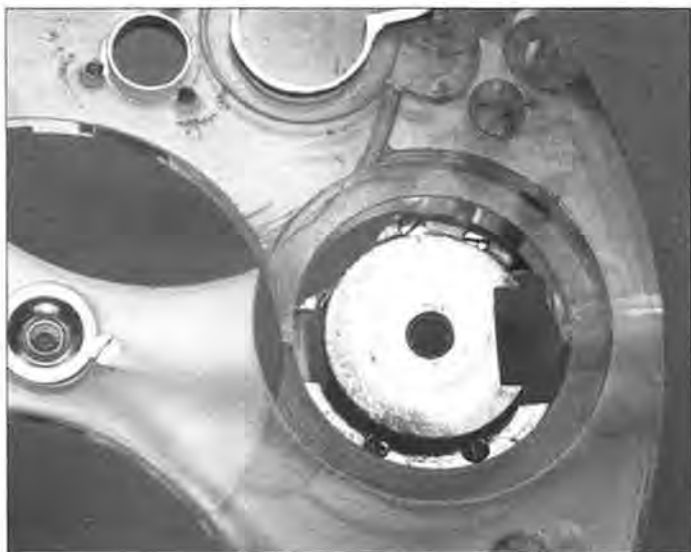


Figure 3

parts made to accommodate adapting to the plastic plates. The plates were machined or more likely cast very precisely and the surfaces were polished to provide clear vision. I couldn't help wanting to know the details of how it was done. I suspected that the factory was most likely to have the skilled workers and resources to produce such a watch.

Over the passage of years the setting for the lower barrel arbor bushing had shifted slightly. The hole into which it was seated was slightly larger than the setting allowing it to shift from its original position under the pressure of the mainspring. This allowed the barrel teeth to butt with the center wheel pinion causing the watch to stop intermittently. I simply filled the hole slightly with epoxy and bored it accurately to accept the setting in the proper location. This, along with cleaning and relubrication, produced reliable performance.

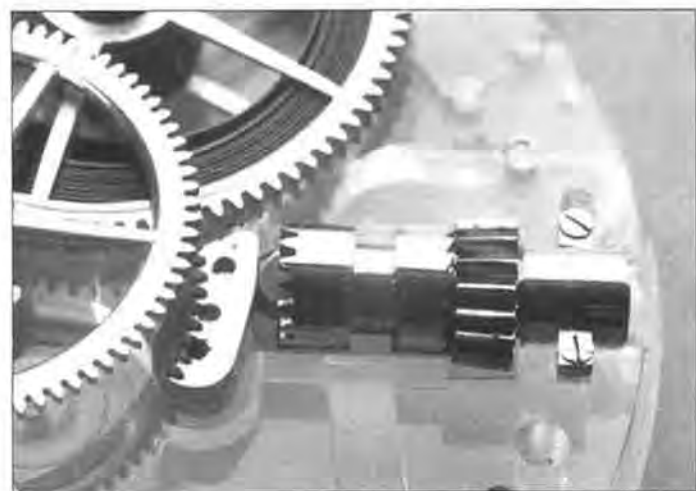


Figure 5

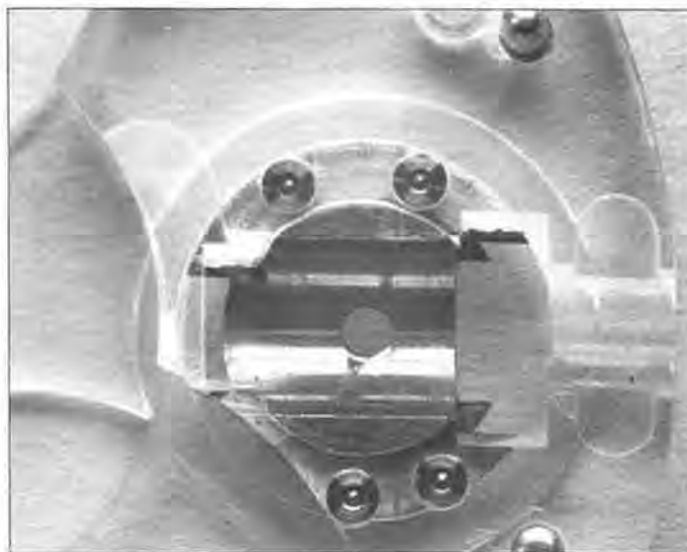


Figure 4

In the images one can see the main plate, train bridge plate, pallet bridge, and balance cock with various steady pins and other fittings. (See Figures 1 and 2.)

The crown wheel seating is inset into the Lucite with four screws and round nuts holding it securely in place. This seating carries the forces for winding generated between the winding pinion and the crown wheel. (See Figures 3 and 4.)

A steel collar and special fitting support the stem. Use of these fittings provides a suitable bearing surface avoiding the use of Lucite for these surfaces. The special fitting also supports the setting wheels. This provides the strength necessary to support the loads in this area. It is predictable that without these careful design features the watch could not have functioned normally for an extended period of time without breakdowns. The fact that the watch still

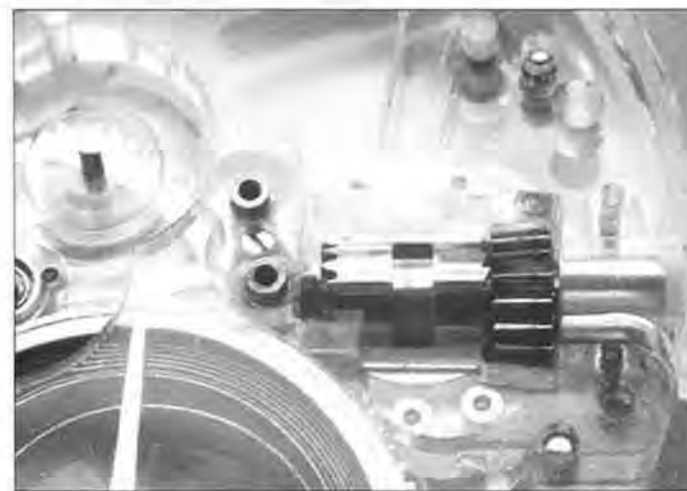


Figure 6

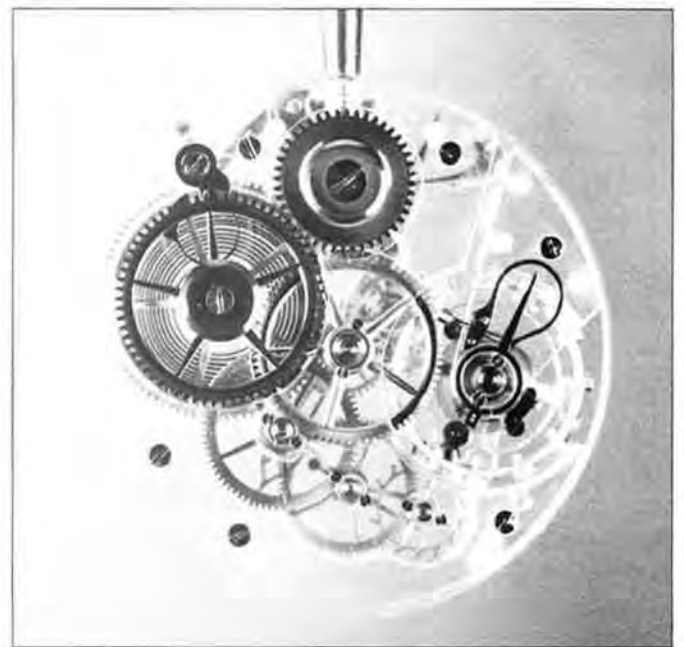


Figure 7

functions well after about 60 years of existence is testimony that the design was well thought out. If the barrel arbor bushing had been more tightly seated, the only service required would have been cleaning and oiling. (See Figures 5 and 6.)

The click screw was carefully bored and tapped to receive a screw from the plate side. This screw supports the click with the constant force of the mainspring on it. (See Figure 7.)

The artistic character of the watch inspired me to make several photographs of the running movement. It is my pleasure to share them here. ☺



# IN MEMORY OF BENJAMIN MATZ, CMW, FAWI 1914-2007

Benjamin Matz, a long-term enthusiastic supporter of AWCI, passed away on March 9<sup>th</sup>, 2007 in Boca Raton, Florida. His nephew reported that he died peacefully and quietly, at the age of 93, following a battle with cancer.

Ben, as his friends and colleagues affectionately knew him, was born in Gloversville, New York in 1914. His wife, Fay (Kalisher), preceded him in death some years ago. She was truly Ben's life-long love and he always devoted himself to her.

Ben had a long and varied career in the watchmaking profession. Following his academic education at the College of the City of New York, he achieved the status of Certified Master Watchmaker with the Horological Institute of America and subsequently with the American Watchmakers Institute.

Ben taught watch repair at two different times and served on the New York Board of Examiners for Watchmakers. Following his proprietorship of a watch company for a number of years, he served as Shop Foreman for the Cyma Watch Company. Following this he was the Manager of Technical Information for the Gruen, Bulova and Benrus watch companies. He was, perhaps, best known in our industry for his long-term role with Benrus.

As an accomplished writer, Ben served as the Horological Editor for the *National Jeweler*, *Chronos*, and the *Watch and Clock Review*. He also wrote numerous articles for the *Horological Times* as well as for other trade publications and for the *Popular Science* magazine. In recent years he authored an important and useful book, *The History and Development of the Quartz Watch*.

Ben was active in the affairs of various horological associations during his lifetime. He served as president and newsletter editor for the Horological Society of New York and he was a member of the Executive Committee of the Watch Material and Jewelry Distributors of America. He was in attendance at the Charter Convention of the AWI in 1960 and served our organization continuously until the last few years. He served on the AWI Industry Advisory Board and co-chaired the AWI Technical Committee. He also served as chairman of the AWI Standards Committee and the Technical Articles Committee.



In more recent years, Ben was the Adjunct Historian for AWI, serving as our primary liaison with the Smithsonian Institute. He even helped the Smithsonian to update their horological exhibit in the National Museum of American History. He also served on the Technical Advisory Board of the American Watch Guild in recent years. He is listed in the *Who's Who in the Jewelry Industry* and his work has been listed on the Internet website of the Smithsonian.

Benjamin Matz was a man of integrity who consistently dedicated himself to the field of horology. His proudest moment was on August 4<sup>th</sup>, 2001, when the Board of Directors of the American Watchmakers-Clockmakers Institute bestowed on him the honorary title of Fellow, AWCI for "enriching the field of horology by outstanding and meritorious contributions on national and international levels."

Ben, we will miss your love and passion for the AWCI. We will miss, even more, your smile, your friendship and your wonderful enthusiasm. —Ewell Hartman



Mark Butterworth

# The Modern German Clock Movement

Document, Document, Document

Part 70

I don't often take literary license with this column without believing I have a compelling reason. If the title sounds familiar, it is from the old real estate adage that the three most important considerations in purchasing property are location, location, location. Our daughter just bought her first home and our crash course in this experience reminded us that one can change a lot of things about the house, but not location or surroundings. One must have priorities. I received a call from an old customer recently asking for a new price list. No surprise there except that he told me the reason was that a fire started in the shopping center in which he was located and the entire complex burned to the ground. Here he was in a safe, simple, non-dangerous business, but the victim of a catastrophe nonetheless. Some can remember the Pearl Clock Company of Tennessee. It was one of the major players in the early 1980s. By the nature of its business, a lot of wood, glue, solvents, etc., were on the property. A major fire burned it down. They were underinsured, as I understand it, and never rebuilt—a fine company gone overnight. As a matter of trivia, it is my understanding that the reason the early insurance companies got their start in Connecticut was due to the disastrous fires in the clock factories in particular.

Whether we work out of a shopping center, in our basements, or something in between, we are very fortunate today. In the age of the computer, digital camera, etc., we have the ability to much more easily document what we have, and to organize and protect that information. We don't need a fire to

do damage these days. A computer crash can cost us dearly in time and effort. This is especially true as we not only depend on it more, but also use it as the sole location for the storage of data. What can we do? First, we need to identify the types of risks we have and then have the documentation to cover ourselves.

Of course, there are the risks of physical loss. The building burns down, blows down, or we are simply robbed are examples. We all remember Hurricane Katrina. Most insurance companies have teams of professionals who will come in at no charge and analyze the situation and determine what level of document is necessary for a claim. Do not wait until afterwards to ask what is necessary for documentation, what your deductibles are, or what is not covered. For us, our major assets are in the inventory. Office and shop assets such as computers and tools are much less in comparison, but still significant.

Another type of risk is that of data loss. Today, that can be very significant because of how much we depend on computers and the amount of information stored on them.

We use a Peachtree accounting system for both inventory and invoicing. Others such as QuickBooks are excellent also and one must determine what fits the need best. One of the really nice things is that we can back up the system nightly on a flash drive and I carry the backup home with me. We also back up the UPS computer with our customer information weekly and that backup also goes home with us. We did have a UPS



computer crash in fact. The tech people came with a new computer, uploaded our backup and we were shipping the same morning. Without it we would have lost 3,000 names and addresses from the computer that would have had to be hand-key entered. UPS technicians told us we were one of the few people who bothered backing up their computer. The good news is that modern technology makes the process faster and easier than was possible twenty years ago. The bad news is that many of us do not bother taking advantage of it. Most of us learn from sad experience. We had a computer crash several years before in which I did not back up our WordPerfect which contained articles, as well as price lists, etc. As a result, some things were lost and never recovered and some had to be reconstructed over again. I make lots of mistakes, but try to not make the same one twice!

Another risk is lack of organization or documentation in the first place. At least once a year we get a call from someone being audited by the IRS asking us if we have his or her purchases from us from several years ago. We regularly get calls from those with a clock movement that is defective and which surely must have come from us, but there is no documentation. We must tell people that their record keeping is their responsibility, not ours. It is a lot like organizing watch or clock material in one's shop. If one cannot find what is needed and in a reasonable time, it is as good as not being there.

The digital camera is a great invention to help document physical assets. Even basic pictures of the workplace, office, shop, and walls, help document in the event of loss, that one did in fact have the computer, file cabinet, tools, inventory, etc. The saying that a picture is worth a thousand words still holds in the courtroom. We can show we have tools, inventory, etc., and not just four walls and empty space that we claim were filled. This can also be very helpful in showcasing our shop or business to distant prospective customers or vendors. The fact that the technology is widely available and inexpensive makes it imperative to use.

If you have customers' merchandise on your premise, know the law for your state. Who is responsible for loss if something happens while it is in your possession either while on your property or when transporting it. Whose insurer is responsible—yours or your customer's? Does the customer need to sign a waiver or disclaimer? My father worked for a jeweler who required the customer to state on the repair ticket the value for items left for repair in the event of robbery. One of the big risks today is the customer who brings in the high-end watch that turns out to be a fake or has

other issues. One must have procedures and documentation that will hold up in court or with the insurer.

I believe it is more important than ever today to be both proactive and defensive in our approach to business. I hope this helps start your plan of action.

Final thought: "Be prepared."—*Boy Scout Motto*

Tip for the month: Regulating problems with the modern balance can be caused by the hairspring coils touching at the extreme swing ends of the balance motion.

*Editor's Note: HT Advisory Committee Member Karel Ebenstreit added these thoughts: Data backup is very important. Do not forget backup of digital camera pictures. Some cameras number pictures the same way when new media is started and, when backing up pictures to the same directory, the older pictures of the same number are copied over and therefore lost. Some data that does not change much, such as the UPS directory, should be burned on CD. It is not as volatile as the flash drive. Make more backups than one and verify that the backup was done correctly.* ☺



**B**  
**BERGEON**  
Depuis 1781

**BASELWORLD**  
THE WATCH AND JEWELRY SHOW  
APRIL 12-19 2007  
Hall 3<sup>rd</sup> - Stand D20

Winding and testing machine for automatic watches  
**No 6928**

**NEW**

**BERGEON & CIE SA**  
CH 2400 LE LOCLE  
Switzerland

www.bergeon.ch  
E-mail: info@bergeon.ch



J. Malcolm Wild, FBHI

# Aciera Precision Milling Machines

## Part 1

For anyone carrying out accurate milling, there is no more versatile machine than the Aciera. Many models were manufactured in Switzerland, the smallest – the F1 – being the most desirable for precision work in horology, instrumentation and model engineering. Aciera also produced precision drilling and tapping machines.

Aciera was founded in 1903, with the prime intention of serving the watchmaking industry. Its location was initially in the French-Swiss town of Le Locle, in the Canton of Neuchâtel.

By 1914 Aciera was employing 50 precision engineers but, with a change of management, production had started on universal machines not only for watchmaking.

With the passage of time and increasing demand, by 1943 Aciera had become a very large producer by local standards with more than 250 employees.

In 1969 the idea of a new factory was launched and by August 1973 the plant was ready in nearby Le Crêt-du-Loche, with a floor space of 14,000 square meters and 134 new production machines. (See Figure 2.)

By this time Aciera was selling its machines to 62 different countries, with the sale of their traditional range of machine tools growing annually following strong demand.

Aciera had made their name by manufacturing a range of small to medium sized universal machine tools of the highest precision for use in tool rooms and on the factory floor of industries such as watch and instrument making, electronics and research and development. These machines included single and multi-spindle drilling and tapping machines, universal milling machines and specialized versions of these for series production.

In 1978, following the death of the owner and managing director Mr. Albert Saner, the



Figure 1. Aciera factory.



Figure 2. Aciera assembly shop.

new management decided to invest in new technology and change from the traditional manually operated machines to electronic and computerized control. By so doing they went too far with their plans, by changing the successful basis of Aciera's business. They over-invested and overexpanded with new designs at a time when the market was not ready to buy new and untried machines.

In December 1991 Aciera was taken over by the German group Hermle, a family-owned machine tool concern. This group was being confronted by heavy competition problems and hoped that by buying Aciera they would obtain a larger sales base and eliminate important competitors. In this they failed and Aciera was declared bankrupt in February 1992 with total liquidation being completed by the end of 1994. The machines in the Aciera factory were sold to an Indonesian businessman.

The range of precision millers was extensive commencing with the F1 (Figure 3), which is the smallest and most useful for instrumentation work. The F2 is a very rare machine; only 12 were imported into the UK by Adam Machine Equipment, who held the Aciera agency from the early 1950s until 1978. Many F1s and F3s were sold during that time, the F3 (Figures 4 and 5) being supplied mainly to medium sized engineering companies for tool room work as the versatility of the machine with its many attachments was ideal to cover varied work. The F2 suffered with a design fault whereby the ram had not been designed with sufficient strength and suffered with deflection when machining loads were applied.



**Poseidon LT-100**  
**From Vibrograf®**  
*the leading waterproof equipment supplier*

- Dry Waterproof Tester using vacuum and pressure deformation test
- Color display prompts operator
- Programmable tests up to 10 Bar
- Printer can be added
- Automatic stabilization for maximum accuracy

Vibrograf® Sells 12 waterproof checkers  
 Let us recommend the correct one for your operation and budget.

**Contact**  
**Vibrograf USA**

**Ph: 516.437.8700**  
**Fax: 516.437.8708**

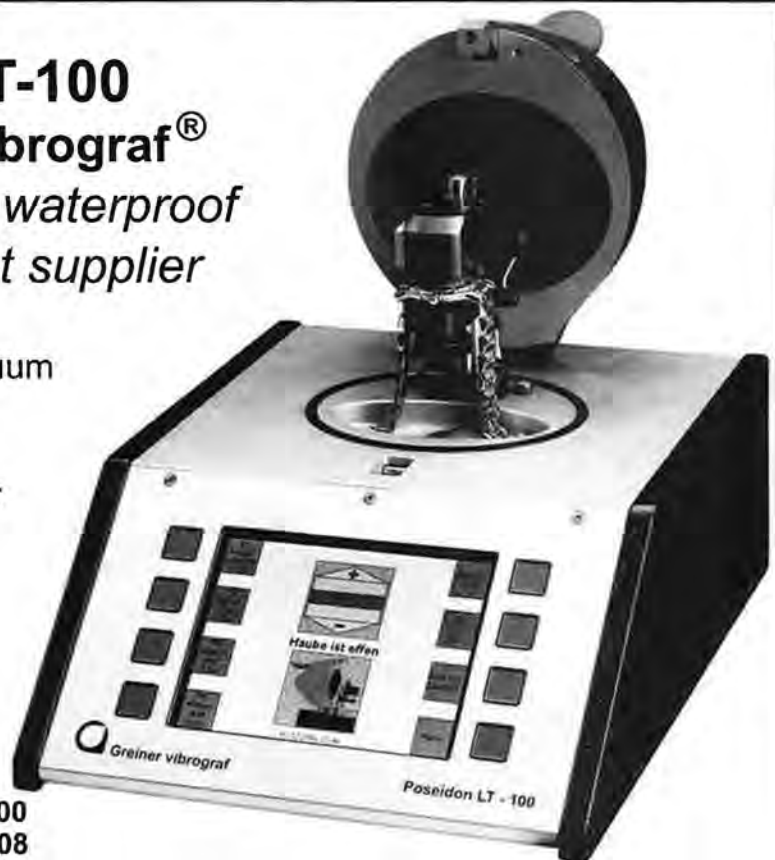




Figure 3. F1 from catalog showing horizontal and vertical mode.



Figure 4. F3 in horizontal mode.



Figure 5. F3 in vertical mode.

The largest machine was the F5, which had a table size of 32 inches x 12 inches. The type F4 had a slightly smaller table. As will be seen later, all these machines could be supplied with a wide range of accessories including dividing head, rotary table, slotting head, vices, etc. Another useful feature was the facility for both vertical and horizontal machining. The main table could also be tilted.

Many famous companies purchased these machines including Decca, Dowty, EMI, GEC, Kodak, The Ministry of Defence, Rolls Royce, Smiths Industries and many universities.

Figure 6 shows the type F12 produced in 1943. This was the

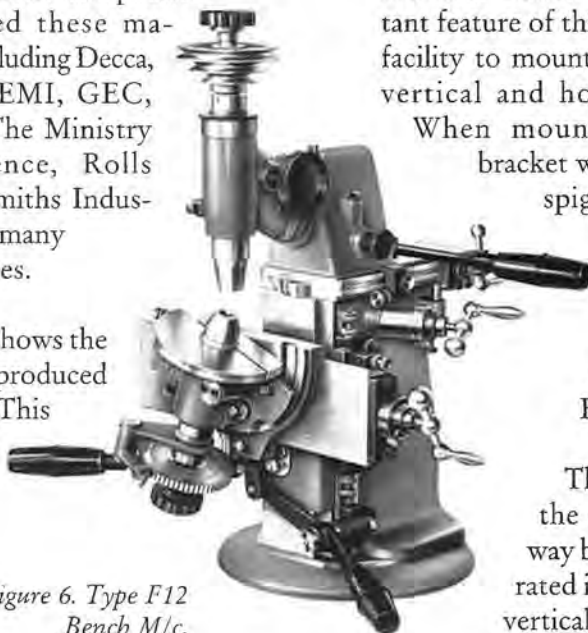


Figure 6. Type F12 Bench M/c.

forerunner of the F1, the machine of most interest to our readers. Production of the F1 commenced around 1950 and this proved to be a very successful design, made to extremely high standards of accuracy and the usual Swiss precision. The main spindle accepts 12 mm collets, the same size used on the Schaublin 70 instrument lathe.

Figure 7 shows the Aciera fitted on its cabinet with the milling head mounted horizontally. An important feature of this machine was the facility to mount the head in both vertical and horizontal modes.

When mounted vertically a bracket was supplied with a spigot that fitted the bore in the ram. This accessory is shown with others in the main sales catalog, see Figures 8-11.

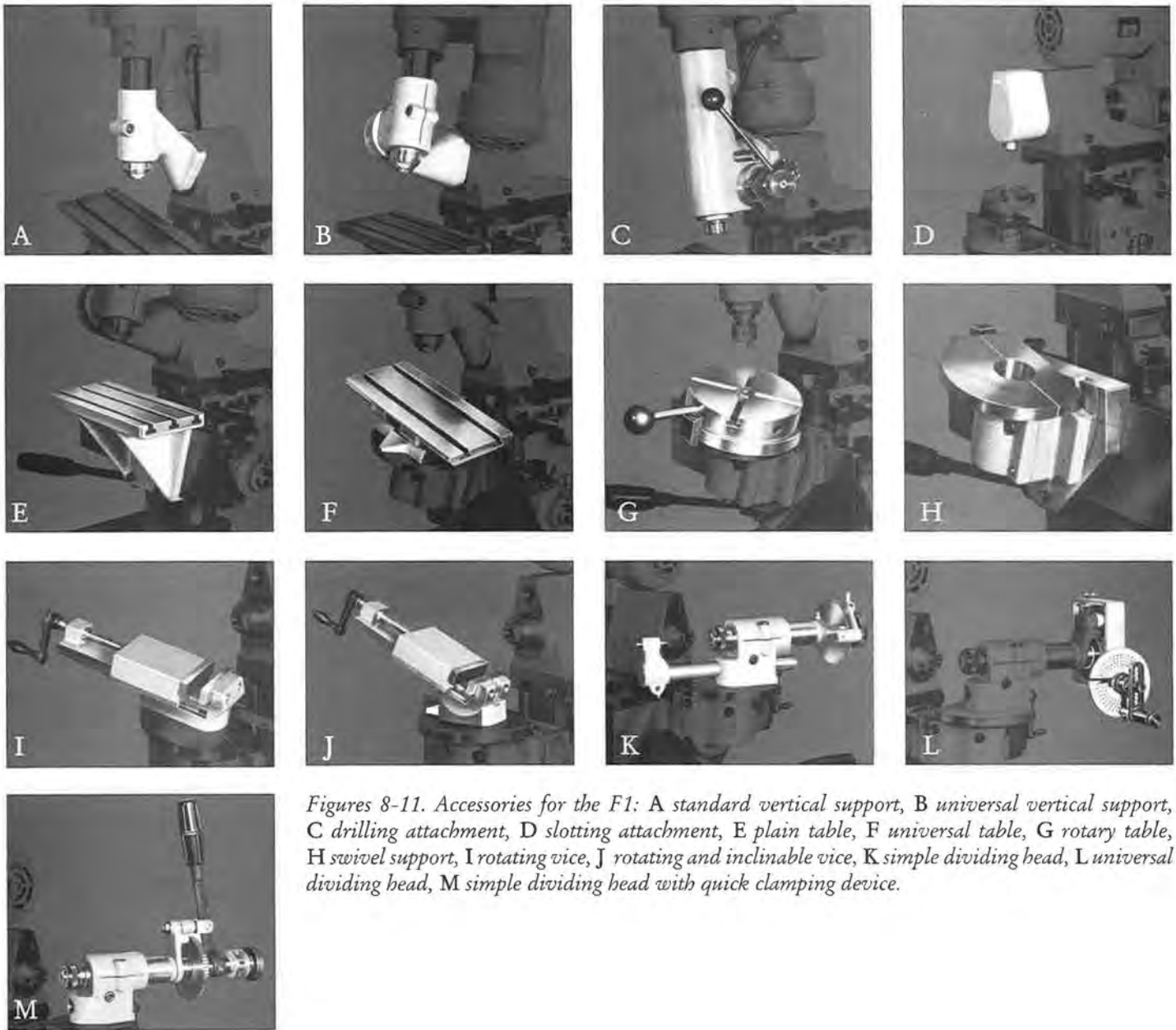
The facility to swing the spindle over each way by 45° was incorporated in the design of the vertical bracket. A sector



Figure 7. Aciera fitted on its cabinet.

portion of the casting was suitably engraved and the bracket pivoted on the spigot that fitted the ram.

Another feature of this machine was that all accessories, adjustable stops, and clamps were operated with one single 6 mm Allen key. The 3-jaw self-centering chuck supplied with the machine also had a 6 mm socket



Figures 8-11. Accessories for the F1: A standard vertical support, B universal vertical support, C drilling attachment, D slotting attachment, E plain table, F universal table, G rotary table, H swivel support, I rotating vice, J rotating and inclinable vice, K simple dividing head, L universal dividing head, M simple dividing head with quick clamping device.

for operating the jaws in place of the normal square key.

Many F1s were supplied as horizontal machines only for production work; these were the F1N and F1H. Automatic feed to the table could also be fitted.

As can be seen from Figures 8 to 11, there were many useful accessories available to enable the operator to carry out the most complicated work.

Figure 12 shows the universal table in position. This fits into the swivel support, as do a number of the accessories. The table tilts forwards and backwards 30°. It also tilts from left to right as well as being able to rotate in the horizontal plane. Also available was a plain slotted table. This is shown in



Figure 12. Universal table.

Figure 13, together with the centering microscope mounted in the main spindle.

Figure 14 shows the dividing head mounted vertically; direct indexing from both notched plates and from worm and wheel can be facilitated. With the accessory mounted in this position it is possible to drill PCDs



Figure 13. Plain table and centering microscope in spindle.

and carry out similar work. As with the main F1 spindle, the dividing head accepts 12 mm collets and the nose is threaded 22.6 x 2 mm as is the Schaublin 70 instrument lathe. This enables work to be transferred from one machine to the other, maintaining concentricity.



Figure 15. Dividing head mounted horizontally.



Figure 14. Dividing head mounted vertically.



Figure 16. Milling a clock pinion.

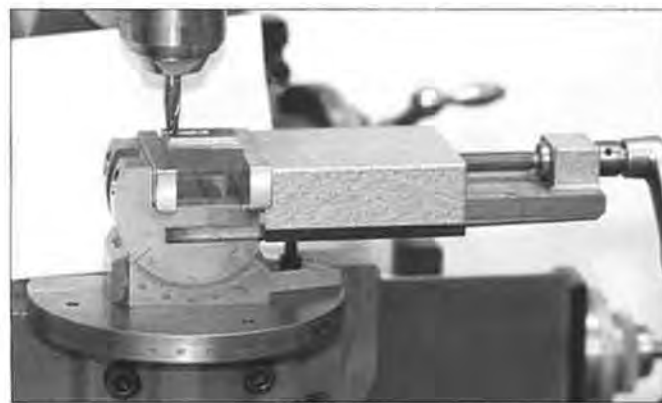


Figure 17. Rotating and inclinable vice.



Figure 18. Rotary table.

Figures 15 and 16 demonstrate machining a 12-leaf pinion, the dividing head and main spindle are both mounted in the horizontal position.

Two types of precision vice were available, both rotating. One had tilting facility enabling work to be angled through 90°. Figure 17 shows the angled vice in position mounted in the accessory table. Work is being machined using an end mill held by a collet mounted in the vertical spindle.

Figures 18 and 19 show the rotary table and slotting head mounted on the machine. The rotary table does not have the normal design of worm and wheel to rotate the table. The rotary movement is by handle and angular motion is controlled by adjustable stops mounted in slots on the edge of the main table.

A slotting head is a useful accessory. This one is quite robust but the stroke is limited to only 10 mm.

Having used the machine for three years or more, there appeared to be one major disadvantage. This was that there had never been a vertical quill supplied with the machine. The main sales catalog illustrates a unit described as a drilling unit, which accepted 8 mm collets, not the 12 mm size used on the machine. According to Adam Machine Equipment's records, none of these units were ever supplied.

Part 2 will launch the design project to fit this versatile machine with a quill.

#### Acknowledgments

L. Iain Loch, Sales Director (now retired) of Adam Machine Equipment Ltd., Sole UK Agents and Importers of the Aciera machines 1954-1978.



Figure 19. Slotting head.

*Editor's Note:* Caution should be taken to check the power supply requirements before purchasing this unit from Europe. The voltage and number of phases information is not shown on the general specification sheet. The motor on these units is powered by 380 VAC 3 phase. ☺

**HERMLE • KIENINGER • URGOS  
H. HERR • REGULA**

from

**Butterworth Clocks, Inc.**

*Why repair when you can replace?*

**THE LARGEST MOVEMENT SUPPLY IN THE WORLD**

**FREE PRICE LIST:**

Call toll free: 1-800-258-5418

5300 59th Ave. W • Muscatine, IA 52761

E-mail: [bci@muscanet.com](mailto:bci@muscanet.com) • Web: [www.butterworthclocks.com](http://www.butterworthclocks.com)

**SAME DAY SHIPPING • TWO-YEAR WARRANTY**

Mark Butterworth



Laurie Penman

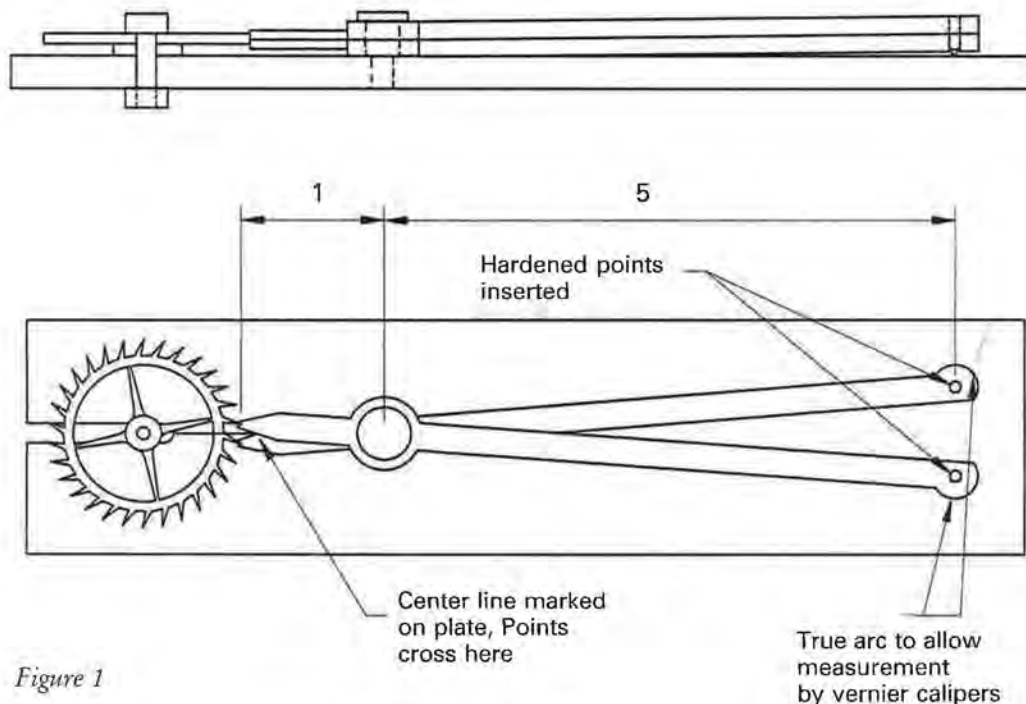
# One or Two Useful Tools

The minor variations in tooth pitch that occur while cutting a wheel or an escape wheel do not usually affect the working of a clock—so long as it will work at all with those variations. (Clearly if the variations are too great in a deadbeat, the escapement will not lock and unlock properly.) The proof is that clocks made in the early 19<sup>th</sup> century and earlier are still working well despite being made by direct division and with plates that might have been a quarter of a century old and more.

Direct division is the use of a drilled plate that is directly attached to the wheel blank. Whatever angular error there may be between one drilled hole and the next, is reproduced faithfully in the wheel being cut. The plates were considerably larger than the wheels being cut so that the actual changes in pitch around the circumference of the plate hole ring was reduced for the teeth of the wheel. However, this does not reduce

the angular errors. You must remember too that the holes in the plate were originally marked out by hand, using dividers and the errors resulting would be reproduced in the cut wheel. I dare say that it is possible to prove that a group of wheels from different clock movements have been cut on the same machine, simply by mapping errors. (Now that is a research program for someone—establishing manufacturing patterns and commerce routes.)

Wheel cutting engines were expensive and a clockmaker with an output of a few clocks per year would be likely to use it all his working life and then pass it on to his son. At the end of its life the holes would not be round and the location of the dividing lever for each tooth cut would be much less precise than it was when the machine was new. There is no doubt that old wheels and escape wheels have pitch errors, but for the ordinary clock this was of no importance.





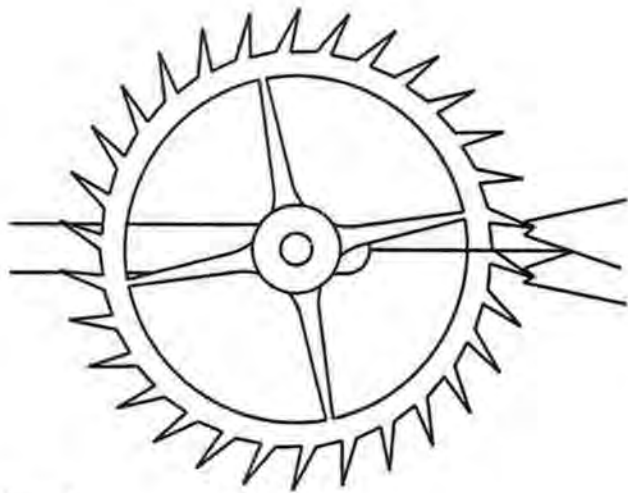


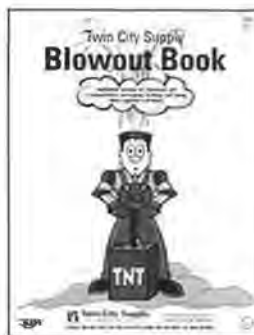
Figure 2

Incidentally the wear on direct dividing plates is one of the reasons for a clockmaker's occasional choice of an unusual count of gear. When a frequently used ring of holes became too worn for use, the clockmaker could either drill a new ring of that count, or choose a ring that was not worn and fiddle with his train calculations. This could result in a seconds pendulum that was, for instance, four inches longer or shorter and a beat that was clearly outside the normal 3,600 per hour.

However, when dealing with a precision clock we would like to have the drive as smooth as possible and in particular, pitch variations on an escape wheel will have a direct effect upon the escapement operation and the behavior of the pendulum. An early clock of mine had an escape wheel diameter of 106.9 mm and 48 teeth. Impulse was shared between an incline plane at the top of each tooth and the impulse plane of the pallets. It was designed as a regulator.

The first wheel that was cut on my usual setup totally failed to operate properly and I discovered that my method of dividing led to two sets of sinusoidal errors that gave pitches differing by as much as 0.008" in the worst cases. Since the pitch was nominally 0.275" and I was allowing 5% for drop and lock (0.0137"), this error interfered badly with the operation of the escapement. The errors were measured and tabulated by my then apprentice, David Carne. It was a tedious process but it revealed the reason for the errors (an angular and a linear displacement of the center of the dividing head from the mandrel of the lathe). It would have been a much simpler procedure with the instrument shown in Figure 1. The fingers are made from gauge plate (flat ground stock about 1/32 of an inch thick) and they are notched to locate on the tips of the wheel (Figure 2). There is a center line scribed on the base plate and the

# Spring Values from Twin City Supply!



## Our NEW Blowout Book is now available!!

16 pages of amazing closeout specials — Call now! Or send your email address to [Twincitysupply@msn.com](mailto:Twincitysupply@msn.com) and we will e-mail you the PDF of the book today!

### FREE Pen Light!\*

One free with purchase of 300 Energizer Watch Batteries.

### This Months HT Special!

377/376 Reg. 27¢ Sale 24¢ ea!

364/363 Reg. 27¢ Sale 24¢ ea!

\*Minimum purchase of 100 per style for sale price. One free pen light per account. **Must mention this ad when ordering.** While supplies last. Prior purchases do not apply. Offer expires 6.15.07.



### Special savings on Clock Bushings!

#### Lowest pricing in the US!

From Bergeon, KWM, "The System" and more. Call for our inventory list.



### Closeout— save up to 80% of retail!

Close out on all remaining leather and metal watchbands from **Kreisler** and **Flexon**! Call for our inventory list.

## Twin City Supply

2230 Edgewood Avenue South Minneapolis, MN 55426-2823

USA: 800.328.6009 • Fax: 800.328.6001



[www.twincitysupply.net](http://www.twincitysupply.net)



3.07 HT

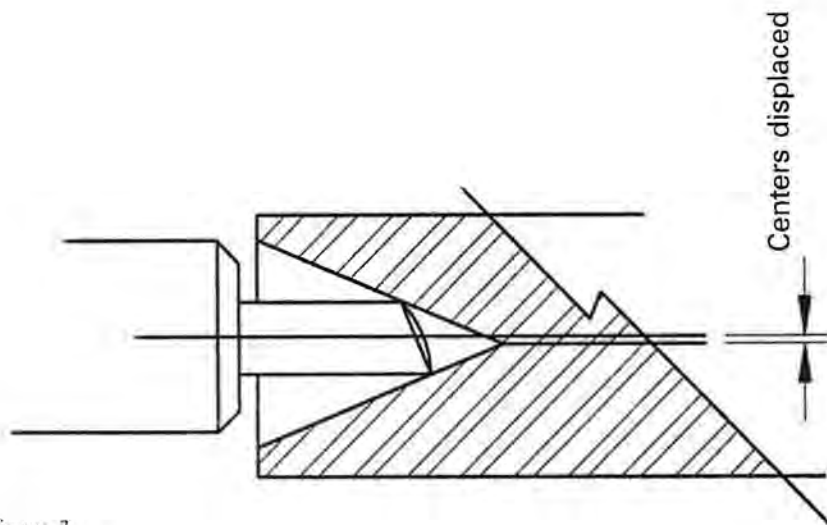


Figure 3

fingers must cross on the center line, which they will do if they are filed together to be accurate mirror images. A piece of thin brass sheet is clipped under the points; and after the first pitch has been measured with the fingers, the one lying next to the base plate is clamped there, while all the other tooth pitches are tested. The error is shown by the movement (and scratch) of just the upper finger. Note that the ends have been given true arcs centered on the points so that a vernier may be used to measure the amplified pitch instead of relying on the scratch mark. The wheel is mounted on an arbor and bush so that it remains upright while being slid along the slot in the base plate to engage the notched fingers.

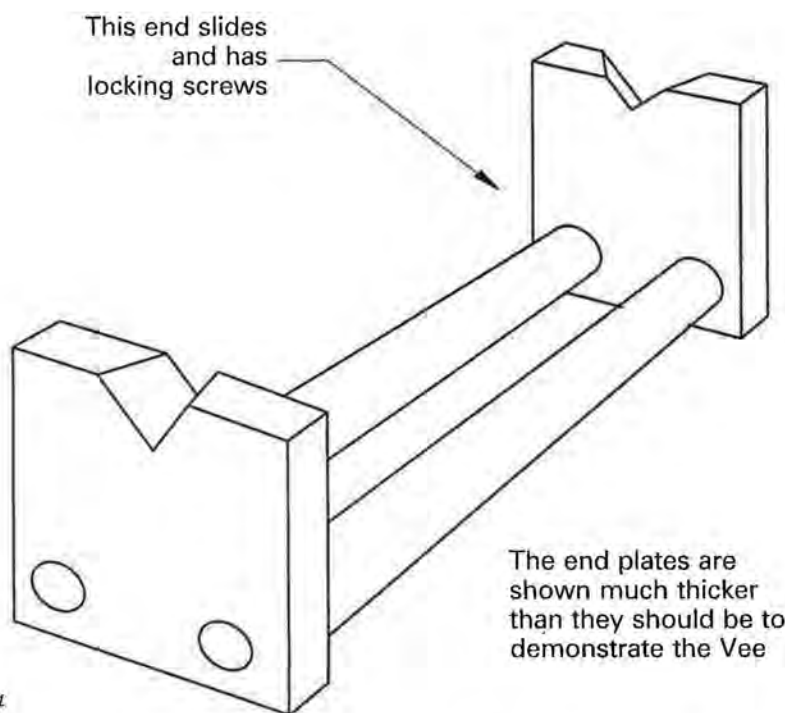


Figure 4

It will operate on gear wheels too, with a modified notch in the fingers, and since the marked plate is a piece of brass, copper or aluminum the record is pretty permanent.

The ordinary depthing tool is not a precise means of testing whether a wheel is running true to its pivots or not. For movements that can accept modest errors without being noticed it works well, but for precision work there are one or two points to note. The first is that the hollow cones that contain the pivots run on the ends of them. Any deviation from truth at the end of the pivots (Figure 3) will "throw" the wheel, only a matter of one or two thousandths of an inch, but we are talking of precision here. The second is that for the wheel to run freely, there must be a certain looseness in the contact between the pivots and the hollow-ended runners, and the third is that most of the pivot is hidden by the cone and cannot be seen. If it is bent very slightly, that fault is invisible and the resultant throw may be attributed to the mounting of the wheel. I always prefer to run each wheel in the movement plates to check for true running; however, the tool in Figure 4 is simple to make and makes it easy to view the whole length of the pivot and the rest of the assembly as it rotates. Do not use hardened knife-edges on soft pivots, they may scratch a groove in them. Modify the supports to have flats in contact with the pivots.

I have not detailed the drawings because clockmakers' needs vary greatly, and so Figure 4 is virtually a schematic.

⊕

# AWCI Honor Awards

The Honor Awards Committee would like your help in finding applicants who fulfill the requirements for the achievement awards given out at the AWCI Convention and Educational Symposium held in August. The awards and what the committee needs in writing is described below.

## AWCI Fellow Award

This is AWCI's most prestigious award. It carries the endorsement of one's peers as an outstanding member of the Horological Community. The person must have these qualities:

- Tangible evidence of leadership abilities
- Active participation chairing or serving on committees
- Publication of articles in horological publications
- Given lectures, workshops and technical demonstrations

## Outstanding Achievement Award

Recognized for outstanding personal achievements or accomplishments such as projects, inventions, or innovative or creative ideas that meet a need in the field of Horology.

## Meritorious Service Awards

Will be awarded to a person who has made a significant contribution to AWCI and its members.

The application to nominate someone for these awards must be written and received by the committee chairperson by May 31, 2007. Any questions or concerns, contact: Glenn Gardner, CMW at ggardner1@charter.net or call 608-233-1444 (work), 608-831-1883 (home), or one of the committee members: Gerald Jaeger, Ewell Hartman, Elbert Lewis, Dan Spath, Gerald Kincaid.

# Livesay's

Tampa, Florida Inc.

Wholesale Jeweler & Watchmaker Supplies  
Since 1969



### BER-6899 Bergeon 6899 10 Piece Screwdriver Set

This new range of ergonomic watchmaker's screwdrivers offers tools that combine a high technical quality with ease of use. The screwdrivers are fitted with an elastomeric membrane to guarantee optimum contact between the tool and the watchmaker's hand, while the octagonal head ensures even greater comfort. The balance and feel is unsurpassed.

\$257.40



### 42.260P Bergeon Dip Oiler Set

Bergeon dip style oilers have flat steel tips for picking up oil and depositing on touch. They have clearly defined spade shapes in 0.20, 0.30, 0.50 and 0.80mm sizes. The plastic handles are non-rolling and color coded for quick identification.

Just \$9.50 for set of 4



### Movement Holders for use with Rolex®

Adjustable center pin provides proper support for Rolex® watch movements. Built of polished aluminum. Three different color-coded models to choose from.

Stock No.	Description
591.070	Movement Holder for 1570 (Blue)
591.072	Movement Holder for 2135 (Gold)
591.074	Movement Holder for 3035 (Red)

\$14.95 each



Phone Orders Toll Free 24 Hour FAX Orders Online Catalog  
(800) 476-2715 (800) 476-8016 www.LivesaysInc.com  
Local Voice Local Fax Email  
(813)229-2715 (813)221-8016 info@LivesaysInc.com

Note: Livesay's Inc. is no way associated with Rolex®; nor does Livesay's Inc. attempt to portray itself as an agent of Rolex®. The above parts are not manufactured by or for Rolex® and does not carry any endorsement from Rolex® implied or otherwise.

Prices are in effect until May 31, 2007 or until present supplies are depleted.

# 2007 JCK Show – Las Vegas

The 2007 *JCK* Show – Las Vegas will be held in two locations: The Sands Expo and Convention Center/The Venetian Hotel Resort & Casino, and for the first time the Las Vegas Convention Center (LVCC). Highlights of the 2007 event will include a brand new Luxury Gift Collection called Cadeaux; a new Time Pieces Pavilion that will focus on accessories and many fine international jewelry manufacturers that will all be featured at the Las Vegas Convention Center. The *JCK* Show – Las Vegas 2007 will take place Friday, June 1 through Tuesday, June 5 with educational sessions being held on Wednesday, May 30 and Thursday, May 31.

“We conducted extensive research during the show, and the jewelry retailers who are loyal to the *JCK* Events overwhelmingly expressed interest in seeing new product categories, which we are planning to feature in 2007,” explained Dave Bonaparte, Vice President, *JCK* Events. “Our goal is to produce the most comprehensive and exciting jewelry event in the industry, and by taking space at the LVCC we are able to bring in new features that will benefit the manufacturers and the retailers.”

With the addition of the Las Vegas Convention Center, *JCK* Events will offer several amenities for the attendees including a sweepstakes for a 2007 Pontiac Solstice Convertible; earlier registration hours with no lines; earlier exhibit hours – the LVCC will open at 9:00 AM each day; daily prizes including restaurant gift

certificates, shopping sprees, free travel coupons; afternoon wine & cheese receptions; built in networking lounges on the exhibit floor where complimentary lunches for buyers will be served; additional educational sessions; and a dedicated transportation system between the LVCC, the Sands and the show hotels.

“With the addition of new exhibitors and product categories and a new exhibit hall it will be extremely important for retailers to register early, and take advantage of the appointment making programs that we have available,” added Bonaparte. “We will be offering several ways for exhibitors and retailers to communicate prior to the show, and set up their schedules. We invite the *JCK* retailers to plan to visit the LVCC early in the day, since it will have a 9:00 AM opening, and then head over on one of our many shuttle buses to the Sands.”

**5<sup>th</sup> Annual Swiss Watch by *JCK*:** The industry’s elite retailers will once again have the opportunity to schedule appointments to view the lat-

est Swiss Watch collections during the 5<sup>th</sup> Annual Swiss Watch by *JCK* being held at the beautiful and upscale Venetian Resort Hotel Casino from Friday, June 1 through Tuesday, June 5. This event, produced by *JCK* Events in conjunction with Kaiser Time offers jewelry retailers a convenient location to schedule appointments with the top brands including Baume & Mercier, Bulgari, Christian Dior, Chopard, Corum, Dunhill, Ebel, Gucci, Harry Winston, Hermes, Hublot, IWC,

## 2007 JCK SHOW — LAS VEGAS

**Visit AWCI  
Booth 33085  
Hall of Time**



Maurice Lacroix, Mont Blanc, Piaget, Swatch Group USA, Tag Heuer, Ulysse Nardin and Zenith in a private and exclusive setting.

"Swiss Watch by JCK offers Baume and Mercier the opportunity to present to our retailers the very latest introductions in a luxurious and personal environment. Most importantly, the Venetian offers a very convenient location that allows our retailers the very important ability to maximize their time away from their stores," said Rudy Chavez, President of Baume & Mercier.

Retailers from around the world arrange appointments including executives from Ben Bridge Jeweler Inc.; London Jewelers/Udell Jewelers, Inc.; Lux Bond & Green Inc.; and Tourneau, Inc.

Swiss Watch by JCK is complimented by the convenience of having LUXURY by JCK and The JCK Show – Las Vegas all in one location. To find out more information about Swiss Watch by JCK 2007, contact Diane James of Kaiser Time at 646-473-1640 or e-mail at [djames@kaisertime.com](mailto:djames@kaisertime.com), or visit [www.jckgroup.com](http://www.jckgroup.com).

Swiss Watch by JCK is produced by JCK. The series of JCK Events are designed to serve the worldwide jewelry industry by offering the most comprehensive and complete buying and selling opportunities on a business-to-business basis.

For more information on 2007 JCK Show – Las Vegas, please visit [www.jckshows.com](http://www.jckshows.com) or simply call 1-800-257-3626. ☺

## Our Timing Machine Meters Rate, Beat, AND Amplitude As Required by High End Watch Manufacturers

- Large easy-to-read LCD Digital Display of Rate, Beat Error and Amplitude in both Numbers and Graph Diagram.
- Four different display modes as well as multi-rate display, diagram shift, simulation of beat noise and "pause" functions.
- Tests Watches with Beat Numbers from 18000 to 36000.
- Automatic or Manual Beat Selection.
- All displayed diagrams and parameters can be printed to a thermal printer.



Multifunction Timegrapher for Mechanical Watches



590.859 Monochrome Timegrapher ..... \$1395  
590.862 Color Display Timegrapher ..... 1595

Thermal Printer  
Includes cables and paper.  
590.863 Printer..... \$269



**Cas-Ker Co.**  
2550 CIVIC CENTER DR PO BOX 31167  
CINCINNATI OH 45231-0167

CALL 1.800.487.0408  
FAX 1.800.487.5848  
Shop our web site: [www.casker.com](http://www.casker.com)





Jack Kurdzionak, CW21

# From the Workshop

## You Are Invited

Do you have a solution to a watch or clock repair problem that you want to share with our membership? Do you have a question about a repair problem you would like to ask? I invite you to participate in this column with your suggestions, questions, and comments. It is easy. Just e-mail me at AWCI <magazine@awci.com> or write using the old standby known as the postal service. You can even fax me at 513-367-1414.

I will do my best to help you help the membership. By sharing your questions and suggestions, all of our members can benefit from our combined knowledge and experience. The ideas, tools, techniques, and products presented in this column are suggested by the author and contributing members and are not endorsed by any manufacturer, supplier, advertiser, or AWCI itself.

## Freshness Dating

Did you ever wonder what all those tiny letters and numbers found on ETA movements mean? Did you think it to be some kind of graffiti they put on the movement to keep us, the watchmakers who service these movements, asking questions? Alternatively, did you assume it some kind of secret code, only known to the folks at ETA? Those who believe it to be a code are correct, but it is not a secret. The letters and numbers found on all Swiss ETA products indicate the country of origin, the ETA division that produced the movement, the plant in which it was made, and the production date.

ETA, the movement manufacturing division of the Swatch Group, marks each Swiss-made movement, both mechanical

and quartz, with a V8 somewhere on the movement. The V8 indicates the movement was produced in Switzerland under the responsibility of ETA in Grenchen. Most often, the production codes are located under the battery insulator in quartz movements and near the balance assembly in mechanical movements.

The standard production code consists of two letters and a digit. The first letter in the code indicates the plant in which the movement was assembled. The literature from ETA does not provide any information regarding the code letters for each manufacturing facility. The second letter in the code represents the year of manufacture. The final digit denotes the monthly period of manufacture.

The accompanying chart displays the letters used to denote the year of manufacture. They only use 20 letters, omitting G, I, O, Q, Y, and Z. The current cycle began in the millennium year of 2000 and will repeat again beginning in 2020.

Year	Letter	Year	Letter	Year	Letter
1997	V	2007	J	2017	V
1998	W	2008	K	2018	W
1999	X	2009	L	2019	X
2000	A	2010	M	2020	A
2001	B	2011	N	2021	B
2002	C	2012	P	2022	C
2003	D	2013	R	2023	D
2004	E	2014	S	2024	E
2005	F	2015	T	2025	F
2006	H	2016	U		

The digit at the end of the code indicates the period of the year in which the movement was manufactured as shown in the chart below.

1	January-February	4	July- August
2	March-April	5	September-October
3	May-June	6	November-December

A movement marked V8 XJ3 was made in Switzerland (V8), at plant X, in the year 2007 (J), and during the months of May and June (3). Copy these charts for future reference to check the freshness of the movements you are purchasing. The date code provides some timely clues for those watchmakers who perform time restricted warranty service on these movements.

*Jack Kurdzionak*

### That Is Not Possible

All watchmakers and clockmakers have had work come to their shops that they really do not want to accept for a variety of reasons. Many, rather than say no, accept the work, with some sort of precondition that, we hope, will not be acceptable to the client. We may think a high price estimate will discourage the client, but that

can backfire if the client says, "Yes, do the work." Another tactic some may use is to give an indefinite completion date far into the future, but that may fail as well if the client agrees to a long-term repair. Even the combination of a high price and indefinite completion date may not be sufficient to send the job away. Once the client agrees to price and/or many months in the shop, we are committed to the task without any opportunity to back out, short of retirement from the business.

"No" can be difficult to say to someone making a request. Our inclination is to be helpful to others and display our competence to clients. Yet, sometimes we watchmakers and clockmakers must refuse work. The reasons to refuse work can include a lack of spare parts, insufficient experience with a specialized timepiece, previous negative relationship with the client, etc. Experience and the wisdom that we acquire during our careers are invaluable aids to use as we determine when to accept work and when to turn it away.

No one can repair every watch or clock presented for repair. Each of us has a skill set that allows us to perform certain tasks very well. Understanding one's own set of skills and knowing the limitations of those skills

706 S. Hill St., #580  
Los Angeles, CA 90014



**SMITH SUPPLY HOUSE**  
LOS ANGELES

Tel: (213) 622-1687  
Fax: (213) 488-0922

---

Watch Materials, Supplies & Tools

Watch Battery Distributor

## MAINSRING WINDERS

**TO FIT**

**LADY'S ROLEX CAL. 1400/2030/2035/2130/2135/2230/2235**

**MAN'S ROLEX CAL. 1530/3035/3135**

**\$59.75 each**



SMITH SUPPLY HOUSE IS NOT AFFILIATED WITH OR SPONSORED BY ROLEX WATCH U.S.A.  
THE ROLEX WARRANTY DOES NOT APPLY TO GENERIC REPLACEMENT PARTS SUPPLIED BY SMITH SUPPLY HOUSE.



**YOUR SUPPLIER OF SPARE PARTS FOR ALL BRANDS OF  
MECHANICAL AND QUARTZ WATCHES, CLOCKS AND ALARMS**



---



**CALL TOLL FREE (800) 23-SMITH**

VISIT OUR WEB SITES  
[www.smithsupplyhouse.com](http://www.smithsupplyhouse.com) & [www.watchpartonline.com](http://www.watchpartonline.com)



broadly defines the scope of one's work. A clockmaker, specializing in the repair of modern German clock movements, when presented with an antique repeating French carriage clock for repair, may politely decline the opportunity. That is, unless the clockmaker has expertise in that area. Without the requisite expertise to service the French clock, the clockmaker probably could not make either a quality repair or a profit on the job.

Consider the watchmaker who is asked to guarantee a completion date for a watch repair. A watchmaker, who enters into this type of agreement, should be prepared for trouble. We depend upon many suppliers and sub-contractors in our profession. Even a simple repair becomes complicated when a required part is out of stock; a refinished dial arrives late, or an unanticipated problem with the movement requires extra time to repair. It seems that a time sensitive repair is the one that always causes trouble. Conversely, for reasons unknown, repairs accepted without demands for a guaranteed completion date generally are completed without complications. Always consider carefully time sensitive repairs before accepting them. A delayed repair, regardless of how well done, has the potential for major customer dissatisfaction.

All of us have heard this partial job request: "Can't you just fix the \_\_\_\_\_ (you fill in the name of the part) and not do the complete job? It only needs that part fixed. It runs perfectly except for that." A partial job, especially when the watchmaker or clockmaker recommends a comprehensive repair, is a recipe for trouble and spell that with a capital T. Regardless of any disclaimers given to a client, a partial repair comes with some expectation of a performance warranty. If, in one's professional judgment, a partial repair is inappropriate, it is wise to politely decline the job. Partial repairs, for a partial fee, often result in a full warranty repair at no additional charge, to satisfy the client. It is far better to refuse such a repair. The wisdom in the

old saying, "Do the job right, or do not do it at all" has not changed.

Another request that deserves to be turned down is, "I would like to have you do this repair, but can you charge me less than you have estimated?" The client is really asking, "Will you accept a reduction in pay to do first class work for me or will you do a second class job for less money and still provide a first class warranty?" Neither alternative makes any business sense.

Some clients just do not seem to connect well with a given watchmaker or clockmaker. The personal chemistry between the professional and the client just is not right. We sense that a client will never be satisfied with our services. Although there is no way to define each situation, but when they occur, it is best to let your intuition and experience help you decide. When intuition and experience say, "Do not accept any work from this person," let them be your guide. Politely decline the work. It makes no sense to work for a person who will not be satisfied with your work.

How does one politely refuse work and not just bluntly say, "NO"? In many cultures, people seldom use the words yes or no. An affirmative response can be, "that is possible" rather than just yes. The negative response, "That will not be possible" is much easier to accept than a blunt, "NO." It sounds much better than even a softly spoken "no." When it seems the client is not going to easily accept a negative response, an alternative answer can be, "I will see if it is possible." That delay allows time to defuse a situation so that the negative response can be gently postponed. Although it does not really change the answer, somehow it is more palatable to the listener. No one is required to repair every timepiece for every client, but we must be able to politely decline some work from some clients.

*Jack Kurdzionak*



## PARTS MESSAGE BOARD

The American Watchmakers-Clockmakers Institute **Parts Message Board** is available on line at [www.awci.com](http://www.awci.com) Click on the Parts Forum in the Top Links box. Guests are free to browse our topics and posts but only validated AWCI members will be able to actively post messages and communicate with one another via private messaging.

The purpose of this board is to aid our members in finding watch parts, clock parts and tools. This board is not open to generic advertising posts; therefore, web addresses and e-mail addresses should not be included in public messages.



# AWCI ACADEMY OF WATCHMAKING CLASSES

**Manuel Yazijian, CMW21 Instructor**

**AWCI is offering a series of watchmaking classes throughout 2006 and 2007. The series will consist of 5-day sessions covering a variety of subject matter. Each 5-day block will cost \$600.000. For additional information, contact Education Coordinator, Nancy Wellmann [nwellmann@awci.com](mailto:nwellmann@awci.com) or call (866) 367-2924, ext. 303. Class information is also available at [www.awci.com](http://www.awci.com)**

May 7-11, 2007	Modern Mechanical Chronographs
June 11-15, 2007	Introduction to the Watchmaker's Lathe
June 25-29, 2007	Precision Timing & Adjustment
July 9-13, 2007	Modern Mechanical Chronographs, Servicing and Adjusting
August 27-31, 2007	Modern Automatic Watch Repair
September 24-28, 2007	Vintage Chronographs - Bernhard Stoeber, Instructor
October 22-26, 2007	Basic Watch Repair, Servicing and Adjusting
November 5-9, 2007	Introduction to Basic Quartz Watches & Quartz Chronographs

## AWCI CERTIFICATION EXAM SCHEDULE Certified Watchmaker & Certified Master Watchmaker

May 21-24, 2007	AWCI Training Facility	Harrison, OH
August 13-16, 2007	Saint Paul College	Saint Paul, MN
August 27-30, 2007	Lititz Watch Technicum	Lititz, PA
September 4-7, 2007	North Seattle Community College	Seattle, WA
October 8-11, 2007	Oklahoma State University	Okmulgee, OK

**To register for an exam or for more information contact  
Education Coordinator, Nancy Wellmann at [nwellmann@awci.com](mailto:nwellmann@awci.com)  
or call toll free 1-866-FOR-AWCI (367-2924)**

# AWCI Business & Pricing Surveys

The AWCI Business and Pricing Surveys provide statistics on business expenses, rates charged by clockmakers and watchmakers around the country, and much more. Do you want to increase your bottom line? Order your copy today!

## AWCI Business Survey

The purpose of the business survey was to learn more about members' business environments, income, and demographics such as age and location. The results for most questions are presented with a national average and a high and low range, and regions are also broken out.

## AWCI Pricing Survey

The purpose of the pricing survey was to learn more about members' charges and hours, their business, their income, and their demographics such as age and location. The results for most questions are presented with a national average and a high and low range, and regions are also broken out.



**AWCI Business & Pricing Survey**      \$ 80.00

AWCI members who participated in the survey  
(Your participation will be verified)

**AWCI Business & Pricing Survey**  
Retail: \$200.00      AWCI Members: \$100.00

**To place your order, please visit our website [www.awci.com](http://www.awci.com) or call toll free 866-367-2924, ext. 301**

## AWCI Member Benefit

**Office DEPOT**  
*Taking Care of Business*

AWCI strives to bring more value to your association membership. That is why we have teamed with Office Depot to bring your business a better office supply solution. Some of the benefits you can count on are:

- Savings ranging from 10% to 80% on 176 frequently purchased items
- Discounts ranging from 20% to 55% at all Copy and Print centers in every retail store
- 5% savings on all other items\*

\*Substantial discounts on Office Depot's already low prices for copier paper and toner

Visit AWCI's website, [www.awci.com](http://www.awci.com) and click on "Members Page" under the "Home" menu and follow the Office Depot link, click on the link to register for the discount.

Note: Office Depot Benefits are available only in the U.S.A.



## New Members

### Arizona

Peck, Kenneth E.—Phoenix, AZ\*

### California

Hornbrook, Paul—Belmont, CA  
Lado, Hector—West Covina, CA\*  
Mooring, David—Los Altos Hills, CA  
Weinstein, Robert—La Mesa, CA

### Florida

Hamilton, Jeff—Tallahassee, FL\*  
Rosenblum, Martin—Hobe Sound, FL\*

### Illinois

Carey, Thomas—Pontiac, IL  
Halverson, Aaron C.—Mundelein, IL\*  
Jones, William—Kenilworth, IL\*  
O'Meara, Kelly M.—Matteson, IL\*

### Kentucky

Camenisch, Robert—Stanford, KY  
Schroeder, George B.—California, KY

### Michigan

Ahlborn, Michael W.—Pontiac, MI  
Taran, Igor—W. Bloomfield, MI\*

### Mississippi

Mims, Robert—Hattiesburg, MS\*  
Pitts, Christopher P.—Purvis, MS

### Montana

McGrath, Janet K.—Kalispell, MT

### Ohio

Acuna, Enrique—Dayton, OH  
Peck, Steve—Troy, OH  
Wise, Joseph L.—Fremont, OH\*

### Oregon

Chavez, Charles—Hillsboro, OR\*  
Hole, Kenneth W.—Portland, OR\*

### Pennsylvania

Cornbower, Tyrone—Whitehall, PA  
Cruz, Ed—Pittsburgh, PA\*

### Texas

Stern, Paul W.—Plano, TX\*

### Virginia

Bottiy, Richard—Winchester, VA  
Murad, Nabi—McLean, VA  
Rungrujiphaisal, Pensiri—Springfield, VA  
Worrell, Van—Petersburg, VA  
Zelawar, Taher—McLean, VA

### Washington

Nesbit, Mackenzie—Seattle, WA

**\*AWCI welcomes back these individuals who have chosen to re-instate their membership.**

## AWCI Returned Check Policy

We are pleased to be able to accept your personal or business check for payment of dues, purchase of books, tapes and merchandise, purchase of education and certification courses and other AWCI goods and services. If your check is returned to us by our bank for any reason beyond AWCI's control, we will impose upon you a USD \$25.00 returned check fee. We will invoice you for this returned check fee. This fee will have to be paid before any additional goods or services can be purchased from AWCI.

Upon request, AWCI will redeposit any check which has been returned to us by our bank. If the check is returned a second time, a second \$25.00 returned check fee will be imposed upon you and no future deposit attempts will be made for the check. In addition, payment of the returned check fees and the goods and services in question will have to be made by credit card (no debit or check cards), cashier's check or money order.

When paying for goods or services by personal or business check, you are consenting to and agreeing to abide by this policy. AWCI reserves the right to modify this policy as needed. ©

**Eckcell-ent** selection of hard to find, Swiss made (gold plated), ETA movements

Need these movements with short cannon pinions? With only two hands? With three hands? Standard cannon pinion with two hands? We have them all.

ETA 955.112 11½ Ligne  
ETA 955.412 10% Ligne  
ETA 956.112 7% Ligne  
ETA 956.412 10% Ligne

Any three for \$100 or \$35 each

Need these same movements with standard cannon pinion and three hands? We have them.

Any four for \$95 or \$25.95 each

**Eckcells**  
379 Main Street  
Stoneham, MA 02180  
Phone 800-514-1270  
Fax 800-690-3303  
eckcells@gmail.com



## President's Message

(Continued from page 2.)

We want the jewelers who sell watches to be aware of what a well-trained watchmaker with proper equipment can do for their business. They will be given information about suppliers, watch companies, electronic watch timers, waterproof testers, watchmaker schools, and, more important, AWCI.

Many man hours and an investment from industry and AWCI members have made this a worthwhile endeavor. I want to thank those who are working behind the scenes in giving their service to AWCI.

Information about this project can be found on the AWCI website. Also, it will be published in a special edition of *Horological Times*.

Good luck to all the candidates who are running for the Board of Directors of AWCI.

## Executive Director's Message

(Continued from page 2.)

This project would not have been possible if it weren't for the generosity of Chuck Berthiaume and Bernhard Stoerber of Rolex USA, and Henry Kessler of Sy Kessler & Sons. There will be many more individuals and sponsors to thank next month when everything is in place. Hope to see you in Las Vegas June 1<sup>st</sup> - 5<sup>th</sup>.

I know I have talked about the AWCI Career Center in the past, but I thought I would mention it again for two reasons. One because there are a number of good jobs in our classified section of the *HT*, and secondly, because there aren't very many resumes posted in our Career Center. That could only mean that every watchmaker and clockmaker is happily employed and making as much money as they think they are worth. That is great if it's true. If it's not you need to check the *HT*'s Help Wanted section in the classified ads, and visit the AWCI Career Center at [www.awci.com](http://www.awci.com).

If you have never been to the Career Center this is how you get there. Once you are at the AWCI home page, log in with your member number and password. Your password is your member number plus the first initial of your last name capitalized (unless you have changed it to something else). Once you are logged in, the first item on the list of "When logged in you can:" is "Post your resume on AWCI's Career Center for free." Follow the directions and you are all set.

While you are logged in check your listing on the Referral Directory. Make sure your listing is turned on so you can be found by consumers looking for a professional to repair their watch or clock, and make sure the information posted is correct.

And lastly, when purchasing your supplies from our advertisers be sure to tell them that you saw their ad in the *HT*.

## AWCI Member Websites

- Have you always wanted a website for your business, or are you unhappy with your current website?
- Do you feel that your business needs more exposure to your customers?
- Do you want a website, but don't know where to start, and assume it would be a costly venture?
- Do you just not have the time to mess with it?

Go to

**[awci.companysitecreator.com](http://awci.companysitecreator.com)**

**AWCI and Companysitecreator have worked together to offer an opportunity to all members!**

**It literally takes just a few minutes to build your new site in 5 simple steps from start to finish.**

**Two packages are offered (\$8.95 per month or \$18.95 per month), and you are able to see your site before you decide to purchase.**



## WHAT'S ON THE AWCI CW EXAM?

1. **Written/Theory** task (essay type questions, calculations, etc.)
2. Using the **Watchmaker's Lathe** (hand-held graver turning operations)
3. Servicing a Modern Swiss **Quartz** wristwatch movement
4. Servicing a Modern Swiss **Automatic** wristwatch movement
5. Servicing a Modern Swiss **Chronograph** wristwatch movement

It is strongly recommended that you read and comprehend the detailed contents of the five (5) points above, in the AWCI Standards & Practices (CW exam emphasized on pages 16 – 24) at the following link:

<http://www.awci.com/documents/June2006sandpforwatchmakers.pdf>

Or visit [www.awci.com](http://www.awci.com) and click on CERTIFICATION

For further questions you may contact Nancy Wellmann at:

Toll Free 1-866-367-2924, ext. 303

E-mail: [nwellmann@awci.com](mailto:nwellmann@awci.com)

- Phone: 800-772-3456
- Fax: 800-900-3734
- E-mail: [info@ofrei.com](mailto:info@ofrei.com)



126 Second St., Oakland, CA 94607

Visit our web site  
[www.ofrei.com](http://www.ofrei.com)  
Shop online for over 12,000 items

### Four Different 'Quick Pick' Luminous Hand Assortments – 14 pairs for Just \$16.60!

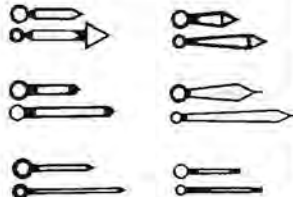


Save big money when you buy luminous hands in one of our Quick Pick assortments. Just \$16.60 gets you 14 pairs of hands. Choose from three assortments in popular hole sizes -- 65/100, 70/120 or 90/150 -- or a fourth for hard-to-find large hole sizes\*.

\*For Unitas 6497, hole sizes 115/200, Valjoux 7750 & 7751, hole sizes 120/200, and ETA quartz series 251.262 to 251.272, hole sizes 150/200.

#### Quick Pick Assortments

Hole size	Item no.
65/110	QP14-65-110
70/120	QP14-70-120
90/150	QP14-90-150
Large	QP14-115-120/150-200



### Great Deals, Quantity Pricing on 70/120 & 90/150 Luminous Hands



#### Quantity Pricing

Qty per style	Price per pair
1-2	\$3.40
3-11	\$2.50
12-99	\$1.66
100+	\$1.42

Most hands shown above are available in gold, silver and black, with white or green luminous material

Ask for a copy of our Movement Catalog with a more complete listing of our hands.

Orders 800-772-3456

Inquiries 510-832-0355

Fax 800-900-3734

# AWCI Annual Meeting & Educational Symposium



## AGENDA-AT-A-GLANCE August 2-5, 2007



### Radisson Hotel Cincinnati Riverfront — Covington, Kentucky

\$105/double room rate — Deadline for reservations is July 11, 2007

Call 859-491-1200 or 800-333-3333

All events are held at the Radisson Hotel Cincinnati Riverfront unless otherwise noted

#### Thursday, August 2, 2007

9:00 AM - 4:00 PM	Chronometer Club (members only) AWCI Training Facility
2:00 - 4:00 PM	Research and Education Council (REC) Meeting - AWCI
3:00 - 6:00 PM	Registration
4:30 - 5:30 PM	Chronometer Club Business Meeting AWCI (members only)
6:30 - 7:30 PM	New Member & Welcome Reception
7:30 - 8:30 PM	Affiliate Chapter Welcome Reception
8:30 - 10:00 PM	Affiliate Chapter Round Table

#### Friday, August 3, 2007

7:00 AM	Registration
7:00 AM	Continental Breakfast
8:00 AM - Noon	Affiliate Chapter Meeting Keynote Speaker - TBA
9:00 - 10:00 AM	J.M. Dodson Perpetuation Fund Meeting
10:00 AM - Noon	Industry Advisory Board (IAB) Meeting
Noon - 1:30 PM	Lunch on your own
1:30 - 5:00 PM	AWCI Board of Directors Meeting
6:00 PM	Bus departs for AWCI Transportation sponsored by SWATCH
6:30 - 11:00 PM	AWCI Auction
11:00 PM	Bus returns to the Radisson

#### Saturday, August 4, 2007

7:00 AM	Registration
7:00 AM	Continental Breakfast
8:00 - 11:15 AM	Educational Symposium Mark Butterworth Lloyd Lehn Laurie Penman Tamara Houk Tom Schomaker Manuel Yazijian
10:00 AM	ELM Trust Meeting
10:00 AM - 3:00 PM	Vendor Fair
11:30 AM - 1:30 PM	Vendor-Sponsored Luncheon Buffet
1:30 - 4:45 PM	Educational Symposium Mark Butterworth Lloyd Lehn Laurie Penman Tamara Houk Tom Schomaker Manuel Yazijian
6:00 - 7:00 PM	President's Reception (Black Tie Optional)
7:00 - 9:00 PM	Rolex ELM Charitable Trust Dinner & Awards Program Dinner sponsored by Rolex

#### Sunday, August 5, 2007

8:00 - 9:00 AM	Breakfast Buffet
9:00 AM - Noon	AWCI Board of Directors Meeting

AWCI reserves the right to change the convention program as needed

**Hospitality Room open to all - Evenings throughout the event**



# 2007 Annual Meeting & Educational Symposium August 2-6, 2007

**AWCI Registration Deadline: July 13, 2007**

Registration also available on line: [www.awci.com](http://www.awci.com)

*(Please type or print all information requested)*

Name: \_\_\_\_\_ AWCI Member No.: \_\_\_\_\_

Company/Affiliate Chapter: \_\_\_\_\_

City: \_\_\_\_\_ State/Province \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

E-mail: \_\_\_\_\_

Spouse's Name: \_\_\_\_\_ Guest's Name: \_\_\_\_\_

Child #1: \_\_\_\_\_ Age: \_\_\_\_\_

Child #2: \_\_\_\_\_ Age: \_\_\_\_\_

Child #3: \_\_\_\_\_ Age: \_\_\_\_\_

Registration Fees	Received by July 1, 2007	After July 1, 2007
<b>Weekend Package*</b>		
AWCI Member	_____ @ \$275.00	_____ @ \$330.00
Nonmember	_____ @ \$330.00	_____ @ \$385.00
Spouse/Guest	_____ @ \$165.00	_____ @ \$220.00
Children (under 12)	_____ @ \$ 55.00	_____ @ \$110.00
<b>Saturday Package**</b>		
AWCI Member	_____ @ \$220.00	_____ @ \$275.00
Nonmember	_____ @ \$275.00	_____ @ \$330.00
Spouse/Guest	_____ @ \$ 82.00	_____ @ \$110.00
<b>Education Package***</b>		
AWCI Member	_____ @ \$165.00	_____ @ \$220.00
Nonmember	_____ @ \$220.00	_____ @ \$275.00
		<b>Total</b> _____

Should we be aware of any personal health issues you have? \_\_\_\_\_

Do you prefer vegetarian meals? \_\_\_\_\_

**\*Weekend Package Includes:** Thursday: Welcome Receptions and Affiliate Chapter Reception/Round Table; Friday: Continental Breakfast, Affiliate Chapter and Board Meetings, and Transportation to Auction; Saturday: Continental Breakfast, Technical Presentations, Luncheon, ELM Trust Dinner/Awards Program; Sunday: Breakfast Buffet

**\*\*Saturday Package Includes:** Saturday: Continental Breakfast, Technical Presentations, Luncheon and ELM Trust Dinner/Awards Program

**\*\*\*Education Package Includes:** Saturday: Continental Breakfast, Technical Presentations & Luncheon

Note: Program changes will be announced as they occur.

Check  American Express  Discover  MasterCard  Visa  Diner's Club

Name on Card \_\_\_\_\_

Account# \_\_\_\_\_ Expiration Date \_\_\_\_\_ Signature \_\_\_\_\_

**Please make checks payable to AWCI. All fees must be paid in advance; credit cards will be processed upon receipt.  
Payment in U.S. Funds, drawn on a U.S. Financial Institution. No refunds or cancellations after July 13, 2007.**

**AWCI's 47<sup>th</sup> Annual Meeting & Educational Symposium**  
701 Enterprise Drive Harrison, OH 45030  
Toll Free 1-866-367-2924, ext. 301 Fax: 513-367-1414 E-mail: [orders@awci.com](mailto:orders@awci.com)



# 2007 Annual Meeting & Educational Symposium

## VENDOR INVITATION

Dear Vendor Friend of AWCI:

Plans are being made for our annual summer meeting and educational symposium. This year we return to the Cincinnati area for the first time since 2003. We have had very successful "on the road" meetings for the past three years in Portland, ME; Bloomington, MN and Seattle, WA respectively.

This year our host hotel will be the Radisson in Covington, KY. The meeting dates are Thursday, August 2 - Sunday, August 5, 2007. The vendor fair takes place on Saturday, August 4. As in years past, the vendors are the hosts of the Saturday luncheon which is held in the same room as the fair. Delegates and members can visit the fair between 10 AM - 3 PM, during lunch and between classes. The educational symposium also takes place during the day on Saturday. Members attending any of the classes will have ample time to visit the vendor fair.

Also this year, we will be having an auction at headquarters in Harrison on Friday evening. AWCI is cleaning out the warehouse and there will be many opportunities to get a bargain. Transportation to Harrison will be by motor coach, provided by the Swatch Group, and you are invited to join us that evening. Food and beverage will be available.

The cost to you is \$275.00 which includes 2 tables at the vendor fair, 2 luncheons at the fair, transportation to the auction, and a place to "wind down" in our hotel hospitality room on Friday evening after the auction. Should you care to come to the Rolex ELM Charitable Trust Dinner & Awards Program on Saturday evening, an additional \$60 per person is requested as this is the fund-raising banquet to support the Education, Library and Museum Trust. Black tie is optional. The fee for the dinner is in addition to the \$275.00 registration fee for vendors.

I am happy to answer any questions you may have regarding the vendor fair. Specifics about getting your merchandise to the hotel, storage, unloading, etc. will be addressed as soon as we have a better idea of the participants. Please help me plan ahead by sending me an e-mail indicating whether or not you are interested in participating.

The vendor registration form can be found on page 39. I look forward to hearing from you.

Sincerely,

*Terry Kurdzionak*

Eckcells@gmail.com



# AWCI Annual Meeting & Educational Symposium

## August 2-5, 2007

### VENDOR REGISTRATION & DOOR PRIZE DONATIONS

Deadline for vendor registration is July 1<sup>st</sup>, 2007

The American Watchmakers-Clockmakers Institute would like to invite you to participate in the AWCI 47th Annual Meeting & Educational Symposium at the Radisson Hotel Cincinnati Riverfront — Covington, Kentucky. Exhibitor's cost is \$275 which includes 2 tables at the vendor fair, 2 luncheons at the fair, transportation to the auction, and a place to "wind down" in our hotel hospitality room on Friday evening after the auction.

Please register our company to exhibit during the 2007 AWCI Annual Meeting Vendor Fair

Company Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

E-Mail \_\_\_\_\_

The following people will be attending:

Name \_\_\_\_\_ Title \_\_\_\_\_

Name \_\_\_\_\_ Title \_\_\_\_\_

Name \_\_\_\_\_ Title \_\_\_\_\_

We would also like to attend the Rolex ELM Charitable Trust Dinner & Awards Program

Please register \_\_\_\_\_ attendees for the dinner @ \$60.00 each.

#### DOOR PRIZES

A door prize will be sent to AWCI for the drawings held during the Trade Fair. This entitles our company to be listed as a convention sponsor.

The generous financial support of persons interested in preserving the past and building the future of horology augments the AWCI-ELM Charitable Trust. Your donation will contribute to the education of the next generation of watchmakers and clockmakers or to maintaining the historical record of the craft.

Please accept this donation of \$ \_\_\_\_\_ to the AWCI-ELM Charitable Trust

#### Payment Method:

Total \_\_\_\_\_

Check     American Express     Discover     MasterCard     Visa     Diner's Club

Name on Card \_\_\_\_\_

Account # \_\_\_\_\_ Expiration Date \_\_\_\_\_ Signature \_\_\_\_\_

## *In Remembrance*

AWCI has been notified of the passing of the following members:

### **Florida**

Matz, Benjamin — Boca Raton, FL

### **Illinois**

Schroeder, T. William — Chicago, IL

### **Indiana**

Cinotto, William R. — Whiting, IN

### **North Carolina**

Haddock, David W. — Statesville, NC

### **Texas**

Wysong, Harry E. — Austin, TX

### **Washington**

Levine, Max — Snoqualmie, WA

## **AWCI Directors' E-mail Address Directory**

<b>Director</b>	<b>AWCI E-mail Address</b>
Dennis Warner: President	dwarner@awci.com
Mark Butterworth: 1st Vice President	mbutterworth@awci.com
Gene Bertram: 2nd Vice President	gbertram@awci.com
Matt Henning: Secretary	mhenning@awci.com
Jack Kurdzionak: Treasurer	jkurdzionak@awci.com
Mark Baker	mbaker@awci.com
Glenn D. Gardner	ggardner@awci.com
Roland (Ron) Iverson	riverson@awci.com
James Sadilek	jsadilek@awci.com
James Zimmerman	jzimmerman@awci.com
Wes Cutter: Affiliate Chapter Director	wcutter@awci.com
Elbert Lewis: REC Director	elewis@awci.com
Jack Kurdzionak: IAB Director	jkurdzionak@awci.com



Payment processing tailored to your needs,  
a partnership with AWCI,  
and reduced rates just for members.

And you thought your timepieces were reliable.

First National Merchant Solutions can provide your business with an affordable way to accept credit and debit payments, convert checks to instant cash, and receive payments over the internet. Just some of the ways we can help you grow your business...find out more today.

**800-354-3988**

**[www.membersales.com/awci-net](http://www.membersales.com/awci-net)**



**First National  
Merchant Solutions**

# AWCI EVENING CLASSES IN WATCH REPAIR

American Watchmakers-Clockmakers Institute is offering weekly evening classes in watch repair (10 consecutive Thursdays). These will be basic instructional classes, loosely structured to adapt to the needs of the students. Watch classes will take place on Thursday evenings from 6:00 PM to 9:00 PM at the training facilities at AWCI in Harrison, Ohio.

- Instructors: Tom Schomaker, CMW21, Watch Repair
- Schedule: Spring/Summer Session - May 17, 2007 - August 9, 2007
- Location: AWCI Training Facility  
701 Enterprise Drive, Harrison, OH 45030
- Cost: \$400 per 10-week session  
Registrants must be AWCI members (\$98 yearly membership)  
Tools and material costs are extra

For more information or to register for a class, contact Nancy Wellmann, Education Coordinator  
1-866-FOR-AWCI (367-2924), ext. 303 or e-mail: [nwellmann@awci.com](mailto:nwellmann@awci.com)



**CHRONOS**  
IF YOU LOVE WATCHES,  
YOU'LL LOVE CHRONOS

- \$22.50 - One Year
  - \$42.00 - Two Years
  - \$60.00 - Three Years
- Foreign subscribers add \$10 per year. (U.S. Funds drawn from U.S. bank only)
- Check or money order enclosed
  - Charge my Visa or MasterCard
- Card No. \_\_\_\_\_  
Exp. Date \_\_\_\_\_  
Signature \_\_\_\_\_  
Phone \_\_\_\_\_  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_  
Zip \_\_\_\_\_ Country \_\_\_\_\_  
Company Name \_\_\_\_\_  
Type of Business \_\_\_\_\_

**Chronos Magazine** is published 6 times per year for the connoisseur of luxury timepieces. Each issue presents the finest watches and clocks of today as well as exploring premier vintage collections.



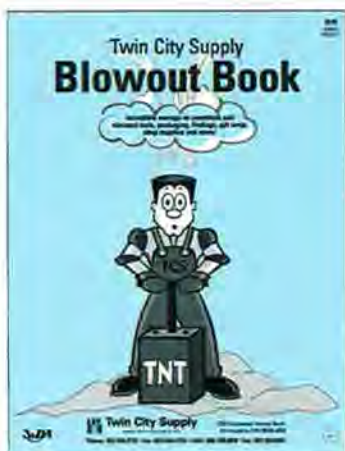
**WCR**  
Watch & Clock Review  
THE INDUSTRY'S  
MOST-USED  
PUBLICATION

- \$19.50 - One Year
  - \$35.00 - Two Years
  - \$50.00 - Three Years
- Foreign subscribers add \$10 per year. (U.S. Funds drawn from U.S. bank only)
- Check or money order enclosed
  - Charge my Visa or MasterCard
- Card No. \_\_\_\_\_  
Exp. Date \_\_\_\_\_  
Signature \_\_\_\_\_  
Phone \_\_\_\_\_  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_  
Zip \_\_\_\_\_ Country \_\_\_\_\_  
Company Name \_\_\_\_\_  
Type of Business \_\_\_\_\_

**Watch & Clock Review** is published 10 times per year and is the industry's most-used publication—the only one in North America devoted to watches and clocks. Get the one convenient source of industry news features including eight annual directory issues.

# Industry News

Twin City Supply Releases New Catalog  
Twin City Supply, a Watch Material & Jewelers Supply Distributor in Minneapolis, Minnesota, has just released their newest catalog, the 16-page *Blowout Book*. This special edition features hundreds of closeouts, overstocks, one-of-a-kinds, and special purchases that have been in the warehouse.



Customers will find amazing specials on things like tools for jewelers and watchmakers, cleaning machines, gift wrap, boxes, store supplies, watchbands, findings, files, scales, graters, loupes, and so much more.

Twin City Supply has been in Minneapolis, Minnesota, since the early 1930s. They trace their roots even further, as their founder, Harry Heifetz, originally worked for his Uncle, Julius Garon, Jewelers & Watchmakers supplies of Duluth, Minnesota.

Twin City Supply is a full-line supplier of watch material, crystals and crystal fits, findings, tools and supplies, Timex and Acqua watches, Zippo products, Scheaffer writing instruments, L&R products, Eurotool, Pepe and Grobet tools, batteries from Energizer, and watchbands from Watchband Headquarters and Gilden.

To request this *Blowout Book*, or any of their other catalogs, e-mail: [TwinCitySupply@msn.com](mailto:TwinCitySupply@msn.com), or call 800-328-6009. You may also check out many of these blowout items on their website, [www.TwinCitySupply.net](http://www.TwinCitySupply.net).



## American Watchmakers-Clockmakers Institute

### Member Benefit Alert!

**Health Savings Accounts  
Dental & Vision**

### Health Insurance

**Individuals & Families  
Groups**

**Student Health Plans**

**Medicare Supplements**

**International Travel Insurance**

**Health Savings Accounts**

Individuals/Groups

### Long-Term Care Insurance

**Home Health Care**

**Assisted Living**

**Nursing Home Care**

**SAVE  
UP TO  
30%**

**On Insurance Premiums!**

Rates and Availability May Vary by State

**Disability Income/Critical Illness  
Annuities**

### Life Insurance

**Term 5, 10, 20, 25, 30, Age 95**

**Universal Life**

**Survivorship (2nd to Die)**

**Key Person**

**Executive Benefit Life**

**Retirement & Financial Services**

**AWCI Association Health Programs**

12721 Metcalf Ave Ste 100, Overland Park, KS 66213

Phone: (913) 341-2868 Toll Free: (888) 450-3040 Fax: (913) 341-2803

E-mail: [help@associationpros.com](mailto:help@associationpros.com)

Website: [www.associationpros.com](http://www.associationpros.com)

ASSOCIATION  
*Health*  
PROGRAMS

# BULLETIN BOARD

## NEW REQUESTS

Hahl Automatic Clock Co.

AWCI is looking for an instruction manual/service information for a Hahl Pneumatic Clock.

## ITEMS STILL NEEDED

Sonic 4 Ultrasonic Cleaner

Charles Goad, Fairland, OK, is searching for a schematic for a Sonic 4 Ultrasonic Cleaner.

Mido Multifort Supermatic Water Tester

Gaetan Demers, Lawrence, MA, is looking for parts and an instruction manual for a Mido Multifort Supermatic Water Tester.

Do you have information regarding this month's requests? Do you need information about one of this month's responses? If so, send your information or requests to: *Horological Times* Bulletin Board; 701 Enterprise Drive; Harrison, OH 45030-1696; Toll-Free: 1-866-367-2924, ext. 307; Phone: (513) 367-9800; Fax: (513) 367-1414; E-mail: [dbaas@awci.com](mailto:dbaas@awci.com) ©

# CLOCKS

m a g a z i n e

CLOCKS:KS:KS

m a g a z i n e i n e i n e



Inside: Sale in Leeds | Roberts in FAQ  
A massiv movement makers/taules

**GET YOUR FREE SAMPLE  
COPY OF CLOCKS**

**Tel: 044 131 331 3200**

**Email: [sample@clocksmagazine.com](mailto:sample@clocksmagazine.com)**



**EXPRESS**

The American Watchmakers & Clockmakers Association is excited to announce its DHL shipping program for members. DHL brings AWCI members a full suite of domestic and international shipping services, covering over 220 countries and territories around the globe.

Through AWCI's partnership with DHL, members are also eligible for special association member pricing. To find out more about your DHL benefits and set up your account, or if you have questions regarding your current account, please contact the dedicated association hotline at 1-800-MEMBERS (1-800-636-2377, 8 am – 7 pm, ET) or log onto [www.1800members.com/awcinet](http://www.1800members.com/awcinet)



# Classified Advertising

## Regulations & Rates

Ads are payable in advance 90¢ per word, \$1.00 per word in **bold** type. Classified display ads are \$40.00 per column inch, 2 1/4" wide. Classified ads are not commissionable or discountable. Payment can be made by check, VISA, MasterCard, Discover, Diner's or American Express. The publisher may, at the publisher's sole discretion and for any reason and without notice, decline to publish or republish any ad, in which case any fees submitted or paid for such ads shall be returned or rebated to the advertiser. The publisher reserves the right to edit all copy. Price lists of services will not be accepted. Confidential ads are \$10.00 additional for postage and handling. The first of the month is issue date. Copy must be received 30 days in advance (July issue closes for copy on June 1<sup>st</sup>).

### HOROLOGICAL TIMES

701 Enterprise Drive  
Harrison, OH 45030  
Toll Free 866-367-2924, ext. 307  
Phone (513) 367-9800  
Fax (513) 367-1414  
E-mail: [dbaas@awci.com](mailto:dbaas@awci.com)  
[www.awci.com](http://www.awci.com)

## TRADESMAN

**VINTAGE POCKET WATCH RESTORATION.**  
Twenty-eight years experience, guarantee, free estimates. The Escapement, P.O. Box 522, Pooler, GA 31322; (912) 330-0866

## DIAL REFINISHING



BEFORE AFTER

Quartz Conversions  
Diamond Dial Conversions  
Emblem & Name Personalization

Write for Brochures  
**INTERNATIONAL DIAL CO., INC.**  
58 W. SUGARTREE  
P.O. BOX 970  
WILMINGTON, OH 45177  
(937) 382-4535

### ELECTRONIC INSTRUMENT SERVICE

We are Factory Authorized Service for:

- VIBROGRAF & PORTESCAP
- TICK-O-PRINT & L&R

We service all makes of ultrasonics, all makes of watch rate recorders, and related equipment. 25 years experience.

190 Deepstone Drive San Rafael, CA 94903  
Used Equipment Bought & Sold



For Information  
(415) 453-9266



### FENDLEY & COX WHEEL AND PINION SPECIALIST

1530 Etain Rd., Irving, TX 75060  
RICHARD COX 972-986-7698  
CMC, FNAWCC, CMBHI  
[www.fendley-cox.com](http://www.fendley-cox.com)

### POCKET WATCH & MARINE CHRONOMETER REPAIR

General repair and restoration of antique and complicated watches. Custom parts fabrication including staffs, verge staffs, stems, levers, and springs. Located in Massachusetts. Matt Henning, CW (413) 549-1950; [www.henningwatches.com](http://www.henningwatches.com)

**CLOCK, MUSIC BOX MAINSPRINGS, GEAR PINION CUTTERS, MATERIAL & PARTS CUSTOM MADE.** TANI ENGINEERING, 1852 St. Rt. 44, Atwater, OH 44201; (330) 325-0645. Catalog \$3.00.

### HAMILTON ELECTRIC WATCH REPAIR

Expert, experienced service on all Hamilton 500 and 505 Electric watches. Hamilton electric watches and parts always wanted. René Rondeau, P.O. Box 391, Corte Madera, CA 94976. Tel: (415) 924-6534. E-mail: [rene@hamiltonwristwatch.com](mailto:rene@hamiltonwristwatch.com)

### ATMOS

Service/Repair  
Warranty 2 Years Parts & Labor  
800-837-1545  
Clockmaster, Inc. - Robert Good  
2537 So. Brentwood Blvd.  
St. Louis, Missouri 63144

**CLOCK GEARS, BARRELS and PINIONS** made from your sample, **ARBORS** re-pivoted, teeth replaced in gears or barrels. All work guaranteed, fair prices fast turn around. Call Mike Loebbaka, 86 Mullens Lane, Saugerties, NY 12477; Phone: 800-411-4542, [tictoc@oldandnew.com](mailto:tictoc@oldandnew.com)

**DIAL REFINISHING CO. FAST SERVICE, FINEST QUALITY**, quantity works welcome. Specialize on changing dial feet positions to fit the quartz movement. Send your works to: **KIRK DIAL OF SEATTLE**, 112 Central Avenue North, Kent, WA 98032; (253) 852-5125

### DENNIS KAYE

108 Corgy Drive • Cary, NC 27513  
888-363-9510

Porcelain Dial Restoration  
Watch • Pocket Watch • Clock

Platform Escapement Repair

Atmos Parts & Service

400-Day Clock Repair

Kundo Coil/Electric Clock Service

Prompt Reliable Service . . . Guaranteed  
Call Us or Visit [dialrepair.com](http://dialrepair.com)

### MORGAN PIVOT POLISHER

POLISH PIVOTS IN AS  
LITTLE AS 5-7 SEC.

FITS SHERLINE MOST  
WATCHMAKERS & ENGINE LATHES  
MORGAN CLOCK CO.  
800-805-2220 9-5 CST  
[MORGANPIVOTPOLISHER.COM](http://MORGANPIVOTPOLISHER.COM)



### ATMOS by Jaeger-LeCoultre

Completely overhauled with the longest labor warranty on the planet!  
Five years on all labor!

#### Mike's Clock Clinic

Established in 1982 & devoted exclusively to the Atmos since 1990.  
I also overhaul 400-day clocks.  
Please call 877-286-6762

<http://www.atmos-man.com/atmos.html>

### REPIVOTING - WRIST & POCKET WATCHES

Custom made pivots for balance staffs, arbors, pinions. No part too small. Balance staffs and arbors made to factory standards. 40 years experience. Juliusz Dabrowski, J.D. Watchworks 210 Post St., Suite 506, San Francisco, CA 94108; (415) 397-0310; [jd@jdwatchworks.com](mailto:jd@jdwatchworks.com)

## ARTICLES FOR SALE

### STUCK FOR A MOVEMENT?

or a watch part? Call Don Kroker's Watch Movements. (559) 229-8423 or write 4325 No. 5th St., Fresno, CA 93726.

### DASHTO INC./TOM MISTER PO Box 61894

Virginia Beach, VA 23466  
<http://www.dashto.com>

**Huge and everchanging selection  
Used and new horological items**

**Sold by internet list only**

TOOLS/EQUIPMENT

MATERIAL ASSTS/PARTS

POCKET/WRISTWATCHES

WATCH MOVEMENTS

WATCH CASES & DIALS

WATCH BRACELETS/BUCKLES

MUCH MORE

**WE BUY & TRADE ALSO**

[tom@dashto.com](mailto:tom@dashto.com)

<http://dashto.org>

**FULLY WARRANTEED**  
Watch Timers & Cleaners



**FACTORY REBUILT WATCH TESTING EQUIPMENT**

Call or Write for details:  
Tel: (516) 437-8700  
Fax: (516) 437-8708

**VIBROGRAF U.S.A. CORP.**  
504 Cherry Lane, Floral Park, NY 11001  
www.vibrografusa.com

**Regula and H. Herr Cuckoo Movements**  
Complete selection. Also factory stopper new Hermle, Urgos, and Kieninger at 60% OFF our regular wholesale prices. Call Butterworth 1-800-258-5418.

**HAMILTON ORIGINAL MILITARY MATERIAL**  
Supplying original factory material for the Hamilton Model 21 Chronometer, Model 22 Deck Watch & Military 16 Size Watch Models 23, 3992B, 4992B and 2974B As well as much material for the 950B & 992B Railroad Watches.

LARRY CRUTSINGER  
P.O. Box 8514 Norfolk, VA 23503  
757-650-9470 E-mail: detent21@aol.com  
www.militarywatchmuseum.com

**The Original Troop-Balas Labs**  
Silcon-7® Sealant \$5.95  
One-Dip Solution® \$5.95  
Crystal-Kleer® Rouge \$6.50  
KT-22 Microlubricant® \$3.50  
www.troop-balas.com  
800-423-3294

**24/7 Secure On-Line Ordering**



**Timesavers**  
Box 12700 • Scottsdale, AZ 85267 • USA  
Phone: 480-483-3711 • Fax: 480-483-6116  
info@timesavers.com • www.timesavers.com  
Our 164 page printed Catalog #32 illustrating 1,000's of products is \$3 postpaid worldwide.

Watch Repair Tools & Supplies  
Clock Repair Tools & Supplies...  
for American and European clocks of all types!  
Horological Repair and Reference Books

**Browse through our inventory and order on-line 24-hours a day! ...**  
www.merritts.com

*Our new 2006-2007 Catalog of Parts and Repair Supplies will be available approx. May 1, 2006*  
Write for your copy today!  
...\$3.00 postpd.

**MERRITT'S  
CLOCK & WATCH REPAIR  
SUPPLY DEPARTMENT**  
1860 Weavertown Rd,  
Douglassville, PA 19518  
610-689-9541 FAX: 610-689-0567

Clockmaking & Modelmaking Books, Videos & DVDs by W. R. Smith, 8049 Camberley Drive, Powell, TN 37849. Phone 865-947-9671; E-mail: WRSmith2@aol.com

**DOCTOR'S WATCHES** - beautiful German design, Swiss mechanical ETA movement, good price. Contact Mark Butterworth for info at (800) 258-5418 or bci@muscanet.com

**BUSINESS FOR SALE**

**COLORADO'S BEST CLOCK & WATCH STORE IS FOR SALE**

Owner wants to retire. Our strip center has a new face lift and is located across from a nationally acclaimed shopping complex with shops, restaurants, theater, bowling, ice skating, arts, lots of events; over 1300 residences, over 1 million square feet of retail and 800 thousand feet of office space. These people see our sign daily. Close to mountains, fishing, skiing, gambling, camping, hiking and more. This store has a great reputation, and is well known in the community. We have been at this location over 22 years. Owner will carry some flexible financing and help new owner with transition. Our Watchmaker of over 20 years will stay on. We have a clean inventory. Jewelry and jewelry service can be added to further enhance this great store, even more potential with all the new development in the area. We average 30 to 60 customers in our store daily. We are asking \$225,000 for this great store, plus cost of inventory. For more information call (720) 236-7567 days, (303) 989-0188 evenings.

**HOROLOGICAL TOURS**

**3 CONTINENTS  
HOROLOGY STUDY CRUISE**  
OUR 5TH CRUISE AND SEMINAR, TAKES US TO **BARCELONA** (CLOCK MUSEUM, PITA WATCHES - AHCI) AND A TRANSATLANTIC CRUISE CALLING AT **MALAGA** (GRANADA) **GIBRALTAR** (TREMENDOUS WATCH BARGAINS) **TANGIER** (ANTIQUE MARKETS) **CASABLANCA** (MARRAKESH), **AGADIR**, **LANZAROTE**, **TENERIFE**, **SANTA CRUZ**, **MIAMI**. SEMINARS AT SEA - PRESENTATIONS ABOUT **HOROLOGY**, **MECHANICAL MUSIC**, **AUTOMATA**, **HISTORY OF SCIENCE**, **SCIENTIFIC INSTRUMENTS**. DEC 3-20, 2007. FROM \$3,100.00. BROCHURE? 1-800-262-4284 OR atc@warwick.net

**SITUATIONS WANTED**

Experienced English watchmaker. British Horological Institute certified. Has Rolex and Omega training, seeks employment in Florida with top quality company. Reply to BOX SW42005, c/o Horological Times, 701 Enterprise Drive, Harrison, OH 45030.

Watchmaker seeking employment. Experience includes Cartier and Chelsea Clocks. Please reply to: Box SW112006, c/o Horological Times, 701 Enterprise Drive, Harrison, OH 45030.

Clockmaker, college trained, 18 years experience, seeking employment. Reply to Box SW22006, c/o Horological Times, 701 Enterprise Drive, Harrison, OH 45030.

**HELP WANTED**

**TOURNEAU**  
SERVICE AND REPAIR CENTER  
NOW OPEN IN LONG ISLAND CITY



**Tourneau Inc.**, the world's largest watch store is looking for experienced watchmakers. Our brand new state of the art facility offers the latest in equipment and technology. We also enjoy competitive compensation and a terrific work environment. Customer service and other support opportunities also exist. We offer excellent benefits and opportunities for growth. EOE.

Mail, fax, or email your resume to:  
**Tourneau**  
Attn: AA, Tourneau  
3 East 54th Street  
New York, NY 10022  
Fax: 718.392.4791  
Email: tirby@tourneau.com

**TOURNEAU**  
SINCE 1900

## HELP WANTED

### RICHEMONT NORTH AMERICA, INC.

Richemont North America is looking for technical capacity for watch repairs. Richemont's luxury goods interests encompass several of the most prestigious names in this area, including **Cartier, Van Cleef & Arpels, Piaget, Panerai, Vacheron Constantin, Jaeger-LeCoultre, IWC, Alfred Dunhill, Baume & Mercier, and Montblanc.**

We are looking for AWCI 21<sup>st</sup> Century Certified Watchmakers who are interested in becoming part of Richemont North America's network of subcontractors.

Please contact us at:

Richemont North America  
111 8<sup>th</sup> Avenue, Suite 500  
New York, NY 10011  
Telephone: 917-606-7082  
Fax: 917-606-7065  
E-mail: [Dennis.Post@Richemont.com](mailto:Dennis.Post@Richemont.com)

### WATCH MATERIAL DISTRIBUTORS

Please call us if you are interested in selling your business. All replies confidential.  
**Contact Pat Cassedy  
Cas-Ker 1-800-487-0408**

### WANTED WATCH BOXES

Buy - Sell - Trade

We want most major brands. Also buying high-end jewelry brand boxes. **Doug Giard, 586-774-3684**

### WATCH BUCKLES WANTED

I will buy your signed wrist watch buckles from any company in gold, gold filled, stainless steel or silver. 1-1000.  
Randy Chapin 831-246-0945  
or email to [horology@cruzio.com](mailto:horology@cruzio.com)

### WE BUY WATCHES

Rolex, Patek, Cartier, LeCoultre, Vacheron, Breitling, Audemars, Tudor and others. Modern or Vintage. **Doug Giard, 586-774-3684**

We pay up to 97% of market for karat gold scrap (any amount)! Also, buy filings, gold fill, sweeps, silver, platinum! Immediate 24-hour payment return mail! Ship insured/registered mail to: AMERICAN METALS COMPANY, 253 King St., Dept. HT, Charleston, SC 29401. Established 1960. Phone (843) 722-2073

## WANTED TO BUY



We also fit glass crystals to  
Openface, Hunting, and English  
chain drive watches.  
Complete watches, dials,  
movements, case springs for sale.

**G F Specialties**  
1-800-351-6926  
P.O. Box 2332  
Sanford, FL 32772

### \$\$WANTED ANYTHING\$\$

Rolex - Cartier - Patek - Breitling  
Panerai - Le Coultre  
Vacheron - AP - Etc.

Watches, Boxes, Dials, Links, Parts, Bands, Movements, Crystals, Bezels, Crowns, Clocks, Signs, Posters, Catalogs, Instruction Books, Polish Cloths, Wallets, Hats, Shirts, Promo Items, ANYTHING! **Doug Giard, 586-774-3684**

Chronograph movements, cases, dials, parts and watches. Paying: Valjoux 72 - \$200.00; Venus 178 - \$150.00; Longines 13ZN - \$350.00; Valjoux 69 - \$350.00; also Rolex 620 NA - \$350.00, Dean Sarnelle, 25 W Beverley St., Staunton, VA 24401; 1-866-877-8164.

### ATTENTION RETIRED WATCHMAKERS

Call us before you sell your parts, tools, and watches. We have helped over 175 watchmakers in the last eight years to dispose of their accumulations. When you're really ready to sell, we're ready to buy! Phone (229) 928-9092 or (727) 327-3306. Ask for Jeff or Nancy. E-mail: [jeffnancy@mchsi.com](mailto:jeffnancy@mchsi.com)

**IT'S TIME  
TO SELL  
A WATCH**  
TOP PRICES PAID!

ROLEX • PATEK PHILIPPE  
VACHERON & CONSTANTIN  
AUDEMARS PIGUET  
BREITLING • CARTIER  
& OTHERS

When you're ready to sell  
Call Toll Free

**1-800-842-8625**

Always prompt payment!

**WINGATE'S**  
QUALITY WATCHES

P.O. Box 59760 Dallas, TX 75229-1760  
In Texas 972-392-7676



## WE BUY ENTIRE WATCH COLLECTIONS

Call Toll Free  
1-800-426-2344  
203-366-2500



**Ron Fried,  
President**  
"I look forward to  
giving you honest and  
reliable service."

### SPECIALTY METALS REFINING COMPANY, INC.

1915 Black Rock Turnpike  
Fairfield, CT 06430

Members:  
Better Business Bureau  
Jewelers Board of Trade

257 Consecutive Ads

## Horological Times Annual Binders

Preserve a full year's volume  
of your *Horological Times*  
in this embossed  
12-spine binder.

**\$8.00 each**

To order contact **AWCI**  
**1-866-367-2924 ext. 301**  
or visit our website  
**www.awci.com**

## SCHOOLS

### YOUR FUTURE NEVER LOOKED BETTER



#### Study the Art of Swiss Watchmaking in a Comprehensive 2-Year Program

It's time to invest in a career for a lifetime. The growth of the luxury watch market has created job opportunities for qualified watchmakers throughout the United States. Your career potential is unlimited due to the current and future need for watchmakers. Learn in an environment that combines old world craftsmanship with state of the art techniques and equipment.

Now is the time to request an application for the 2-year training program. The full-time WOSTEP (Watchmakers of Switzerland Training and Education Program)-based curriculum is designed to train and certify graduates for a fulfilling career in the watchmaking profession. The WOSTEP program is available at the partnership schools listed below. Programs start in September in both Lititz and Seattle, and in January in Okmulgee and Saint Paul. Please write to the Admissions office or request an application by telephone or email:

#### Lititz Watch Technicum

1 Wynfield Drive • Lititz, PA 17543  
(717) 625-3787  
info@lititzwatchtechnicum.org

#### North Seattle Community College

Watch Technology Institute  
9600 College Way North • Seattle, WA 98103  
(206) 526-0169  
WTI@sccd.ctc.edu

#### Saint Paul College Watchmaking Program

235 Marshall Avenue • Saint Paul, MN 55102  
(651) 846-1408  
www.saintpaul.edu

#### Oklahoma State University Okmulgee

Watchmaking and Microtechnology  
1801 E. 4th Street • Okmulgee, OK 74447  
(918) 293-4703  
www.osu-okmulgee.edu/watch/

## AWCI Home Study Course in Clock Repair

Based on the original correspondence course written and administered by Laurie Penman, AWCI's resident clock instructor, this course is constructed to provide information and instruction in a manner that is immediately useful in both learning and practicing clock repair. The course contains 16 lessons. At the completion of each lesson you will receive comments and suggestions from Laurie Penman, and a pass or fail grade. Those who achieve a pass grade in each section will receive a certificate of completion. Mr. Penman will be available to answer questions or offer suggestions to each student.

The AWCI Home Study Course in Clock Repair package contains all the material and information necessary to successfully learn the fundamentals of clock repair, including *The Clock Repairer's Handbook* by Laurie Penman and a one-year subscription to Steven G. Conover's monthly publication, *Clockmaker's Newsletter*. Course participants will be invited to attend a 2-day meeting at AWCI to confer with Mr. Penman and meet other students.

Contact **Nancy Wellmann, AWCI Education Coordinator**  
E-mail: [nwellmann@awci.com](mailto:nwellmann@awci.com)  
Phone Toll Free 1-866-367-2924, ext. 303 or (513) 367-9800



## Advertisers' Index

Bergeon .....	15
011 32 933 00 55	
Borel & Co., Jules .....	5
(816) 421-6110	
Butterworth Clocks, Inc. ....	21
(800) 258-5418	
Cas-Ker Co. ....	27
(513) 674-7700	
Chronos/WCR.....	41
(303) 296-1600	
Clocks .....	43
011 44 131 331 3200	
Eckcells .....	33
(800) 514-1270	
Energizer .....	3
(314) 985-1637	
Frei, Otto.....	35
(510) 832-0355	
Livesay's, Inc. ....	25
(813) 229-2715	
Maxell Corp. ....	inside front cover
(201) 794-5900	
Renata .....	back cover
(419) 243-3720	
Seiko Instruments USA, Inc. ....	inside back cover
(513) 674-7700	
Smith Supply House .....	29
(213) 622-1687	
Twin City Supply .....	23
(952) 545-2725	
Vibrograf U.S.A. Corp. ....	17
(516) 437-8700	

### Horological Times Advertising Policy

The publisher reserves the right to approve all advertising copy and reject any advertisements not in keeping with the publisher's standards.

The publisher may, at the publisher's sole discretion and for any reason and without notice, decline to publish or republish any ad, in which case any fees submitted or paid for such ads shall be returned or rebated to the advertiser. The publisher reserves the right to edit all copy.

The advertiser and/or agency agree to assume liability for all content of advertisements printed. They will also accept responsibility for any claims or suits arising therefrom brought against the publisher.

## AWCI Employee Directory

James E. Lubic, CMW21  
Executive Director  
Education & Technical Director  
1-866-367-2924 ext. 310  
jlubic@awci.com

Lucy Fuleki  
Assistant Executive Director  
1-866-367-2924 ext. 304  
lfuleki@awci.com

Thomas J. Pack, CPA  
Finance Director  
1-866-367-2924 ext. 311  
tpack@awci.com

Laurie Penman  
Clock Instructor  
1-866-367-2924 ext. 318  
lpenman@awci.com

Manuel Yazijian, CMW21  
Watchmaking Instructor/Certification  
Coordinator  
1-866-367-2924 ext. 309  
myazijian@awci.com

Donna K. Baas  
Managing Editor/Advertising Manager  
1-866-367-2924 ext. 307  
dbaas@awci.com

Nancy L. Wellmann  
Education Coordinator  
1-866-367-2924 ext. 303  
nwellmann@awci.com

Sharon McManus  
Membership Coordinator  
1-866-367-2924 ext. 302  
smcmanus@awci.com

Heather Weaver  
Receptionist/Secretary  
1-866-367-2924 ext. 301  
hweaver@awci.com

Jim Meyer  
IT Director  
1-866-367-2924 ext. 323  
jmeyer@awci.com

American Watchmakers-Clockmakers Institute  
701 Enterprise Drive  
Harrison, OH 45030  
Phone: Toll Free 866-FOR-AWCI (367-2924)  
(513) 367-9800  
Fax: (513) 367-1414  
E-mail: awci@awci.com  
Website: www.awci.com  
Office Hours: 8:00 to 5:00 (EST) Mon-Fri

SII ●

# SEIZAIKEN®

MADE IN JAPAN



**The brand used by Japan's most experienced watch maker**

**SII Micro Parts Ltd.**

13F ARCACENTRAL, 1-2-1, Kinshi Sumida-ku,  
Tokyo 130-0013, Japan

Telephone: +81-3-5819-8021 Facsimile: +81-3-5819-8020

[www.siimp.co.jp](http://www.siimp.co.jp)

**Seiko Instruments USA Inc.**

2990 Lomita Boulevard  
Torrance, California 90505-5102

Telephone: (310) 517-7771 Facsimile: (310) 517-7792

[www.sielectroniccomponents.com](http://www.sielectroniccomponents.com)

