



Loupes and Tweezers

The Official Newsletter of THE HOROLOGICAL ASSOCIATION OF VIRGINIA

Horological Association
of Virginia, Inc.

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Save the date! The Annual HAV Convention

The HAV Annual Convention is scheduled for April 16, 17, and 18, 2004 in Lynchburg, VA at the Ramada Inn and Conference Center. Activities will include:

- President's Reception
- Clock and Watch Technical Sessions
(Laurie Penman and Herrmann Mayer)
- HAV Annual Meeting
- Annual Banquet
- Members Auction
- Ladies Program

Please try to attend. If you haven't been to a convention in the past, why not start now. The technical sessions promise to be excellent with two outstanding horologists and this is a good chance to meet others with similar interests.

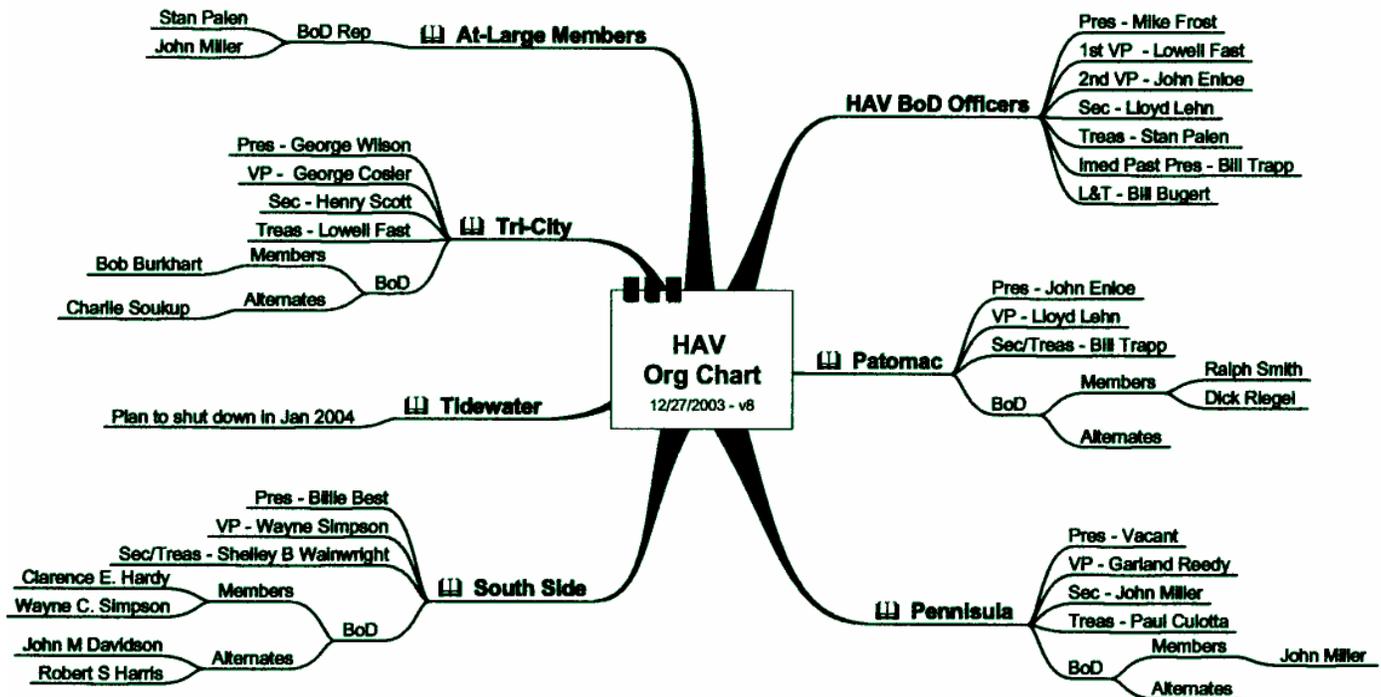
For registration information, contact Lowell Fast (804) 526-1660 or by email at fastla@earthlink.net

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HAV Organization Chart

Thanks to the efforts of Lloyd Lehn, CC, the HAV Secretary, here is an **early DRAFT** depiction of the current HAV structure.





The President's Message

By Mike Frost



I would like to be able to write something upbeat and full of promise; however, I am still burdened by the cold and bleakness of winter. So while looking over the latest edition of the Bulletin, HT, and some other specialty trade magazines I subscribe to, it becomes more and more apparent that we are losing.

We are losing the membership battle. Just look at the obituaries and the new membership rosters. In most cases, the obits are larger. The experienced membership is dying off, new but inexperienced members (in smaller numbers) are coming in, and it is depressing. Yes, politics and membership costs do come into play, but that is another story. The attraction just isn't there anymore for many people. Why not?

What about HAV? Well, someone once told me that at one time we had over 500 members and now we are down to about 130. Every meeting seems to bring the sad news that another member has met his maker. While we do get some new members, HAV is not growing and we need to. Let's face it, we are not some high-powered organization that lobbies in front of Congress for its members benefit and we do not have a national presence. We do, however, try to bring to our members a sense of belonging and camaraderie, education, and technical assistance and we need to remain viable to continue doing that.

Are you watching your Guild decline? Do you know why? Does it bother you that it is in decline? Have you done anything about it? I believe that most of us know individuals

who were at one time members of a Guild. For one reason or another, they left the organization. How many of these may be persuaded to return? How about people around you who are in the trade who are not members? Have you spoken to them about joining? Have you at least invited them to a meeting just to see what it is like?

Maybe this year we can all try to increase membership even a little. It is too disheartening to think about all the talent that has left us for whatever reason and so little talent coming in. Any ideas that you may have to increase membership will be appreciated. Let us know your ideas. I know everyone is busy with their own lives and businesses, but it really doesn't take much time to help strengthen the health of the organization you belong to.

Did you know?

In the 1700's, clocks with heavy weights were expensive to ship. Consequently, empty tin cans were shipped with the movement and later filled with weights necessary to run the clock.

Feature of the issue: An Interesting Railroad Watch



Photo by Bill Egert

Last fall, the editor had a chance to visit the Pennsylvania Railroaders Memorial Museum in Altoona, PA. This newly remodeled museum is worthy of a visit, hosts extensive modern audio/visual exhibits, plenty of historical railroad items, and clock and watches to appeal to the horological interests in use all. Located on the grounds of the old Altoona railroad works, multiple exhibits portray the importance of timekeeping to the correct functioning of the railroad. Pictured to the left is a trainman's pocket watch on display with the caption "If members of a passenger crew were more than three minutes late bringing their train in, they found themselves standing before the division superintendent to explain why." The conductors and engineers were required to carry and check reliable watches daily against standard clocks located in stations and yard offices. Ansonia and Set Thomas clock are prominently displayed through the museum. Check out this museum if you are in the Altoona; a complete self guided tour takes about 2 hours. It is open seven days a week.



John Enloe's Notes from the HAV Fall Seminar, October 5, 2003

The 2003 HAV Fall Seminar was held on October 5, 2003 at the Best Western Airport Inn in Sandston, Virginia. We were once again fortunate to have as our speaker, Mr. August Cornell. August is not only very knowledgeable and highly skilled horologist, but is an excellent and entertaining speaker. Like the outstanding professionals of our Association, August Cornell loves to teach, knowing that he has helped to perpetuate our craft.

August provided so much information on a wide variety of topics, it is impossible to capture all that he covered in the course of the seminar. What follows are some of the highlights from his presentation.

The general theme of our seminar was "Common wear problems in American clock parts – tT00 worn to run, but not to repair". August started with a discussion that put us all shipwrecked on an island. All being clockmakers, he asked the question – What is the first thing we would want to do – and to everyone's amazement, the answer was – Build a Clock! He went to an elaborate but rather simplistic description of how we would use rocks, bamboo, vine and the resources available to us to construct a basic clock, improving it over time as additional resources became available, including the addition of springs for power. He did this to underscore the basic understanding of a clock movement and how the power source, whatever it was, impacted the mechanism. From there, he addressed a number of areas of clock repair.

Pendulum motion: When a clock does not have good pendulum motion, the first place to look is for wobble in the pendulum, escape wheel teeth that are different length, or verge saddle holes that are "egged" out, or a bent arbor. All these things can effect the amount of pendulum motion. As for bent arbors, these cause wheels to oscillate, affecting the tooth depth, which will cause the escapement to lock up. If a clock always stops at the same place, the first place to look is tooth depth, where the teeth will bottom out on the wheel.

He then told us how to use old mainsprings to make a tool to get pivots into their holes in the plates. Basically, you cut a piece of spring, cut an "L" shaped slot in one end and use that to move the arbors to get the pivots into the holes in the plates.

He then discussed the method used as far back as the 1300's to cut wheels and put in bushings. What clockmakers did was to extend the length of the guide used for indexing out to give more accuracy. He also talked about how repairs done by watch and clockmakers was always done alone – there was no team effort.

He then moved to stop works. Stop works were designed to prevent over and under winding. Although in theory, you can't over wind a clock, before the manufacturer of modern springs, it was actually possible. Over winding simply means that the spring would bind if too much torque was put on the mainspring when winding. Stop works were made to compensate for the amount of torque at fully wound and let down (the duration of the spring) Stop works were introduced in the 1380's. He then discussed how to set the stop works.

Pendulum swing- August discussed the maximum amount of pendulum swing you can get . The first thing to check is that every wheel in running true and straight. You can move the pallets of the strap verge as far into the escape wheel as you can and then back off until you have good motion and the pallets clear each tooth in the escape wheel. The pendulum rod is the same as an impulse pin on a watch – the crutch transmits power to the pendulum. The loop on the crutch is the only source of power to the pendulum rod. He also discussed the length of the crutch. The farther down the pendulum rod, the less motion you get and conversely, the farther up the pendulum rod, the more motion, flexibility in torque and tooth depth you get. Manufacturers looked for the ideal length to get good motion of the pendulum and good torque.

Mainsprings: August discussed attaching the mainspring to the arbor and the importance of examining the catch on the arbor. He told us that the place to bend the inner loop of the spring to catch the arbor was at 90 degrees from the end of the spring and not to bend the inner loop toward the arbor at the location of the arbor pin. He also emphasized that the hole in the spring must be long enough to clear the entire length of the pin in the arbor. Otherwise, the spring may pull loose when power is applied to the spring. He discussed methods for taking the temper out of the inner loop and putting a new hole in the inner loop using a pair of chain nose pliers with a hold drilled through the jaws and a drill/rod inserted into the hole to form a punch. He said this was an

inexpensive tool to do the job and we might need several of these punch tools to do a variety of springs. He also discussed how to drill a hole in a mainspring inner loop using a ball burr in a Dremel tool, which actually takes the temper out of the spring, drills the hole and all this can actually be done without taking the spring out of the barrel! He also discussed attaching the spring to the pin in the barrel and problems with barrel caps coming loose and how to insure that problem is resolved. He pointed out that a mainspring should cover 60-70% of the barrel when at rest – otherwise, the spring is too weak or set. He also discussed taking the bulge out of the mainspring barrel, which was basically to roll on a block to reform the barrel to its original shape.

As an aside, the question was asked about how American kitchen clocks came to use the same mainspring. August explained that around 1850, we were at war. Trade embargos were imposed and material was scarce. There were few mainspring manufacturers and they took springs from European clocks, figuring they had 2-300 years of experience and arrived at a common size that was used in most all kitchen clocks

Tip – You can use a Q-tip to polish oil sinks – charge the Q-tip with ZAM, which is available from supply houses.

Throughout the seminar, there was continued reference to soldering with gold solder. August is really high on the use of gold solder for soldering dissimilar metals because of its strength. He recommended using Ultra (or Easy) Repair solder, which is the lowest temperature gold solder, slowing at 1375 degrees. He also recommended using Freeflo Flux for gold, silver and platinum soldering, available from Hoover and Strong, Inc, in Richmond, VA.

Tip: When applying shellac, use a 2.5 watt soldering iron made for repairing circuit boards – available from Radio Shack. Also, you need to test shellac to be sure it flows – if not, it is dead and needs to be returned or discarded.

August discussed common repairs in the strike mechanism. This included repair of the paddle on the strike lever arm, broken tooth in the count wheel or other wheels in the strike train and how to insure you have the exact center for the arbor pivot on the plates. He also discussed how to repair a rack and snail using gold brazing – either on the rack teeth or the snail to insure the proper number of strikes were obtained. He pointed out that the first place to check for wear on a rack was the tip of the rack tail that comes down on the snail. He recommended using gold solder to add metal to the rack tail tip.

Tip: To remove solder from clock plates, use copper steel wool, with flux applied and heated. When this is rubbed against the solder on the plate, it removes the solder onto the copper steel wool.

He also discussed how to sleeve the hour tube to get rid of loose tubes, repair to a slit cannon pinion on the center shaft – again using gold solder mixed with flux and applied to the split, heated slowly until the two sides are joined. You may need to broach out if the hole in the pinion is too small or use shellac to secure the cannon pinion to the center shaft if it the pinion is too large. He discussed how to make a jig to repair broken clock hands, the repair of hammer levers that wobble, how to straighten bent arbors and how a fussee has a stop work at the small end of the fussee to keep the chain from winding off the fussee.

As in all our past seminars with August, there was open and lively discussion throughout the seminar, with many attendees getting advice on specific repair problems they were having. And as August would say, even though we might not have encountered the problem areas discussed, we all might know someone who has!! We also enjoyed an excellent meal and the exchange of information and knowledge with others attending the seminar. I might also note that it was good to have two members from the Horological Association of Maryland (HAM) participate in our seminar. August is willing to share his knowledge of horology and encouraged all the attendees to ask him questions when we encounter repair problems. His email address is cornellts@clarityconnect.com. He can also be reached at (315) 491-6931 or through his toll free number, 1-866-FRAME11.



Stan's Komputer Korner

By Stan Palen



This is a regular column for Loupes and Tweezers. It includes computer information for IBM compatible computers in the form of hints, helps, suggestions and news. Please submit your questions to Stan Palen, 8283 Oakwood Drive, King George, VA 22485 or via email to spalen@crosslink.net. Please note that this column is often submitted for publication 30 to 60 days before publication. I now have a web page located at: www.stanpalen.com. My columns will be posted there when I have completed them.

Well, my cheap web site host went away several months ago. I tried contacting them and they never answered. I found out they were in British Columbia or something similar.

I looked around and found another host. This one is Lowesthosting.com. It is only \$4.95 a month. They have been working for a week or so to wrestle control of the domain away from them. The previous host locked the domain so it could not be changed.

I checked with the reseller and they cannot access the account because they do not have the passwords.

The new host has my new site on it with email etc. finally working, but they should have control of the domain too.

I had to transfer all my files for my web site to the new host as everything on the old one had disappeared. As usual the new site does things differently, so I had to figure out how things work. They have 24/7 help via email, so it did not take too long to get everything working.

They have a lot of support software available if you want to use it on your site. You can even set up credit card sales.

My Internet provider finally started providing some spam filtering. That is the good news, the bad news is they

leave everything in my mailbox and just mark it as possible spam.

That means I had to set up a filter to catch all the mail marked as spam and put it in a separate mailbox. Then I need to review that mailbox to see if any mail I would like to have was in there. So far in three weeks, there has not been any useful mail in there. I have asked my Internet provider to just delete all this junk, but so far they have not bothered to answer me. I am getting 90% spam now.

I know the owners name and am about to send him a note about his lousy service.

DVD burner prices have been coming down. They finally got to my threshold of \$100. I bought one from Tiger Direct and installed it where my original CD drive was. It came with DVD burning software. If you want a data disk, a DVD will hold 4.7 Gigabytes. I was able to back up my whole system on two DVD's. This was one of the easier installations of new hardware I have had in a while.

If you get new hardware or software for Christmas and have trouble getting them to work, I would appreciate it if you could let me know how you worked it out. If you cannot find out how to get things working, give me a call or send me an email. I may be able to help you.

The author is retired from the Navy as a Supervisory General Engineer. He has been involved with computers since the early sixties. He used to purchase all the hardware and software for a group of 40 scientists and engineers. He has marketed Swim Meet programs nationally. He was an associate editor of the Apple II section of the Washington Apple Pie a computer users group based in Washington DC.



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Hint...

Check out www.timekeepersworkbench.com

For gear cutting tools, parts, and accessories

Mark your calendar !

First Tuesday of every month, Potomac Guild meeting
March 16, 2004 - Tri-Cities Guild meeting
April 17-18, 2004 - HAV Convention 2004, Lynchburg, VA
April 20, 2004 - Tri-Cities Guild meeting
July 1-3, 2004 - NAWCC National Convention, Oklahoma City, OK
August 5-8, 2004 - AWI Convention, place TBD

HAV Mission

The Horological Association of Virginia is dedicated to the advancement of the Art and Science of Horology. We will provide opportunities to our membership to advance their skills and knowledge. We will support our members by providing educational opportunities at our Conventions and Seminars. We will support our local guilds, wherever possible, in their efforts to advance the causes of the HAV.

The HAV was formed in October 1939 for the purpose of promoting cooperation among the horologists, principally watchmakers, throughout the Commonwealth of Virginia and surrounding locales. In the ensuing years, HAV's spectrum has broadened to include clockmakers, bench jewelers, retail jewelers, collectors, and hobbyists associated with this precision industry. The scope of HAV has grown by expanding its offering of education to its members in the latest techniques, training in the use of advances in technology, and continued prompting of fair and ethical trade practices.

In Memoriam

Thomas Greene Belcher, 82, of the 7500 block of Yorktown Drive, died Nov. 24, 2003. A native of Norfolk, Mr. Belcher was a graduate of Maury High School, Class of 1940. He had retired as a watch maker jeweler at Wards Corner Jewelers. He was a past deacon and choir member of Park Place Baptist Church, a former member of Wards Corner Lions Club, Moose Lodge No. 39 Norfolk and a life member of the Horological Association of Virginia. He was also a member of the local Polio Club. Mr. Belcher was preceded in death by his first wife, Renee R. Belcher and two sisters, Eugenia Basye and Virginia Barnes. Survivors include his wife, Jeanette J. Belcher; a daughter, Jeanne Renee Belcher of Rochester, N.Y.; three sons, John William Belcher of Florida, Lawrence Thomas Belcher and Mark Allen Belcher, both of Norfolk; two sisters, Katherine Evans of Chesapeake and Elizabeth Gray of Kittanning, Pa.; two brothers, W.W. Belcher of Harlingen, Texas and the Rev. Bobby H. Belcher of Salisbury, Md.; seven grandchildren; and seven great-grandchildren. Interment was at Forest Lawn Cemetery. In lieu of flowers, memorial donations may be made to the church.