The Howard Banta
Alarm Clock Chapter
Chapter 178 of the National Association of Watch and Clock Collectors
www.acc178.org 2007 Volume 4

In this Issue

More regional coverage - this time in San Diego. Do you see yourself in any of the photos? We're pleased to have continued contributions from Roger Royal for our 'Poet's Corner'. Two of our international members, Alarm Clock Peter and Rodney Lewis, are also present. Check out the 'Sell it in the Newseltter' for those hard to find items. And of course, we're very pleased to have Ken Reindel continue his series with the conclusion of his article "The Baby Ben Movement Restoration Highlights."

Dues Due

It's that time again. To ensure uninterrupted newsletters mail your dues ($15.00) in the envelope enclosed to our Treasurer Mike Wilson.

Our apologies to Roger Royal for a misprint of his poem in the last issue. We print it here in its entirety.

MY BEST ALARM CLOCK
By
Roger Royal

There's nothing much better
Than a new alarm clock.
I run to the mail
And tear open the box.

I fight with the tape
That covers the flap.
And pop all the pips
On the clear bubble wrap.

My pulse is racing
As it comes into view.
I feel so excited
I don't know what to do.

It's the one that I've wanted
For over ten years.
I've waited so long
That I'm almost in tears.

I open the tissue
And there it is.
The clock of my dreams
And it fills me with bliss.

I cannot believe it
I finally have it.
I gingerly place it
In my display cabinet.

It's really a gem
It's almost perfection.
It's the crowning addition
To my favorite collection.

It's truly the best
Alarm clock of my life
At least till the next
Clock I buy – says my wife!

Officers and Contacts

Alarm Clock Chapter Newsletter: Quarterly
Annual Dues: $15.00

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Sell it Through the Newsletter

Every member may submit one ad per newsletter. This includes a *Wanted to Buy* or *Wanted to Sell*. The newsletter comes out at the beginning of March, June, September and December.

Author Instructions

All are encouraged to submit articles for publication in the *Alarm Clock Chapter* newsletter. Please include your name, address and phone number with the article. Although certainly not a complete list, suggestions for topics are:

- Specific alarm clocks or manufacturers
- Unique design - movement or case
- Special methods of cleaning
- Descriptions of interesting repairs
- History of a manufacturer
- Helpful tips on repair

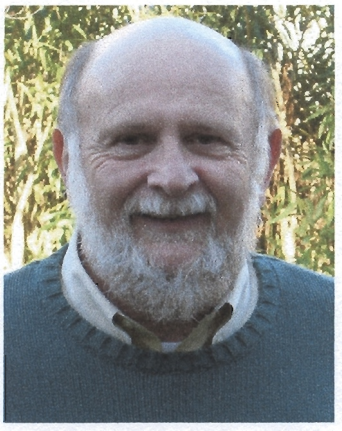
Photos along with the text are always appreciated. Please email to the editor at:

saraandmary@sbcglobal.net

or send article on computer disk (MS Word) via snail mail

Mary Maier
530 Staples Avenue
San Francisco, CA 94112

President's Corner



As stated in the article on the Southern California Regional, more and more members of the NAWCC are starting to become interested in alarm clock collecting than in previous years. It is because of "Special Interest Chapters" like ours that the interest is growing and a larger variety of alarm clocks are being collected and shared. For those of you that have access to the internet, we can see that eBay has unearthed some of the rarer alarm clocks for sale besides the more common ones.

We must remember that eBay is only one place to purchase the clocks. There are many alarm clocks showing up at NAWCC conventions, local Chapter meetings, flea markets, and garage sales.

The point I am trying to state is that with the support of the National in providing access to numerous conventions throughout the country and support to our own local chapters, we have been able to enhance our collections and share with others the joy and love of collecting and sharing this special interest.

Many believe the NAWCC is waning, but with support of members like you we will still have the opportunity to visit local chapter meetings and go to Regional and National conventions to share our passion and love for collecting alarm clocks. Hope to see you at the next convention!

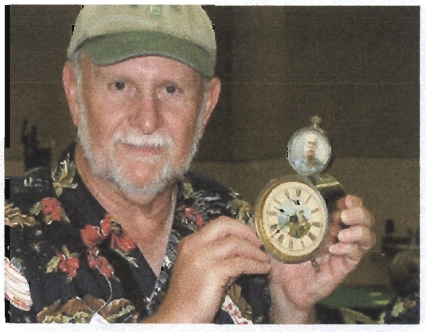
- Vince Angell -

You are receiving this newsletter a little later than normal. Balancing a hectic work schedule, getting together with family over the holidays and working on the newsletter...well it didn't all balance very well. My apologies to all you members out there for this issue being late.

- the Editor -

Southern California Regional

The Southern California Regional held at the Del Mar Raceway near San Diego was a great success. Over 300 tables of clocks and watches with more alarm clocks than usual. More and more members of the National now see the great interest in alarm clocks and dig into their storage boxes to sell them at the Regionals. With the numbers in alarm clock collectors growing it seems that more and more clocks are showing up at the convention and especially this one last November.

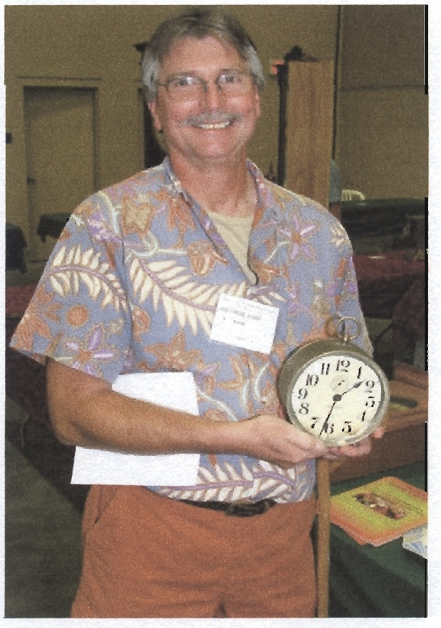


Vince Angell shows us this rare and expensive German alarm clock at the regional for sale.

Member Verlyn Kuhlman shops a variety of clocks and alarm clocks.

Nile Godfrey finds great graphics on alarm clock boxes which are fun to collect.

Bob and Cora Lee Linkenhofer visit with former Director of the NAWCC Mary Ann Wahlner.



Recent member Chip Kumparack makes a great find at Del Mar.

NAWCC Presidential Time Pieces

The NAWCC Museum is hosting an exhibit of Presidential Timepieces in 2008. One of the timepieces is a 1970's Seiko battery powered alarm clock that was given by Don Baylor to President Richard Nixon as a thank you for an invitation to the President's home in CA. The two struck up a friendship and, according to President Nixon's daughter, the clock was one of his most prized possession. His daughter is loaning the clock for the exhibit. A few images are shown here.

Best of Holiday Wishes

Very Happy Holiday Wishes from fellow member Rodney Lewis in Australia.

What Is It?

Writes Jim Davis:

Has anyone seen this clock before? I'm trying to get more information on it. I think it's related to the tape measure clock. Can you or someone tell me who makes it? All it has is "made in USA patented 1563431, 1709146 and 1848520. When did it come out? The clock and alarm works and you have to set the day of the week and month manually.
Thank you,
Jim Davis.

The clock you have was made by Lux circa 1938. *American Clocks Volume 3* by Tran Duy Ly refers to it simply as 'Rotary Alarm' while Stein in *20th Century Modern Clocks* refers to it as the 'Bugle Boy'. As you correctly guessed it's the same manufacturer as the 'Tape Measure' clock. The original colors were red, bronze and ivory. If anyone has any additional information please just send an email and we'll get the information to Jim Davis.

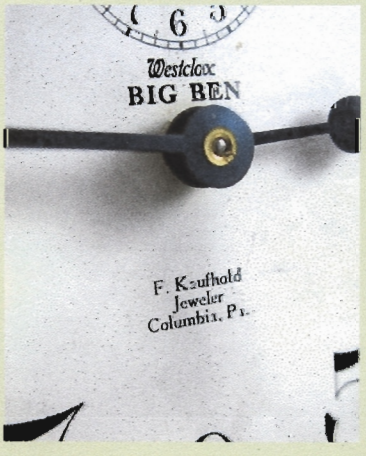
-the Editor-

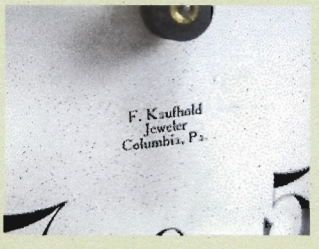
Museum Donation

The HBACC has just received notice from Noel Poirier, NAWCC Museum Director, that the Collections Committee has approved the addition of the Westclox Big Ben with the Columbia, PA Jeweler's dial to the museum.

This clock will be donated to the museum for display by the Howard Banta Alarm Clock Chapter #178.

More information and pictures will be coming in the future.





Poet's Corner

CHRISTMAS WISHES

BY

ROGER ROYAL

CHRISTMAS IS COMING
A TIME OF GOOD CHEER
WITH FAMILY AND FRIENDS
AND THOSE WE HOLD DEAR

A TIME TO REFLECT ON
ALL OF OUR BLESSINGS
BUT THERE'S ONE LITTLE THING
THAT I MUST BE CONFESSING

I WENT TO MY DRESSER
AND PULLED OUT A SOCK
SO IT COULD BE FILLED
WITH AN OLD ALARM CLOCK

AND I HOPE TO BE HAVING
A VISIT FROM SANTA
WITH A CHAPTER NEWSLETTER
FROM HOWARD BANTA…

AND ALSO I'M WISHING YOU
WARM SEASON'S GREETINGS
AND HOPE THAT YOUR
CLOCK FINDING LUCK
WON'T BE FLEETING

MERRY CHRISTMAS AND A GREAT
NEW YEAR!

The Market Place - Sell It In The Newsletter!

Every member can advertise in the newsletter for free. And unlike eBay, no hidden fees and charges. Advertise to other collectors like yourself.

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Cast Iron Alarm Clock

Ca. 1910
Possible Westclox Movement
$45.00
Contact Vince Angell
phylathome@hotmail.com
or call @ 916-952-4961

ANSONIA PIRATE ALARM CLOCK IN ORIGINAL WOODEN BOX

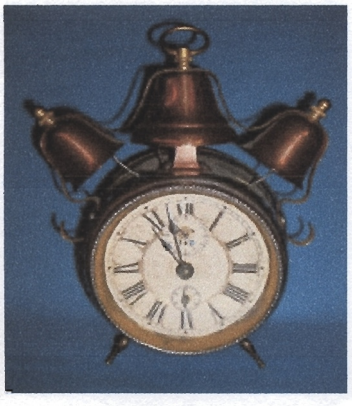
Ca. 1910
Clock "as is"
$75.00
Contact Vince Angell
phylathome@hotmail.com
or call @ 916-952-4961

Wanted to Sell

COLLECTION OF ALARM CLOCKS
Antique, middle aged and modern
5 page list.
Send S.A.S.E. to:
William J. Meehan
1798 Mimosa Plaza
Monroe Township, New Jersey 08831

GREETINGS FROM ALARM CLOCK PETER

I send you greetings from Germany. The last few months have been hard on me - very, very long work days. It seems I'm often home only to sleep with very little time for collecting old alarm clocks. But at least I've been a little successful with my alarm clock collecting.



In April of last year I was in the Black Forest. A French trader brought me an alarm clock from Mauthe, Villingen-Schwennigen. I'd been searching for this model for a long time. It was expensive, but I'm very glad to have found one. You would recognize this model as there was one in the Howard Banta collection. The piece is complete and in original condition with a decoration over the bells.

Uwe H. Peter (Alarm Clock PETER)

Ken's Korner

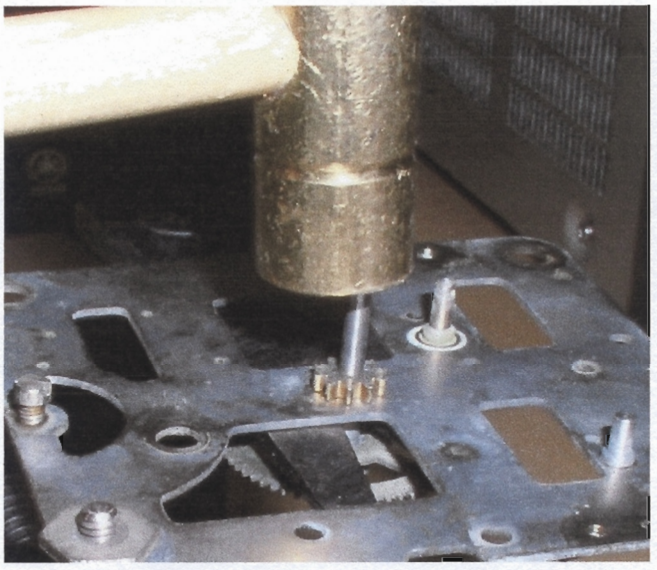
The Baby Ben Movement Restoration Highlights

by Ken Reindel*

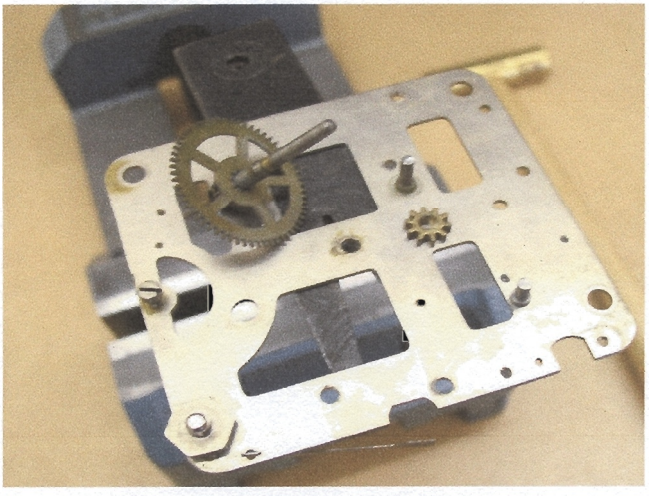
This article is continued from Volume 2, 2007

In the upper left corner of the image below we see our center wheel pivot hole. It is worn, but not nearly as badly as the third wheel hole, lower center. It is long and oval and will require an oversize bushing to repair. It's amazing these clocks keep running for decades with this kind of wear, but eventually the party comes to an end and the clock stops. In this case the repeating alarm must have also begun having problems since on the Style A Baby Ben this wheel controls this feature. With all this wear, it's even more amazing how unusual it is to find a vintage Westclox with a worn pivot—although it does happen and must be dealt with.

As you can see on the left above, the center wheel cannon pinion has been removed. Often repairers skip this step and leave the pinion in place because it is considered difficult to remove. In fact, it is not difficult to remove with the right tools. Below is a picture of our setup. A few brisk taps with a light brass hammer and the assembly slips apart easily. Getting under the cannon pinion is very important. Cleaning and servicing this hole cannot be done any other way. In this case, we also had to deal with the badly marred center wheel arbor which had been staked flat, distorted, bent and scratched in some previous repair operation.



Setup for Removing Cannon Pinion



Pinion Removed (Style 3 Chime Alarm)

The alarm setter knob must also be removed. On many clocks, this is a simple screw-on part. The alarm tension washer and retaining nut are then removed, and the shaft drops out the front of the movement. On some movements, the alarm setter is a friction fit and must be removed in a fashion similar to what was done for the cannon pinion. It's impossible to describe every possible scenario, since they vary from clock to clock. For example on some later model alarms, there is a pilot hole in the center of the setter that can be used with a thin drift punch to tap the shaft downwards while clamping the setter either with the crow's foot or with the vise (wrap the setter in 1/16" cardboard to prevent marring it). On some movements such as the early Ingraham and Gilbert movements, the alarm set shaft is pinned. The taper pin must be driven out to allow access to the move-

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(*) Ken Reindel is the owner of Ken's Clock Clinic found at http://www.kensclockclinic.com

ment. With it in place, the movement cannot be disassembled for any kind of repair work. For these we use a small brass collar which is placed on the shaft under the screw-on setter. We've hollowed out part of the underside of the collar so that when the setter is screwed on, it acts to pull the shaft upwards, lifting the pin off the plate, allowing easy removal with a thin drift punch.

The small Palmgren vice shown in the background is a "must-have" on the clockmaker's bench. It is one of the most handy, helpful tools on the bench. It is heavy enough to be used for staking operations, but light enough to be moved where most convenient, even as a milling or drilling vise! It's one of the most frequently used tools in our shop.

Now that the movement is fully disassembled, it is time to do a more detailed inspection of what we're dealing with. There are a myriad of things to check, so I've listed the most common things:

All movement train pivots (look for bent pivots as well as wear)

Escape pallet pins
Escape pallet fork (for wear)
Escape wheel teeth (for wear)
Balance Pivots (for wear or cracks)
Balance pin
Balance roller (for wear)
Broken teeth
Center wheel clutch (very important!)
Ratchets and Clicks
Mainsprings
Mainspring barrels
Cast Arbor and Pinion (for loose pivots and cracks)

Let's now cover some of these in more detail.

Movement Train Pivots. Wherever there is a worn hole, it is extremely important to closely inspect for worn pivots. They wear together. It is infrequent to find a hole worn and a pivot not worn, or the other way around. This is because small particles of metal are worn off the pivot and the wall of the hole as a normal by-product of friction. These microscopic particles blend with the oil and eventually form a paste. Some of this paste embeds itself into the walls of the pivot holes, turning the hole into a little sanding block that wears away at the pivot. Some of the paste embeds itself in the pivot, resulting similarly in a worn hole. If a pivot is worn, it is always advisable to rebush the hole. Part of the reason is that once the pivot is resurfaced the hole will be too small. The other reason is to remove the embedded particles from the pivot hole to prevent pivot wear from recurring. Note that no amount of cleaning or pegging out of holes will remove embedded particles. Lightly broaching will do it, but then this will often require a larger pivot! It is debatable if round broaching is aggressive enough to do the job.

I mentioned earlier that the Baby Ben and Big Bens with cast arbors and pinions tend to experience worn pivots at a lower rate than traditional turned pivots. We have found this to be true. Westclox devised the cast approach to save cost, and this resulted in a more affordable clock. But it also resulted in a longer wearing clock. We believe this is because of the way the pivots were made. The process of cutting pivots on lower priced clocks seemed to go a little "light" on the final polishing step, presumably to save time and therefore cost. The result was a somewhat rougher pivot finish. The traditional approach also required softer pivot steel in order to make it possible to economically machine the pivots on the arbors. With the Westclox design, the process by which the pinion wire was formed, as well as the hardness of the wire itself (it only had to be cut, not machined) resulted in a much smoother, harder pivot than was found in traditional alarm clock designs. Because of the relative hardness and yet flexibility of the wire, it was possible to produce a very thin pivot that resulted in much less frictional wear than is found in traditional clocks of the era. This had the additional positive side effect of requiring substantially less mainspring power to run the clock, which in turn also resulted in less pivot wear!

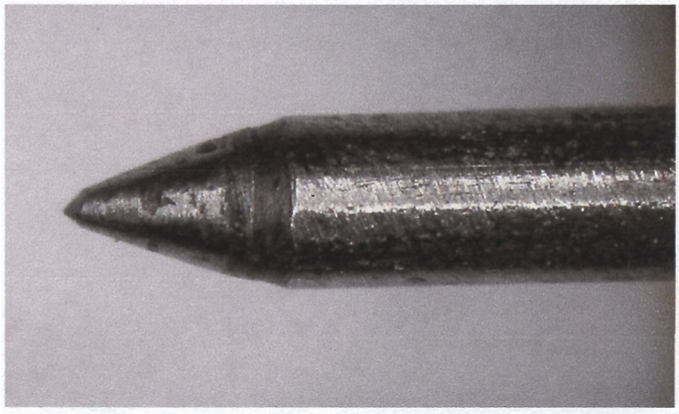
An important point here is that, regardless of obvious wear, ALL pivots should be reconditioned and then ALL holes inspected carefully. Not all pivot holes will need to be rebushed. But you won't be able to make a final determination until all of the pivots are polished and reassembled for re-inspection of the holes. The reconditioning of pivots will be covered in our next series.

Escape Pallet. The escape pallet is a source of many movement problems. The two most common problems are worn pallet pins and a worn fork. The part of the fork that we are most concerned with is that which impinges on the balance roller. We see wear periodically with pallets that are of the non-roller style. However, for whatever reason it seems more common with the roller-style, and must be addressed. There are things we can do short of replacing the pallets that can help this. Pins can easily be replaced. The pallet arm can be staked to stretch the metal slightly, resulting in an oversized pallet that can then be carefully filed to size, essentially "filling in" for the wear.

Pallet problems are responsible for a lot of mysterious behavior with alarm movements. Unless you correctly diagnose these problems and eliminate them, you might be stuck with a movement that runs great on the test stand but eventually stops when installed in the clock—but only intermittently. A beat amplifier is helpful, because problems can be detected audibly but at a very low level so they must be

amplified. With amplification, there should be an absence of rubbing sounds in between the beats. Rubbing is an indication that the escapement is not locked and is recoiling the pallet against the stop roller. This slows down the action of the balance wheel affecting timekeeping and potentially stopping the clock. More on escapement adjustments will be covered in future articles.

Balance Wheel and Balance Cups. The balance wheel pivots are the most common source of frustration for the alarm clock restorer. If worn (and they are the majority of the time) and left unattended, the clock will run sluggish and stop before fully unwound. Severe friction between the balance wheel pivots and cups can stop a clock. The balance wheel pivots can be resharpened and burnished on the lathe. Cups with minor wear can be re-used. Cups with deep wear from years of running with bad pivots will need to be replaced. See pictures below.



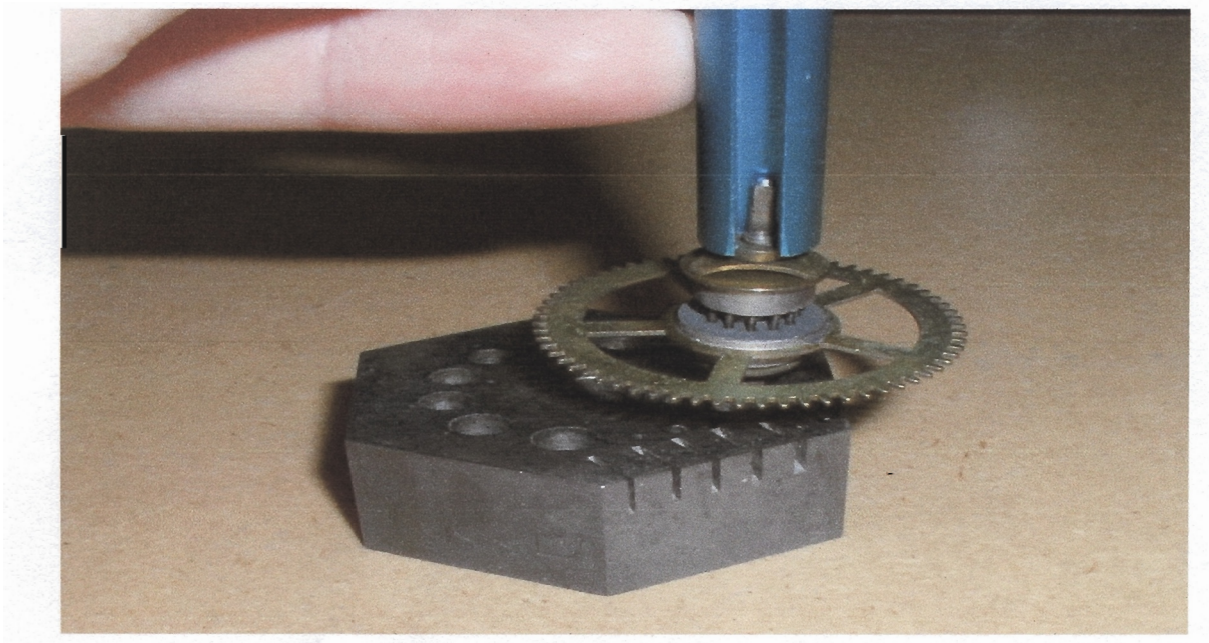
An example of a worn balance pivot, highly magnified. Note the flat spot on the upper tip of the conical pivot.

Wheel Teeth. Broken wheel teeth, while rare, can be repaired. If replacement wheels are available from either new old stock or from otherwise unsalvageable clocks, these can be used to expedite the repair. However this must be done with great care, as wheels can look the same and have different tooth or pinion counts. Fabricating replacement wheels is often possible as well. This will be the subject of a separate article in the future.

Center Wheel Clutch. The proper tension on a center wheel clutch is critical. Too tight and the user will have difficulty setting the correct time. Too loose and the movement will deliver erratic timekeeping. Some days the clock will run fast, some days the clock will run slow. You'll have to develop a "feel" for what an acceptable level of tightness is. But in NO case should this clutch ever be left loose.

To tighten the clutch, the wheel can be set in a bench block (available from numerous suppliers with a variety of hole sizes). Often we like to use old bushings as "buffers" for the arbor. A bushing that is a "just fit" on the arbor prevents the hardened steel bench block from marring or otherwise damaging the arbor during the tightening process. It also makes up for the possibility that the exact sized hole may not be available in the bench block. If a bushing is not available, a small scrap piece of 1/16" brass can be drilled and broached open to provide the "buffer" piece for the tightening operation.

To tighten the arbor, a cannon pinion tightening tool such as the one shown below is used. The open end is placed on top of the retaining boss and lightly tapped a few times with a small brass hammer. Normally a few taps is all that is needed to tighten things up. Always recheck the friction fit by



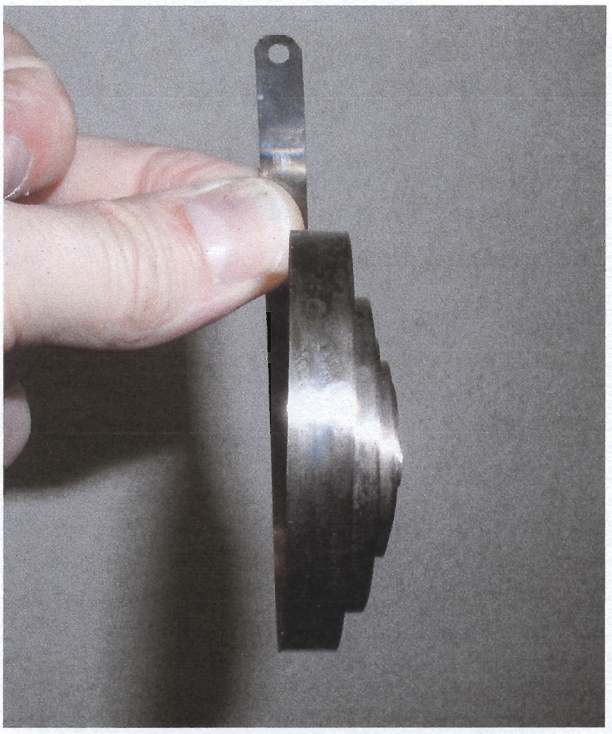
grasping the wheel, loosely installing the setter on the center wheel arbor, and attempt to turn it. It should turn freely and yet not be loose. A little tight is usually better than too loose, as it is nearly impossible to re-adjust after the movement is assembled if a problem is discovered then. Again, though, too tight will result in difficulty in setting the clock.

Tightening clutch on center wheel. Note the cannon pinion tool is a handy device for this operation. Not shown is the other hand with hammer, lightly tapping top of tool.

Ratchets and Clicks. Ratchets and clicks must be inspected carefully. Broken ratchet wheel teeth can result in a bruised hand, a broken mainspring, or permanent damage to the click. A damaged or worn click could let loose and result in a destroyed ratchet wheel and other problems mentioned above. Pay attention also to the click spring. It is important that it be adjusted to be tight enough to provide a solid "click" as the mainspring is wound. If the action is weak or faint, the mechanism could release, resulting in damage to both the movement and the customer.

Mainspring Barrels. On some clocks, such as the Westclox Bens, the mainsprings are set in barrels. This practice was meant to contain the mainsprings. It prevented damage in case of breakage, aided in assembly of the movement, and made mainspring replacement easier. We must inspect these barrel assemblies carefully. With Westclox models, the ratchet/barrel assembly also serves a dual function of providing the upper bearing for the main wheel. The play in the upper pivot can be excessive due to wear in the upper pivot hole, or it can be due to the wear in the machined ratchet. The combination of the two often becomes bad enough to interfere with the gearing between the main wheel and center wheel pinion. While this assembly can be restored (it is a fairly big job since the entire assembly is staked together), the most convenient course of action is to replace the barrel assembly with either new old stock or a unit from a spare parts movement.

Mainsprings. It is not uncommon to reassemble a clock, have all set in order, and then have the mainsprings break! The reasons this happens are numerous. The three most common are small cracks, rust, and metal fatigue. You can see rust and small cracks. Every mainspring should be inspected for these defects, especially if they are near the stress points around the holes (inner and outer). Any springs with these defects should be discarded.



To the left is an example of a Baby Ben mainspring. Here, the hole has been previously repaired. Note also the conical shape of the spring. Although I removed it from the barrel with a mainspring winder, it was obviously wound back into the barrel at some point in time without a winder. This mainspring will be discarded.

Metal fatigue is sneaky. It can result in latent failure even though the spring looks fine. After this has happened to you a few times, you reach a point where you only feel safe replacing old springs. Unfortunately, previously used or even new old stock springs found at a Mart for $5 per dozen don't do the job, because they are either rusty or they have been fatiguing in barrels for the last 50 years. That leaves us with no choice but to buy replacements from suppliers.

The two most important dimensions you need to match are spring thickness and width. Of course length is important too, but it is usually easier to accommodate—even if you have to shorten a stock spring size somewhat. Remember that the strength of a spring varies as the cube (to the power of 3) of the thickness, and proportional to width. This means you can afford to be off somewhat on the width, but not thickness. If you are 10% wider, the spring will only be 10% stronger, and this can probably be tolerated as long as it fits. But, a spring that is a mere 10% thicker will be 33% stronger! That can do damage to the small pivots and thin plates found in alarms and cause problems with over banking in the escapement. Therefore it is important to match springs as closely as possible on thickness as a first priority. Even using a .011" thick spring (when the original was .010") is playing with fire. A .012" thick spring will be 70% or 1.7X stronger! Keep in mind that modern spring steel is a bit stronger than its 100 year old predecessor, so sometimes it is

acceptable to go a little light on the thickness and still get good performance from the movement. This is actually preferred to going too strong.

If you decide to take a chance on the original spring, it is prudent to wind it and unwind it fully on a spring winder at least 10x before reinstalling it into the clock. This will catch many imminent failures. Also, make sure the mainspring, when fully released and sitting on the bench, has an overall outer diameter between 2x or 3x what it will be once wound into the barrel. If not, it may not have sufficient power to run the clock correctly.

Cast Arbor and Pinion Problems (Westclox products). Many Westclox cast arbor components develop faults over the years. Pictured below is an example.

Internal cracks weaken the arbor and at the extreme will cause gearing problems due to the deflection of the arbor. The telltale sign is that the pinion will split apart if gently pulled. Such damage is unacceptable and must be dealt with. The easiest and most efficient solution is to replace the whole wheel. If this is possible, by all means do so. The other means is to repair it. The type of repair will depend on the type of damage, where in the arbor it occurs, and its effect on its performance in the clock. The methodology for repairing these wheels is beyond the scope of this article, as it requires a proficiency in machining that cannot be assumed. Feel free to contact me if you wish to discuss such repairs. JB Weld has been used with some, but limited, success.

To the left is an example wheel with a broken internal arbor.

In later articles we will deal with some techniques for tightening the steel pivot wire in the arbor. This very common problem can lead to failure of the movement if not addressed. If sufficiently loose, the wire has a tendency to "walk" its way out of its associated hole (especially if the clock receives a mechanical shock such as falling on the floor).

In the next section, we will cover the art of restoring worn holes with bushings that we will make ourselves, on the lathe. The result will be hole repair that will be reliable, mechanically sound, and nearly undetectable.

We hope you have enjoyed this wonderful article by Ken Reindel *Baby Ben Movement Restoration Highlights*. Ken's series have become one of the highlights of our newsletter and w're pleased to annouce the next issue will begin a multi-part article on bushing work for alarms.

Plan on attending the Greater Los Angeles Regional?

The annual GLAR is held February 8th and 9th at

Pasadena Center
300 East Green Street
Pasadena California 91101

If you will be attending, please stop by and visit the HBACC table and display near the auction tables.