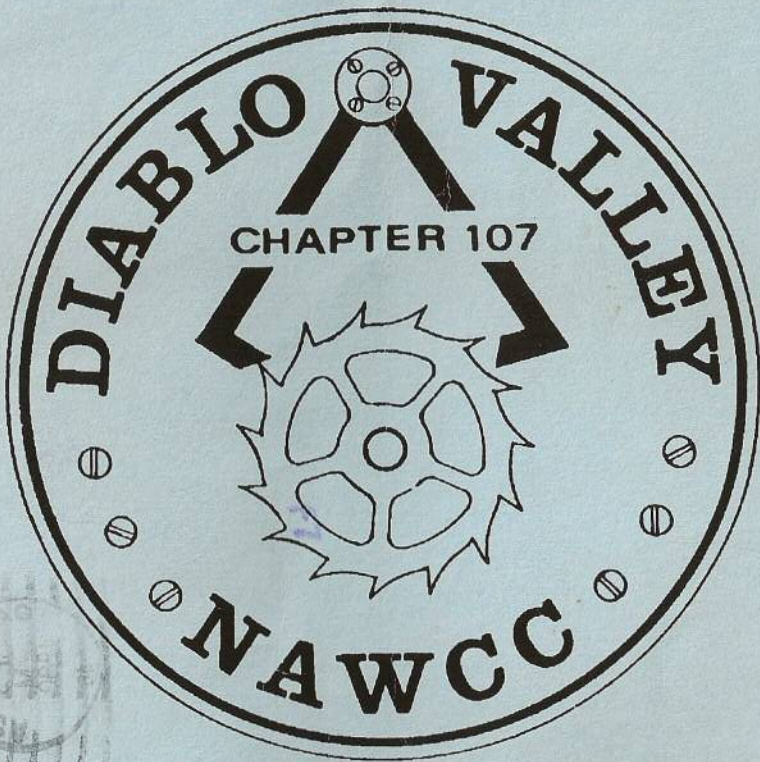


BULLETIN



OCTOBER 1990

ISSUE 71

Diablo Valley Chapter 107
National Association of Watch and Clock Collectors, Inc.

MEETINGS

Chapter: Second Sundays, Even Months, Noon
Evening: First Fridays, Odd Months, 7:30 PM
Board: Second Mondays, Odd Months, 7:30 PM

1990 OFFICERS

President.....Steve Fabes.....932-5091
Vice President.....Wayne DeLaroche...944-9242
Vice President.....John Stohr.....376-6476
Secretary.....Tom Armour.....654-3363
Treasurer.....John Sanderson.....937-6272
Past Pres. Fred Cuthill.....686-3144

DIRECTORS

Harold Montano.....1989-90....223-7931
Dorothea Sanderson....1989-90....937-6272
Glen Armstrong.....1990-91....837-6298
Rick Calicura.....1990-91....228-4992
Shirley Gibson.....1990-91....735-3377

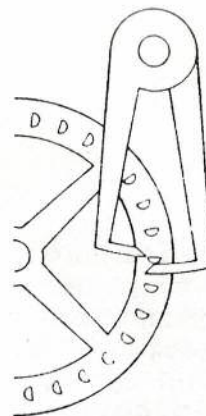
COMMITTEE CHAIRS

Display.....Bob Wahrer.....462-4912
Drawing.....Harold Montano.....223-7931
Library.....Sandy Cuthill.....686-3144
Mart/S. Auction.....Ed Okvist.....357-6257
Membership.....Dorothea Sanderson...937-6272
Nominating.....Fred Cuthill.....686-3144
Photo/Mem.Book...Rick Calicura.....228-4992
Program.....Wayne DeLaroche.....944-9242
 John Stohr.....376-6476
Refreshments.....Bud Ehler.....228-5387
 Shirley Gibson.....735-3377

Editor....John North....676-9188

Please send material for BULLETIN to
4427 Striped Maple Ct. Concord, Ca, 94521

Statements of opinion or fact made by authors of articles appearing in chapter publications are to be accepted as the author's
own; the chapter assumes no responsibility for the accuracy or correctness of any statements of its contributors.



THE PIN-WHEEL ESCAPMENT

MEETING INFORMATION

Sunday, October 14, 1990

at

HOME FEDERAL SAVING AND LOAN
Tice Valley Road and Rossmoor Parkway
Walnut Creek

MART Set-up 11:30 AM
MART begins 12:00 Noon

PROGRAM

HISTORY OF THE STANDARD ELECTRIC TIME
COMPANY

Phil Pople, a Bay Area resident and specialist collector of Standard Electric master and slave systems used mainly in schools and industrial locations will share his extensive historical and technical knowledge with us. Please bring any questions you have on such clocks and systems.

DISPLAY

Bring your master and slave electric clocks, of whatever brand, also any related material such as advertizing, technical documents, or piece parts.



October President's Message:

Summer is over. I hope you all had a good time vacationing and enjoying the long days. My vacation took me into Pennsylvania where I traded a day's unlimited shopping in Lancaster with my wife for a day on my own in the NAWCC museum.

What an impressive show of clocks and watches. My knowledge is general but I came away with the impression that they had assembled an example of all that I was familiar with. The watch displays were marvelous but it was here that I thought they were light-- not so much with pocket watches but wristwatches, especially ladies.

Donations to the museum are a significant act for an individual or a chapter. Most of us have in our homes more timepieces than is normal. (Most of us are also insane according to our noncollecting families.) We should all think of the museum and perhaps identify a quality watch (or clock) that can have a more public final resting place than we collectors shall ever deserve.

ELECTIONS

Nominating committee Chair Fred Cuthill announces the following nominations for the December elections. Nominations may be made from the floor at the October meeting. Please be sure in advance any person you wish to nominate from the floor is willing to serve.

- For President John Stohr
- Vice President Harold Montaro
- Vice President Bob Wahrer
- Director 1991-92 Jack Coulter
- Director 1991-92 Roy Holman
- Secretary Tom Armour
- Treasurer John Sanderson

MEMBERSHIP

Here we are at October again! Time to think about renewing your Chapter membership for 1991.

Annual Dues \$15.00

Sign up now. Don't wait until the last minute!

Dorothea Sanderson

LAST MEETING

Congratulations to GINNY FORD who won an enamel Chapter pin for best cookies in the COOKIE BAKEOFF. Also to SANDY CUTHILL for having the temerity to bring a clock capable of winning the UGLY CLOCK CONTEST!



EXECUTIVE COMMITTEE MEETING .. SEPT. 10, 1990

Meeting called to order at 7:45 pm by
President Fabes.

Present were: Armour, Calicura, F Cuthill,
Fabes, Gibson, D & J Sanderson and North.

Nominating Chair Fred Cuthill reported
progress on the slate of officers for next
year. The Board suggested additional names.

Dues: After discussion on Chapter dues,
visitor/guest charges and dues proration for
members joining during the dues year, the
Board voted:

1. Chapter dues are \$15.00 per year, which
shall include spouse and children under 18.
This allows one vote and one office
privilege.
2. There will be no charges for visitors or
guests at meetings.
3. First year dues for new members will be:
Entering January through June ... \$15.00
Entering July through December .. \$ 8.00

Note from Secretary: Previous Board actions
on dues may be found in Bulletins #58-June
1988 and # 61-December 1988.

Bylaw discussion was tabled.

It was clarified that the NAWCC dues for Dr.
Hohchstrasser of Romania were paid by our
Chapter.

Meeting adjourned at 9:15 pm.

Tom

Tom Armour, Secretary

The Tip Off by Phil Russell

***** When we think of the Eli Terry clocks--
the words "Mass Production" never enter our
minds. But wait-- Eli Terry made 4000 move-
ments (1000 in 1809 and 3000 in 1810). These
movemnts were sold to the Porter Brothers in
Waterbury Conn, Porter brothers were case
makers and thus began the mass production of
clocks. Do you have a mass produced Eli Terry
clock?

***** Sears and Roebuck told us how they take
care of clocks-- now here are the directions
for keeping your clock in "running order" as
described by none other than Chauncy Jerome--
the major clockmaker of the 1840's

"Do not have your clock cleaned or oiled
too often.

If clock has a faint beat or stops on a
cold night-- oil all the pivots in front,
wind the clock about half way, then take
off the verge. This will run out the
gummy oil. Wipe off the black oil, and
it is not necessary to add more oil to
the pivots."

***** Ever hear of Maria Nicollet of
Philadelphia? Probably not--BUT you should be
aware that she is called the "FIRST" woman
watchmaker in the U.S.A. around 1793-1799.
Other noted women in the clock and watch in-
dustry were Anna Marie Leroy who made a com-
plete brass movement and had the dial engraved
with her husband's name. then in 1802 Hannah
Montanden in Lancaster was in the clock busi-
ness 6 years after the death of her husband.
Through the years a great number of capable
and skilled women were employed.



CLOCK KEYS

A key wound clock without a winding key is about as useful as a car without gasoline or oil. As important as a key is to a clock, you'd think that sizes and types would be known by everyone, both buyer and seller. However, it doesn't work that way. Order a specific size key from a supplier and it's liable not to fit your clock.

The size of a key starts with the width across the flats of its winding arbor in millimeters. That's straightforward--where's the problem? The problem is that there are two standards, Swiss and English. Both systems start with a #3 key as being 3.0 millimeters across the flat of the square winding arbor. The Swiss system increases or decreases in multiples of 0.25 mm while the English system uses multiples of 0.20 mm. See the problem?

Size	Swiss	English
0	2.25 mm	2.4 mm
1	2.50	2.60
2	2.75	2.80
3	3.00	3.00
4	3.25	3.20
5	3.50	3.40
6	3.75	3.60
7	4.00	3.80
8	4.25	4.00
9	4.50	4.20
10	4.75	4.40
and etcetera.....		

Present day keys made in India use the English system. Suppliers sell keys with a number size stamped on them, but fail to say which system is used. It pays to carry a good assortment of sizes and sell by fit and not by size.

Key gauges are made in both male and female styles. However, unless the sizes are designated in millimeters on the gauge, you don't know which system or key will fit.

When you know the correct key size for your clock, it's recommended that conventional keys-- those with "ears" or "wings" be used to wind spring driven clocks and winding cranks be used for weight driven clocks. Cranks provide a smooth continuous action or lift to the weights which will minimize the wear and tear on the cables, pulleys and arbor clicks.

Some of us may lose strength in our hands and wrists as we "mellow with age". Some winding cranks with their longer arms give a mechanical advantage so that the clock can be fully wound to run eight days instead of the two or three days sometimes reported.

Keys are made of both steel and brass with brass usually costing more. There should be enough metal at the winding end to provide strength, but still fit through the holes in the dial. If a key has cracks at the winding end or doesn't have square corners, find a new key. A slipping key can provide lots of repair problems. This holds true for undersized or oversized keys; you don't want slippage while winding. Keys with longer winding shanks place the fingers out away from the clock hands, making winding a little easier.

If someone knows how they cut the square hole in the key, let me know.

THE ARCHITECTURE OF HOROLOGY
Part 2 - The Rebirth of An Idea

When mechanical clocks actually appeared in western European culture is not certain; probably between 900 and 1300 AD and only then because of a serious scientific interest in astronomical observation. A mechanical clock requires, aside from wheels and gears, a regular source of power, and above all, an escapement mechanism that engages and interrupts the movement of the gears and thus checks the source of power at regular intervals. This was a new idea after the fall of Rome.

There is positive reference to and drawings of a thirty foot high monumental astronomical clock built at Kai-Feng, China in 1090 by one Su-Sung, which was water powered with a scoop wheel mechanism checked by a weigh bridge that regulated the flow of water and hence the movement of the complex works. It is perhaps the first authenticated mechanical time telling device of such a type which contained an armillary sphere with rotating planets and had a five story pagoda structure with figural jacks that struck hours and special times of the day on bells and gongs. It appeared to be more an oddity than necessity as it was dismantled a few years after its conception from lack of interest.

But for reference to a mercury clock of King Alfonso XII of Castille (c. 1270) and another reference by Dante in 1320, little is known of early mechanical devices until a remarkable treatise about an astronomical clock designed and made by Giovanni Dondi, a prominent professor of medicine, logic and astronomy at Padua. Dondi completed the clock in 1364 after sixteen years of work. With a fine brass movement it recorded mean minute and hour time, setting and rising of the sun,

conversion to sidereal and temporal hours, solar and lunar elliptical cycles, annual movements of the five known planets, fixed and movable feasts of the Church and prediction of eclipses. So perfect was the description of the treatise that Thwait's and Reed Manufacturers in England were able to reproduce several of these heptagonal weight driven dialed time-pieces, one of which is housed at the Smithsonian and another at the Time Museum at Rockford, Illinois. Architecturally, the clock hints of Gothic style, each dial having trefoiled spandrels and its seven paw feet are set in Gothic buttresses.

Dondi's sophisticated mechanism was several centuries before its time; whereas those existing clocks from the 12th and 13th centuries would be, for the most part, crude creations of blacksmith's work with simple time and striking mechanisms.

Did the first western clock strike the hours from a medieval city tower to awaken a newly established city ready for commerce? Or did it come from a small weight driven version in a monastery, an alarum version ready to wake the bretheren for their nightly hours and prayers? Which ever it was, it was the first important step in ordering of a society now involved in commerce and learning.

Next issue: Hesitant Beginnings, Part 3.

Dorothy Waldrip
The Hoary Horologist



ROYAL'S SPACE
by Royal English

QUIZTIME.....

If a clock were to run with the same perfection as Ivory soap (99.44% Pure) what would be the error in time in one hour?

Answer at Chapter meeting.

ONE DOT, TWO DOT.....

Have you ever wondered about those little dots on some spring barrels? They have a purpose.

1. They match cap to barrel, and arbor, sometimes.

2. The dots must also be aligned, barrel to cap, because this was the position of assembly when the holes were drilled and trued in barrel and cap.

WHITE ELEPHANT AUCTION # # # # #

Congratulations to Wayne DeLaroche and Bob Prochnow for running a good fun white elephant auction as usual, and to all our members for bringing good items and bidding high! Our Chapter made \$161.00, a new record!

* It is with great sadness we *
* must announce the passing of *
* long time member Ed Okvist on *
* September 18, 1990. Ed con- *
* tributed greatly to our Chapter *
* and we will miss him. *
* *

TIE ME UP

I've heard said that some members have several clocks. Even heard of one guy who had three in one room! So do you have both of your clocks secured so they don't drop or walk off the edge the next time a seven pointer rolls through here?

Now we know how busy some of us have been repairing damage from October 17th. We also know how lucky some of us were October 17th.

Do yourself a favor, next Saturday morning, no rush, while the coffee is brewing, walk through the house, if that's too much one room. Count your clocks and in the deepest part of your soul admit how many you have adequately secured.

Now, I know our Chapter is unevenly populated by saints but I also know there are too many of us sinners who know what we've done or not done. These clocks are not yours. I know you paid for them but they will surely out-live even our youngest members. We only hold them for a short while. They are entrusted to us and we are obligated to correctly care for them.

Now to those of you who stuck through the preceeding (rambling) paragraphs and expected some wise, well tried and proven techniques to secure your timepieces--it's disappointment time.

I can only tell you what I've done with one little surprise.



My longcase clocks are secured in the modern way. (Did you know the old-fashioned way? A large nail, I mean large, 3-4 inch forged horseshoe type nail, hammered through the middle of the back of the case directly into the wall. Today you'll often see the hole behind the pendulum rod as you open the door. I can put my fingers through mine--enough--on to today...)

I use an adapted molly bolt replacing the bolt with a ring bolt. To the clock I have again bolted two smaller ring bolts to the backboard about two inches in from the side and at a height equal to the middle of the dial. I use 150 pound test nylon line tied between the two case ring bolts, running the line through the eye of a fireman's clip so that the clip can slide along the line. (In America, a fireman's clip is better known as a spring clip--ed.) The line itself is also loose, about six inches longer than appears necessary. The clock is positioned back in place and with caution is tipped forward so as to reach the fireman's clip that is then clipped onto the ring bolt in the wall. This looseness is critical if your longcase is in a corner and in either case it will permit your clock to rock but not crash.

My wall clocks are initially secured with either screw hooks into studs or molly bolts with the small hook attachment. I don't rely on a single point of failure and always have a line going to another ring bolt or screw. It's a basic distrust of hooks that leads me to the line. For this I use a 40 pound fishing line and use it double. It's clear and inexpensive. Do make sure that you know how to tie a secure knot. Shelf clocks are secured only with the fishing line. Table clocks? I had no idea until recently and even then I'm not sure. A friend with a lot of china figures uses velcro to fix them to his tables, most of which are glass. It seems to work, but I would not recommend it for a wooden table top.

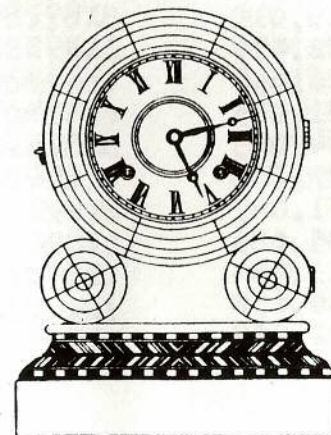
I said I have a surprise. I test my lines. I tip my longcases with a jolt to see that they hold. I push my shelf clocks off the shelf to see if they hold. I lift my wall clocks off their hooks and let them drop onto their safety lines. Scary as all get out. You need an accomplice who a) trusts you, b) has good hands and quick reaction and c) likes you and the clock in question to be there should you need them.

I guess I sound like I've got my act together. As I sit there is a heavy black mantel on a shelf over my head with nothing but its good looks to keep it up there, I have much to do and that is my point. I get the sense that we all have work to do. So do it--no gret rush, one a week would be a start and remember it is not for you--its for the ones who follow and to whom these timepieces really belong.

Steve Fabes

Editor's comment:

This is a most important subject, and one that if heeded could save us all a lot of greivous damage. With the experts saying the San Francisco portion of the San Andreas and the Hayward faults are both due to snap, we should pay attention. I'm sure more of our members have good ideas on how to deter the earthquake bogey, please jot down your ideas and I'll put them in our Bulletin.



A LISTING OF THE FIRST U.S. PATENT
NUMBER ISSUED IN EACH CALENDAR YEAR.

By Phil & Sarah Russell

Most all Clock & Watch makers protected their inventions by U.S. Patents. For a fee of \$1.50 (in 1990) the U.S. Commissioner of Patents and Trademarks, Washington, D.C. 20231, will send you a complete copy of a U.S. Patent or a Trademark, postage free.

Year	Patent No.	Year	Patent No.
1836	1	1869	85,503
1837	110	1870	98,460
1838	546	1871	110,617
1839	1,061	1872	122,304
1840	1,465	1873	134,504
1841	1,923	1874	146,120
1842	2,413	1875	158,350
1843	2,901	1876	171,641
1844	3,395	1877	185,813
1845	3,873	1878	198,733
1846	4,348	1879	211,078
1847	4,914	1880	223,211
1848	5,409	1881	236,137
1849	5,993	1882	251,685
1850	6,981	1883	269,820
1851	7,865	1884	291,016
1852	8,622	1885	310,163
1853	9,512	1886	333,494
1854	10,358	1887	355,291
1855	12,117	1888	375,720
1856	14,009	1889	395,305
1857	16,324	1890	418,665
1858	19,010	1891	443,987
1859	22,477	1892	466,315
1860	26,642	1893	488,976
1861	31,005	1894	511,744
1862	34,045	1895	531,619
1863	37,266	1896	552,502
1864	41,047	1897	574,369
1865	45,685	1898	596,467
1866	51,784	1899	616,871
1867	60,658	1900	640,167
1868	72,959	1901	664,827

Year	Patent No.	Year	Patent No.
1902	690,385	1945	2,366,154
1903	717,521	1946	2,391,856
1904	748,567	1947	2,413,675
1905	778,834	1948	2,433,824
1906	808,618	1949	2,457,797
1907	839,799	1950	2,492,944
1908	875,679	1951	2,536,016
1909	908,436	1952	2,580,379
1910	945,010	1953	2,624,046
1911	980,178	1954	2,664,562
1912	1,013,095	1955	2,698,434
1913	1,049,326	1956	2,728,913
1914	1,083,267	1957	2,775,762
1915	1,123,212	1958	2,818,567
1916	1,166,419	1959	2,866,973
1917	1,210,389	1960	2,919,443
1918	1,251,458	1961	2,966,681
1919	1,290,027	1962	3,015,103
1920	1,326,899	1963	3,070,801
1921	1,364,063	1964	3,116,487
1922	1,401,948	1965	3,163,865
1923	1,440,362	1966	3,226,729
1924	1,478,996	1967	3,295,143
1925	1,521,590	1968	3,360,800
1926	1,568,040	1969	3,419,907
1927	1,612,700	1970	3,487,470
1928	1,654,521	1971	3,551,909
1929	1,696,897	1972	3,633,214
1930	1,742,181	1973	3,707,729
1931	1,787,424		
1932	1,839,190		
1933	1,892,663		
1934	1,941,449		
1935	1,985,878		
1936	2,026,516		
1937	2,066,309		
1938	2,104,004		
1939	2,142,080		
1940	2,185,170		
1941	2,227,418		
1942	2,268,540		
1943	2,307,007		
1944	2,338,081		

The United States first began issuing Patent Numbers in July 1836. The numbers have been issued consecutively ever since. The Patent was good for 17 years, and should not be used for an exact year date for dating.

To use chart-#232,037 i.e. was issued in 1880 which started at 223,211 and ended at 236,136.

TO SET THE RECORD STRAIGHT

At the September 7 evening Chapter meeting we had a fine slide/tape show on mass production methods and tools used in the manufacture of wooden works clocks by Eli Terry, Seth Thomas and others. One slide showed a lead pencil being used to scribe lines on an arbor. Several of us wondered if that could be correct -- did they have lead pencils in Terry's day (1772-1852). In a short post meeting discussion all of the "experts" agreed it was a minor error in an excellent show.

We were wrong! (You say you're not surprised?)

Pliny, (Roman naturalist and encyclopedist AD 23-79), refers to using lead to make lines on papyrus and Cortez found the Aztecs using lead crayons. Of course black lead pencils actually use graphite, not lead. From 1564, the graphite mines in Cumberland, England furnished the best material for pencils. The purest yet discovered is at Ticonderoga, N.Y.

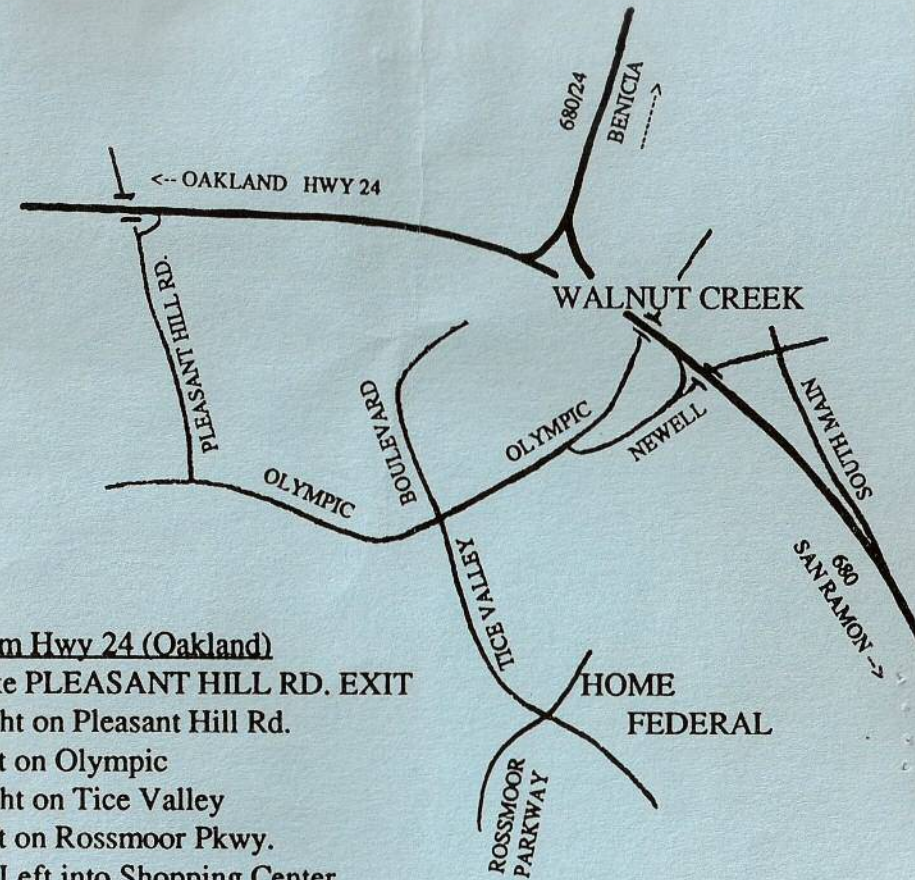
In 1795 Coute' of Paris developed a process of mixing the graphite with water and clay, rolling it out, cutting it into strips and baking them.

William Monroe of Concord, Mass. in 1812 invented a process of encasing the graphite in cedar holders, just like today.

So -- Terry could very well have used pencil marks although not the wooden pencil we know, at least at the time of the Porter contract in 1806. But by the time of his later woodworks clocks (1816-25) he could have used the wood lead pencil shown in the slide.

Jack Coulter

DIRECTIONS TO CHAPTER MEETINGS



From Hwy 24 (Oakland)

Take PLEASANT HILL RD. EXIT
Right on Pleasant Hill Rd.
Left on Olympic
Right on Tice Valley
Left on Rossmoor Pkwy.
1st Left into Shopping Center

From Hwy. 680 (San Ramon)

Take SOUTH MAIN EXIT
Left On Newell
Left on Olympic
Left on Tice Valley
Left on Rossmoor Pkwy.
1st Left into Shopping Center

From Hwy 680/24 (Benicia)

Go South on 680 in Walnut Ck.
Take NEWELL EXIT
Right on Newell
Left on Olympic
Left on Tice Valley
Left on Rossmoor Pkwy.
1st Left into Shopping Center

Home Federal is between American Bank & Trust and First Interstate Bank. Meeting Room is at rear.

Annual Chapter Membership \$15.00

Guests are most welcome, but due to our tax exempt status, only NAWCC members can participate in the MART.