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# The Man Who Saved the **Hamilton Model 21 Ship's Chronometer**

By William R. Smith (TN), BSME, FNAWCC, FBHI, CMC, CMW, CMEW

During the initial days of World War II, the U.S. Navy suffered a crisis. To find their positions at sea, ships needed an accurate timepiece—a chronometer. None were available in the quantities needed. Hamilton Watch Company had a contract to produce them but believed the detents could not be mass-produced. They believed that they could only be handmade and they had only three people who could make them. Thus, there was no hope that they could fulfill their contract.

The detent is a part of the chronometer escapement that allows the balance wheel to pass the detent on one of its arcs, but to trip it during its other arc to deliver power to the balance wheel from the escape wheel. On an anxious day at the beginning of World War II, my longtime friend V. E. Van Hoesen said to me, "Hamilton has a large contract for producing a chronometer. They don't believe that its detent can be mass-produced. I know it can and I'm going to mass-produce it for them."

Let me relate how I came to hear these unbelievable words. At the start of my first year of high school, I decided to become a watchmaker. But those were the years of the Great Depression and there was no hope for schooling. I decided to hitchhike 30 miles to Memphis, TN, and learn by visiting the watchmakers, asking questions, and seeking help from those who would tolerate me.

During my initial trip, I stopped at the first watchmaker's place that I came to, the shop of Mr. Homer Harris. He was a kind and helpful man, and I made that my headquarters for each of my Memphis visits. From there, I visited every watchmaker within walking distance. Thus, rain or shine, each Saturday during my high school years were spent visiting the Memphis watchmakers.

During one of these trips, a fellow in his thirties, V. E. Van Hoesen, came to the Harris shop to show Mr. Harris a new part he had just completed for a watch he was making from scratch. A man of extraordinary skills, from a family of watchmakers, Van Hoesen also did restorations of rare watches owned by Major Paul Chamberlain, the author of many articles for the then-popular magazine, *Horology*, published by Lewis and Samuel Levin of California. (Following Chamberlain's death, his wife had these articles published as a book, *It's About Time*.)

Because of Van Hoesen's exceptional skills, I made it a point to spend as much time as possible with him during my Saturday visits. Thus, he taught me many things about watch repair that others lacked the ability to teach me. Since he called the watch he was making during that time his Number 8, it is reasonable to assume that he had made seven others before starting work on it.

When completed, he sent it to the laboratory of the magazine *Horology* in California to be given a quality rating. It was so well made and kept such perfect time they didn't believe an American craftsman could have made such a perfect watch. He had to obtain affidavits to prove that he had made it. Such was the mechanical genius of my friend Van Hoesen.

By now my high school days were over and I was working as a watchmaker in Memphis, but I still visited Van Hoesen. During my last visit before joining the Air Corps

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**Figure 1.** A typical Hamilton Model 21 ship's chronometer. A Hamilton Watch Co. photograph, ca. World War II years. Source: http://www.hamiltonparts.com/

during World War II, he was having a large milling machine hoisted into the second floor of the jewelry store, A. Graves & Steuwer building, where he had his shop. When asked what he was about to do, his response, as previously stated, was that he planned to mass-produce detents for Hamilton's Model 21 ship's chronometer, which Hamilton thought could not be done. Coming from Van Hoesen, this seemed a normal statement, and I thought little about it.

After my return home following the war I visited him, and he showed me one of the completed detents that he had mass-produced for the Hamilton Model 21 chronometer and the Army/Navy "E" banner awarded for their work.

While I was obtaining a degree in mechanical engineering at The University of Tennessee, at Knoxville, Van moved to New York and went to work for Karl Plepla. About 1950 I visited him there. It was the last time that I saw him.

Many years later I read the 1981 Marvin Whitney book, *The Ship's Chronometer,* which described in detail almost everything associated with the Model 21 chronometer. I was astounded that no mention was made of the contribution by my old friend, Memphis, TN, watchmaker V. E. Van Hoesen, the man who had essentially pulled Hamilton's chestnuts out of the fire and made it possible for them to fulfill their World War II contract and for the United States to put their ships to sea.

I wrote Marvin Whitney to tell him what I knew about the Van Hoesen mass production of Model 21 detents and wondered why he had not mentioned the effort in the book. His reply was very curt, saying that he knew everyone at Hamilton who worked on the chronometer and Van Hoesen was not one of them. Of course, Van Hoesen did all of his work in the Memphis jewelry store of A. Graves & Steuwer and was not a part of the Hamilton factory group. I doubt that he ever visited Hamilton. This left me very upset.

Many years later, I read the 1992 Don Sauer book, *Time for America*, which is a very detailed history of the Hamilton Watch Company. Again, nowhere in the book was there any mention of the contribution made by Van Hoesen and his production of the Model 21 chronometer detents. This really upset me, so I talked with Henry Fried about the problem and was told that Hamilton seldom ever gave credit to anyone who had helped them.

In a later attempt to contact Van Hoesen, I learned that he had died. Not being a research type, I finally dropped the matter. However, it continued to bother me that Van Hoesen had never received credit for his very important work on the Model 21 chronometer.

In desperation, a few years ago I wrote a letter to the *NAWCC Bulletin* in hopes that someone might shed light on the matter. In response to the *Bulletin* letter, I received a phone call and a visit from a Mr. John Huber, who ran a chronometer repair shop in a nearby town. He had purchased the estate of Van Hoesen and had a large number of unfinished Model 21 detent parts and pictures. These things made no sense to him because he was unaware of

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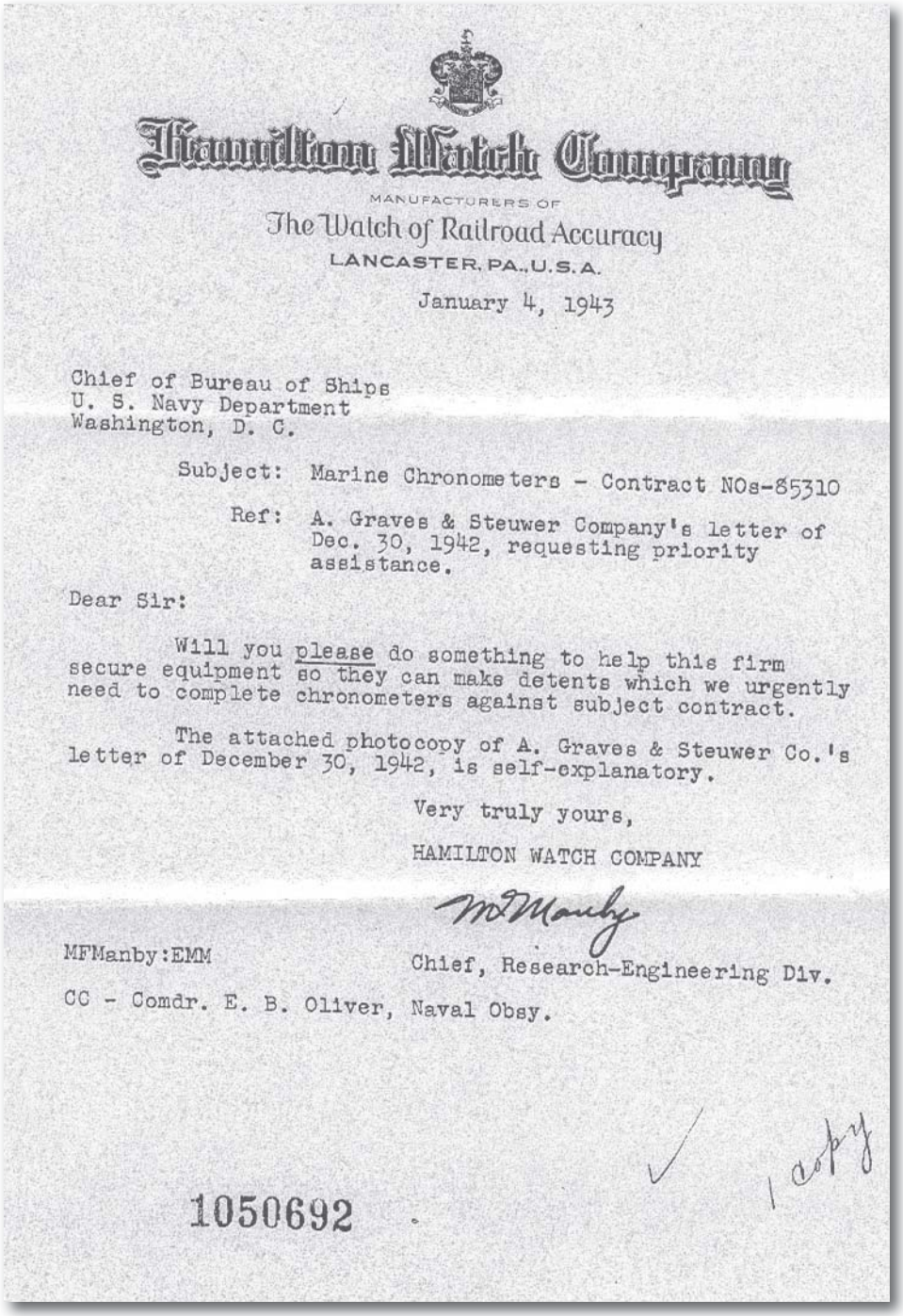
Van Hoesen's mass production of the Hamilton Model 21 detents in Memphis. (Huber is preparing a detailed article on the life and accomplishments of V. E. Van Hoesen, hopefully to appear in a later *Watch & Clock Bulletin*.)

Although Huber had detent parts and photographs of Van Hoesen at work on the Hamilton detent project, there was no proof that the parts were being mass-produced for Hamilton, which left only my word that what had been produced were actually Model 21 detents. Thus, I lacked proof of what had happened and decided I could do little with the material to correct the Model 21 history.

Recently, I was contacted by a distant relative of Van Hoesen, Patti Hobbs, who is a genealogist studying the Van Hoesen family. Apparently, she had come across my earlier letter to the *Bulletin* asking for help in the Van Hoesen case. During extended correspondence, she has been able to produce articles of proof that the Hamilton detents were produced at A. Graves & Steuwer in Memphis, TN.

Using her genealogy training, she found a 1943 letter from Hamilton begging the Chief of Bureau of Ships for help in obtaining machinery for A. Graves & Steuwer for the manufacture of the Model 21 detents needed to complete their chronometers (Figure 2a), and an undated letter from A. Graves & Steuwer Company to Milton Manby asking for help in expediting delivery of the equipment (see Figure 2b, next page). This undated letter is most likely the letter referenced in Hamilton's letter to the Navy (see Figure 2a). It may have no date because, lacking photocopy methods, the transcriber failed to copy the date along with the contents. Patti Hobbs also produced a Missouri newspaper article, from *The Daily Capital News*, Jefferson City, MO, dated Wednesday, August 25, 1943, describing the work on chronometer parts being done by V. E. Van Hoesen in Memphis (see Figure 3, next page).



Hamilton Watch Company

MANUFACTURERS OF
The Watch of Railroad Accuracy
LANCASTER, PA., U.S.A.

January 4, 1943

Chief of Bureau of Ships
U. S. Navy Department
Washington, D. C.

Subject: Marine Chronometers - Contract NOs-85310

Ref: A. Graves & Steuwer Company's letter of Dec. 30, 1942, requesting priority assistance.

Dear Sir:

Will you please do something to help this firm secure equipment so they can make detents which we urgently need to complete chronometers against subject contract.

The attached photocopy of A. Graves & Steuwer Co.'s letter of December 30, 1942, is self-explanatory.

Very truly yours,

HAMILTON WATCH COMPANY

MFManby

MFManby:EMM

Chief, Research-Engineering Div.

CC - Comdr. E. B. Oliver, Naval Obsy.

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**Figure 2a.** Hamilton's letter begging the U.S. Navy for help.

With this information at hand, I felt that I could finally write an article correcting the history of the Model 21 chronometer. At age 90, I think that I am likely the only one alive who knows the history of the Van Hoesen detent manufacture in the Memphis jewelry store.

Unfortunately, during the years since the visit of John Huber, I lost contact with him and many efforts to locate him failed. Finally, I found him by contacting the Chamber of Commerce in the town where he once had his chronometer repair shop. This allowed me to borrow the needed photographs and detent parts.

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Mr. Milton Manby
Hamilton Watch Company
Lancaster, Penn.

Dear Mr. Manby:

We are discouraged and disappointed beyond words at the conditions which exist with regard to getting our equipment to manufacture detents. We are wondering if there is anything that you can do to help us out of our predicament. It seems to us that the importance of Marine Chronometers is such that some help should be given to ease our machinery difficulties.

For your information our orders on capital equipment were placed through J.E. Dilworth Company of Memphis and are as follows:

Order #4504 L for a milling machine was placed with Van Norman Machine Tool Company of Springfield, Mass., under date of September 26. When the order was placed a delivery date of December 5, was given. This date has since been changed to December 15, December 29, and now January 29.

Order #6362L dated November 25, covering a precision lathe from The Stark Tool Company at Waltham, Mass., now has a delivery date of January 12. You will note that this order date was November 25, this being placed after Harding Bros. had changed their shipping date from November 5, on a lathe we ordered from them to February 15.

A milling machine and precision lathe were both placed on order with definite commitments on delivery as soon as we received the urgency number you extended to us. Our change in original orders has been brought about through postponements of delivery dates and our eagerness to get equipment in time to meet delivery dates you had set. You no doubt know that our big delay in securing this equipment was the priority give to the Aircraft Industry over Navy and Army contracts. We missed getting delivery on our lathe by five days due to this new order.

As mentioned before, it seems to us that the importance of this contract is such that some help should be forth-coming. Won't you please do what you can to expedite delivery of this or equivalent equipment to enable us to do our work for you, or tell us what we should do? Thanking you for your cooperation in this matter, we are,

Yours very truly,

Eugene E. Lott [signature]
A. Graves & Steuwer Company

EEL:sc

**Figure 2b.** A. Graves & Steuwer Co. letter asking for intervention regarding delayed equipment deliveries. This letter may have been referenced in Figure 2a.

BY S. BURTON HEATH

MEMPHIS, Aug. 24 — A Graves & Steuver Co. used to run a retail jewelry establishment in Memphis. In their watch repair department was a very capable man named V. E. Van Hoesen who specialized on railroad timepieces. Then the nation went to war, badly unprepared and hampered by shortage of innumerable important military items.

One of these was chronometers for the Navy, which must be minutely accurate and therefore involve extremely delicate workmanship To the amazement of almost everybody it developed that the watch repair man, Van Hoesen, was one of only a dozen men in the United States who was well qualified to do a certain type of this work.

**Store Becomes Factory**

Graves & Steuwer might have let Van Hoesen go to some chronometer factory to serve the Navy. But they thought of a better way. Manufacturing facilities being inadequate, anyway, they turned their store into a factory, with Van Hoesen in charge, and began making parts for chronometers.

**Figure 3.** Newspaper article about the chronometer parts being manufactured in Memphis, TN.

These items and those offered by Hobbs certainly supply the needed proof that the Model 21 detents were manufactured in Memphis by the efforts of Van Hoesen. The jewelry store where he worked was converted into a factory for the mass production of the Hamilton detents under his supervision.

During my last visit, I distinctly remember Van showing me the E banner his firm had been awarded. He was obviously very proud of it and the accomplishments that it represented. Thus, as additional proof the detents were made in Memphis, a search was made of what firms were awarded the banner. All attempts by Hobbs and Huber to find that the Army/Navy E banner was awarded to A. Graves & Steuwer have thus far failed. There must surely still be records of the firms receiving such an important award. However, they may have been destroyed during the many years that have passed since World War II.

It is my understanding that the E banner was only given to firms and never to individuals. However, had individuals been given E banners, Van Hoesen should have been one of the first to receive one. He was a remarkable individual, highly skilled and with a strong belief in self-education. He had a grand piano in his workplace on the second floor of the jewelry store where he worked. He taught himself to be a concert pianist. He also taught himself to speak a number of languages.

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