

W. R. SMITH BIOGRAPHY

In the early days of America, when the railroads were crisscrossing the nation, The Illinois Central Company (ICC) ran a rail line across the western end of Tennessee from Memphis on the South to Union City on the North. As was typical in those days, they placed a depot every five or ten miles. These became the main transportation hubs for the areas and towns grew up around each of them. The small town of Atoka, Tennessee was such a town.

I was born in this little town of about 500-people (three grocery stores and a post office/dry goods store) in a farming community about 29 miles north of Memphis, Tennessee. Highways were virtually unknown and rail was also the predominant mode for distant travels and the movement of goods. Most main roads were gravel, but many were dirt with ample mud holes. It was not unusual to see a farmer using his mules to pull an automobile from a mud hole.

My mother was a homemaker and my father was a dirt farmer, who specialized in the raising of sweet potatoes. My father was completely non-mechanically minded. By the time I was old enough to understand what was going on, the great depression was in full swing. One day, I remember my father saying that he had seen a silver dollar and it looked as big as a wagon wheel.

Cotton was 10-cents per pound and farm labor was 50 cents per day, if it could be found. Hoboes, asleep and awake, lined the tops of railway boxcars and frequently knocked on local doors offering to do any sort of work for food. Being on the farm, we had plenty to eat but little else. For a Red Cross project, I once sewed petticoats from flour sacks to be given to needy women. Gingham Girl flour was very popular; women could make dresses from the printed cloth.

Electricity had not reached the small towns, and kerosene lamps and lanterns were the basic sources of light. The better homes were heated with coal burning fireplaces and the stores by coal or oil burning, potbelly stoves. Buggies and wagons were quite prevalent, but T-model Fords were much in use by then. Most farmers raised and cured their own pork. Homes had a "kitchen clock" on the mantle of the living room. Most houses had 10-foot ceilings, transoms over the doors and none were insulated. Feather beds and hearth warmed bricks for the feet were the norm at bedtime in the winter. Fresh and canned garden vegetables, cornbread, homemade biscuits, dairy products, salt-cured pork, and redeye gravy were staple items of the diet. The better homes had a "parlor" containing the family's best furniture. These were immaculate, kept locked, and used only by guests. Edison cylinder phonographs and stereoscopic viewers were marks of the better homes. "Jada" (Ja-da, Ja-da, jada jada jing jing jing?) and "The Preacher and the Bear" were songs of the day.

My grandfather, a merchant, farmer, and one time mayor of the town, was so thrifty that he retained in a large wooden hopper, the year's wood ashes from the cook stove. This he leached with water to obtain lye for making hominy from shelled corn or soap from

stale hog lard. Farm work was by hand, mules, plows, and hoes. Tractors were unheard of. The hand-dug wells averaged 60-feet deep and were lined with brick walls. Cisterns were also popular. Well diggers cleaned the wells and restored the brick work at the bottom year-round. At that depth, the temp was a steady 55 degrees F and it was only when the well digger reached the surface in winter that he really became cold. Thus the expression, "As cold as a well digger's butt in January."

The main entertainment on Sunday was sitting on the front porch watching people walk or ride by in their buggies or on horses, and wondering if someone was coming by for a visit – very few phones to let one know what to expect. Often, people went to watch the afternoon passenger train arrive to see who were boarding the train from visits in other towns or were returning home. News came only by letters, newspapers and word of mouth. A bench outside one of the stores had a built-in checker board that was always in use. Only one store in town could afford a telephone and a typewriter. It was said that the local blacksmith could make anything as long as it was curved. He carved the hooves of horses, shod them, and then checked the grit size of cornmeal from his grist mill with the same unwashed hands. The town barber was also a shoe cobbler and sharpened reel-type, push lawn mowers. Ice boxes were common; only one home in town had a refrigerator. My dad once had several ice routes and I delivered ice during the summer months. Some of the places I went to in the river bottoms could not possibly have been on a map. We were probably the only people they saw from the outside world in days.

The first broadcast radio in town was a battery operated thing with headphones and about five tuning knobs. I used to con traveling salesmen out of a nickel to watch me climb its antenna pole, a guyed steel pipe about 30-feet high and within sight of "downtown." With my homemade crystal radio, I was able to receive a Memphis broadcast station 29-miles away. Not knowing why, I had to pour water on the ground rod each night to get good reception. Probably a little added salt would have avoided the need. Ghost stories were so frightening they made me afraid to reach from under the cover to lay my headphones aside!

One night, about 1927, a tornado blew away the entire town, except for our house, which only moved about 6-inches on its foundation. One person was killed and many injured. This spawned a mass of storm cellars, in one of which I spent many cold and wet nights with the frogs and other varmints.

Being financially quite well healed, the town banker had a Delco System, for which he ran a gasoline engine driven generator during the afternoon to charge a bank of batteries so his family could have electric lights that evening. One or two homes and several churches had acetylene-generating systems (carbide) for their gas light fixtures. Cotton was the main crop of the area and, being on the railroad, our town had both a cotton gin and a sawmill. By the mid-thirties, my father was raising about 5,000 bushels of sweet potatoes each year and had a specially built, insulated house in which a fire had to be kept going all winter to cure them.

Showing considerable mechanical talent early in life, by age 10 I became involved in the wiring of houses during Roosevelt's REA (Rural Electrification Association) program – my fathers, my grandfathers, my aunts, and the houses of several others. This was the days before Romex and required that two holes be bored through each rafter in the ceiling and a porcelain tube inserted through which the two insulated wires were passed. Rosettes were used for the ceiling drop cords that ended in sockets with pull chain switches. All joints had to be soldered and taped with both rubber and friction tape (no wire nuts), and wall switches were virtually unknown. These were the days of the knob, tube and loom wiring, but most homes finally began to have electricity. At this time, 1931, I also became involved in ham radio--still W4PAL. During those times, few radio amateurs could afford on/off switches for their transmitters and solved the problem by pulling the plug from the wall socket. Lacking meters, transmitter tuning was done by holding a wire-loop/series-flashlight-bulb near the tank coil. Life was hard but simple. By then, I had made my own copy of a Vibroplex speed key for sending code, and had also repaired guns, automobile engines, etc.

At age 14, I was given a pocket watch by a merchant who wanted to see if I could "fix" it. Using a screwdriver made from a nail and my mother's eyebrow tweezers, I managed to take the movement from its case, remove the balance cock, clear a hairspring loop thrown over the Breguet overcoil, and get the watch running again. This convinced me that I should become a watchmaker. Attending such a school was out of the question. Thus, with my \$15.00 life's savings, I bought less than a hand full of tools and started a 29-mile, every Saturday (rain or shine), hitchhiking routine from my home in Atoka to Memphis, Tennessee. There, I visited every watchmaker within walking distance to ask questions of any that would help me. To the man, they were always willing to stop their work, answer my questions, show me how to solve my latest problem and allow me to read their books and magazines. I was forced to work with the simplest possible tools and techniques until money could be earned for better ones. However, the memory of their kindness has long influenced my desire to help others in a like manner. It is toward this end that I design clocks, write articles and serials, publish clockmaking workshop manuals, make workshop videos, and lecture at NAWCC National and Regional conventions, and Chapter meetings.

During my high school days, I repaired watches in my spare time, being the only watchmaker within a 25 mile radius. Following graduation, I was offered a job in Memphis where I worked in a 10-man watch repair shop that did trade repair work for Sears. Although I have never attended a watchmaking or clockmaking school, the 4-years of hitchhiking to visit numerous watchmakers and my years in the 10-man trade shop exposed me to, not only the best, but the widest range of skills the trade had to offer. I was also given much guidance by V. E. Van Housen, the Memphian "George Daniels" of his day. It was he who, working in his own Memphis workshop, showed Hamilton that the detent for their marine chronometer could be mass produced. They had previously been convinced that they could only be handmade by their three best craftsmen. He thus broke the production bottleneck that allowed Hamilton to fulfill its military chronometer contract. Buried several years ago, to this day he remains without

credit for having solved the Hamilton Watch Co. chronometer mass production problem during WW II.

War clouds were gathering. During the day I worked as a watchmaker and in the evenings I attended a government sponsored aircraft instrument school. At the start of WW II, eight of us from the school volunteered for the Air Corps and, unbelievably, stayed together throughout the war. I was sent for additional instrument training to a school in Chicago and later to a Bendix aircraft drift meter factory. Following that, our 27th Air Depot Group headed for Brisbane, Australia. After provisions were gathered there, we went to Port Moresby, New Guinea. There, from our own sawmill and jungle wood, we built a huge aircraft repair depot, which included a large 15-man aircraft instrument shop for the repair of mechanical, electrical and gyro instruments, including automatic pilots.

For the first two years of my stay in New Guinea, I repaired electrical and mechanical aircraft instruments and timepieces. However, during this period the capabilities of the shop were greatly hampered by the lack of test equipment. I thus designed and built 40+ pieces of equipment that were desperately needed but unavailable from any of the Air Corps Stores. Because this effort allowed our Air Depot to put instrument-grounded fighter planes back into the air, I was awarded the Legion of Merit by General Douglas MacArthur--the military's highest non-combat medal.

During the first part of our stay in New Guinea, there was no entertainment. Drawing on my long time involvement in magic as a hobby, I made equipment from scratch and did a number of magic shows at various bases on the island. At one show, I wowed the boys by stringing the stage from one side to the other with panties and brassieres borrowed from Port Moresby hospital nurses and pulled as a string from a "Levanty" production. The shows were discontinued only when the USO groups finally started arriving. Though rusty at it, I am still fond of palming coins and thimbles.

Assigned to our Air Depot were a number of test pilots. However, there were more of them than there were planes to be tested. Thus, some of them finally broke away and formed a squadron of C-47's for flying cargo between bases. By then, our depot had moved to a Finschhafen and had been absorbed into another group. Because of my ham radio background, I joined the C-47 group and flew as a radio operator during my third and last year in New Guinea. We flew about 200+ hours per month. We were the squadron's odd-balls-coming and going at all hours of the day and night, never meeting roll-call, sleeping during the day, etc. These flights were to almost every allied held air strip in the Pacific, including many flights to Australia. However, much to my sorrow, my only chance for a flight to New Zealand was canceled because of bad weather.

After discharge, I married and enrolled in mechanical engineering at the University of Tennessee, Knoxville. During this period we lived in a village of 125 trailers, created by the university for returning war veterans. I continued to repair watches in our 17-foot trailer home, in which we had a watchmaker's bench, a 600 Watt ham station, a spinet piano and a rather large safe, and a folding dining table!

Following my BS degree I worked at the three atomic plants in Oak Ridge, Tennessee, where I spent the first 25 years as a high energy accelerator design engineer. The last 15-years of this period were served as Chief Engineer of the ORIC Cyclotron Project--the world's first sector focusing (strong focusing) cyclotron. This was followed by another 10-years as a technical writer/editor for the Martin Marietta Corporation's K-25 Plant's Safety Analysis effort. During the earlier part of this 35-year period, I also worked part time at watch and clock repair.

The advent of Citizens Band Radio in the late 50's found the Knoxville area lacking people with the FCC 1st or 2nd Radio Telephone licensed required to do transmitter repair work. To fill this need, I spent three evenings per week for over 25 years doing part time CB sales, service, and manufacturing in my home basement. My CB product was a vacuum tube microphone preamplifier, trademarked "The Windjammer"--the first of the microphone preamplifiers. For this work, I had a 14-ton punch press, 8-sets of dies, and worked a 14 man assembly line when assembling a batch of 1000 units.

As hobbies, I have done photography (since age eight), skating, tennis, magic, have studied and written in the field of medical hypnosis, have done automotive, aircraft, and lawn mower engine rebuilding, have written poetry, and built and installed many of the early Hi Fi systems. I have rebuilt and ridden motorcycles, restored and flown my own Cessna 140 airplane, collected and restored pocket watches, built clocks, and have written and published six clockmaking books so others could build them, have made four workshop videos and produced them in both VHS and DVD, and have lectured in the field of Horology. I continue to play pocket billiards. I am likely one of the very few who have ever lectured on clockmaking in modern China.

Some 25 years ago, in the spirit of those who helped me when I was learning watchmaking and clockmaking, I decided to try to pass along to others some of the skills I had learned during my struggles. Toward that end, I began to design and build clocks and write articles and serials so other could build them. Although capable of building complex clocks, I reasoned that these would scare away prospective clockmakers. Thus, my clocks and their texts have been purposely been kept simple so potential builders would not be fearful of trying to make them. These articles, workshop manuals and videos have found their way to many parts of the world.

In international competition for handmade clocks, (NAWCC Craft Contests), I have received five gold medals, two silvers, and a bronze for hand made clocks, and a gold for tool design. I have written 60+ Horological articles and six clockmaking workshop manuals that are now offered to the public. These are: How To Make A Grasshopper Skeleton Clock, How To Make A Lyre Skeleton Clock, Clockmaking & Modelmaking Tools & Techniques, How To Make A Skeleton Wall Clock, Workshop Techniques, and How To Make A Strutt Epicyclic Train Clock. I have also produced four, 2-hour workshop videos in both VHS and DVD: Wheel Cutting, Pinion Making & Depthing, Graver Making & Hand Turning For Clockmakers & Modelmakers, Tooling The Workshop For Clockmakers & Modelmakers and Workshop Procedures For Clockmakers & Modelmakers.

During the past two years, I have become interested in telegraph speed keys and have designed and built three of them and restored a number of others. This caused me to realize that no one had ever written a book to help the telegraph key collectors and key owners maintain their prized keys. Thus, I have just completed writing and publishing a 112 page book, How To Restore Telegraph Keys. It contains 254 high quality color photographs.

Because the audience for such manuals is limited, publishers (who can only profit from quantity) are generally uninterested. Thus, authors of such manuals are usually forced to publish their own material. For this, I do the design, the drafting, the machining, the camera work, the darkroom work, set type on the computer, make the halftones, make the 8-1/2" x 11" master pages, copy them to full size negatives on my 14" x 18" Process Camera, burn the plates for my offset press, print the pages, collate them, and punch and bind them--all in-house. For the book on key restoration, I also printed it on my own color printer.

I am a Fellow in the British Horological Institute (FBHI), a Fellow in the NAWCC (FNAWCC), a Certified Master Clockmaker (CMC), a Certified Master Watchmaker (CMW), and a Certified Master Electronic Watchmaker (CMEW). I also hold ham license W4PAL.

As of this writing, 2006, I am 85 years old and retired 22 years. I and my second wife Judy, a rural route mail carrier, live in Powell, Tennessee, a sleepy little town about 1-mile N. of the North city limit of Knoxville. We love to dance, cook, and entertain friends. I still play pool (71 years now) and for many years was the captain of one of the 14 Moose Lodge league teams that played each Wednesday night during the fall, winter, and spring. My daughter is a Division Director at the Oak Ridge National Laboratory and has two sons.

It is indeed a pleasure to help those wishing to learn to build clocks, restore telegraph keys and/or make whatever parts are needed for their repair. I am at home most of the time and if I can be of help, please feel free to write or call. Although I have tried, even if I live long enough, I am sure I'll never get it all done!

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