

# FARM LIFE AND HAM RADIO IN LONGMONT IN THE 1930S

BY  
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**Abstract:** This memoir describes life in the 1930s on the Goss Farm north of Hygiene on Burch Lake from the viewpoint of a frequent visitor. It is now 6914 Ute Highway, Longmont, CO. It also describes the infancy of Ham Radio and how two teenagers taught themselves to build and operate the radio apparatus.

I am writing this in December 2001. I am far from where the events I'm about to ok place. I will never see these people again. They will always be in my mind and heart. An ancient axiom says, "we can choose our friends but are stuck with our relatives," [close enough]. I was fortunate enough to not only have a cousin but a friend also.

I had never heard nor had I ever seen a person described as a "cousin". One afternoon when I was probably five or six years old a big touring car cruised into our drive way in Hygiene. Two persons disembarked. One was the sister of my father. The other a boy described to me as a "cousin." I remember my dog Pal, all our dogs were called Pal, and I were playing in the grass in the back yard. I was joined by this stranger who was not only taller and older than I but who said the magic word, "cousin." We sort of looked at one another and admired old Pal for a time. They then boarded the big automobile and departed. I puzzled over this occurrence until I was assured that these "cousins" were not a strange anomaly but something that occurred naturally in the scheme of things. Perhaps I had seen cousins prior to this but they just had not impressed me all that much.

About the time I reached the 7th grade I began to spend time with Cousin Jim Goss. He was four years older than I and, of course, a whole lot smarter too. We seemed interested in batteries, door bells and light bulbs. The Goss farm had a wonderfully, glorious, mysterious light plant to supply electricity for the house and work shop. In a cellar under the house there was a huge bank of glass cell storage batteries. I expect they were very heavy, had many lead plates in them and filled with battery acid. Each cell was the storage receptacle of two huge volts of electricity. They were hooked in series until thirty two volts were available. A small gasoline powered engine and generator set outside and was run frequently to recharge the batteries.

Inside the house was a radio occupying a prominent place in the dining room. In one corner of the room was a small wood stove set far enough from the wall to allow a series of benches to surround two sides of it. The stove was stoked with corn cobs. Sometimes a branch of apple wood or cottonwood was used if it was especially cold. A large dining table occupied half the room. It would probably seat six without the extension leaves inserted. There were two long narrow windows facing west. During the winter news papers were stuffed in between the window frames and the window guides to keep the cold air out. A large open doorway led to the living room which was closed off during the winter by a drape of some kind. On the west wall, next to the windows, was the telephone. It had a hand crank on it. You spun the crank and an operator would ask, "number please?" This was far from a private phone line. There were probably at least six other parties using the same wire. Each house had a distinctive ring. Two short, a short and a long etc. Regardless, many people liked to listen in to the conversation of their neighbors. When you answered your ring you would generally hear a few clicks as others lifted their receivers also. A door in the south wall of the dining room led to the stairway going to the sleeping quarters. There were three bedrooms and a small vestibule at the top of the stairs. The old folks slept on the main floor. Jim's room was upstairs.

Every evening at 9 PM we tuned in to KOA, Denver, at 850 on the radio dial. Amos and Andy were a daily ritual for everyone, everywhere. These comics were supposed to be two black men. One drove a taxi and the other was always trying to explain the complications of living to him. Now I don't know which was which! Now days they would have been unable to broadcast this program; political correctness, you know. We listened to the Little Theater off Times Square, The Phantom and many others. Your imagination was an integral part of the listening. You needed to actually think about what was going on. I remember hearing Rudy Valley sing, Don Ameche was a regular. Fibber McGee and Molly were a later attraction. We could hear the world series and always the farm report. We all sat near the little stove and strained to hear every word. If we stayed up too late, the light bulbs grew dimmer and the radio tended to get weaker and weaker. Next day back to the generator to charge up for the evenings activities.

The kitchen was the first room you entered from the rear of the house. Outside was a slab of red sand stone raised up one or two steps to allow easy access to the kitchen door. Just inside on the right was a few hooks for coats and next came the kitchen water pump with a long iron handle. There was a stand for a wash basin and a roller towel hanging on the wall. Sometimes the old towel showed signs of extensive use. When new, they had some kind of filler in them to give them body and shape. When you dried your hands on it, it became slick and slimy. I expect you were supposed to wash them prior to first use. A kitchen window with the kitchen cabinet, which held flour, sugar and other condiments came next. Across the room was the center of kitchen activity, the kitchen range. It had two warming ovens above the stove surface and a water reservoir on one end. A black iron frying pan always sat on the back of the stove. Most food was fried then. The frying pan was never subject to water and soap. In the mornings eggs and bacon were cooked in it. Perhaps not used again until evening when a couple pieces of beef steak were cooked or perhaps a chicken or even pork chops were fried. Actually the residue of the previous preparations sort of seasoned the next culinary surprise. Aunt Jennie turned out multiple loaves of bread from the huge oven. She baked cinnamon rolls in a great large pan. We loved to smell the baking and we loved the eating. Lots of sugar and nuts on the rolls and fresh butter on the hot bread. There was a small storage area in the space under the stairs that usually held the freshly baked goods. Uncle Percy had a platform rocker placed in front of the kitchen range and he spent many hours there in the evenings- resting and rocking. He wore a mustache for all the years I knew him. Jim told me when they finally took him to a nursing home when he was very old they shaved off his mustache and he didn't recognize him when he came to call. What a shame.

A large window faced the south sun from the kitchen. In front of the window was a bench or shelf where a multitude of geraniums sat having been rescued from the first hard freeze. Newspapers were generally inserted between the plants and the glass on especially cold nights. Out the back door and across the back yard sat the ice house on the right and the combination garage, work shop and blacksmith shop on the left. Through a gate in a wire fence and just to the right sat the most important fixture- the outhouse. There were two or three accommodations and one closer to the floor for junior members of the family. I can't actually imagine the occupation of all three seats at once except in a dire emergency. There was always a copy of the Montgomery Ward or Sears catalog present. By selecting and removing a page which was duly wrinkled up to provide a rough surface you completed your toilet. I have no recollection of when toilet paper became available. We used to look at the ladies who were dressed in their undress-bodies encompassed in corsets that must have squeezed the life out of them. Our intimate knowledge of the opposite sex was learned from these old catalogs.

Around this time, probably when I was ten years old and Jim was fourteen, the government decreed all the country would be electrified. The Rural Electrification Administration was formed by the President and Congress. Its goal was to build electric transmission lines to every farm and hamlet in the whole country. Poles were erected and wires strung. Electric generating plants were built and brought on line. If we could have viewed the country from the air, we would have seen thousands of points of light after sun down. This was a mixed blessing. The availability of this unharnessed energy was available to every house wife and every working man. It slowly brought to an end the small world each family knew. The intimacy we shared by being totally independent of outside forces gradually came to an end. We were inalterably tied by this umbilical cord to some distant source of energy. Every farm, home, barn and shop now had this magic power.

My Uncle Norton Billings was an electrician who helped wire a good deal of Boulder County farms and homes to the new power grid. He also owned and operated an appliance store where you could purchase an electric refrigerator, stove, radio, light fixtures and a variety of new labor saving devices. Even the old clothes iron no longer had to sit on the back of the kitchen range when it was necessary to remove the wrinkles from your Sunday best.

When he replaced the battery radios with new AC powered radios, I was given the run of the trade-ins. There were a multitude of beautifully engineered radio receivers--black Bakelite panels, beautifully wound copper coils inside, variable capacitors made from choice material, all manner of meters and loud speakers, hardware and handcrafted cabinets that were never to be found after this era. I was in absolute electronic heaven. This was the beginning of our abiding interest in radio as everything electronic was called in those days. We hauled these old sets home by the car full. Each set was inspected and evaluated as to what best to do with it. We dismantled many and began to use the parts to build our own versions of radio receivers and devices of many kinds. Some of which we had no idea what they might do.

We grew older, Jim graduated from High School and opted to remain on the farm to help Percy. We

talked frequently over the telephone for hours at a time. What to do with a certain component, how to figure what size of resistor to use somewhere. How to measure voltage without getting ourselves killed. We, somehow, discovered that there were people out there who were actually communicating with one another using their own home built equipment. They were called Radio Hams!

Before I get off into a maze of "Radio" I will recite some of the flavor of living in the 1930's. No one we knew had any money. Jobs were non-existent. People who lived on farms were pretty close to self-sufficient except they didn't have two coins to rub together in their pocket either. Farm products were bartered at the local grocery store for items that were not obtainable otherwise. We wore patched clothes, shoes with run-over heels and holes in the soles. Haircuts were rendered with a hand-powered clipper that really pulled at your hair. Scissors were, for the most part, dull.

A weekly bath consisted of hauling in a big galvanized tub from the back porch. It was placed on the kitchen floor near the range and filled with warm water. The youngest were bathed first followed by the adults. No, the water was not changed between baths. Everyone used the same water. By the end of the session it must have been a bit murky. The soap was a lye soap made by the house wife and used for every sort of cleaning- ears, feet, hair, floor, clothing and even the dogs, if you could catch them.

Clothes washing day was a monumental undertaking as none was done during the winter. An exception might have been made using a scrubbing board, which was inserted in a bucket of water and the clothing systematically worn up and down on the rough board to loosen the grit and grime. Aunt Jennie had a hand-powered washer. It had a long handle on one side and by vigorously pumping it back and forth the agitator spun the clothes around. When Jim was somewhat older, he rigged a small gasoline powered engine to the machine which spun the agitator vigorously. The machine sat outside, but under a lean-to. An old stove sat nearby which was fired up and huge kettles of water were heated. The machine and the rinse tubs were filled and the clothes piled in.

You knew Spring had arrived when you saw a dozen or more overalls, long handle underwear and many mismatched socks hung on the barbed-wire fence around the house. Next, came the flannel sheets we had slept on all winter. They were so stiff and greasy that they were fit for nothing but rags after washing removed the sizing from them. When the water grew murky and muddy, the plug in the bottom of the wash tub was pulled and the dirt remaining in the bottom was washed out. Fresh hot water and a bar of lye soap was added to commence the routine over again. Wash day was not a casual undertaking. It was hard work. Especially running the hand-operated wringer which squeezed some of the water out. Next came carrying them to the fence and catching them on the barbs of the wire. When the clothes were dry and ready to be harvested, they were so stiff and hard you could barely bend them. They were clean and ready for Spring and Summer work.

I received a new bicycle for my 10th birthday so was now wheel-born if not air-born. The road between Longmont and the Goss farm was a narrow gravel covered trail. It ran through farm land ripe with alfalfa, corn, wheat and an occasional farm house. It was about seven miles between our homes and one that I sailed along on summer days when I had permission to spend a few days on the farm.

You turned down a short lane toward the house from the main road. Along the east side of the lane was an apple orchard occupying about a quarter of an acre of land. The house was on the right side of the lane. Jennie's summer "Stand" sat next to the road in front. She sold farm produce, soda pop, chickens, raspberries, eggs and all sorts of hand work to passing travelers. This was actually all the real coin they had for some years. It also financed their annual trips to Ft. Wayne to see Wesley and family. She would allow Jim and I to have one soda pop per day. Might as well give us one as have us swipe one. I generally chose a Cream Soda or Grape. A cousin, Dorothy Keefauver, who was my age, sometimes attended the stand for Jennie.

The farm provided ice for cooling the soft drinks and preserving the berries and other produce in an "Ice Box". Burch Lake occupied part of the farm. It was a quarter of a mile or so south of the house providing fish in the summer and ice in the winter. In about January, when the ice was its thickest, Percy would hitch a team of horses to a large wooden sled and take along an ice saw, axe and ice tongs from the shop. We would build a big fire on the edge of the lake to warm us then chop a hole in the ice with the axe. The saw was then inserted in the hole. Up and down we worked the saw until a long cut was made in the ice. Another parallel cut was made a couple of feet away from the first. With pick or axe we then cut this piece of ice into fifty-pound chunks. The ice was generally up to a foot thick and very clear and clean looking. We removed the ice from the water with the ice tongs and loaded it onto the sled. When the sled was loaded, we then hauled it back to the ice house. The ice house sat just south of the main house and in front of the out house so was handy to get to in the summer. Fresh saw dust and wood chips were packed

around the ice cakes. Another layer of ice and more saw dust eventually filled the ice house to a level of perhaps ten feet. It was a cool hideaway in the summer. It provided ice for the 4th of July ice cream social and all the cooling that was needed for the milk, cream, butter and freshly slaughtered meat that was used in the summer. This supply of ice would last from one harvest to the next. The original fifty-pound pieces might have been reduced to half their original weight by then.

To the left of the main house stood a root cellar, a granary and the main barn with a silo just to the east of it. These buildings bordered a field of perhaps twenty acres where Percy grew corn, wheat and alfalfa in alternating years. For many years they farmed with horses finally becoming mechanized in the late 1930s.

While they were farming with horses, they always took a week or more off from work and went to Wyoming to fish. Uncle Charlie Goss, who lived a short distance away, would do the chores for them. We would pitch a tent along side a clear, fast moving stream of water. Aunt Jennie would bring her sewing and reading. She also had prepared many pounds of fried chicken, bread and cookies to feed us. We would spend the day fishing and generally have enough fish to make a fine feed about dark. We would sit around the camp fire and Percy would tell about his life as a young man.

When they switched from horses to tractors, our trips to Wyoming became shorter and fewer, only to cease all together. So much for modern farming methods. The old tractors were always broken down. They were late with plowing, cultivating and harvesting.

When I was in High School, Jim would sometimes come to stay the night but not until the chores were done. We would go to the midnight movie on Saturday night for ten cents. It would generally be one with Eddie Cantor, Charlie Chaplin, Laurel and Oliver Hardy etc. We would walk the few blocks home in the middle of the street as there were no street lights and the sandstone sidewalks were very uneven. Jim could seldom be spared from the farm chores so had little opportunity to get far from home.

Chores had to be done twice a day. The cows milked and fed. Jim and I were generally up quite late so we were sleeping soundly when Percy called, "Oh Jim," as he headed for the barn about daylight. In the winter we slowly stuck a toe out to test the air. It was always very crisp. No heat in the upstairs bed room. We slept in our long handles and socks between flannel sheets. By spring the sheets assumed the universal color, gray, dark gray where our bodies lay.

In the summer we slept outside in a hay wagon. About the first of June we would move the bed to the wagon parked beneath the lean-to. We had birds, mosquitoes, spiders and other creatures for companions. Reveille came even earlier in the summer. The stock had to be watered and fed, the cows milked and eggs gathered. The ten gallon milk cans were set in the ditch to cool. Breakfast was generally between seven and eight AM. It was a substantial meal designed to last until noon.

Some of the milk was run through a separator. This was a Buck Rogers looking machine that stood some five feet high. It separated the milk from the cream by centrifugal force. The cream was so thick and rich it would hardly pour. We used to sprinkle a little sugar on hot cakes then cover them with thick cream. What a treat! Milk was kept in ten gallon milk cans. Every other day one or more cans were set by the road. The milk trunk would pick the cans up and leave some empties.

There were never any truly idle days unless the weather was just too foul to be outside. Jennie read a great deal and Percy would work in his shop. Jim and I would retire to our lab-or-atory and conjure up sparks, flashes and dim the house lights.

By this time Jim had converted one of the upstairs bed rooms to his shop. We had a small work bench, a wood burning heating stove, a couple of chairs and a multitude of radio parts salvaged from Uncle Norton's trade-ins.

There were practically no books or magazines covering "Radio" so we blindly followed our best guess. We eventually found an organization called The American Radio Relay League that catered to Radio Amateurs. From them we bought our first printed matter concerning the building of radio receivers and transmitters. The ARRL, as they were known, published a Radio Amateurs License Manual. We managed to procure two copies which we studied and memorized. There were questions on every aspect of "radio". You needed to be able to draw schematics of circuits. Figure out component values. Know the laws concerning radio communications. The real sticker was the need to be able to send and receive Morse Code at ten words per minute. Let me tell you, learning the Morse Code with a door bell and a switch is a difficult task!

We studied and studied. Every time we were together we practiced sending and receiving the Morse Code. Meanwhile we had discovered others who were already licensed radio amateurs or Hams. Aunt Jennie would drive us to their homes. Sometimes as far away as Denver. We would stand in awe of their equipment. Huge wire antennas extending in every direction. You almost needed to live on the farm to have

sufficient room. The radio equipment was generally in a large rack six feet in height, the standard width was thirty inches. Think that had something to do with a standard cut of Bakelite panel material. Meters galore, flashing lights, dials and the smell of corona in the air. We were invigorated and beside ourselves with the desire to join the elite. We were a pair of self-educated radio enthusiasts.

Finally, we felt we were able to pass the Federal Communications Commission test. My Dad agreed to take us to Denver on the appointed Saturday. It snowed heavily Friday night. Jim and I were up half the night practicing the code. My Dad didn't come and didn't come. Finally we saw the dim lights of an old Ford Model A pickup truck coming down the road. We were half sick from worry and then from the possibility we would be late for the examinations. There were several other very nervous people taking the exam also. The first part consisted of the Morse code section. If you failed this, there was no reason to take the written test. We passed, what a relief. The written test followed our study material closely so we breezed through that also. Actually, we were probably over prepared by about a year's worth of studying. Now came the long, long wait for our licenses. I was sitting on the front steps of our home on Baker Street on Saturday morning. The mail man delivered a small envelope with an FCC return address in the corner. Inside was my first license, W9ZIY. I excitedly called Jim who had just received his also, W9ZIX. We remained Zed Eye Ex and Zed Eye Wy for many, many years. As I moved around the world I held many different calls but none held the treasured memories of that first one.

We received our Amateur Radio Station Licenses in 1935. I was 15 and Jim was 19 years of age. Considering we had been studying for the test for a couple of years and that we had began our radio career even before that, I would think I must have been around 10 and Jim, of course, 14 years of age. Many people were fascinated by radio and held those of us in the know in awe. When I first put my station on the air, the local police had also put their police radios on the air. They said they could copy me on their police radio just fine but no one objected!

The shop in the farm house was turned into Jim's radio room. We had been building apparatus for a year or more in anticipation of receiving our licenses. There was no such thing as a commercially available piece of Ham radio equipment. I can recall most vividly our first radio circuit that actually, really worked. We were experimenting with tubes and oscillator circuits. We had this device on the work bench, tuned up and obviously working as the tube was glowing vigorously. A flash light bulb attached to a single loop of wire held near the coils of the oscillator would glow if there were a signal being generated. Wow, our bulb glowed brightly. We had finally discovered the touchstone of radio signals.

From then on there was no holding us back. Jim was a marvel of ingenuity. When he commenced building his radio transmitter, he manufactured all the variable capacitors from scraps of metal. Ordinarily, these would have been quite expensive for us to purchase. We wound some of our own power transformers from old transformer cores and rolls of varnished copper wire. It's a wonder we didn't electrocute ourselves. We had home-made measuring instruments but never any way to calibrate them. We knew these things worked, but not exactly how well they worked. We sometimes made our own resistors using resistance wires wound on a Bakelite core. Other times we slid a connector along a carbon rod until we got the proper resistance for a circuit. The vacuum tubes we used were salvaged from the old radio sets along with some of the meters for our front panels. It was a sight to behold to see all our tubes glow in the darkened room!

We managed to get our hands on some line transformers from the power company. These transformers were mounted on the power poles and stepped down the high transmission line voltage to 110 volts for household use. By hooking them up in reverse we could step the 110 volts up to over a thousand volts to use on our radio equipment. The bigger spark we could draw, the higher the voltage, obviously. The good Lord certainly must have been looking out for us.

We were now able to communicate with one another via radio rather than telephone. We must have spent hours and hours on the air discussing how to do this or that. There were a scattering of other Hams around the area. We would join one another on the air, each taking their turn to talk. We discussed all the technical aspects of the hobby endlessly. Our receivers were the subject of lots of remarks. They were all home made and of various different circuit design. Which was the best? Which do you use? The receivers were all battery powered in order to reduce the hum induced by the 110 volt AC power devices.

Our ears were flattened against our head from wearing ear phones for so many hours at a time. It was legal at the time to play phonograph records on the air to test your equipment. Each of us had an old turn table and one or two scratchy recordings. I had a Rudy Valley recording that I used. We could recognize a station by it's introductory sign on music.

Usually in the summer we would have a big swap meet and all of us would gather to have an "eye ball

QSO." Q signals originated on the Morse code circuits to reduce the number of words being sent. A QSO meant a conversation with another station. QRK meant, "What is my signal strength." That was used extensively as we lived or died by the strength of our signal at a distant station. There were many Q signals used both on voice and code transmissions.

Since I had my station up and running while in High School I decided to transport it to my Physics class for a demonstration. As I recall one of the class assignments was to build or demonstrate some aspect of Physics relating to material we had discussed in class.

My transmitter was assembled in a rack made of old bed irons--the hardest iron in the world when it came to drilling holes with a dull bit. It must have weighed over 200 pounds. It was no easy task, but with the help of some friends we partially disassembled it and my Dad hauled it to school in his pickup truck. This was but one of the hurdles. What to do about an antenna. Finally we strung about two hundred feet of wire between trees in front of the school house. We ran the feed line from transmitter to antenna through an open window. I had Jim stand by with his equipment. I fired up the big rig and called, W9Zed eye Ex this is W9 Zed eye wy, please come in. Wow! it really worked. We chatted a few minutes then other stations called us and we were able to demonstrate this new means of communication. Needless to say, my Physics teacher was even impressed. I saw him nearly forty years later at a reunion and he still was impressed!

As time went on, we improved our original stations. We bought more powerful vacuum tubes and replaced home-made gadgets with more sophisticated items. We purchased calibrated measuring devices so we had some idea of what we were doing. Finally, we managed to accumulate enough money to buy a factory-built radio receiver whose dials were calibrated and showed us just where in the frequency spectrum we were operating.

I discovered girls, had a car and a job; Jim had built a station that was the envy of anyone seeing it. We were now talking with stations all over the world- Australia, England, South America, Canada and the United States. Jim spent many nights fighting static and straining to hear those weak ones. The war years were just ahead but we didn't realize the impact they would have on us. Finally, on 7 December 1941 we were off the air for the duration. The Navy Department called for all Radio Amateur License holders to contact the nearest Recruiting Station. We were enlisted to go to a super secret school--RADAR installation and maintenance was in our future. I spent the war years aboard ship as an electronic technician working on radio communication equipment, SONAR under water detection gear and RADAR. The things I learned on my own with my cousin Jim were invaluable during my entire career, which spanned nearly thirty years of service.

Wherever I was sent in the Navy I managed to have a Ham station. I was assigned to a Japanese Radio Transmitter Station after the war. This station had been concealed under ground. The antenna wires were strung through a forest of tall pine trees. The Japanese crew consisting of nearly 200 sailors who simply took off their uniforms and wore civilian clothes. The Station Master was fluent in English, fortunately. He had also been a Ham in prewar Japan. My job along with a crew of USN personnel was to move the Japanese equipment from the caves to buildings above ground and construct a new antenna field.

During this time I had access to some surplus radio equipment which I immediately set up on the amateur radio bands. The amateur radio service had only been restored a short time. One of the first tasks I asked of the Station Master was to build me a directional antenna pointed at San Francisco. Shortly thereafter I was again calling W9 zed eye ex this is JA2CQ, my assigned station call while I was in Japan. We had a weekly schedule. My parents were able to visit Jim. My children and wife were able to chat every week with them. Sometimes I would have guests that wanted to talk to their loved ones in the States. Gradually more and more people turned up to use my station. At this time telephone service to the States was very limited. It was via underwater cable which was generally carrying high priority circuits.

We reconstructed the former Japanese Naval Transmitter station above ground and operated the Japanese equipment for many years. The technicians at the station were all former Japanese Navy sailors who had been aboard ships that had been sunk by one means or another. It was a real experience discussing various battles we had each participated in. I must say I have never experienced a more dedicated crew and never at any time felt threatened by any of them. My wife and family of three plus twenty USN personnel administered and supervised this station during my tour there. My children spoke Japanese as well as English. I reluctantly left this tour of duty in 1952. I was then assigned to the USN Radio Transmitter Station in Annapolis, Md. This was followed by many more assignments to radio communication stations and sea going ships.

Where ever I went W9 zed eye ex was always on the receiving end of my ham radio signal. We shared

a lifetime of experiences over the air. Jim was one of the most competent and imaginative persons I have known. We badly needed farmers to feed us during the emergency. I know he would have made a real difference somewhere in industrial United States had fate so decreed..

This narration would not be complete without a mention of The 4th Of July. Next to Christmas this was the most important day of the year. Jim and I would go to Longmont for our fireworks. Lutes Drug store stood on the North East corner of 4th and Main Street. They would fill their display windows full of fireworks of all sorts. Big three-inch cannon crackers, every size down to lady fingers. Cherry bombs, sky rockets and sparklers were every where. A single match into that display would have blown up that whole end of town. We could buy a large grocery bag full for a dollar. In addition to factory built fireworks, we manufactured some our own using carbide and a bit of water.

Jennie had an old pressure cooker that we liberated for our purpose. These old cookers were probably manufactured from aluminum. The top was held down by several turn buckle affairs that screwed the lid down tight. A pressure gauge calibrated in pounds set atop the lid . A relief valve for regulating the inner pressure was next to the gauge. Ordinarily the food and a quantity of water were placed in the cooker and shortly you had a tender meal. The pressure was kept from climbing too high by opening the relief valve slightly. We modified this process somewhat by placing a quantity of carbide and a bit of water in the cooker. Water and carbide form an inflammable gas of considerable power. By placing a small rubber hose over the relief valve we could regulate a bit of gas into the end of our carbide cannon. Open the valve, close the valve, light off the cannon. Man, what a boom. We had a spark plug in the end of the cannon. An old ford ignition coil and battery provided the fuse to ignite the propellant. By inserting a green apple or a Carnation Condensed Milk can into the cannon pipe you could blow a projectile clear out of sight.

We made hand-held projectile launchers from heavy lead pipes. One end was hammered shut so the considerable force from an exploding fire cracker would be directed out the far end. By assuming a comfortable position in an apple tree across the lane from the pig pen we could harass them until our ammunition ran out. Pow, squeal, reload and shoot again. I wonder why Percy allowed us to do this..

On 4th of July night we fired off our Roman Candles and Sky Rockets over Burch Lake. What a magnificent sight and a fit ending to a perfect day.

In addition to the fireworks on the 4th it was also a day the Lee clan gathered for a celebration. Aunt Amy, Uncle George and family, my mother, father and I. Grandad Lee and Minnie. Clyde and family were always away in Idaho. Sometimes we would picnic down near the lake under some huge cottonwood trees. Plenty of room for the kids to play ball and tease the girls. There was always a big, huge freezer of ice cream that we had made earlier in the day. An old gunny sack was placed over the freezer and one kid sat on the freezer to hold it down while another turned the crank. When it was absolutely impossible to turn it another round, Jennie would announce that it was done. The paddle was removed, careful not to allow any salty water into the ice cream. The top was placed back on and ice packed over it again. Sometimes there were strawberries frozen in it, but we generally just liked plain vanilla. Each of us got one or two spoons of ice cream from the paddle then had to wait until later for the big bowl.

I should mention our religious affiliation as it was a part of our young lives. When I was quite young, I recall going to Sunday School at the Methodist Church in Hygiene. I don't think my parents were particularly attached to any church. In fact, I don't believe any of the Lees were too excited about going to Church. One day when I was maybe five years old I saw Minnie running down the road toward our house. She had a bible in her hand and was extremely excited. She had been introduced to a religion that promised to fulfill her needs-- the Christian Science Church. For the uninitiated they believe that our physical ills can be cured by ardent prayer. Not that much difference from others I expect. The Church was located in Longmont next to a pretty green city park. It was small but large enough to serve the congregation. Minnie and Jennie were the first to succumb. Since Jennie was going, Jim went to Sunday School. Since he was going to Sunday School, I had to go to Sunday School.. My parents were neither here nor there on the subject.

The Church has a Reader who stands at a podium in front of the congregation reading selected passages from the Bible. An outline and guide is provided by the Mother Church based in Boston. Each congregation member is provided with a small booklet that contains the outline for the weekly lesson. During the week you read the Bible passages recommended, then on Sunday it is repeated and expanded on by the Reader. It was sort of fun. We had a guided tour of the Bible and someone to help explain the language the Bible is written in.

This Church provided Minnie with the companionship and well-being she enjoyed the rest of her life. She read her Bible every day as did Jennie, Amy and Dorothy. The rest of us fell by the side as we grew older.

During the early summer Percy would allow Jim and I to hoe the corn field. We were paid a dollar a day provided we put in a good six or more hours at it. Of course there was still the twice a day milking and regular chores thrown in.

At harvest time Jim drove a team of horses pulling a big grain wagon. We pulled up next to the thresher for a load. When full, we then drove next to the granary and shoveled the grain into a small window far above our head. Neither one of us was much of a muscle man so it was a real back breaking job. Dinner break found us famished and pooped.

During thrashing season neighbors pooled their resources helping one another until all had their crops in. Several would bring teams pulling big wagons that were used to haul the bundles of wheat from the field to the threshing machine. This was long before the combine was invented.

The power source for running the thrasher was a huge Rumley steam engine tractor. The rear wheels were far above my head. It huffed, puffed and blew steam and black smoke all day long. A drive belt connected the engine to the thresher. The belt was about twelve inches wide and maybe thirty feet long. It was twisted once in the center to keep it from working its self off the drive. We soon figured out this was an excellent source of static electricity. By using something like a five gallon glass jar lined with tin foil inside and wrapped outside by a like layer of tin foil we manufactured a huge capacitor. By locating it close to the belt it assumed the static charge. When it was fully charged, we could short the tin-foil plates together and get a tremendous spark. By attaching the foil plates to upright wires we could generate a series of lightning flashes between the wires as the plates charged and discharged. The whole place had the odor of corona. The horses were spooked and the neighbors were not too receptive either.

Dinner for the threshing crew was served in a dinner or grub wagon. This was a long wagon with a canvas top and screened sides. A long table ran down the center of the wagon with benches on either side. I expect it would accommodate twenty or more people. All of whom were starved. Aunt Jennie would host the feed while they were on their farm. She provided all the food. She was assisted in the preparation by the other neighbor ladies. Never have you seen a spread like they laid out. Fried chicken piled high on platters. Mashed potatoes and gravy. Hot biscuits with fresh churned butter. Sweet corn, green beans, peas. Freshly baked bread with honey and preserves. Water melon, apple pie and cookies. It makes me hungry to just write about it! The harvest only lasted a few days then on to the next farm.

During the fall when the corn became mature it was time to fill the silo. This was not one of my favorite activities but the pay was good. All you could eat and a dollar a day. My job was to climb up into the silo, as the ground silage was blown in from the top, stomp it down tight against the sides so there would be no air holes. Jim ran the grinder and Percy hauled in the corn.

During haying season which actually lasted all summer we worked and sweated in the hot sun. Jim drove the hay rake dumping the hay on the hay stacker forks. My job was to lead the stacker horse out and back as the loads of hay were thrown up and over onto the stack. Percy worked the stack with a pitch fork placing the hay here and there so the stack would stand straight and not tumble down around our ears. This was dull work as we were unable to speak to one another all day long. Jennie would bring our lunch out to us. We would sit in the shade of the stack eating and resting. When we came in at the end of the day we rode on the backs of the horses. Their backs were so wide you could hardly straddle them. Seemed like riding on an elephant they were so high in the air.

After the first frost and along in October, it was time to pick the corn ears off the stalks. The stalks were dried and rustled in the breeze all day. The team of horses walked slowly up the corn rows with no direction from us. We walked beside the wagon and threw the ears of corn into the wagon. Shortly after we started in the mornings it was warm enough to remove our jackets and the sun felt wonderfully on our backs. We talked and wondered and dreamed the day away. How could life be more wonderful?

About November, but before the snow fell, it was time to cut the winter's supply of fire wood. Generally, a big cottonwood tree near the lake was sacrificed. Many times it was a tree that had been the victim of multiple lightning strikes so it was dead and the wood dry. We used a long saw with a handle on each end. Back and forth spilling wood chips as it went. Soon, lengths of six feet or so were laying on the ground. We hoisted these onto the wagon. If they were too large and heavy, we just drug them back to the farm yard with a chain. Even the horses seemed to enjoy this fall activity under a beautiful blue sky, maybe a white cloud floated by. The ducks would fly over and land on the lake and the birds sing a tune for us. There was a very big circular saw blade mounted on a structure of some kind that we used to cut the wood into the proper length. It was then necessary to split the wood and pile it in a dry place. Sometimes we used a wedge and heavy sledge hammer, other times an ax sufficed. It takes good eye and muscle control to strike a piece of fire wood in the same place twice with an ax. Same with cutting the head of a chicken off.



Don't whack him in the nose or cut too far back on the body.

Once the corn was shelled from the cobs, they were piled somewhere to keep dry. Dry cobs make a fast fire and a good starter for not so dry wood. They have a particular odor when burning also. Very distinctive and always reminded me of fall and winter season.

During all these activities Jim and I were discussing our latest "radio" projects. When it was time to milk the cows we played a game that was popular on the radio. It was called "Twenty Questions". One would think of something familiar to each of us. The other person was then allowed twenty questions to identify the object. No fair changing during the game either! Percy would listen and grin a bit.

The barn cats were in attendance and would get a squirt of milk in the face if they got too close. There were very few mice around the barn. The cats were fat and sleek so apparently they were doing their appointed job. We had a radio in the milk barn so as not to miss the Lucky Strike Hit Parade or other favorites that were broadcast before we went to the house.

Sometimes in the summer, Jim and I would ride our bikes up into the mountains. I expect it might have been a ten or twelve mile ride one direction. We loved to climb on the rocks and enjoyed the view from the top. One day we encountered a difficult shelf of rocks. I stood on his shoulders as he hoisted me high enough to grasp a small pine tree growing from a crack. The tree pulled loose and I fell backwards. He still had a grip on my ankles. When he realized I was falling, he loosened his grip but by this time I was ready to crash into the rocky mountains. I sustained a very serious injury to one leg and bled profusely. We were both scared out of our wits. We descended the mountain and rode our bikes back to the farm. Fortunately no bones were broken, but I did have a shoe full of blood.

Perhaps in closing I should mention that Jim did have a love life. . He was enamored with a lovely young lady whose family owned a farm near Hygiene. They dated and went roller skating, bowling and picnicking together after Jennie died. I expect they would have married had she not seen the old house in which she was expected to live. While Jim and Percy were batching they were not the best house keepers in the world. There were piles of newspapers, books and magazines beside their favorite chairs. The entire house was in need of a hurricane to blow it clean. Still no inside plumbing and the old coal range to cook on. Wow! I am unclear as to how and when he met Elsie, his wife. Bringing women into our lives changed us dramatically. I was married and had children. Jim was married and had children. We no longer had the luxury of long talks and close association. I was gone many years in the Navy. Jim lost his eye sight. Nothing was ever the same again.

There were rattle snakes in our life, banged up automobiles, some sickness, trips to Rabbit Mountain where we explored an Indian encampment that Percy had found when a young man, trips to Lakeside Amusement Park where we watched the Midget Auto Races, rides on the Roller Coaster with Jennie--a young lifetime of activities. Something I was privileged to enjoy and most of all remember after so many years. I thank you who have encouraged me to write it all down. Otherwise it would have been gone and forgotten. Oliver Lee

Note: This memoir mentions several family members. Oliver's grandparents were Jesse and Minnie Collins Lee. Their children were Clyde, Jennie, Amy and Clarence. Jennie married Percy Goss and had two children, Wesley and Jim. Clyde married and moved to Idaho. Amy married George Kefauver and had several children, one of whom was Dorothy mentioned in the memoir. Clarence married and had two children, Oliver and Byron..