My Boyhood Days

by Loyd Riedesel (Brookings, South Dakota)

Editor's Note: This is a recollection of life on the farm near Glidden, Carroll County, Iowa operated by Loyd's parents, Ralph and Edith (Mace) Riedesel, in the 1920s and 1930s. The 140-acre farm was established by Ralph's parents, Louis and Sophia (Wetter) Riedesel, around 1880. Ralph took over the farm in 1909. Despite neighborhood whispers about his move being "Loyd's Folly", Loyd took up farming near Brookings, South Dakota, and proved very successful.

GLIMPSES OF MY BOYHOOD DAYS

I'll probably never finish this, but I've been thinking about it for several years and my children want me to write down some of the things that happened to me during my younger years. I would also like to explain the way we lived before so many different inventions changed our lives.

I was born November 20, 1914, in the house on an Iowa farm where my father was born, and lived all his life. At that time there was less chance for infection there than in the hospitals. Also, at that time, the family doctor made house calls night or day, and probably spent more time out of his office than in it. Horse and buggy was the way people traveled, including the doctors; though doctors, veterinarians, and mail carriers were the first to use cars in their business. I can remember the doctor offices in Glidden. Our doctor had his office in a small building on the east side of main street. It consisted of a small waiting room with an examination room next to it. On the south, a door opened into a closet where he kept his pills and medicines. He was his own pharmacist. He didn't have a nurse or a secretary; his wife took his house calls at home.

THE HOME FARM

The farm where I grew up was located three miles north of Glidden, on the Lake City road. It consisted of 140 acres, 80 acres where the buildings were, 20 acres across the road, and 40 acres one mile south. The 80 acres were divided this way, 5 acres for buildings, a five acre pasture south of the buildings, and north of the buildings was a 10 acre, timothy and red clover, hay field. The land west was divided into two 30 acre fields which were rotated between corn and oats through the years. The south part of the 20 acres across the road was low ground and it was in permanent pasture with it's own well and hand pump, where we spent a lot of time pumping water, for cattle on pasture, during the summer. The north part of that field was dry enough to farm, so through the years it had various crops on it, including corn, oats, and hay. During the later 1920's Dad tiled the pasture across the road and also the pasture south of the house, draining them, so all of it could be farmed.

At that time farm tile lines were dug in by hand. I remember men working all day long pushing a narrow tile spade, with their foot, to dig a two foot deep ditch and wide enough to stand in. By standing in the ditch another two foot could be dug and so on; until the ditch was deep enough and on a gradual slope so the water would run from the upper end of the tile line to the outlet. When the foot long tile were laid end to end in the ditch and covered with dirt, the

water could enter the tile where they were laid together and drain the land. Tile at first were made of fired clay in four inch or larger sizes. Later they were made of cement and the four inch size was dropped because they plugged up with mud too easily. There was a tile plant located at a gravel pit north of the Raccoon River where the railroad had taken gravel when it was built. Another plant was located in Glidden next to the railroad on the Coon Rapids road.

Picture of the house with the old kitchen, cistern pump, and wash house.
It was taken from the wind mill.

Ours was a median sized farm, smaller ones were 80 acres or less and the larger ones 160 acres to 240 acres. There were a few larger farms around but they had a lot of permanent pasture, either hilly timber ground or bottom land along the rivers. Most farms were diversified. We had our own milk cows, hogs, and chickens; and grew most of our own feed. The hogs were fed all the skim milk, that wasn't fed to the calves or used in the house. Dad also fed them shorts (a byproduct from making flour from wheat) Another source of protein was tankage, made at the Rendering Plant, where dead animals were collected and cooked in a pressure cooker until the bones and flesh turned into a brownish meal. Dad did buy some protein concentrate to mix with the ground oats and corn to feed to the laying hens, especially after mother got some special roosters and sold eggs to a hatchery near Lake City. Before that mother would keep year old hens and set them on a dozen fertile eggs and hatched her own chickens.

We made our own butter from sour cream. I don't think there was any sweet cream butter in those days. We always cooled the cream from the separator in cold water from the well, but there was no way to keep it sweet for more than a day or two. Our butter churn was called a barrel churn, It was a small wooden barrel with two stub shafts across from each other half way down the side of the barrel. These fitted into slots on the end of two 4 in. upright boards bolted to a base the width of the barrel. One end of the barrel had a round lid about 10 inches across that could be clamped on to seal that end, and near the other end was a small hole with a cork in it where the butter milk could be drained off. About three gallons of warm cream were poured into the top of the barrel, the lid clamped on. The crank was then turned the right speed so the cream

sloshed back and forth throwing the butterfat together. It took at least a half hour or more. The liquid left was butter milk. It was drained off through the small hole with the cork. Fresh cold water was added and churned some more so the rest of the butter milk was driven out of the butter and drained. The butter was then scooped out and put on a bread board where the rest of the water could be squeezed out with a butter paddle. The butter was then formed into a chunk the size of a loaf of bread. That was kept in the cool cellar where pieces could be cut off as needed, to use at the table or in the preparation of meals.

Our kitchen was quite small. We entered it through a door to the west, off the porch. The porch was simply a chunk of cement the width of kitchen and about 5 feet wide and 6 inches thick, which also covered the soft water cistern. The kitchen door had a large square glass window in it giving light to the cloak room, which contained a small corner lavatory in the southeast corner, with two mirrors above it; a large one on the south and a narrow one on the east wall. The rest of the south wall had hooks for coats and caps. The upper ones were for the mature people and the lower ones were the right height for the kids. There were also some medium height hooks on the north wall. Walking east through a doorway, we entered the kitchen which had a double-sash window on the north side of the east wall. The kitchen range sat next to it on the north wall. West of it, next to the range and cob basket was a kitchen cabinet, a very special piece of furniture in those days. The bottom part was about the size of a desk with a large cabinet door under it to the left. It had a good size opening with a wire shelf where mother could store most of her pots and pans. To the right were three drawers, two small ones on top, and a large one below which was lined with metal with a metal cover which slid back as the drawer was opened. This was where the home-made bread was stored so it wouldn't dry out. On top of the small drawers was a bread board that pulled out, making it handy to slice the bread. The top of this cabinet was a metal covered work bench which slid out from under the upper narrower part of the cabinet; making a large area where pie dough could be rolled out, bread kneaded, or cakes made. Above this, in the set back part of the cabinet, two doors opened into an area where mother kept her spices, rolling pin, flour sifter, vanilla and etc. The left part of this contained a tall metal flour bin which could be tipped out so a sack of flour could be poured in the top. The bottom had a crank which turned a wire sifter, so the flour could be sifted out into a container as it was used. Above this were two doors with frosted glass which opened to the shelves where the dishes were kept. The range, cob basket, and kitchen cabinet took most of the north wall leaving too small a space for the pantry door to open, so dad fixed that by sawing the door from the top to the bottom in half and putting an extra set of hinges in the middle so it folded as it opened and would fit between the wall and the kitchen cabinet.

The pantry was a narrow room with a small window to the west. The north wall was covered with shelves from the floor to the ceiling. The south wall had shelves and drawers half way up. The two and half gallon drinking water pail sat on the shelf nest to the door with the long handle dipper standing in the cool water waiting for some thirsty member of the family to pick it up quench his thirst. Here in the drawers and on the shelves were stored the various tools needed in the kitchen in those days. Some of them included the meat grinder, apple peeler, cheery pitter, cork screw and sad iron for ironing clothes. The ironing board was kept back of the folding door in the kitchen. A hammer, screw driver, screws, nails and other parts were kept in a separate drawer under the water pail. It was a very interesting place.

Occupying the east side of the south wall of the kitchen was a built-in cabinet where two large doors , at shoulder height, opened into a cupboard with three shelves, where mother kept her good dishes. On the back side, two doors also opened into the dining room. The idea was to set the table directly from the cupboard rather than carrying the dishes from the kitchen. Mother never used those doors because she was afraid some of the dishes might be leaning against the doors and would fall out and break if they were opened. A coffee grinder was attached to the wall west of the cabinet. At that time coffee was sold in the whole bean and put through a big coffee grinder at the grocery store or you ground it as you used it at home. There was no such thing as vacuum packed coffee in those days. Mother's coffee grinder had a glass bowl on top the size of a quart jar with a screw lid, where the whole beans were poured in and kept. That fed down to the grinder, which was turned by hand, and ground into a glass below as it was needed for the coffee pot. The door leading into the dining room occupied the west side of that wall.

There were no electric lights or electric appliances on the farm in those days. The light for the kitchen was a kerosene lamp that was attached to the door frame by a double jointed arm so it could be swung through the doorway to be used in the dining room also.

That lamp had a glass bowl for the base, which held the kerosene. The burner with an adjustable flat wick which extended to the bottom of the kerosene was screwed to the top of the glass bowl. A glass chimney sat around the base of the burner. The glass chimney had a base larger than the burner with a big bulge where the flame would be and tapered off at the top where the opening let the hot gasses out. The wick had to be cut off straight with the edge of the burner with the edges rounded off so the flame would burn straight and clean with no high spots that would smoke up the chimney. The glass base made it easy to tell when kerosene needed to be added. Mother always cleaned the inside of the chimney by stuffing it with old newspapers and twisting the chimney around them. It did a great job of cleaning the soot from the glass chimney and shined it up.

Ralph Riedesel and Edith Mace about the time of their marriage in 1909

FOOD

The meals were always good and hardy, at home, when I was a boy. Breakfast quite often consisted of hot oatmeal, with our own cream and milk mixed 1/2 & 1/2, and toast with home made butter and jelly. Mother made a lot of jelly in the summer from plums, apples, cherries, & strawberries. Two special kinds were tomato or ground cherry preserves. Toast was made by slicing home made bread and toasting it on the rack in the oven. Of course that dried it out so it was about the same hardness clear through.

Quite often we had pancakes made from mothers own pancake mix. Dad must have bought her a special pancake griddle. I never saw another one like it. There were three flat sheet iron griddles, the size of a medium sized pancake, hinged to a rectangular sheet iron griddle that would hold the three pancakes when they were tipped over with the hinge. Mother laid the whole thing flat on the hot part of the range, and poured the batter in the three round griddles. When the cakes were baked on the lower side, she tipped the hinged griddle over to the rectangle griddle, dumping the pancake so they could bake on the other side, and with the round griddle flipped back, three more could start baking. Lard was used as shortening so sometimes things got a little smoky in the kitchen.

Sorghum was quite often used on pancakes. Farmers grew their own, and in the fall they would cut it, strip the leaves and take the stocks to someone who had a crusher to get the juices squeezed out so it could be boiled down to sorghum. I think dad generally bought ours from someone who grew and made their own. Of course we could buy Log Cabin syrup that came in a metal container shaped and painted like a log cabin with the chimney as the spout. We always bought sugar by the 100 pound sack and kept it upstairs in the hallway, so there was always plenty of sugar. A lot of sugar was used in those days. All the food was prepared at home including bread, pies, cakes, home made jams and jellies, and candy, and of course everyone used lots of sugar on their oatmeal and in their coffee or cocoa. Mother sometimes made syrup by boiling sugar and water and adding concentrated maple flavoring. We had an uncle who lived in town and kept bees, so dad always bought honey from him and had it available in liquid or in the cone. To eat a slice of bread with cone honey spread on it was really a tasty treat.

Most of our meat came from our own hogs. We butchered twice a year and would work together with a neighbor. The west part of our barn was open so loose livestock could go in and out to eat hay from a manger in the winter. This was the place where we butchered hogs. After scattering clean straw on the dirt floor, we would sort out the right size hog and kill, and bleed it before pulling up the carcass to an overhead stringer, .where it could be dunked in a barrel of hot water to loosen the bristles. We would then lay it out on an old door, which rested on two sawbucks. There all the bristles were scraped off, leaving a nice clean skin. At that time dad sent out the hams and bacon to have them cured. During the later years, they canned most of the meat, so they skinned the carcass in the barn so they wouldn't have to scrape off the bristles. We had a drop-leaf walnut table that we stored in the wash house but used it in the kitchen so the two halves of the carcass could be cut up on it. After seeing some of these beautiful walnut tables after they had been refinished, it's hard to believe that we cut up meat on ours. At that time they were a cheap rugged table where we could saw the meat and bones, making pork chops and roasts. A hand crank meat grinder was clamped to the end of the table and the fat and meat were

ground so the fat could be cooked to make lard and cracklings: and the ground meat could be mixed with seasoning to make sausage. We always pried the meat loose from each side of the backbone and called it tenderloin. It was the most tender and leanest meat on the carcass and we ate it as a special treat (commercially that meat is cut cross ways with the backbone to make pork chops.) Most of the meat was cut into small chunks and put into two-quart glass jars and canned. While all this cutting and grinding was going on, the copper boiler with water in the bottom was set on the range. Dad had made a wire rack to fit the bottom of the boiler where the glass jars could set (if they set on the copper bottom, the extra heat would crack the bottom of the jars.) When the jars were full of meat, the rubber ring was stretched over the threads and the zinc cap screwed loosely on top. They were then set in the boiler with a set of tongs that clamped around the lid. After the sausage was mixed with the seasoning and formed into paddies, they were put into the jars and lard poured around them to fill the spaces in the jars. They also had to be processed in the boiler until they could be taken out and the caps tightened against the rubber to seal them. After they cooled, they were set on shelves in the cellar. The cooked lard was squeezed through a cloth into jars and set in the cellar. The cracklings, which were left in the cloth after straining out the lard, were used to make laundry soap through a process involving the use of Lye.

Cherries were picked from the cherry trees north of the house. They were quite large trees. We would pick from step-ladder, and sometimes dad would back the model T truck under the tree so we could stand on a plank across the top of the box. We picked the cherries into empty gallon syrup cans. Mother canned them in two quart glass jars. We had three huge mulberry trees south of the house. When they were ripe we would lay some big tarps under them and shake the limbs and the ripe bernes would fall on the tarps along with a few sticks and leaves. By picking up the sides of the tarp, the berries would roll to the center of it and could be dumped into a basket where they could be sorted. Mulberries by themselves aren't very tart so mother always mixed rhubarb with them to make a very tasty sauce. Some of the early ripening apples were made into jellies and apple butter. The later apples that ripened in the fall were picked and wrapped in sheets of paper from old catalogues and put into crates in the cellar. The paper kept the few apples that spoiled from spoiling the whole crate.

Our garden was located south of the lane. It had a row of grape vines part way down the center. The west end, south side, and the east end were planted to potatoes. To plant potatoes, dad used a (marker) made out of two, four by sixes. They were set forty two inches apart with two by sixes nailed across the top. Two wide cultivator shovels were lag screwed to the front. By pulling this across the garden with horses he dug ditches deep enough to plant cut seed potatoes, and the rows would be wide enough to cultivate with either a one or two row cultivator. The strip north of the row of grapes was used for a vegetable garden. That included peas, lettuce, onions, string beans, red beets, carrots, tomatoes, cucumbers, squash, pie pumpkins, ground cherries and salsify. There was a strawberry patch right west of the row of grapes. A patch of sweet corn and popcorn were grown on the end of the corn field each year.

We always had our own milk and cream, and butter, from the milk cows. The laying hens furnished eggs. The old hens were roasted, and the young roosters were fried. The vegetables came from the garden in the summer so the only groceries we needed from town were flour to make our own bread, and sugar. Yeast came in hard cakes that had to be soaked in warm water

before they could be used. Pork and beans were bought in cans, and salmon was cheap so we always had cans of salmon on hand. Baking powder came in a metal can with a rounded upper edge that could be used as a biscuit cutter when it was empty. Sardines were cheap and we generally bought ours canned in cotton seed oil. Salt was bought in a small sack and mother had a wooden salt cellar that hung on the wall between the kitchen cabinet and the range. It probably held three pounds and fed down to an opening in front where the salt could be dipped out as needed. Vanilla came in large flat bottles. Chocolate came in slabs and coca came in flat sided fiber cans with metal tops and bottoms. We had our own ceramic gallon vinegar jugs which we took to the grocery store to have filled from a wooden barrel in the rear of the store. I don't remember all the uses for vinegar. I know mother pickled her own cucumbers, beets, and apples, and vinegar was used for the liquid. Mixed with cold water and sugar; vinegar rnade a refreshing drink for a hot summer day. The only time we spent money for pop was on some special occasion such as a Fourth of July celebration, or the county fair. Dad always liked strawberry pop but it was too strong for me so I drank orange.

When fall came, the potatoes were dug up and put in crates. Dad used a walking plow behind a team of horses to plow down the rows of potatoes and turn them on top of the ground. We didn't have a potato plow so we had to scratch them out of the turned over dirt by hand and put them in pails to dump them in crates. The crates were hauled to the south porch where the cellar door was part of the floor. It was opened and hooked to the north wall and the crates of potatoes were carried down the steps to be stacked along the north and west wall of the cellar. Carrots were dug and put in a box of sand in the cellar. Pumpkins and squash were set on the cellar floor. Sweet corn was used when it was sweet and ready in July and August. The popcorn was picked by hand, in a shoulder sack, when it was ripe in October. It was put in old flour sacks and hung on hooks in the bedroom closet upstairs. We didn't have a walk-in attic. We shelled it by hand in the winter as we used it. Every Sunday night we popped corn and sometimes made fudge. We always had a watermelon and muskmelon patch, out in the field, with the sweet corn. They ripened in August during oats harvest so we ate them as they ripened. Sometimes we would bury some ripe melons in the oats bin. They seemed to keep longer that way, so sometimes we would have melons in September.

Even during the depression years of the thirties I don't remember a time that we were without food.

This is a picture of mother about ready to milk our gentle Holstein cow named "Molly". She could be milked anywhere in the cattle yard and didn't have to be tied up.

Behind her is the cement stock tank. It is covered on the top and sides with straw and horse manure to keep it from freezing during the winter. The hog waterer next to the barn, "where the hog is drinking" is piped to the tank and has a place underneath for a kerosene lamp with a metal chimney, which gave enough heat to keep the waterer from freezing in the winter. Behind mother is a covered opening where the cattle could reach in and drink water. In cold weather it would freeze during the night. After breaking and dipping the ice out in the morning, the cattle would keep it open all day because they drank a lot of water.

Right here you can see a lot of our food supply, milk from the cow, pork from the hog, and in the back ground is the chicken house where we grew our own eggs chickens for food.

WASHING CLOTHES

Mother's washing machine was in the wash house right west of the house. It was a double tub Dexter. It had two wooden tubs with a wringer between, which could be turned 360 degrees for wringing between the two tubs or from the last tub to a metal movable tub (which we also used once a week, in the kitchen for a bath tub) and from that tub into a reed clothes' basket.

This is the way the system worked. Water was heated in the kitchen, on the range, which had a reservoir on the side of it. We always kept it full of soft rain water from a cistern on the back porch. A copper boiler was also set on the range, right after breakfast, and water was carried from the cistern to fill it. Heat was supplied by burning cobs and wood in the range. While that was heating, mother would get the clothes sorted. Dad or one of us carried hard water from a cistern near the deep well to fill the rinse tub. The 1 1/2 horse power gasoline engine had to be pulled around and lined up to a pulley on the outside of the wash house. A flat belt was slipped over the two pulleys, and a winch was hooked between the engine and a stake in the ground to pull the engine forward to tighten the belt. The engine's gasoline tank had to be filled with gasoline. The drip oiler for the piston had to be filled with engine oil. Three hard oil cups, one for the connecting rod bearing and two for the main bearings, had to be unscrewed and filled

with hard oil using a putty knife. If it was winter, the engine's cooling water was always empty, so water had to be added after the engine was started.

Back to the washing machine, water was carried from the boiler on the range in the kitchen (where mother had boiled some of the soiled white clothes) to the first tub of the washing machine into which mother shaved bars of home made soap. The white clothes were put into the soapy water and the lid dropped down, which made the gears mesh so the dasher (which hung from the lid into the tub) could turn right and left. The dasher was an eight inch piece of two inch wood with four, six inch pegs, the size of broom handles stuck into it. The pegs hooked into the clothes, pulling them back and forth in the soapy water to wash the clothes (rather than circulating the water through the clothes like modern automatics do). The next tub had lukewarm water in it. After the clothes were washed clean in the first tub, they were put through the wringer into the second tub where they were rinsed with the machine the same way they were washed in the first tub. From there they went through the wringer into the metal tub that was full of cold hard water, where mother had colored the water with liquid bluing. The bluing kept the white clothes from turning yellow, making the white clothes whiter. Mother used a hand stomper to rinse the clothes in this tub. A stomper was a funnel shaped metal on the end of a long wooden handle. Water and air would circulate through the clothes by pushing this up and down on top of the clothes in the water. When the clothes were well rinsed, they were put through the ringer into the reed clothes' basket. South of the wash house were four clothes' lines where mother hung the clothes to dry. Remember that washing was a weekly affair and there were always more clothes than the lines would hold. Of course in the winter the clothes froze to the lines and they would have to be pried off the lines under the clothes' pins. The stiff clothes would be stuffed into the clothes' basket and taken into the dining room where a cord clothes' line was cranked out of a container on the east wall hooked over a hook on the south and north wall, cranked up tight and wrapped around the crank to keep it that way. On wash day we ducked around the drying clothes in the dining room. We were glad when the heat from the hard coal burner had dried them.

In those days there were no wrinkle free clothes so most all of them had to be ironed. Mother always set up the ironing board in the dining room next to the kitchen door. The irons were made of heavy cast iron and were heated on the range in the kitchen. Mother's were made with a detachable wooden handle so while she was ironing with one, two or three others could be heating on the range. When the one she was using cooled down she could carry it to the kitchen, unhook the handle and hook to a hot one. The steam iron was yet to be invented, so the clothes that were too dry were sprinkled with a bottle of water with a sprinkler cap attached.

Later dad bought mother a gasoline iron. It had its own gasoline tank in front of the handle and a burner inside the iron. It sounded like a gasoline lantern and kept a steady heat for ironing. Mother used it some but was always afraid of it. When I read this over it amazed me on the amount of work that was done each week to keep the clothes clean. No wonder we only changed our winter underwear once a week. Mother always tried to keep the blue color in the overhauls by washing them last when the water was cooler.

Bertha and I bought a single tub electric washing machine after we were married and used it until I bought her one of the first automatic washing machines in our area, when we lived on the Fisher farm. It was a Bendix. I think that was the first company that made automatics. It was one

machine that took a lot of drudgery out of house work. We found out right away that it was a lot easier on clothes and they lasted a lot longer. Squeezing the clothes three times through the wringer each wash day was hard on the fibers and the clothes soon showed wear. Later when the clothes dryer came to the private home it made it almost a pleasure to keep the family clothes clean.

COUNTRY SCHOOL

The school where I received my first eight years of education was located 1/4 mile south of the buildings on Dad's farm. The whole school district consisted of four square miles. We lived in the south east corner of the northwest square mile. We and our neighbors south of us were the closest to school. We never took our lunch because we could always run home to eat. One farnily lived one mile west and one mile south of the school house and those kids walked to school and home every day unless the weather was terrible. There was no well for water on the school grounds so the older students were divided into couples, and every day a couple would take an empty pail and walk to our farm to bring back a pail full of water to use for drinking and washing hands. The pail and the wash basin sat on a wooden bench in the back of the school room. There was a common dipper in the water pail but most of the students had their own cups hanging on nails above the bench. Of course the dirty wash water had to be carried out the door and dumped on the ground off the wooden porch.

It was a one room school house with three large windows on each side. The north end was taken up with black boards which had a chalk and eraser rack along the bottom. There were large pull down maps above the black board. To the west, in front, was a large cupboard with four shelves and glass doors where all the library books were kept. Below it were some drawers and a couple of doors for storage. In front of the black board and in the center of the north part of the room were the teacher's desk and her captain's chair. In front of her sat a large coal burning heating stove with a huge heating drum as its upper part. Its purpose was to extract as much heat as possible before the smoke went out the top and into stove pipes that connected to the chimney above the black board. The rest of the room was filled with three rows of double seats and desks. Each unit consisted of fancy cast iron ends with a fold down seat in front. Back of it was a desk made from a slanted wooden board with a grove across the front for pencils and a hole in the center for an inkwell. Below it was a light shelf for books and tablets for two students. All the wood was solid maple. The desks were nailed down to the solid maple floor so that the seat of each unit was under the desk of the next unit, the desks getting smaller as they marched toward the front. That way the younger students, who needed the most help, sat in front.

The front or entrance to the school was a small room, with its own roof, and it was attached to the south end of the one large room. It had its own door with a window above it, which was all the light there was if the doors were shut. The door opened inward toward the right, and on the right side of the room was a shelf for storage. Along each wall were triple brass hooks consisting of a long curved one in the center with a shorter curved one on each side, there were enough hooks so everyone could hang their coats and caps or hats. In the winter there were hooks on the south wall of the class room to hang coats so they would stay warm. The ceiling and walls were made of painted grooved ceiling board. The outside of the school house was painted white.

In front of the door was a wooden porch that sat on rocks. No grass grew close to the school house because so many games were played around it. "Bear Around the School House" was a game played with the porch as home base. The person who was "It" would try to catch anyone who ventured off the safety of the porch and ran around the school house. Running, without being caught, kept the kids in condition. Another game was "Anti Over the School House." Sides were chosen and a rubber ball was thrown over the roof to the other side. If you caught the ball you could sneak around to the other side and touch one of the opponents with the ball and put him out of the game. If you caught two bounces or four rollers you could do the same. I don't think anyone cheated, and the roof was high so it wasn't very easy to know when a ball was coming over. The wear of the ground through the years and generations of students made the ground around the school house lower than the rest of the school yard.

One of the other buildings on the acre of school yard was a small coal house where big chunks of coal were kept and also enough cobs were in a bin to start the fire each day. To the north, next to the fence, were two small buildings, one hundred feet apart, each building sat above a square hole a little smaller than the base of the buildings. They had one door in front with a floor going 2/3 of the way back with an enclosed bench in the back. There were two large holes cut in the top of each bench. These were the rest rooms, called "Out Houses." The west one was the boys and the east one was the girls. If you wanted to use them during school hours you held up your hand with one or two fingers up so when the teacher excused you she would know how long you should be gone.

There was no play equipment on our school yard, like slides or swings. We made up our own games. There were four trees, planted in a square, west of the school house where we played the game "Pump Pump Pull Away Come or I'll Pull You Away." We had imaginary lines between trees on opposite sides of the squire, as base lines. One person was "It" and the rest of the kids were behind each of the lines. The idea was to run between the base lines without being caught. If no one would run, the person who was "It" could pull someone off the base line, making them "It." Believe me, someone was always running. Most of the time all eight grades were represented in the school, running in age from 5 to 14 or older. The older kids looked after the younger ones and always gave them a break in the games we played. East of the schoolhouse was an area large enough to lay out a baseball diamond. None of us had a baseball or bat so we used a rubber ball and a narrow board for a bat. No one had a glove or mitt so it was a good thing we used a rubber ball. When I went to school there weren't enough kids to have two teams so we generally played work-up. When someone was put out he started in the backfield and worked his way through fielder, base men, pitcher, catcher, and to the batter position.

We did play "Hide and Seek" although there weren't a lot of places to hide. There was no more than eight trees in the yard, so with that, the school house, coal shed, two out houses, and ditches along two sides of the school yard covered every place available. I'm not quite sure about this game but I think it was called "Merry Go Round." One person was chosen for the center and the rest of the kids joined hands and formed a circle around him. He called the shots, that is he could tell the circle to walk, run right, run left, stop, change hands, or any thing else he could think of, but when he said "fall down," the last one down took his place. Another game was "Farmer in the Dell," a circle was formed and someone was chosen as the "farmer" the rest would join hands and dance around the farmer singing.

The farmer who is "It" chooses a wife from the circle, who comes in to join him. Then the wife chooses a child from the circle who joins the other two. Then the child chooses one for a dog, and the person who is the dog chooses a person from the circle for a cat. The one who is the cat chooses a person to be the rat. The game is then over until someone else is a farmer to do the choosing again.

These were fall and spring games. During the winter when there was snow on the ground we played other games. "Fox and Goose" was played when the grass was covered with new fallen snow. A path was carefully trampled in the new snow in the form of a huge circle with several concentric circles inside. These were divided into quarter pies with straight paths to the center base. The base in the center was a safe place for the geese, which were everyone but the one chosen for the fox. The fox tried to catch the geese as they ran around in the different paths. Anyone who stepped out of the path into the new snow would become the fox or if the fox caught a goose they would become the fox.

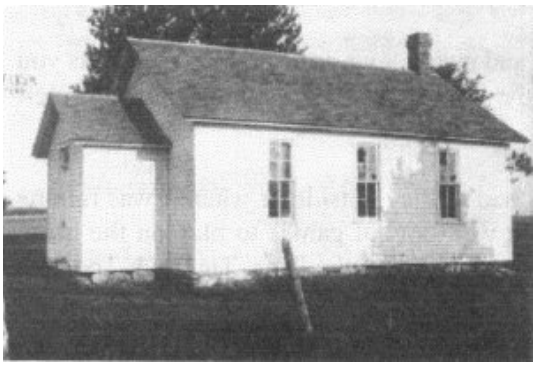
It was fun to lay on your back in the new snow and swing your arms and legs as far as you could and get up very carefully so as not spoil the imprint of a large butterfly that you left in the snow.

In the winter when the weather was too bad to play outside or when it was raining during recess or noon in the spring or fall, there were lots of games to play on the black board. A few games that I remember are Hang-Man, Connect the Dots, Tic-Tack-Toe, and several others whose names I don't remember. Sometimes we would be working on projects for Christmas or other holidays.

We had a record player, that sat on a stand in front, where records could be played. We didn't have a piano. The school raised money for the record player by putting on a "Box Social". A "Box Social" was an event in which the whole neighborhood participated. All the women and older girls prepared a delicious lunch for two and put it in a beautifully decorated box, the size of a shoe box. All the boxes were taken to the front of the school room with out the men seeing them. After a program put on by the school, the boxes were auctioned off. The men and older boys bid on either the boxes that they thought were the prettiest, had the best food in them or thought they knew who brought it. Quite often if they thought it belonged to the teacher the bid really went up. The person who had the highest bid on each box could eat lunch with the person who brought it. The money all went for something extra the school needed. By the way, the record player was a Victrola run from springs which were wound up by hand with a crank on the side. There was no electricity in the country at that time. To light up the school at night the neighbors brought their lanterns to hang up in the school room. Some of the country schools at that time had kerosene lamps with round reflectors behind them fastened to the walls between the windows. Our school didn't have any lighting.

The country school teacher taught all eight grades, which didn't mean that there were always eight grades to teach. There could be several students in some grades and none in others. The year I was to be a third grader, there were no other students for that grade, so I got shifted to the fourth grade, where there were several other students.

Skipping a grade wasn't as hard as it may seem. All the students studied at their desks in the one room school house. During the day the teacher called each class to the front where they sat on the recitation seat next to the library book case. If she called eighth grade arithmetic, that class would come foreword, or if she called first grade reading, that class would come forward, etc. There she would question each pupil about that days assignment. Not only did you learn about your own studies but you also knew what was going on in the classes ahead or behind you. The eighth grade studied hard all year so that they would be able to pass the state examination given at the end of the year. If you passed that examination; the school district would pay your tuition to any high school in the state.



Our country school, taken before my time

ELECTRICITY

Very few farms had electricity when I was boy. Glidden had its own steam driven electric plant, located a half a block east of north main street. It consisted of a coal fired boiler, a big stationary single cylinder steam engine with an eight foot flywheel, which was belted to a generator with a long flat belt. Some of the farmers must have gone together and built an electric line a mile and a half north of town so they could have electric lights. There weren't a lot of other things to use it for. Most houses didn't have many plug-ins. I remember Aunt Laura, who lived a mile and a half south of us, had a drop cord in the center of the kitchen ceiling with a rotary switch on the wall, She used an extension cord to plug into that light fixture when she used the electric iron or toaster. Later on when they bought a G. E. Monitor Top refrigerator, I think it was also plugged into the same cord.

Other farms, who had their own electricity, had a 32 volt Delco electric plant, which charged 16 glass encased, single cell wet batteries. They were very conservative with its use, because the batteries had to be recharged when they were drawn down to half their capacity. In time the batteries had to be rebuilt also, which was quite expensive. The light bulbs were expensive 32 volt bulbs. And, if they had any motors, they also had to be 32 volt D. C.

Let me tell you how we lived before R.E.A. brought electricity to the American farms. The lights we had at home used either kerosene or gasoline. The kerosene lamp we used in the kitchen was mounted on a double jointed arm, so it could be swung through the door-way into the dinning room to be used there also. The dinning room had a gasoline mantle light that hung from the ceiling and was piped to a three gallon pressure tank upstairs. It gave a lot of light, so we spent our evenings in the dinning room, where we could play games or study, using the

dinning room table. Mother never lighted the gasoline light because the generator between the mantles had to be heated with two matches together so the gasoline would turn into gas to be burnt in the mantles. After it was lit the heat from the burning gas kept the generator hot. That room also contained the heating system, which was a hard coal burning heater that warmed that room and kept the bedroom above it some-what warmer, because the stove pipe went through the dining room ceiling and into the chimney that was in the bedroom above.

Hard coal came in the size of crushed rock and was clean burning. The top of the hard coal heater had an opening where a couple of coal hods of coal could be dumped. This fed automatically to the center of the burner (like a self feeder). It kept an even heat all day long, but was slow to heat up in the morning.

There was a writing desk in the northwest corner of the dining room. The kitchen door was in the middle of the north wall. On the east wall was a clock shelf with a Seth Thomas, pendulum clock, that was powered by weights hung on cords. They had to be wound to the top of the clock every night. It also struck the hour on the hour, night and day. In the southeast corner was a Brunswick phonograph that played 78 rpm. records. and was powered by three large springs that were wound up by hand with a crank on the right side. It could play Victor, Pathe, or Edison records by turning the head to use the different needles on the records. The grooves in the Victor records made the needle in the phonograph head vibrate sideways. The needle holder was attached through a pivot to the center of a two inch diaphragm, which vibrated as the needle followed the groves in the record, making a sound, which was amplified though a wooden horn. It was all mechanical, no electronics! The south side of the room had one double sash window, a door to a screened in porch which opened south to a cement walk that went about 60 ft to the driveway. West of that door was a door to a cloak closet. Between the door and window hung a telephone.

The telephone was a large instrument about a foot wide, eighteen inches high, and six inches deep. The adjustable talking piece stuck out of the center front. Two bells were above it near the top, and the bottom had a small slanting shelf for holding paper to write notes. The hand held receiver hung on a hook on the left side with a long cord connected to the telephone. A small hand crank stuck out of the upper right side. Inside; the crank was connected to a magneto and below that were two large dry cell batteries. There were ten or more farm families connected to our telephone line. The way you called a neighbor on our line was to pick up the receiver and listen to see if anyone else was talking. If no one was talking, you hung up the receiver and cranked the number of the person you wanted to call. Our number was one long, three shorts, and one long. If you wanted to call someone in town or on another line you rang one long and central would answer. You gave her the name of the person you wanted to call and she plugged a cord from your line into that line and rang their phone for you. Sometimes central would have a lot of cords crisscrossed across her switch board. She would then have to listen to find out who was done talking so she could unplug that line, making it possible for some one else to be connected to those lines. If there was a fire out in the country she could give ten short rings on the appropriate line and then everybody on that line would listen and would know where to go to help out. Sometimes the stores in town would advertise their specials the same way. Some times we had special service that you couldn't possibly have on the telephone today. Bev's mother called us once from Brookings to tell us that Bev's aunt had died. When she got central, the lady

on duty told her that we were not home but she could connect her with aunt Floy where we were at a card party. Central always knew everything that was going on the neighborhood.

The west wall of the dining room had two double sash windows, through which could be seen the windmill, barn, crib, hog house, machine shed, shop, and oats bin, which used to be an ice house when grand father lived on the farm. A foot powered sewing machine sat next to the window. It was used a lot to make and repair clothes, and to sew scraps of material together for quilts. Dad was very handy with it too. He could rip the seems of the legs of his overalls and sew patches over holes in the knees, and sew the seems up again with the sewing machine. The rest of the furniture consisted of a sturdy dining room table which could be stretched out to feed a threshing crew, with plenty of chairs and several rocking chairs.

Besides the clock, the east wall had a door which opened to a steep stairway with a left and right 90 degree turn to go to the second floor. Dad always said, that we climbed the wooden hill to go to bed. South of the clock were double doors which opened into the living room. That was kept for special occasions.

The living room had a rug with a painted floor around the edge. It had a davenport which could be opened into a bed. There was a library table with one drawer. On top of the table were crochet doilies and a fancy kerosene burning round wick lamp with a painted porcelain lamp shade. A couple of large oak rocking chairs with arms, rounded out the furniture in that room. At one time there had been a heater on the north side but we used a portable kerosene heater to warm the room the few times we used it in the winter. A door on the north side of the room opened into the guest bedroom, with the nicest bed and dresser in the house. To the east was the front door of the house, with an oval window in it. That opened to a wooden porch with a roof above it. Like most farm houses, everybody used the kitchen door to the west or the dining room door to the south.

If we had chores to do after dark, we carried a kerosene lantern with us everywhere and hung it on a nail overhead to give light to milk the cows, feed the pigs, or harness the horses. Battery powered flash lights were used elsewhere, such as lighting our way to the outhouse (the out door toilet) or going upstairs to bed. Later Dad had an American gasoline lantern for outdoor use, which gave a lot more light than the kerosene lantern. In those days the nights were real dark in the country. There was no such thing as a yard light, so the only light, one could see in the country, came from some family's kerosene lamp shining through a window of the one room that was lit up at' night. People didn't waste money lighting up the whole house unless the neighbors got together for a party.

The home refrigerator was yet to be invented so we didn't have any convenient way to keep things cool. We did have a building that was a ice house when grandfather was on the farm. In the winter, river ice was cut into blocks and carefully packed between sawdust, to keep it from melting, so it could be used all summer in an icebox. I guess farmers decided putting up ice was more work than it was worth, so we got along without it. We had fresh milk every day, from our own milk cows, so we cooled what we needed, in cold water from the deep well, and kept it in the cellar between meals. Of course our pantry was cold all winter because it wasn't heated. Sometimes the drinking water pail would have ice on it in the morning after a cold night. There was no such thing as an insulated house. There was only a dead air space between the outer wall

and the lath and plaster inside. If any of the milk would start to sour, mother would pour it in a stone crock with some more skim milk, and set it in a warm place where it would get real thick and she could make cottage cheese from it.

All the milk from the cows was separated through a cream separator. The principle by which it worked, was the fact that cream is lighter than skim milk. The whole milk was poured into a tank on top of the separator, from there it ran down into a centrifuge (called a bowl). the amount of milk going into the bowl was controlled by a float in the stream of milk flowing from the tank. The milk entered the top center of the fast spinning bowl going to the bottom, and up through 30 some slanting disks where the heavier skim milk was whirled to the outside, letting the lighter cream collect in the center and rise to the top of the bowl where a hole in the top side of the bowl whirled the cream into a spout which emptied into a cream-can. The skim milk was let out of another hole and spouted into a milk-bucket.

Because there was no electricity the separator was turned, by hand, with a crank, at 60 rpm. The bowl would turn at a very high speed through a double set of gears. To take care of all that muscle, the machine had to be bolted to the floor and leveled with shims. During the summer it was bolted to a cement floor in the milk house which was located next to the windmill. Before winter it was moved to the kitchen, to stay until Spring came to Iowa once again. All the tin ware of the separator had to be taken apart and washed once a day and hung out to dry. The cream was taken to town in five gallon cream cans and sold for cash. At the cream and egg station the cream was weighed and tested for the per cent of butter fat. The price was based on the pounds of butter fat in the cream can. Most of the cream was loaded into box cars and shipped by rail to the cities in the east. There it was made into butter and ice cream. There was no such thing as sweet cream butter in those days.

The water we used came from a 140 ft. deep well. A 40 ft. tall windmill pumped water when the wind blew. We had a cement stock tank next to the barn to water the live stock and we tried to keep it full by wind power from the windmill. Dad had covered the tank with a wood and tar paper top. It had an opening in the southeast corner which was covered with a box like structure with south side open so the animals could reach in and drink. The sides of the box extended below the water to the bottom of the tank so the cold air couldn't get under the rest of the wooden top. In the winter Dad covered the top and sides of the tank with straw and horse manure to keep the water from freezing. It seemed to work quite well. Many of our neighbors had tank heaters in which they burned cobs every morning to thaw the ice, but we didn't have that chore. We also had a hard water cistern near the wind mill, which was filled with a hose from the deep well pump. My grandparents built that cistern so the iron could settle out of the deep well water so they could make better coffee. It seemed to work, and did make it easier to get water for the house. Every spring we emptied it, pulled the pump out so we could get in and clean it. I remember stepping in a bucket with rope tied to it so dad could let me down in the well, where I could sweep the sides and bottom with a broom and rinse it with fresh water. That water then had to be scooped into the pail, and pulled up with the rope, where it could be dumped on the ground. What fun! If the wind didn't blow often enough, we could pull the 1 & 1/2 hp gasoline engine to the well and belt it to the pump jack to keep us in water.

Drinking water was carried from the well to the house in a 2 1/2 gal. pail, which sat on a shelf in the pantry with a long handled dipper in it, so you could dip out a drink anytime (real sanitary wasn't it?). Hot water was supplied by keeping the reservoir on the side of the range filled with soft water from the cistern pump on the back porch. The water in that cistern came from all the rain water that fell on the roofs of the house. Sometimes it had to be rationed during a dry summer. Of course a tea kettle of hard water was always setting on the range. Even in the summer, cobs were burnt in the range three times a day to cook the meals, so there was always warm or hot water. There was a small corner lavatory in the cloak room where we entered the kitchen. We had running water in the summer by pumping water by hand to an open tank above the kitchen. It was fed by gravity to a small faucet on the lavatory. To have warm water you had to carry a dipper full from the reservoir. No wonder the kitchen linoleum always showed a lot of wear, considering all the traffic in such a small area.

Before the United States Rural Electric Administration (REA); electricity was expensive to bring to the farm. There was a high line one mile north of the home place that went from Carroll to Lake City. To get electricity from that, dad would have had to pay for building the mile of line to his place, and then giving it to the electric company for the privilege of paying an electric bill each month.

The REA let the farmers form a cooperative so they could borrow money from the government to build their own electric lines and power plants or buy power from some other cooperative. That made it possible for all the farmers to have their own water pressure system, hot water heater, bathroom, and sewer system. I know dad put all that in and also bought a 110 volt radio replacing a battery powered one. He also bought a refrigerator, an electric iron and remodeled the kitchen with sinks and running water, and an electric range. Of course the first things that were put in were electric lights in the house and outside buildings, and a yard light. The country was really lit up after all the farms had electricity.

THE MODEL T FORD

I don't remember much about the transportation on the farm before the Model T Ford. I was born in 1914 and dad bought his first Ford in 1915. The car was kept in the north part of the machine shed which was high enough for a floor above the car. A cutter was kept there for use in the winter, and dad used it when I was a boy. A cutter is a light sleigh like Santa Claus has behind his reindeer, with two runners which curved high in front and were braced tagether so the whole sleigh turned with the horses. Ours had two seats and I remember riding to the Christmas Eve program, at the church, in it. Of course we had heavy blankets stuffed around us from our feet to our shoulders to keep warm while we were driving the three miles to town. When we got there, the horses had to be tied to the hitching posts and horse blankets put over them to keep them from catching cold because they were warm and sweaty from pulling the sleigh at a good trot to town. Some of our neighbors didn't buy cars right away so I remember riding to town in a buggy belonging to our north neighbor in the 1920s.

Using the early cars in the winter was not very easy. There was no such thing as antifreeze, multi-purpose oil or winter blend gasoline. Even the lighter grade oils got stiff in cold weather,

and the way a Model T was designed made it even worse. The flywheel and the planetary transmission were part of the engine and were lubricated with the same oil. The magnets for the magneto were bolted to the flywheel and revolved with it, and the whole lower part of it revolved in the oil. The revolving flywheel brought the oil up to a flat funnel which was soldered to a pipe which slanted down to the front of the pan, from there the oil could run back to the flywheel. On its way back it filled four wide slots in the pan where the connecting rod bearings dipped as the crankshaft turned. The splashing oil lubricated the rod bearings. the wrist-pins, pistons and three main bearing. Nothing could be much simpler, but turning that big flywheel in the stiff oil in cold weather was a problem. Another problem was the multiple disk clutch enclosed in the planetary transmission. It had a lot of friction when it was disengaged for neutral, without having the added drag of stiff oil in the winter. The best way to start a Model T in cold weather was to have a shallow pan of corn cobs laced with kerosene so it could be lighted and shoved under the flywheel housing to heat the oil. While it was heating, one rear wheel was blocked and the other one jacked up so the high speed lever could be pushed ahead closing the multiple disk clutch, eliminating the drag of the clutch and letting the rear wheel spin as the motor was cranked. This also eliminated some of the end play of the crankshaft which let the magnets closer to stationary coils, making a hotter spark if you didn't have a hot shot battery for starting.

This was just the beginning of running a car in cold weather. Remember there was no anti-freeze in those days, so, before you started cranking, you had to have at least 3 gallons of water handy and a blanket for covering the radiator. When the engine started, and before it got too hot, the water was poured in the radiator. The blanket kept the fan from pulling cold air through the radiator and freezing the water before the engine warmed it up enough to warm the water in the radiator. By this time the oil should be warm enough so the high speed lever could be pulled back disengaging the clutch so the jack could be taken out from under the rear axle. Before driving to town the blanket could be taken off the radiator, and used to keep a persons feet warm. After parking on main street the blanket was put over the radiator and hood to save the heat of the engine and keep the water from freezing while doing the shopping. The time that could be spent shopping would depend on the temperature and how hard the wind was blowing. The colder and windier it was, the quicker the water would freeze. When the car was driven back home and put in the shed, all the water was drained from the radiator and engine. To make the engine turn over easier the next cold spell, it would be a good idea to leave the high speed lever ahead to squeeze the oil out of the clutch and eliminating some of the friction when the lever was pulled back to start next time. Most people with model Ts ran their front wheels against heavy blocks in the garage to keep the car from creeping ahead and squeezing them against the end of the garage. It was no fun holding off a model T with your back against the wall until the oil in the clutch warmed up enough for the darn thing to stand still. The hand brake expanded cast iron shoes against small brake drums on the rear wheels which weren't the best combination to stop a car. The foot brakes on the other hand were the best on the road at the time. Any or all the foot petals could be pushed down to slow a Ford, when going down hill, and those bands were oil cooled from the engine oil.

Driving a Model T was different than any other car because of the planetary transmission. Setting in the seat on the drivers side, a steering wheel was in front like any car. Below the steering wheel on the left side was a lever sticking out from the steering column which advanced or retarded the spark. On the right side was the same type of lever which was the throttle. Up was

slow and down was fast. The faster the motor was run, the more advanced the spark should be, so to some degree both levers had to be used when driving. By the driver's left leg was the emergency brake and high speed clutch lever. Below the steering column on the floor were three pedals. Pushing down on any of these pedals would tighten a brake band on one of the three drums in the planetary transmission. Pushing down on the left pedal disengaged the high-speed clutch, if the left brake lever was ahead, and put the transmission in low. Letting it back put the transmission in high. It had only two speeds, low and high. The center pedal was reverse. To use reverse, either the brake lever must be put in the middle, neither back (in parking position) or ahead (in high gear), or the brake lever could be ahead in high gear, and the low pedal pushed down half way to release the high speed clutch, then the reverse petal could be pushed down and the car would back up. The right pedal was the brake and it could be pushed any time, but to stop the car, either the brake lever must be pulled back half way or the low speed pedal pushed half way down to release the high speed clutch so the wheels could stop without killing the engine. Just below the windshield in the middle and above the floor boards was the coil box with the ignition switch in the middle. Push the long handle key clockwise for magneto or anti-clockwise for hot shot battery. On the right side of the coil box through a hole in the dash was a rod which adjusted the carburetor. Electric starters weren't available for Model Ts until the 1920s. To start it in the summer the brake lever had to be pulled way back to set the parking brake and disengage the high speed clutch. The spark lever was set near the top notch to retard the spark, The throttle lever was pulled several notches down. The switch was turned on with a magneto and you walked around to the front where the crank hung. It was generally strapped off to one side so it wouldn't get bent when driving on roads with deep ruts. The choke was a wire sticking out of the lower front of the hood on the right side. You grabbed the crank with your right hand and pushed it in to engage the ratchet notches to a pin in the end of the crankshaft and pulled up sharply while pulling the choke wire with your left hand. It was best to pull it over 1/4 turns so if it back fired or (kicked) it wouldn't break your arm. Generally several quick pulls would get the motor started. You must remember there was no door on the drivers side so your passenger either had to get out or you had to crawl around her to get under the steering wheel to get the car under way. The fuel tank was under the front seat cushion so the driver and passenger had to get out and the front cushion lifted so the lid of the fuel tank could be unscrewed and the fuel measured with a wooden ruler to know how much it would hold. Ten gallons was it's capacity. In those days a dollars worth would fill the tank. To check the oil level you crawled under the right side of the car with a pair of pliers where there were two pet cocks on the back side of the flywheel housing. If the oil ran out of the top one, there was plenty of oil. If it just dripped out of the bottom one it was time to add oil.

At the time dad bought his Ford there were mostly just two types, touring cars or roadsters, both with folding tops. The windshield was in two pieces. The upper half could be folded back for air. The front of the top strapped on each side to the center of the windshield and side curtains were carried under the back seat cushion. When it rained they could be taken out and snapped to the sides to keep the rain out. Dad improved his Ford by buying a "Winter Top." It was attached permanently. The four side curtains slid up into the top in light channel iron slides. To get in, just slide the curtain up, reach over the top of the door for the latch handle; which were always on the inside of the door, and walk in. It could be an open car when it was sunny and a closed one when it rained or was cold. The top could not be folded down, but the sliding curtains made it easy to button it up for rain or snow.

Having the fuel tank under the front seat with gravity feed to the carburetor with no fuel pump or vacuum tank made things simple but also caused a problem for model Ts only. If a person wanted to drive up a long steep hill where the carburetor would be higher than the level of the fuel in the tank, the engine would stall for lack of fuel. If a person was quick enough when that happened, he could give the steering wheel a hard quick turn to the left, step on the low pedal enough to release the clutch and let gravity turn the car around and head down hill. If you were quick enough the motor would still be running and you could step on the reverse pedal and back up the rest of the hill. If you were too slow, you could let the car roll down hill and release the clutch pedal, letting the momentum turn the motor over to start it, and then back up the hill. With the carburetor down hill from the fuel tank there was no problem with fuel flow. The regular roads in our part of Iowa were not that steep, but there was a hill in "Dickson's Woods", where we quite often went for picnics, that dad always backed up.

The early pneumatic tires were very poor. A person always expected a flat tire if you took a 20 mile drive. The early cars did not have removable wheels with lug nuts.

The wheels had wooden spokes stuck in holes in the steel rims and were clamped between plates on the hub. Dad had a large steel toolbox bolted to the running board on the right side between the doors. In it he carried a hand tire pump, a jack, tire patches, tire irons, and a lot of other tools. He also carried a "Duster" a light cloth coat, under the back seat, to wear over his good clothes if he had to fix a flat.

To fix a flat tire, the wheel had to be jacked up and tire irons were used to pry the tire bead out of the clincher rim and over the edge so the tire could be removed and the tube pulled from the tire. Some air had to be pumped in the tube with the hand tire pump so the hole could be found. After that the lid of the tire patch can was unscrewed and the tin scratcher taken out so the area around the hole could be roughened to make rubber cement stick. The rubber cement had to be squeezed out of a tube and spread around the hole, the size of the patch. While that was drying a patch was cut out of the rubber patching material, the right size to cover the hole plus enough space around it to make an air tight seal. When the cement was dry, the protective cover was pulled off the patch so the patch could be applied to the cement without touching either sticky surface with your fingers. After that the tube was inserted into the tire and the tire pried over and seated in the clincher rim. The fun of pumping up the tire with the hand pump began. The rear tires were 30-3 1/2 and the front were 30 - 3 high pressure ones. I think they carried 60 lbs pressure. The front tires were smaller in those days so they could follow the deep ruts in the dirt roads. I remember when the first "balloon" tires came out and the cars with those tires would slide all over the muddy roads because it was impossible to keep them in the narrow ruts. Of course this was before gravel or paved roads in the country so when it rained the roads in Iowa were a sticky muddy mess. Everyone carried a set of tire chains and dad kept his in the big tool box so they would be handy when it rained. The model T with the narrow tires and a set of chains could go through a lot of mud even though you had to hold the low speed pedal down with your left foot.

Dad's Ford had electric headlights. The 1913 models had acetylene head lights. They had a gas generator mounted on the left running board. It was made out of brass with a small water tank on

top with a shut off valve which could be opened to let the water drip down inta the lower compartment on top of some chunks of carbide making acetylene gas which was piped to both headlights. If you wanted to turn on your lights at night all you had to do was to take some chunks of carbide out of a water proof container and put them in the bottom of the generator, clamp the compartment shut, turn on the water to drip on the carbide, and when enough gas was generated to get to the headlights, open the lens, and light the burner with a match. Even when Ford put electric headlights on his cars, the tail and parking Iights were kerosene lamps with wicks as standard equipment.

The headlights of dads Ford; and until the Model T had generators, batteries and starters; were connected directly to the low voltage flywheel magneto. That made things simple but very interesting. The voltage of the magneto varied directly with the speed of the motor, when the motor ran slow the lights were very dim, but if you over speeded the motor the lights would get so bright that they would burn out. Just imagine being out on a dark night and driving up a muddy hill, the motor starting to pull down in high gear even with throttle wide open, the lights were getting very dim and the motor was about ready to stall, so you put it in low gear by pushing on the low petal. The load is eased so much that the motor would over speed and burn out the headlights, if you didn't push up on the throttle at the same time you pushed down on the low petal. Believe me everyone carried extra bulbs and a flashlight in a model T Ford. Turning a corner at night was also a problem. If you throttled down in high gear before getting to the corner, the lights would be too dim to see where to turn. Most drivers would step on the low petal to slow the car down, leaving the engine with enough speed to keep the lights bright.

The model T ignition system was different than other cars built at that time, which had a single coil, a distributor, and a single set of breaker points. Each of the four cylinders of a model T had its own coil with a vibrating point on top of each. Each coil was an oblong wooden box with two brass buttons in front and one on the bottom which fitted against three spring contacts when they were slid into the coil box. The flywheel magneto was connected to the bottom contacts on the coils. The four wires from the timer were connected to the front top button on each coil and the bottom front button of each coil was connected to one of the four spark plugs. The timer was a metal cap with four insulated contacts on it's inside race where a spring loaded roller was bolted to the end of the camshaft. When this turned and rolled across one of the four contacts, it completed the circuit through the coil to the spark plug for each cylinder at the right time. The timer could be rotated with the spark lever on the steering column to advance or retard the spark. As the circuit for each coil was completed the points on top of each coil would buzz making the high voltage for the spark plugs. The speed each coil would buzz could be adj usted by a knurled nut on the top point. The gap between the points and the tension on the flat spring of the lower point could be adjusted by bending the base of the spring. It was quite a trick to get all four coils buzzing at the same speed. This may sound quite technical but my dad did all his repair work on his car so I grew up with it. His old shop was not large enough or high enough to run a model T in it, so he would run the front end in to the windshield and could work on the motor that way. He would put blocks under the front wheels so he could get under the motor to drop the pan and tighten the rod bearing by taking out shims. On the top side, the cylinder head could be taken off to grind the valves, or remove the pistons and connecting rods. The valve cover was on the right side of the motor and could be removed by unscrewing two nuts. The valves could be freed from the springs by removing the tension of the spring with a lifter and pulling a U shaped keeper

from a grove in the bottom of the valve stem. The valves could then be ground by turning them back and forth with a crank handled wrench with an end that fit in the two holes in the top of each valve. Dad used a light spring under the valve and coarse and fine valve grinding compound between the valve face and its seat. By pushing down and cranking back and forth and letting the spring push the valve up and starting in a different place each time, it ground evenly all the way around. Piston rings and valves showed a lot of wear in those days because there was no such things as an air filter. The road dust entered the air intake of the carburetor with the rest of the air that the engine needed for combustion making an abrasive mixture which scoured the working parts of the motor.

The transmission bands could be tightened by removing the rubber mat, lifting out the three floor boards and taking off a plate on top of the transmission housing. There you could tighten the three nuts against the springs, which held the bands away from the drums when the pedals were in neutral. To put new bands in the older Fords meant taking off the whole top of the flywheel and transmission housing because the u shaped end that fit over the bolt and against the spring would not go between the drum and the bottom of the transmission housing. Later some parts company made a band, where one end unhooked, so they could be pulled out the hole under the plate on top of the transmission housing.

For riding comfort the model T only had two sets of leaf springs which were mounted cross ways. The center of the springs were clamped to a cross member of the frame and the ends were attached with shackles to near the ends of the axles. A V shaped brace "wishbone" was bolted to the spring shackle bolts on each end of the front axle. They came together in a ball joint which was bolted to the front of the flywheel housing. The rear axle was braced from the outer ends of the axle to the enclosed drive shaft just back of the universal joint which was enclosed in a ball joint that was attached to the rear of the transmission. This was called a torque-tube drive which Ford kept on his cars through the model A and the first V-8s. This made the four wheels very stable. The spring shackles had small oil cups where they could be oiled with an oil can There were hard oil cups on the universal joint housing and the ends of the rear axle to grease the U-joint and rear axle bearings. The front wheels had screw on hub caps which could be taken off and filled with grease and screwed on to grease the front wheel bearings.

Some time in the late twenties Dad traded for a used 1923 model T four door sedan. The body was made of aluminum but the top was made up of wood slats covered with a cloth fiber which needed to be coated with top dressing occasionally to keep it weather proof. It had four doors, so there was a door on the driver's side. It also had an electric starter and demountable rims, so a spare rim with the tire mounted could be carried on the back of the car. It also had a dash with a regular key which was in the center of the light switch and beside it was an ammeter. Model Ts never had an oil pressure gauge because there was no pressure with the gravity flow system.

By that time a heater attachment could be obtained from accessory companies. They actually were a metal covering for the exhaust manifold with the front end open next to the fan, which let the fan blow the hot air across the manifold through an opening into the car. It did a good job of heating the car in the winter but along with the heat there were some oil fumes from the crankcase breather and some alcohol fumes from the radiator overflow pipe. It was impossible to stop all the heat from a manifold hot air heater from coming back into the car so most people

took them off in the summer. In the twenties, before permanent anti-freeze was invented, people mixed alcohol with water in the winter. Alcohol's boiling point is lower than water so it would distill out when the motor had to be pulled hard on muddy roads. It was always a problem to keep enough added so the radiator wouldn't freeze in a cold snap.

Dad always was improving a piece of equipment or making something new. He wanted to be able to camp in his Model T, so he cut the back of the front seat loose from the sides and bolted hinges on the bottom and hooks on the sides. When it was folded down on to two blocks, it spanned the space between the front seat and the back cushion making a nice bed for two people. He was way ahead of his time. The two back seats of my 1989 Aerostar fold down to make a bed for two. I don't know of any other car, built in the last eighty years, that could be ordered direct from the factory so the seats could be made into a bed. He also made a lean-to tent to fit on the right side of the car. With the fold down seat, lean-to tent and a chuck box that he made to fit on the running board, he had a very comfortable camping outfit.

MODEL TT TRUCK

Dad owned a used 1921 model TT truck. The engine, transmission, hood and radiator were the same as the car. The frame was longer and heavier and the rear axle and wheels were bigger and heavier with larger tires. It was geared down to pull the heavier load, by use of a worm drive in the rear end, a great way to do it but I'm sure a lot of horse power was lost in friction. Ford made only the chassis for their trucks for a good many years, so dad's truck had a square wooden cab, and a wooden box made by another company. The box held a bushel of grain per inch of height the same as a wagon box but it was shorter and wider. It was a triple box (that means that it had three sets of side boards and end gates). The top two sets could be taken off, and also could be raised and locked with a space above the set below so the box would be higher and let air flow through to haul live stock. To haul shelled corn the double box was used. It was twenty-five inches high and held fifty bushels of corn which was 2800 lbs. Corn weighs 56 lbs. to the bushel. By heaping the load, enough corn could be loaded to weigh a ton and a half which was the capacity of the truck. Oats only weighs 32 lbs to the bushel so the triple box was used for hauling oats making the box 36 inches high and holding 72 bushels.

Most people found that the two speed transmission for moving that large a load was inadequate, so add-on transmissions could be bought from other companies. Dad put a "Rocky Mountain" transmission in his. It was attached behind the Ford transmission and had a higher and a lower gear. By using the Ford two speeds and either the low, regular, or high gear of the added transmission, it provided six different gear ratios. With that transmission the twenty horse power Model T engine could carry it's ton and a half load over some very treacherous roads. I remember we helped our north neighbor move, on the first of March, to a farm in the hills south of Coon Rapids. The wet clay roads were so sticky that the mud would roll into a big cone on the outside of each front wheel. It took lots of power to even go down hill. It would be hard for you to imagine how bad the Iowa roads got after a rain in the spring, before we had gravel and pavement. When the weather started drying up, and with enough traffic the ruts would begin to get solid in the bottom and spread out to be about a foot wide and about ten inches deep. It was fun riding a bicycle down the ruts if you could keep the pedals from hitting the sides. I remember

riding mine in a rut north of our farm without taking hold of the handle bars. Did I ever take a spill when the front wheel hit the side and threw me off into the rough hard gumbo.

The "Rocky Mountain" transmission in the truck had one drawback that the driver should never forget. Remember the foot brake was in the model T transmission and the Rocky Mountain transmission had a neutral between each gear. If that lever was in neutral there was no connection between the foot brake and the rear wheels so there were no brakes. The emergency brake on the two rear wheels were very poor. We always practiced getting the transmission from neutral back into gear on small hills just in case it happened on a steep hill someday. A person had to match the speed of the motor to the forward speed of the truck to make it work.

Dad made the box on his truck so it would dump. He made a hinge between the stringers under the box and the back end of the truck frame. Between the truck cab and the front of the box he put two metal uprights, with pulleys on top, which were hinged to the truck frame. He strung two chains from the bottom of the box over the two pulleys and down to a cross shaft where they were attached. They then could be wound on the shaft with a crank which was attached to the shaft on the right side of the truck. Turning the crank wound the chains on the shaft pulling the front of the box up to the two pulleys. To lock the front end of the box down, he made a long rod with a short crank on one end and threads on the other end. It could be pushed through holes through the box stringers and frame stringers where it threaded into a plate on the opposite side. It was easy to use and was used a lot.

Old coils that didn't work anymore in model Ts were very useful to we kids. The ones that were shorted out and were thrown away were great to take apart and get the spools of fine hair-like wire. Old coils that could be made to work with a little tinkering could be used to shock people when connected to an old used dry-cell battery from the country telephone. I remember stringing two of the fine wires from an old coil from my bedroom into my sister's bedroom and coiling one near the top and one near the bottom of her sheet. By connecting one wire to the ground on the battery and one to the high tension button on the coil I had a circuit set up so when she went to bed that night and was all snuggled in nicely, I threw the switch and the coil buzzed. In the dark I could see the high voltage current going through those fine wires and I don't think she ever got out of bed that fast before. Oh well, dad was always a kid at heart.

When I was older, we had the most fun by wiring up a model T with one of these old coils. We connected the coil to the car battery and the coil's high tension button to an insulated wire which was attached to a chain which hung to the ground under the car. We would stop to invite someone to ride with us and when they either put a hand on the car door or put one foot on the running board, we would flick the switch and the circuit would be complete from the one foot on the ground and one on the running board, making a very shocking greeting.

The bumpers were made of spring steel on the cars at that time so once we drove our model T against the bumper of the roadster of a friend who was picking up two girls. The circuit was complete through the bumpers so when we turned on the switch they got shocked and wouldn't get in the car. So much for the Model T days, a very interesting time in history.