

As I remember events in my life thirty months to the present time.

James B. Hill, son of A.A. and Caroline Stiger Hill, born November 29, 1856.

When nineteen months old I was as all little boys in being where I ought not to be, among the men. They were sharpening cradles to harvest the wheat. A cradle is a large knife four feet long three inches in width at heel running to point with a frame of four fingers to cut the grain. The handle or snath was attached at a right angle to the knife and fingers. Men left a snath on the ground so the fingers would protect the knife and me. When the men had gone I wanted to see how the thing looked with the snath up, up it went, and the fingers and the knife went down. I toddled around the head and saw the knife. I started to cross the fingers, but tripped on them, when nearly across I fell on the knife body over. We little boys were little girls at least we wore dresses until three years old. If facing north, the nothwest corner was cut to the bone. I still have a scar on my left leg four inches long. I distinctly remember there was an out building just high enough from the ground so I could crawl under and see mother wetting bandages with soap and water. I would crawl under this building and mother would coax me out with lumps of sugar, which was very scarce in Nothern Ohio in 1857. The cradle is a tool, to cut wheat, oats, rye, and buck wheat, before we had machines to do this work, not the old hickory cradle I was rocked to sleep in.

With the past and going to sleep lying beside ten little nigs on old sows, best as stated later. When I was thirty months old enough to keep fresh in memory as long as I live as to the dates knowing where we lived at the time and season of year. I knew July was the only month to cut grain. A year later two old men with cradles would deliver cut grain in rows. Heads all one way with a rake and would rake it ⁱⁿ bundles. Then they would make a band to place around the bundle and tuck it under.

Next came the horse drawn machine cutting grain and dropping it in bundl to be bound the same way by men at stations around the field. My uncle, who is one year my junior, and I were on the same station. When dinner bell re

and I were on the same station. When dinner bell rang we were on last station, and I wanted to bind it before dinner, but my uncle said, "No, we have plenty of time after dinner." Harvest time in Northern Ohio comes in early July, the hottest part of the year.

Snakes were quite numerous. Some were black and diamond rattlers. A twenty inch garter snake took refuge in a sheave in the shade. My uncle's pants were three sizes too large for him at the waist. Instead of stooping to bind his sheafe, he stood erect and the snake slid out of the sheaf and inside of his pants. The lower part of his pants were tucked in his boot tops. The snake was cold on his warm body and he thought it was a rattler. Did he ever run, holler, kick, roll, jump and stand on his head! I thought he would go crazy kicking and thrashing, but I could not get to him to help him get his pants off. The snake got frightened and crawled out at the top of his shirt. I never saw anyone so frightened. I think I would be a little scared with a cold snake crawling around by body and thinking it might be a rattler, too.

At harvest time farmers and town clerks would go out to help harvest the wheat and get a few good meals mixed with harvest apples, raspberries, sugar corn, roasting corn, new peas, and string beans. I will have to let up or the desire to go back to Ohio will be too great to resist. Hardware and grocery clerks are okay, but dry goods, shoe and drug clerks are too soft, and would melt in the harvest sun.

About 1874 the wire self binder came into use. It was a terrible job to keep small pieces of wire out of the wheat. Two years later someone made iron fingers to tie a knot with twine.

With a reaper crew of six men, ten acres were done per day. With the self binder, three men could do fifteen acres in one day. Now with a combine a farmer, his wife and daughter or some other lady can cut, thrash, and sack (I was going to say bake bread) twenty acres a day.

How to get the grain off the straw. Made tight floor 12x12 feet. Built pen on straw.
5 ft. high, 3 ft. from floor placed a floor of rails with small space between each rail to let grain drop to floor. Place straw with grain on 8 to 10 inches thick over rails. Use flail to pound the grain off the straw. A flail has a handle as a garden rake with a club some 3 ft. long, 2 inches in diameter fastened to handle with a piece of rawhide some 6 inches long. The operator would stand erect and the club would strike the grain its full length at the same time. It is a trade to handle a flail.

First machine father had was operated with a horse power. One machine would thrash the grain off the straw, another would clean the chaff from the grain. Men with forks would move the straw. Father's next machine had a conveyor to move the straw and clean grain ready for market or storage bins. At one operation operated with horse power, 8 teams 16 horses going round and round from can to noon, noon to supper, 4:30 to 5 p.m. Supper to can't see.

When I was 8 years old father's 2 helpers were off for a day. Father put me on the power to drive the 16 horses. Had a whip some 18 ft. My duty was to tutch up any horse I found lagging. This made me feel big.

Nest step steam engine mounted on boiler and on wheels moved place to place with horses. In due time the traction engine did the work until the combine took its place.

A thrashing crew when I drove the 16 horses consisted of 3 men with machine driver.

Men to feed had to shake bundles a part so they would go in cylinder evenly and not choke it as a bundle would. A band cutter 3 men to get scheeves on table to band cutter, 5 men on straw stack, 1 to take care of grain. When trashing in barn or from stack. Out of field required 4 or 5 more men.

About the farmers hiring extra help was corn planting, harvest, corn cutting and schucking. Most farmers would hire a boy or yound man for 8 months and take him in his family. Work 8 months do chores, work Saturdays for board and go to school 4 months in winter.

the thrashers would change work, and help one another. The ladies would help each other prepare meals for the thrashers. It would be some meal. Each farmer's better half would try to have the best dinner. I remember one farm where we ate they had six different kinds of pie at one meal. The pie was ten inches in diameter one inch thick and cut in six pieces. Imagine eating six pieces at one meal! After loading up with sausage packed in lard, smoked ham, mutton, chicken (the tender spring kind and all kinds of truck berries, cherries and apples just off the trees. Last but not least, home made bread covered with fresh rich creamy home made butter. We had very few out ovens, we all had cook stoves, as I remember.

Now back to the cradle. The men left it with the fingers up so I could not fall on the blade. I toddled around and got ahold of the snath and turned it back ^{to} the sharp edge with the knife up. I toddled around and tripped crossing the fingers and fell on the knife, and cut my leg to the bone an inch below my stomach. I still have a scar five inches long facing north, northwest on my left leg. We had an out-house just high enough from the ground to let me crawl under the shanty. Mother tried to get me out coaxing me with sugar. No go! She placed lumps of sugar on the ground and I would watch and when the coast was clear I would get the sugar. Mother placed a board along the house and put more sugar on it and then started to go into the house (pretending not to see me); she hid behind this blind and when I thought she was gone I sneaked out and she nabbed me before I could get back under the shanty. Mother had it fixed so I had to keep out. She was afraid of snakes and getting dirt in my sore leg.

5) The same year, 1859, on a warm day I climbed into the pig pen with an old sow and ten little pigs. It was warm so I snuggled down with ~~the~~ pigs ~~he~~ on the sow. After seeing that the pigs were all asleep it made me sleepy; before I realized the danger I was in ~~the~~ land of dreams. Mother missed ~~r~~ so she started looking for me as she thought I was in mischief. I was nowhere to be found. Then she thought of the little pigs just a day old. She knew enough about hogs to know if she tried to wake me the old sow would awaken and jump up and I would fall on a pig, causing it to squeal. The old sow would make short work of me. My father was near by so he got a piece of board and as he got in the pen the sow jumped up and I fell on a pig. It let out a squeal, so the sow thought I was hurting her baby and she came for me with her large mouth wide open. Father had all he could do to get me and himself out of the pen safely. Boy, no more pigs for me! The sow's mouth looked large enough to swallow me in one grab.

Some twenty-five years back I met an old lady in Iowa who used to work for ~~some~~ mother when a young maiden. She told ^{me} ~~I~~ was a mischievous little rascal. I would upset her washtub, have use for the clothes~~prop~~ prop at the same time she needed it badly, put chunks of ice under the sheet in her bed; I did the same thing with cockleburrs, and put mud in her rinse water. She also said she had to watch me continuously and I was so slick she couldn't catch me.

The old lady's maiden name was Emma Brown. We had a young man just came from Germany taking a noon nap and ^I ~~heard~~ mother say it was time for August to go to work, but he didn't awaken. The wash lady left a fire ~~burning~~ ~~ne~~ by and I got a hot poker and started to tickle the bottom of his bare feet. He came at me like a mad hornet, but I got to mother just in time to save my hide. I think he was madder than Hitler was because the Red Army wouldn't give up to him.

cardles). We also had a dozen sheep. We would take the wool to the woollen mill, and have part woven heavy for the men's clothes.

Now as I remember events when I was a little girl - if I wasn't I ought to have been as I had to wear dresses until I was four years old as my mother used to tell me. She said, "Keep clean and neatly dressed, because dress counts."

The first light was a cast (iron) cup with an open spout, and an iron handle curled over the top. It would hold about a cup of lard. Any old rag one inch in width twisted and placed in one end in the open spout, and the other end in the lard took up the steel flint and punk. Strike a spark on the punk, and blow the punk to a blaze on the greasy ~~stick~~ ^{wick}. A very dim light with plenty of very black smoke was the result.

Next came the tallow candles which were placed in tin molds twelve ⁱⁿ ~~to~~ set. We could get candle wicking, a very soft cotton yarn. The holes were closed at the lower end, but a small hole was left open. Pass the wick through the hole to tie to the stick over the mold. Then place the wick in the center of the mold. Melt the tallow, fill the mold, and then place in cold water. Cut knots on the lower end, turn the mold top end down and you will have twelve very nice tallow candles. Next is the kerosene. We called it coal oil. I think they named it coal oil because there was so much coal in Pennsylvania. They first thought the oil came from coal. It was several years before this came into general use as many of the first lamps would explode, and therefore it wasn't safe.

Next, manufactured gas was used for street lamps and in the stores in town, etc. When reading by your beautiful light, think ^{what} ~~how~~ your ancestors and I had to put up with eighty-three years ago, as I remember.

We lived at home during the rebellion, and we had no sugar. Every farm had a quarter acre sorghum for sweets, parched rye with chicory for coffee, pennyroyal and spice bush for tea. We had to buy salt and a few spices. I came near to forgetting the old arm and hammer brand saleratus, soda. We would get our beef hides tanned at the tannery near by. Then we took the leather to the shoe maker and have the family including the fair sex which was not so fair (after 4 or 5 months in room - it

The flannel for the women folks generally was checkered black and red or blue and red. The checks were mostly one inch square. The cloth for the men was usually brown colored with the soft hull on walnuts or walnut bark. There were no paper patterns, so mother had to cut the dresses and men's suits and them by hand. The part of the wool just carded from the mill would make roll two feet long and as large as a silver dime in diameter. Do you remember what a dime looks like. I have not seen one in a year. We had a spinning wheel with a wooden wheel some four feet in diameter. Then there was a belt over the large wheel and the small spindle. One end of the shaft extended some five inches beyond the bearings. The shaft was three-sixteenths of an inch in diameter, then at the end the inch tapered to a point. The operator takes the roll and fastens it to the spindle roll in the left hand, and turns the wheel with the right hand. Then lets the wool roll off the end of the spindle, twisting depends on what yarn is to be used and how it is twisted ~~xxx~~ and to the gage the yarn. The operator does this as she lets wool go on the spindle.

Next comes the knitting of stockings. Oh, yes, the ladies wore woolen stockings above the knee at this time in Northern Ohio. Knitting the men and children socks was quite a task, to know how to narrow, widen, and place the heel. And the fingers in the gloves, head coverings for ladies in the winter or knit hats. If you had, I was going to say best, girl, you could look for a woolen scarf for Christmas. We had no best girl, then, all good then. The woolen scarf would be four feet to six feet long and from eight to ten inches wide with all kinds of fancy colored yarn and designs.

We had a little old man near by with a loom in the house to weave bed spreads of cotton warp with wool fillings. He made some very pretty spreads. There were very few divorce cases at this time. I am rather inclined to think the housewife had no time to primp and paint and steal some ladies brains. What will I say? Oh, yes, scallawag.

Since I'm not going to be here to defend myself, I would not care to have my great, great grandchildren think I was a heartless, wicked, little boy to deliberately burn a man's feet. It was an iron poker and the end that I had hold of was cool, and the other end being black, I had no way of telling if it was hot. I just wanted to make a black mark across his foot. It is time to tell where I hail from, I guess, which was from Dutch Holland or near by there. We settled in the wilds of Eastern Pennsylvania near Reading in 1600 or early 1700. Grandfather Hill passed away at the age of eighty-five in 1800. He was married in Pennsylvania and moved to Ohio when father was a year old. One hundred and nine years ago we spoke Dutch only. His brother's people came from the same locality only a few years later. All craftsmen were on brother's side of house. Father's senior was his oldest brother by sixteen years. His oldest brother built the wagon they moved in from Pennsylvania to Ohio. At the age of seventeen, he made a clock and then took a wooden ball four inches in diameter and painted it half black and half white, then geared it to his clock to run with the moon. If you wanted to know where the moon was you just looked at the clock.

He did the surveying for the United States in Western Iowa and Eastern Nebraska. The style of men's clothes ^{has} changed very little since the discarding of the spike tail some eighty years ago. The fairer sex had nine distinct styles let alone slight changes. They cut an inch off the bottom of their dresses each year. Now they're coming down from the top. I'm hoping styles change before they meet. As I remember eighty-three years ago, in the rear of a dressed lady when she attempted to pass through, unless it was a barn door, she would have to extend her arms and squeeze the skirt together. There were from twelve to fifteen yards to a dress with hoops, when pantlets were six inches to the shoe top. The last six inches of the cuff were in bright color such as green, red, or bright blue and extended to the shoes, if they were barefooted to the ankle.

If the groom-to-be cared, and where is the man that doesn't, he wants to know if his intended's calves were nice and round and plump. They would go walking, taking me along after coaching me. He would give me a big copper cent, no nickels. The copper pieces were nearly as large as a half dollar. My part of the naughty trick was to run ahead and fall down, and then start crying as if I were badly hurt. The young swain would be so shocked that he would be able to move. The young lady would hurry to pick me up not thinking about her hoops, and as she went down, the hoops went up. Curiosity is a great thing. At that time the groom had no way of knowing if his intended was wobble-knee, knock-knee, bowlegged, or supported on broom sticks or saw legs, until after the knot was tied and tied so very, very hard and tight. The grim old reaper was the only one to untie the knot.

Now, ~~sixty~~ eighty years later, at this date, the prospective benedict can see how his intended is supported when two miles away, with a good telescope. I attended school in several localities and do not recall to ~~many~~^{mind} any of my associates in divorce courts or any of the maidens not finding a mate. Only a deaf mute which was very smart and went to school every day could take a piece of chalk in each hand and write the same ~~sentence~~ sentence at the same time with each hand. The mute was red-headed, rather heavy, and was managing two large farms in the year 1938.

Some predictions: We have seen dresses go from fifteen yards to two ~~yards~~ yards. The train of a yard in the rear to above the knee. I see the change coming - so many of the fair ones have gone from the homes and are self-supporting. Soon they will likely choose their own mates and the poor men will have to primp and dress to display their best qualities to draw the attention of the fair ones, as they will select their own mate, which she has a perfect right to do. In a few years, Daddy can stay home and mind the baby and do the housekeeping. This is to be the future - not the past. I know nothing of it.

I remember the first pair of pants. We went from dresses to long pants and red-topped copper-toed boots. We were going to visit an uncle who had three young ladies who always made a fuss over me. They were always up to some tricks. About a mile to uncle's through the woods over a beaver dam - I felt big and ran ahead of mother and said, "Uncle Sam's made maine ich bine a glaine dauty." (That was German or Pennsylvania Dutch.) Translation: "Uncle's girls would think I was a little father." I meant to say, "a little man."

Now for the schooling as we used to call it. The first man teacher was Jerry Munch at a salary of twenty dollars per month, one dollar a day. We had to take and board him for about a week. He was a short, heavy-set man. The man would ~~xxxx~~ teach four months in winter. The young lady would teach three months in the summer for the little tots. We had to go to work on the farm at the age of eight and nine years old. I remember about the teacher's desk. There were two pegs in the wall, and on them rested half a dozen gads, or whips. The big ones for the big boys and the little ones for the big girls. No, the little boys did not get off scott free - they got the girls' gad. I guess I wasn't a very naughty boy at school as I only remember one licking and that was because I did not learn to talk American before I was born. We had a great gangle-shank teacher from some foreign country. He spoke very broken English. We had that awful mountain in Africa with that name. (?Kilamonjaro) I tried to pronounce it and he tried it and did a worse job than I did. He cast an eye up at the gads and said try again. It rolled out the same as he pronounced it. Then he got it into his thick numb-skull I was making fun of him, especially when the young ladies began to snicker. So to ease his temper, he took a gad and gave me two. He only talked Dutch, not German. When starting to school, the school house was about twenty by thirty feet, and was heated by a big box stove in the center. The board desks were two large and three small scholars a desk. This teacher was fired and did not finish the term.

The first lease school was a mile through the woods most of the way. The summer I was seven years old we had six boys and ten girls in school. I was the largest boy, and Miss Anna Laird was the largest girl. One forenoon in June, we had a warm and heavy rain. Some five hundred yards from the school there was a brook. The teacher had gone to a nearby farm for dinner. It was lunch time now and the girls wanted to ~~xx~~ take a splash in the warm water. There were no bathing suits eighty years ago. So the boss lady gave us boys all their trinkets and warned us it was against the rules to leave the yard. She then went away with the girls. Two thirds of the way to the brook was through a jungle of underbrush. We played a while and I got to wondering why they didn't want us with them. I just had to know so I started on their trail with the boys. We found them having as much sport as a flock of ducks at the first rain in spring. We gave the Indian War Hoop and down went all but the tops of their heads into the muddy water. We amused ourselves by throwing mud at them until it was near school time and for fear of the girls hurrying through the brush would tear their dresses, we picked them up and carried them through the brush. The teacher reckoned the girls were punished by the scratch hurrying through the brush. And we boys got off scott free for being the cause of the girls being punished. All was forgiven and happy ever after. When I was eight years old the snow was too deep for one day to wade through to school. ~~xxxx~~ At one PM mother was taken ill and would scream with pain. She would say if only Mrs. Fry were here. Father was in bed with rheumatism ~~xx~~ and was of no use because his ~~g~~ legs could not walk. The man who did the chores was not due until five PM. The snow was too deep for me to walk a mile through the woods. One of our four horses was wild and skittish. I knew mother would not consent to let me try to harness horses to the sled, so I sneaked out the back door and shoveled snow out of the sled box and then filled it with light clean straw. I put the collar and bridle of the tame horse in the manger, then climbed in the manger and placed the collar and bridle in place.

CLIMBED IN A MANGER PLACED COLLAR AND BRIDLE IN PLACE NOW TO GET HARNESS ON HORSE WAY ABOVE MY HEAD. I FOUND AN EMPTY BARREL CLIMBED ON BARREL ROLLED IT BESIDE THE HORSE PUT HARNESS ON BARREL CLIMBED ON BARREL PUT HARNESS IN PLACE. NOW FOR KITTY THE SKITTISH HORSE WOULD NOT COME TO MANGER
* SO I COULD PLACE COLLAR ON SEVERAL EARS OF CORN IN FEED BOX SHE WOULD STEP UP GRAB AN EAR AND STEP BACK. I SAYS KITTY I WILL FIX YOU GOT MORE CORN AND SHELLLED IT MANAGED TO GET COLLAR AND BRIDLE IN PLACE. BRIDLE ON STOOD STILL FOR HARNESS. HITSHED TAME HORSE TO SLED LED KITTY OUT HITCHED UP AND LED TEAM WITH SLED TO DOOR OF HOUSE FATHER CRAWLED AND ROLLED OUT GOT IN SLED WE DROVE TO MIDWIFE AND GOT BACK IN TIME TO MEET MY BROTHER.

WHEN CAN A HORSE EAT BEST: WHEN HE HASN'T A BIT : BITT: IN HIS MOUTH

GETTING OLD ENOUGH TO WORK ON FARM FIRST WORK I REMEMBER WAS DROPPING CORN. EVERY FARMER HAD A SET OF STAKES 7 FT., _ INCHES LONG PAINTED SOME BRIGHT COLOR. START AT ONE SIDE OF FIELD SET AT EACH END OTHER ONE IN CENTER OF FIELD. SET STAKES IN STRAIGHT LINE MARK ROW WITH ONE HORSE WITH CAST IRON PLOW. MARK EVERY OTHER ROW BY STAKE THEN MARK ROW W CENTER OF STAKE ROWS. AFTER FIELD MARKED. WE WOULD PLACE SAME STAKES ACROSS THE ROWS A MAN WOULD DROP CORN ON STAKE ROWS A BOY AS WE CALLED IT SPLIT THE MIDDLE DROPPING THREE OR FOUR GRAINS IN EACH ROW IN CENTER OF STAKE ROWS

AS EVERYONE PLANTED CORN AT SAME TIME NO CHANGING WORK AS IN THRASHING SO ALL THE AVAILABLE LADIES BUT THE COOK WOULD GET HOES TO COVER THE CORN WITH HOES.

NEXT SLED WITH FOUR MARKERS USING STAKES TO GET STRAIGHT ROWS HAND PLANTER JAB IT IN THE GROUND BY CLOSING TOP BOTTOM WOULD OPEN LET CORN DROP AND COVER CORN AT SAME TIME. AND THEN TWO HORSE PLANTER

10-8-42

I REMEMBER THE FIRST CALL FOR MEN IN 1860 ONLY FOR ONE HUNDRED DAYS. THREE OF MY UNCLES LEFT FROM OUR HOUSE. I REMEMBER MY FATHER GETTING THE MAP TO FIND THE BEST WAY TO WASHINGTON. AFTER MIDNIGHT MOTHER WANTED ME TO GO TO BED. NO, I WANTED TO KNOW WHAT UNCLE WAS GOING TO DO WITH THE WICKED LAZY SLAVE HOLDERS. THEY SAID THEY WOULD LICK THEM AND BE HOME IN THREE MONTHS. ONE NEVER GOT HOME. THE OTHER TWO WERE HOME AFTER FOUR YEARS. AT THAT TIME IF YOU DIDN'T BELIEVE IN WAR OR WANT TO GO AND HAD OR COULD GET A FEW DOLLARS YOU COULD HIRE A SUBSTITUTE BY GIVING HIM YOUR PAY AND A BONUS OF TWO TO THREE HUNDRED DOLLARS. A MAN WITH MONEY OR LOVE OF A FREE COUNTRY DID NOT HAVE TO GO TO WAR. TO HELP KEEP IT FREE.

WHEN I WAS TEN YEARS OLD WE MOVED SOME FIVE MILES TO "WINTERS STATION" WHERE I GOT MOST OF MY SCHOOLING HALF MILE FROM SCHOOL FRAME BUILDING FAIRLY GOOD SEATS, THREE MONTHS' SUMMER FOUR MONTHS WINTER. MISSED TWO MONTHS WITH TYPHOID FEVER. SEVEN CHILDREN AND THEIR PARENTS WERE IN BED AT ONE TIME IN MARCH NASTY WET COLD WEATHER AND WE HAD ONLY THE COOK STOVE FOR HEATING.

OH YES, I HAD TO GET INTO MISCHIEF. WE HAD A BUMBLE BEE MADE ITS NEST IN OLD STUMPS AND IN GROUND LONG IN AUGUST HAD PLENTY HONEY. WE WOULD ROB THE NESTS. USUALLY THERE WERE A DOZEN BEES IN A NEST. WE FOUND A NEST OF YELLOW JACKETS IN AN OLD STUMP. THEY ARE SMALLER THAN HONEY BEES AND IF THEY ARE ON YOU, THEY KEEP STINGING UNTIL YOU ARE KILLED. WE WORE OUR HAIR LONG AND CUT STRAIGHT AROUND. GOT BROTHER TO TAKE NEST OUT. DIDN'T GET AWAY FAST ENOUGH. SEVERAL HUNDRED GOT IN HIS HAIR. DID HE YELL! OH, MY! WE FINALLY GOT HIM TO THE HOUSE AND GOT HIS HEAD UNDER WATER AND WITH A COMB WE FINALLY GOT ALL THE BEES OFF. HIS HEAD WAS BADLY SWOLLEN FOR DAYS. ONE DAY I WAS IN TOWN WITH MY FATHER AND I CAME HOME LATE. HE SENT ME UP INTO THE HAY LOFT TO GET HAY. IT WAS DARK AND I STEPPED TOO NEAR THE HOLE AND FELL TO THE BARN FLOOR. THIS WAS A DISTANCE OF TWELVE FEET AND I STRUCK MY HEAD. I CAME TO THE NEXT MORNING IN BED. THERE WAS NO BAD EFFECT: BUT IT DID HURT.

THERE WAS A RAILROAD NEAR OUR HOUSE AND IN BUILDING THE ROAD A FEW YEARS BEFORE, TWO CAST WHEELS WITH A FLANGE WEIGHING FIFTY POUNDS EACH WERE LEFT BEHIND. WE BOYS PLACED THEM ON A POLE AT THE GAGE PROPER TO FIT THE RAILS AND GOT STICKS WITH CROTCHES ON THEIR ENDS. THEN WE RAN THE WHEELS BACK AND FORTH. THERE WAS NO DANGER OF A TRAIN BECAUSE THE TRAINS RAN ONLY WEEKLY. IT WENT UP ONE WEEK AND TOOK THREE WEEKS TO GET BACK. SOME OF THE BOYS WONDERED HOW IT WOULD FEEL TO HAVE A TRAIN PASS OVER YOUR BACK. THEY DECIDED TO LIE BETWEEN THE RAILS AND LET THE WHEELS PASS OVER THEM. ONE BOY HAD A RATHER LONG HEAD. HE GOT DOWN ON HIS STOMACH AND PLACED HIS HANDS CROSSED ON A CROSS TIE WITH HIS CHIN ON TOP OF HIS HANDS. WE HAD NO WAY TO MEASURE THE HEIGHT OF THE TOP OF HIS HEAD: BUT THE POLE BETWEEN THE WHEELS FOUND IT TOO HIGH. IT TORE OFF AN INCH OF SCALP AND KNOCKED HIM OUT. WE HAD TO CARRY HIM HOME. OUR MOTHERS CONFISCATED OUR WHEELS AND HID THEM IN SOME WELL OR SOME PLACE WHERE WE COULDN'T FIND THEM.

GRANDFATHER WAS STAYING WITH US. HE GREW A QUARTER OF AN ACRE OF TOBACCO TO KEEP HIM BUSY. HE HAD A STRONG PRESS TO MAKE CHEWING TOBACCO AND A CUTTING MACHINE FOR FINE CUT SMOKING TOBACCO. WHEN HE WASN'T LOOKING WE BOYS WOULD BORROW SOME OF HIS SMOKING TOBACCO. IN THE WOODS NEARBY WE MADE CORN COB PIPES WITH ELDER SPROUTS FOR PIPE STEMS. MOST OF US HAD TO HAVE A CUP OF CATNIP TEA AFTER EACH SMOKE. THE AVERSION WE HAD FOR CATNIP TEA MADE OUR SMOKES FAR APART. I NEVER ACQUIRED THE HABIT OF SMOKING AND AM TOO OLD TO DO SO NOW.

ONE SUNDAY MORNING I HAD TO GET THE HORSES FROM PASTURE. MY YOUNGER BROTHER WHO WAS FOUR YEARS OLD WANTED TO GO ALONG. I CAUGHT MY HORSE TO RIDE BACK. BROTHER WANTED TO RIDE TOO. WE HAD A VERY TAME OLD HORSE. I PLACED HIM ON HER BACK AND GAVE HIM EACH HAND FULL OF MANE. I TOLD HIM TO HANG ON AND OPENED THE GATE. THE HORSES STARTED TO TROT. MY BROTHER WAS FRIGHTENED AND WANTED TO SAY, "WHOA!"

INSTEAD, HE HOLLERED, "GET UP! GET UP!"

THE HORSE BEGAN TO LOPE. HE FELL OFF BUT HUNG ONTO THE MANE UNTIL THE HORSE STOPPED. HE WAS SAFE BUT FRIGHTENED.

in october, 1869, WE MOVED TO EATON COUNTY, MICHIGAN IN THE WOODS. LIVED IN SANDUSKY COUNTY, OHIO. UP TO THIS TIME WE LIVED FIVE: AND THEN, SEVEN MILES WEST OF FREMONT. IN MICHIGAN SEVEN MILES SOUTHWEST OF GRANDE LEDGE. WE MOVED ON TWO COVERED WAGONS.. WE STARTED WITH THREE COWS AND A CALF. WHEN WE CAME TO THE FIRST COVERED BRIDGE, THE CALF BECAME FRIGHTENED AND JUMPED FROM THE BRIDGE AND DROWNED. WE WERE FIVE DAYS ON THE WAY, CAMPING ALONG THE (WE WERE GOING TO SAY HIGHWAY: BUT IT WAS HARDLY A BRIDLE PATH IN PLACES) We were ALONG THE ROAD NIGHTS. THERE WAS NO RAIN ON THE WAY. JUST BUILT A NEW ROAD ACROSS THORN APPLE A MILE FROM OUR NEW HOME. USING EIGHT TO TWELVE INCH LOGS TEN FEET LONG COVERING LOGS WITH GRAVEL. ALL FINISHED BUT SOME FIVE HUNDRED FEET NO GRAVEL YET. SEVEN MILES ROUND GETTING LATE IN DAY. EVERYONE WAS TIRED. WE HAD A MILE TO GO. FATHER SAID HE WOULD TRY IT. MOTHER AND THE LITTLE TOTS GOT OUT AND WALKED. THE HOUSEHOLD GOODS AND THE WAGONS NEARLY BUMPED TO PIECES. HORSES AND COWS PASSED FREEZING SAFELY. THE WAGONS WERE HEAVILY LOADED. FATHER WOULD NOT TRUST ME DRIVING A TEAM. THERE WAS A MAN DRIVING MY UNCLE'S TEAM AND HELPING US MOVE. IT BECAME MY LOT TO WALK ALL THE WAY AND DRIVE THE COWS WITH MY LITTLE DOG FIDO. HE HAD A VERY BAD HABIT. HE WOULD RUN AFTER ANYTHING THAT WOULD RUN. IF WE PASSED A NUMBER OF FIELDS WITH SHEEP HE WAS SURE TO RUN THEM. FATHER THOUGHT WE MIGHT GET IN TROUBLE ALONG THE WAY AND ASKED ME TO SELL MY DOG. HE WAS SUCH A PRETTY LITTLE DOG AND THERE WAS NO TROUBLE FINDING A BUYER. THE BUYER WOULD TAKE A LEATHER HITCH STRAP TO TIE HIM WITH. HE HAD VERY SHARP TEETH AND CUT THE STRAP AND TOOK MY TRAIL AND CAUGHT UP WITH US. SOMETIMES IT WOULD BE HALF A DAY BEFORE HE WOULD CATCH US. AT A DOLLAR A SALE WE HAD THREE DOLLARS AND MY DOG.

WELL, WE ARRIVED AT THE TAIL END OF THE FIFTH DAY. AT UNCLE'S. THERE WAS NO FROST YET; YET THE LEAVES ^{WERE ALL ON THE TREES} HAD SIX INCHES OF WET SNOW THAT NIGHT. MANY SMALL AND VERY TALL TREES WERE BENT TO THE GROUND WITH THE WEIGHT OF THE SNOW. ONE OF US BOYS WOULD GET ON THE BODY OF THE TREE NEAR THE TOP. THE OTHER BOYS WOULD SHAKE THE SNOW OFF AND UP THE TREE WOULD GO WITH THE BOY ON IT. GREAT SPORT!

This one top was the heaviest and lying on the ground. The men cut the top off, leaving six rail cuts sixty-six feet of red elm straight and three and one half feet in diameter at the butt. We were to split rails off this log. When the top was cut off, the stump end was the heaviest. The top went up some twelve feet in the air. The under tree had a large limb a foot or more in diameter and about four feet up from the ground. There was just room enough to stand and to pull the saw between the log and the limb. My father thought it wasn't safe for me to stand between the two logs. We saved the stump off. The top was heavier and the stump turned back. My father stood watching the stump turn back. The top end struck the ground and rolled over and caught him between the butt of the log and the large limb across his breast. The men working nearby logging came running; but they could not get hand spikes between the logs next to his body. In his last breath he called me. He wanted me to help him.

The wise old ladies had Mother nearly worried to death by telling her I was sure next to go and here I am the last one of eight at that time. I feel now as if I could stay fourteen years and one month yet. and as much longer as I can see other human beings except Hitler moving around. Oh, well, he isn't human inside even if he resembles a human outside.

Grandfather Stiger, Mother's father, came to Michigan. He sold everything but a few household goods and bundled us back to Ohio. Grandmother passed away a short time before Mother went to housekeeping for him. I had an aunt a year older and an uncle a year younger than I. The four older children were scattered among uncles and aunts.

It was my lot to be placed with one of my Mother's brothers some time in June. At some work I did a man's work. Uncle sent me some fifteen hundred feet down in a field to bind some oats. There was an apple tree there with apples getting ripe and there was a hornet's nest in the tree. Uncle was shooting into the nest with an old army revolver. He did not see that I was in range. I had a sheaf of oats up and was placing the band around it when I heard a bullet strike in

Did I work for that German! - sometimes until 9:00 p.m.! He had a good dog and when the corn was getting ripe old Mammy Coon would bring her half grown babies to the corn fields for a feast. Generally there would be five or six of them. We would watch for them. Once my uncle and two of his friends came for a coon hunt. It was way after dark before I finished the day's tasks. They were wandering around while they were waiting for me and they found the hard cider barrel. It was too hard for them and we finally started. The dog treed a coon with a litter. On our way to the tree a pole cat jumped up. One of the boys saw the bushy tail and thought it was a young coon. He ran and caught it. The skunk let go in his face. I had to hunt a doctor instead of coons.

There was a big overgrown lummox sissy boy in our locality. He would never go out with us on our pranks. We insisted and insisted and told him he could carry the lantern. We took him a half a mile into the woods and found a hollow tree and told him it was a coon tree. We gave him the lantern and a club to kill the coon with. We were to scout about and Mr. Coon would head for home. Instead we made for home. He stayed half an hour and when he saw no coon and did not see or hear us, he suspected a trick and started for home, feeling safe with the lantern. He wasn't aware that in carrying a lantern in the woods you will travel in a circle some four hundred yards in diameter. He walked for an hour and when he could find no way out he became frightened and began to holler. He made some noise! It was time for the roosters to crow and a farmer heard him and led him out safely.

A short time before I had occasion to cross a forty acre tract of woods on a very dark night. Instead of going around on the road, I thought I could cut diagonally through the woods and save walking, since I was familiar with the woods and had a lantern. After a while I knew I had walked far enough to be on the other side. I came to a fence, however, and not the kind of fence I expected to find. I walked along the fence. I found that I was within ten

woods with a lantern
change hands every fifteen minutes

I I was just past seventeen when I hired to an uncle to learn the carpenter's trade. The first task was going into the woods and selecting trees of the proper size and length. We would take a tenfoot pole for a vertical measure. We would measure the shadow cast to the base of the pole and measure the shadow cast by the tree we thought was the proper size and straight. By taking the number of inches cast per foot it was easy to figure the height. I was my uncle's assistant in this and had my eyes and ears open and my mouth shut. I didn't want him to think I was learning too fast. Here is where I learned to measure with my eyes. We would next cut the tree down and score the bark off each upper corner; or what would be the corner when it was ready for the bard. We would make a chalk line on each side for the size the finished timber is to be.

We would take an ax and chop it in two, straight down; and where the tree was large near the butt we would cut to near the line and split off jugles some three feet long. Then we would smoothe the sides with the broad ax blade. The ax had a long crooked handle. The operator would stand on the side of the timber. If it was too low he would put one knee on each side. When this was finished he would turn the timber over a quarter, use the chalk line and proceed as before.

When the timbers were all squared we would mark mortise and tenons corner brace timbers pinned together inch wooden pins. We had to know how much drift to give the pins to hold the timbers tightly. To get foundation square measure one eight foot and the other six feet diagonal to these points ten feet had to be for a square corner timbers all framed braces and rafters cut by the way. At that time we cut a mortise in plate straight down some two inches. The rafter was cut to fit the mortise. It was impossible to lift the rafter out unless we lifted the upper end first. Flow a groove in under side of plate to receive upper end of siding. We did not have to be nail drivers to be wood butchers. We had to know how to place all cut nail because they were

I would call and see my mother frequently. I had to walk on foot some eight miles. White sugar was rather scarce and I would get into Mother's sugar bowl every time I came home. If she saw me coming she would hide it. She thought she would break me of the habit. She filled the sugar bowl with nice white salt and placed a spoon nearby and left a crack in the door so she could see me spit and sputter. I walked in, saw the sugar bowl full and the spoon handy. I opened the cupboard door, picked up the spoon and filled it with what I thought was sugar. I heard a slight giggle in the other room and put what I thought was sugar back in the bowl and walked away. Mother wanted to know why I didn't take the sugar. I told her there was a good little fairy watching over me so that no harm would come to me.

To even the score with Mother I gathered wild raspberries for dinner. I found a turkey hen on a dozen eggs way back in the field and knew Mother had a hen sitting on hen eggs. I said, "Won't it be a surprise if Mother Hen hatches a dozen turkeys and the neighbor's turkey comes home with a dozen little chickens?"

The only thing I did was to change the eggs. The old hen and Mother knew the difference in the eggs. The hen scratched out of her nest. Mother knew they were turkey eggs and found the turkey nest and changed the eggs back the same day. There was no harm to either setting.

When I was seventeen the United Brethren Church had a revival meeting to get new members. The preacher would tell us that if we did not come to the mourners' bench and get religion the old devil with long horns would surely get us. Mother asked me to come to the mourners' bench. A couple of old ladies knelt beside me praying for me to cast the devil out. They were singing, "Yield Not to Temptation/ For Yielding is Sin". Some little voice said, "Jim, get up and help sing".

I never could sing or carry a tune. I was ashamed to get up and try and be laughed at. All through my life when tempted those words, "Yield Not" flash to mind.

the business end of a woman. The old maid gave him an amused sour frown. The girls began to giggle and the boys began to haw haw. His bluster and life gone, it finally got through his thick head that he got the cart ahead of the horse and he made a shot for the deer, leaving his hat, top coat and books. He came to where I was and stopped and asked me to get his books, hat and coat. That was the last we ever saw of Miles Van Allstine.

The teacher's name was Miss Octavia Wheelock. We boys used to call her the old hen with her flock of chickens. Nothing of importance happened. We just studied our lessons and recited. I discovered the first week that I would have to quit going out with the boys and treating or quit school. I told the boys about my short finances and about the fact that I couldn't treat and that I therefore would not take a treat. I would only treat them as human beings. That was sixty-five years ago and I haven't broken that vow to this date and was only called down once. A friend asked me to have a drink. I refused.

"Oh, you think you are too good to drink with me?"

I may have lost a few friends but I never missed them.

I learned of a small town looking for a teacher. I arrived and was hired at thirty dollars a month for four months. At that time each township was what a ward is. There was an elected trustee. He gave me a list of questions to answer in writing. While at his home out in the country. If you answered seventy-five percent of the questions correctly, you were allowed to teach. I missed one simple example: the sum of two numbers equals five. Their difference is equal to one half the lesser number.

When the three month term closed, I walked seven miles to my Uncle Sam's on Saturday. I left there Sunday after dinner for my school which was fifteen miles away. On the way I called to see a lady friend at 8:00 p.m. It began to snow and I did not care to go out into the snow. I was in a warm room with very good company and before I knew it, I heard the clock strike four. It had quit snowing and I had nine miles to

walk in snow a foot deep with no path broken. I was the first to pass over the road and had to get to the schoolhouse by 8:00 a.m. to unlock and start the fire, which was my duty. I had no breakfast. I struggled on the best I could and finally arrived at 9:00 a.m. where the schoolhouse had been. It had burned on Saturday night and there was all kinds of talk about my not being there. It was said that I was afraid of the big boys and girls and so I burned the schoolhouse down. I easily proved where I was Saturday and Sunday.

The schoolhouse was a half a mile out of town. There was an empty building in town, twenty feet wide and thirty feet long. Everyone got busy and by night we had seats and desks for the sixty-four scholars and the teacher and a big box stove ready for the school bell the next morning.

By helping with the saw and hammer and being jelly I made friends with young and old, especially those of my age. There were sixty-four from five to twenty to teach. There were no grades at that time. We had class in ABC, primer, first, second, fourth, and fifth readers. There were two classes I hadn't studied: algebra and physical geography. By studying evenings I kept ahead of the class. Everything went well. The first three weeks there were four boys and two girls older than I and three of the boys weighed 175 to 200 pounds while I only weighed 145 pounds.

There were two factions in the system. One had been teaching for years and the other faction became too numerous and hired me. I knew nothing of this until the end of the first month. There was a spoiled young man who was the only son of a railroad engineer. This young man was permitted to do as he pleased and he always pleased to displease others. He was on the minority side and began talking aloud in his seat. I told him it was against the rules and that the other scholars could not study their lessons. He just kept on talking. I told him it was too near closing time to attend to him and dismissed him and told him to leave the room and I would settle with him the next morning. He lingered outside until school was dismissed and came inside to ask me to

go home with him. I accepted his invitation. His home was about two miles out in the country. Nothing was said about the school. He introduced me to his mother. His father was not at home. We passed a pleasant evening while he was doing his chores. As his mother was getting breakfast I was out in the orchard getting good apple sprouts for switches. We walked to school together. He carried the lusk and I carried the switches. We chatted but neither of us referred to the day before. After school began I asked him to step forward and he did so like a man. I told him he refused to stop talking when I kindly asked him to do so and I would have to punish him. I had him turn and I hit his back. I gave him two cuts with a four foot gad. I did not bear down too heavily on the gad or give too much speed to it. There was no more trouble with any of the scholars; but his father raised sand. There was snow over the sand so I guess he kicked up snow and tried to have me arrested. As I hadn't violated any law he failed. He worked on the school board. To save trouble and expense the board asked me to resign at the end of four months. As I had a position which offered more pay and board I resigned.

During March April and May of 1878 I went back to the old hen and her chickens for three months and back to the same boarding place. I took care of the cow, the lawn, and the garden for board and room. Nothing of importance happened.

When school closed I took a notion that I wanted to see my mother and the rest of the family; so I went back to Ohio during harvest time. There were always plenty of jobs at double wages during harvest time. I called on my bad old man Doss. (I forget to say that before I left Michigan I wandered up into the pinoy woods some six miles north of Muire and engaged to teach in a small school in a small log school house the coming winter.

Old Doss was glad to have me help him harvest haying and thrashing. I found a very pretty plump girl working there, a girl I had known for six years. She was four years my junior. She was nearly eighteen and I was nearly twenty-two.

We decided to get married. I knew I could make a good living for myself; but I never thought the expenses would be double. I told her I had seventy-five dollars. "Oh, well", she answered, "I have worked since I was ten years old and haven't forgotten how", was her answer.

I wasn't like the fellow who said he could make a half a living and it was a peer woman who could not make the other half or the fellow who said they would live on bread and water. He would let his wife furnish the bread and he would hustle around for the water. This same man said he never stayed home on cold rainy days as it made him feel so bad to see his wife out in the cold rain chopping wood.

Since we had worked at the same place for six months I knew she was a good cook and not afraid of work.

We were married early in August, 1878 and left the same day for Muire, Michigan. This was some two hundred miles from home and near where I expected to teach. Neither of us knew a soul in town or that locality. As to worldly goods I had thirty dollars in good cash, a twenty dollar watch, one good suit with a top coat, two suits of work duds and underwear. My wife was no better supplied. We rented a furnished room for a week to be paid for when I get the money. I got a job in a saw mill the same day, starting the next morning. I bargained for a cook stove and necessary cooking utensils. I left my watch as part security and a thirty-five dollar bill trust on balance. I used the cash to buy bedding. My wife made bed tick and pillows. I asked a farmer for straw.

"He said, "There is the stack. Help yourself."

We rented a small house on pay when you can and got some scrap lumber and nailed up a bedstead, a table, and two chairs in the evenings. With my wife's help the house was ready. By the noise I think all the dogs in town saw me coming down the road with the full straw bed on my back - and my wife with the pillows made from straw - about 9:00 p.m. in the moonshine. People came out to see what the dogs were barking at. In a week we were ready for housekeeping.

We were just married and very busy making a nest to crawl into. I neglected to walk out to look after my school until the latter part of September. Since there was no word from me and I was a stranger, another teacher was hired. This ended my career as a pedagogue. I did not shed any crocodile tears. As a teacher I earned \$1.50 a day five days a week. As a mill laborer I earned \$1.75 a day six days a week from 6:00 a.m. to 6 p.m. instead of 9:00 a.m. to 4 p.m. I did not care for the longer hours but I needed the money. By living close I would buy a hog head which weighed thirty or forty pounds. For thirty cents I could buy plenty of hog lard. Hog head cheese was cheap and we had corn meal and baked our own bread. We lived well but not fancily. We soon paid our debts and bought good but not fancy furniture.

We had very good neighbors who helped us a lot. We were to pay six dollars a month. T

The land lord said, "You seem to be a very good young man trying to get a start. To help you I'll throw off half the rent."

"Thank you, but I never let anyone be more liberal than I; so I'll throw off the other half."

He looked at me and had an amused smile on his face and finally said, "Alright, - on past due rent."

The mill owner where I worked had a very large farm. At harvest time he would close the mill and the lumbering work and all hands had to work on the farm. The lumber jacks, the men in the woods who seldom had to be outclasses as a rough set of men, took me for a city dude because I wasn't sunburned. One rainy morning the men were all gathered around the horsebarn. There was a big gray team I later learned was called the mankiller. It would take two or three men to harness them and hitch them to a wagon. Each man would have a good big club. They had planned to have some sport with a greenhorn.

The foreman said, "Hill, you can harness and hitch that gray team to the wagon." I looked at the team and saw they were old enough to be well broken. I wasn't the

to the wagon and hitched them up. By being easy and talking to them in a soothing gentle tone, they were surprised and when I showed no fear the horses were very gentle. I got a lot of praise and hand clapping as this was the first time the team was ever harnessed and hitched by one man. The lumber bully wanted to know what I did to the horses. I told him the only thing I did was to treat them as horses should be treated and that I did not show fear around them. (Why? Should I? Be? Afraid? We? Are? Both? Made? Of? The? Same? Kind? Of? Material?)

"You know, I am the bully of the camp. Hain't you afraid of me?"

"Why should I be? We are both made of the same kind of material. Why should we fear one another?"

He said, "I hate them cowards, fawning around me as if I was going to eat them - afraid to talk to me. It makes my blood boil to see the cowards. It isn't my fault I am heavy with a strong frame and quick."

At this time I saw the young man I whipped at school. I asked him why he asked me to go home with him the evening we had trouble.

"- to give you a pair of black eyes."

"Why didn't you try it?", I asked.

"Darn it, you wasn't afraid as all of the teachers and everybody was afraid of me and let me do as I pleased"- and being much heavier and stronger than I was, he became afraid of me because I showed no fear and let me go without black eyes.

By keeping my eyes and ears open I learned to be certain in my mind that everything I do can be accomplished and that I can do it - and that if any doubt about this arises, it must be put out of the mind. If you hitch a team to a load and are certain that they can't move it, they won't; but if the load is not too heavy and you are certain the team can move it; they can.

Do not yell, curse or whip. There are more balky drivers than horses. I had learned never to be afraid you can't do this or that. Do the best you can in anything you undertake. Always try to do the most with the least amount of energy exerted has been my hobby through life.

During the latter part of May, 1879, a little girl came and insisted on staying with us. In 1879 the timber was all sawed out; so the mill moved to Fife Lake, Michigan. We moved, too, in February of 1881. I worked in the tail end of the mill and any lumber less than twelve feet went into a pit and was burned. I got permission to have any pieces I could use. I soon had enough to build a small house. Working from midnight to noon gave me ample time to build my house all from scrap lumber, even the roof and the floor. My wife made a rag carpet to cover the unplained floor. I sold a number of leads to farmers at a dollar a lead. I squatted my house on the rail road land. There was no rent and no taxes to pay; but I ate breakfast at 11:30 p.m.; lunch, at 3:00 a.m.; was home ~~at~~ at 6:00 a.m.; lunch, at 9:00 a.m.; dinner, at noon. I worked in the garden or around the house or picked berries until 5:00 p.m.; had a light meal and went to bed.

One day while I was looking for berries I ran onto two ~~years~~ cub bears. Since I only had a ten quart bucket and my legs to defend myself from Mother Bear, I tried my legs first. There were only bridle paths through the berry bushes.

We turned up too much new soil. My wife got the ague chills every day and was getting a little homesick in the fall of 1881. We had to sell out and go back to Ohio. It was just corn shucking time and the wages were a dollar a day with rainy days out. This made a poor living for the three of us. I estimated that ~~11/1000/one/bushel/11/corn/10~~ at the price of corn it took one bushel of corn out of every eight to pay the wages. I showed my figures to the farmer.

"Alright, go ahead. I will give you one in eight."

Instead of going to work at 7:30 and quitting in ample time to get home before sundown I would be out often at 3:00 a.m. and stay as long as I could see and made every move count. Instead of a dollar a day I made two to two-and-a-half that winter. I cut cord wood at fifty cents a cord. The pieces were eight feet long and four feet high with no pieces larger than five inches in diameter or smaller than three inches. I split a thousand rails at a dollar a hundred. I asked the farmer where to cut trees and he said, "Oh, pick your

years with timber with eyes open. I knew more about timber than I did at my first rail splitting job. I picked my trees and cut them in eleven foot lengths and split one thousand rails in three days, working from 6:00 a.m. to 6 p.m. with one hour off at noon. I called on the old farmer to collect. He said that ten dollars in three days was too much and that J. Dee would have split them for a dollar a day. I asked how long it would take J. to split one thousand rails. He said it would take him a full week; but that he did not think I knew how to select the trees that were easy to split and the best size to split and he thought I would take any tree nearby instead of picking the best trees in the woods of some forty acres.

In the spring of 1882 I built a few small buildings and a board fence for farmers. I did not follow the hard boiled rule of setting posts with the tops uneven and nail the bottom board first the same distance from the surface regardless of how uneven it was. I made three stakes with cross arms and placed the stakes in a straight line where I wanted the top of the fence. I dug holes and set the posts in line and the tops of the posts in line of cross arms. I nailed the top board first to the top of the post and made hooks of heavy wire with one inch bent at a right angle and the post the proper length for space between the boards for a four foot fence. Six inch boards space bottom up first - 2,3,5 and six inches for second board. I placed the hook on the top board to hold one in place while nailing the other. This made a nice even straight fence. Through building board fence by the panel.

The farmers had just begun to tile drain. Blind ditches - clay pipes two and one half, three, four, five, six, eight, ten and twelve inches in diameter and a foot long. These were placed in trenches two to four feet in depth and the trench was refilled with soil removed in digging the trench. Here is where the blind ditching comes in. A ditch you can see. Most of these drains were a hundred feet apart in heavy clay and fifty feet apart in very porous soil and 150 to 200 feet apart in parallel lines.

Two Irishmen came from New York state where they had been tiling several years. They were making two and one half to three dollars a day doing job work by the rod, (sixteen and one half feet). The price depended upon the depth.

I worked for a farmer by the name of William Verhies. I mention his name because he insisted that I learn the tiling trade as we called it. He knew I did a lot of different types of work and he said, "Jim, why don't you learn tiling?" Here you are doing common farm work part of your time at a dollar a day and then Irishmen come in here and make three dollars a day. You are awful handy at everything I put you at and know you will make a good ditcher. Go over and see how they do it."

I stayed all afternoon as these pipes had to be on grade because the low places would fill in and stop the drainage; so we did all our tiling where there was water in the soil. The grade depended on the ~~flat~~ land, whether or not there was little or much slope. The grade had to be cut so the water would all run out of the trench. The workers were using what we would call a paddy shovel. This was ten inches long and ten inches wide with a handle about twenty-eight inches ~~wide~~ long. It was necessary to go over the trench four times. There were four spadings. A ditch thirty inches deep was cut. At each spading the loose dirt had to be cleaned out. At the last spading there was always water in the ditch. The workers would tramp the bottom up. It was a job to get a perfect grade. The trench was ten inches wide and dirt had to be packed on each side to keep the tile in place. The trench was fifteen inches wide at the top and ten inches wide at the bottom. The sides of the trench were dressed straight and smooth.

The next morning I was given a paddy shovel and started where a tile drain was wanted. At noon I took the shovel with me and ~~said~~ told the man who had hired me that he could dig his own ditches - that there was no Irish in me - only Dutch. I told him there was too much unnecessary work cutting a ditch a foot wide for a three inch tile.

"I think you are right," replied the man. "Let's go to Tiffin."

We were in every hardware store in the city. We found a narrow spade with

The top of the spade was narrow, two inches at the point and three inches at the top. We bought a duck bill spade five inches in with fifteen inches long and a little oval to give it strength and a scoop. We bought a tile hoe with an oval scoop twelve inches long at right angle to the handle.

We cut the first spading eight inches wide and fifteen inches deep and removed the loose dirt with the long-handled narrow shovel. We dug the last spading just wide enough for the tile. The majority of the tile was three inches in diameter, and too near grade. Every five feet we got out of the ditch and picked up the scoop and stood astride the ditch and removed the loose dirt and cut to grade with the scoop. This was less than a quarter of the labor it took to cut a narrow ditch to grade and we did not have to get into the bottom of the ditch to mess it up. Since it was just wide enough the tiles would stay in place.

The farmers thought that five or six dollars a day was too much money; so I cut the price per rod in half and made more money than the Irish, by doing a better job with half the labor. Here is where the Dutch beat the Irish.

This was my first invention, - or rather, improvement. I did not fancy crawling in and out of ditches. I gathered old cross cut saws and took them to a handy blacksmith and had scoops, ^{and} tile hoes made for each size of tile to eight inches. I had a handle eight feet long attached to the scoop with a shank in the back of the center of the handle at a quarter angle, forty-five degrees to scoop. I would dig some five feet. Then I would pick up the scoop and remove the loose dirt out of the ditch to grade it with the scoop.

Someone smarter than I made a spade just for putting ditches for drain tile. The spade was eighteen inches long and four inches wide at the point and five inches wide at the top of the rounded point. It was oval to give it strength. It was okay as long as we had water to carry our grade. I had more work offered to me than I could do and since we boarded and bunked with a farmer the limit to my crew was three men and a boss. This was all most farmers could take care of and there was no way to go but to walk. There were no autos in 1882. I wanted to do all the tiling as we called placing the drain tile.

I knew that a drain tile placed on a grade that was only obtained through guessing would not last long. I just had to find some way to carry a grade. I bought a Gurley Y Level, and paid seventy-five dollars for it. The talk was that Jim bought a level without knowing a thing about surveying or ever being out with a surveyor; and that he surely liked to squander his money. My friend Verhies ^{said,} "let Jim alone. He will come out on top."

The surface had more slope to the upper half; so I had to make two grades. I took my bench marks and got paper and pencil and sat down in a fence corner and went to work to find how deep to drive each stake so that the tops would be on grade or the same distance each.

I put one stake nearer the center of the ditch (earth) and then the preceding one going down hill. After studying and figuring for three hours I finally got it through my thick head. I set the stakes on a grade ^{and} stretched a line over nails on stakes. I made a gage with my arm at a right angle to touch the line at the side of the ditch with a long handle. It was not necessary to get out of the ditch to use the gage.

This was very satisfactory. Too much time had been taken placing the grade line. It was very easy in hard dry dirt to lean the gage over to touch the grade line. Dogs and farm animals and sometimes the men would tear the line down. Stake lines and gages were a lot of extra equipment.

I did not like the idea of wasting so much time setting the ^{grade} ~~gag~~ line. One day my little fairy whispered, "Why don't you set your grade overhead?"

I made half a dozen stakes one and a quarter by one and a quarter inches by five feet. The cross arms were one half by three by thirty inches. One half the arm was painted white; and the other half, red. There was a level in each cross arm. The arms were clamped to the stakes alternately. I placed the level over the outlet to carry a seven foot grade; i.e., seven feet from the bottom of the ditch I set the level ~~at the~~ center. Seven feet above the bottom of the ditch for a two foot deep ditch I placed a cross arm five feet above the surface ~~from~~ the space between where the level shows and the top of the cross is the fall the ditch has

raised forward end of the tube on level so that the cross arm on the upper end of the ditch; i.e., top edge: other stakes. As to the length of the ditch were set in line cross arms on grade with level all ~~across~~/ cross arms seven feet to where the bottom of the ditch was to be. I cut a little notch in the handle of the scoop/ and the tile hoe. The distance from the top of the cross arm to the bottom of the ditch, in this case seven feet from the bottom of the tile hoe. The last spading was generally anywhere from twelve to eighteen inches in depth. It was cut or dig, whichever was preferred, for some five feet. Then you would pick up the scoop and remove loose dirt and place the scoop erect and place your thumb nail in the notch in the handle, sight over your thumb to the grade arms. This would show you whether you are deep enough or too deep. With a little care and practice a ditch could be cut on a perfect grade. There was no figuring, ^{ing,} The stake set the line in the way and sagged ~~it~~/ ~~it~~ There was very little lost time because you could set the grade from the upper end as well as the lower. I preferred to work downhill. This was much easier for me.

~~I am using this same method of grading in 1942~~

This same method of grading is still being used (in 1942) on the Buckeye Tractor Ditcher. Some 7000 of these are sold in the United States and three hundred in foreign countries. All use this method of carrying a grade. I was the first ^{in the world} to use this method as far as I can learn.

My fame as an expert tiler (as the man who buried drain tile was called) spread far and wide. In 1894 the state of Ohio bought a large farm at Wooster, Ohio. I was sent for to come and cut the ditches for the tile with one of my ditching machines. The first morning the state's old civil engineer came out with three men and a lot of stakes and started to set stakes every twenty-five feet and the depth to cut at each stake. I told him kindly that I didn't have time to set my grade arms at each of his stakes and all I wanted to know was the depth of each end of the ditch and if the same grade full length and depth at broken grade. He remarked, "I don't see how in heck you can cut a ditch to grade if you do not know the depth at all

points. This ditch is two to three feet at different places."

I said, "Let me have my way and if the ditch isn't cut to grade full length it won't cost you a penny."

"Well, go ahead, but let me check on it before you dig any more."

When he finished he came with paper depth at each stake perfect.

I showed him how to set his level elevated to grade. ^{He} I had a man with a measuring staff pass over the ditch at every five feet. He set the staff in the ditch and found it perfect. The old gent said, "Here I went through college and studied surveying two years and you come along never having been in college or studied surveying and show me how I can save nearly three thirds of the time and labor in mapping a tile drainage system. Where did you learn this?"

I pointed to my head.

"No wonder you could invent and build a perfect ditching machine/ from hill going up hill to making maps six years ahead of time.

I used to make maps of farms I tiled, giving the depth at all points and locating drains on a scale generally one inch per one hundred feet.

The last time I was in Ohio I examined some of the drains I placed and tiled in 1882. I found them in perfect working condition after fifty-six years on duty. I paid no attention to the length of the day as I was working by the time red, by the job and not by the day. I call to mind one place four miles from home. My wife was afraid to stay alone. ^I had to walk to and from every day and would get there before old Selimen stuck his head up where I could see it, ate breakfast and was out in the ditch before old sel got ten feet above the earth. At least that was the way he looked. In the latter part of May the days were rather long. I would stop long enough at noon to eat and would have supper at five. Then I would go back to work as long as I could see and then go home. One warm evening I was very tired and sat down by the wayside. At 1:00 a.m. I was not home and my wife made the babies safe and started out to look for me. Two miles from home she found me sound asleep. We found the babies okay.

A farmer wanted to plant corn in his field and wanted it tiled first. I wanted to

keep out of his way with the tile. It was getting late in the season and I had no help. The ground was frozen too hard to ditch in winter. We often had places where we had to go six or eight or ten feet deep. I did this deep ditching in winter by cutting the ditch some two feet deep in early fall. It would not freeze hard enough to stop work and down in the ditch I was out of the cold wind.

This was not as nice as it would look. The frost would draw the moisture out and freeze on the sides of the ditch. The warm sun would thaw the ice and make the sides of the ditch a plaster of mud. Since the ditch was just wide enough to get in flat ways, my pants and shirt would become ~~xxx~~ coated with mud. Old Sol would hide himself and the ice man come out and freeze the mud on my pants. Many a time I had to thaw them before I could get them off.

That was unpleasant but not dangerous as it was when I cut through a hill. I should have known better than to set a hill trying to cut through a hill. It was only fifty feet across but I had to dig twelve feet deep to drain a pond for fear of caving. I would place a tile as soon as the ditch was ready. About half way across I was in the bottom of the ditch placing a pipe/tile. I noticed a gravel fall and turned and ran. I got out all but my feet. I guess they were too slow or too large. Anyway, they got caught to my knees in the cave and they had to dig me out. I stood my ground. I ~~shdy/xx/yy/~~ sure would have been a gener. Oh, no, I did not give up. I had the farmer get lumber and I curbed the ditch and finished it and placed tile all the way and drained the pond. Three other men at different times tried to drain this pond and stated that it could not be drained across that ridge as it was underlaid with gravel and the ditch would not stay open to place the tile.

It was my hobby to do things that were considered impossible to do and to do them with the least energy exerted for the work to be accomplished. I never gave up. There is an old saying: where there is a will there is a way. If there wasn't, I would hunt for a way and never give up unless I had too

Our eldest daughter was a regular chatterbox when she was small. You knew that a person who talks a lot has to say something. We just moved into a new locality and the first day of school the teacher said, Well, little girl, how old are you?"

"Forty".

"You aren't forty."

"Yes, I am."

"Doesn't your mother know how old you are?"

"No, Mama doesn't know - only Papa and Grandma were there when I was born."

A few days later she told us that a man stayed at school with a big bird that would sing the nicest songs and let the children ride on its back. It would flop its wings but couldn't fly. We were wondering what kind of a bird it was.

I said, "How did it sing?"

"Wee! Haw wee haw!"

At that time it was the custom in Northern Ohio for an old hen from the old country to pass through the country with a donkey and a few trinkets to sell at the store. It would stop at the schools and give the little folks a ride.

After working in ~~the~~ mud water and hard pan and stone tiling for seven years I began to feel as if I wanted to rest free from pain/ ^{in my old days/} I would have to quit ditching by hand. There was a ditching plow on the market drawn by four horses cutting one to three inches in depth at a passage ditch eight inches in width. I was possible only to guess at the grade. Where it looked low you would throw the plow up and just pass empty. The machine was a wheel four feet in diameter with eight inch face cups a foot apart which forced out the surface by a calm extending from the bottom to the top where the cups are forced back leaving the top smooth. A stationary scoop would stop the dirt and deliver it on the side of the ditch and on the surface the horses tramping to and fro turning at ends/ the dirt on each side of the ditch. It was very inconvenient to get near the ditch to grade it and to make a bed for the tile. It was very unsatisfactory. It took a great deal of time to feed and care for four horses.

In dry times I had to haul water to soften the bottom of the ditch so we could cut it to grade by hand.

An old black smith Jake Omwake had been trying to build a ditching machine for several years. He never did any ditching and had no idea what the machine would be up against. It wasn't like cutting green cheese, mowing grain or passing a saw through a log. We would find roots, stumps, logs, stones, rock and hard pan, sand, sticky clay and gumbe/
gravel/buried in the soil. That is the kind of soil that will lock a wagon wheel on the highway. Along the Missouri River in eastern Nebraska is the only place in the United States I got stuck. I never got a machine to handle this gumbe to suit me.

A professor at school learned what I was doing in tiling and the reputation I had at making good at anything I did,. He lived near Mr. Omwake. The professor ^{old} though the machine could be made to work; so he bought the/contraption from Omwake and made a verbal bargain with his brother, who was a carpenter, and me. We were to share alike the money; I, the brains and brawn. We had the junk hauled near a machine shop in Tiffin, Ohio.

His brother Charlie did most of the work. I did the planning and headwork. Neither of us had ever worked in iron; so we hired that part made in a machine shop and bought an engine and boiler - a little six horse power vertical engine that would keep the machine jumping continuously. The machine was mounted on four wheels. There was an excavating wheel in the center and a double axle at the rear end to extend the wagon wheel beyond the spoil bank when at work. These were Omwake's plans. We finally got the machine to work after a fashion and the professor found a buyer/^{who} provided one eighth interest in the right to manufacture. The machines went with it. Charlie and I received one fifty per ten hour's for our work and a promise of one third interest in the rights to build the machine.

It worked fairly well in loose soil cutting the ditch at one passage to any depth up to forty-two inches and was propelled with a rope anchored and wound on a reel on the machine, using a team of horses to move from ditch to ditch and road.

At this time (1888) Bowling Green was a booming oil town of some good 6000 looking for factories. A machine shop from eastern Ohio moved in looking for something to manufacture, saw the ditcher and made a deal with the professor for rights. He sold out his rights and his brother's rights and my rights and the farmer's rights. We had no papers - only his promise. This was no good.

One machine was built. I operated it several months with my two boys. The machine was built too lightly. There was no way to carry an accurate grade. There were many break downs. One of the boys did the firing. The other hauled water and weed with a one horse wagon with a water tank on the wagon. The boy would drive in the water and fill the tank with a bucket. He found that by going farther out in the river the water was much deeper. He thought, Oh, shucks! I'll drive into deep water and let the water run into the top of the tank. The tank floated off and downstream. He had to come and get me to get the tank in place.

We used to take the tank off and place boards on the wagon to ride home on the week end (some ten miles). We had a long ten inch board and a short one on the wagon. I sat on the forward end to drive and the boys sat on the rear end beyond the axle teetering. I looked back and saw they were asleep. I thought it would be great sport to roll on the other board and let my end go up and let them roll into the road. I got to laughing at the surprise they would get. I rolled against the wagon wheel and had my ear scraped with spokes in the wheel before I could quit laughing and stop the horse. The laugh was on me.

In 1889 I got a notion in my head that I could build a ditching machine; but my family had grown to six with my mother-in-law and sister-in-law as newcomers with nothing ahead for a rainy day and rent to pay and little fellows to keep in school. I knew nothing about mechanical drawing. I had all my plans for the machine in my head. The pattern was after no one's. I was not to follow; but, to lead. I also knew that not having the where-with, no one would do the work, as the plans were in

my head. Had I been able to make or have made blue prints no one would have paid attention to them. I would have been considered a hay seed trying to explain something I didn't know anything about, such as an iron crank shaft- he, he!

The wheels rolling around in my head began to rattle, - or at least they were getting me rattled. I had made good at anything I had ever undertaken except schellteaching. I said, "Jim, why don't you quit ditching in winter and get a warm job in a machine shop?"

I knew that if I ever got a ditching machine, I would have to build it myself. The only thing I knew about steam engines was what I learned in six months on that horse power baby.

The fall of 1889 I applied for a job to keep up steam in a small machine shop that did all kinds of repair work. There was a forty horse power boiler and engine. Not but little power to run slow moving iron machinery: lathes, planers, drill press, shaper and thread cutter. There were machines for only three machinists. The steam would vary from forty to one hundred pounds and was fired with natural gas. The only time it required power was when we took the heat off; i.e., melted iron to pour into molds. The blast fan had to turn at a very high speed and would take off heat two times a week. It took three hours to take off the heat.

It was my duty to have the steam up by 7:00 a.m. and keep it up until 6:00 p.m. and We would blow the whistle four times a day ~~to~~ open and close and keep the shop clean. This went on six days a week for fifty-two weeks a year.

One of the downcast partners, the office man, had some of his friends call from down East showing them how nice natural gas was. We had a big box stove to heat the shop. A one inch by three feet pipe full of small holes was placed in the stove and connected to a gas main line. He walked back to the stove and turned on the gas, lit a piece of paper, opened the stove door and threw the burning paper in. Puff! The stove scattered over the shop. No one was hurt but we were all badly frightened. He said he would let me do the showing off the next time.

While I am talking about the gas business, I may just as well give my experience. I had a burner the same as the one in the stove except that it was larger with a supply pipe in the center burner crossways with some six inches in the center with no holes. I would leave a small fire to keep the boiler warm. One cold morning I found the fire out at one end of the burner. Being in a hurry I opened the furnace doors and turned on a little more gas. I stuck my head in the door, reached in, and brushed the blaze over with my hand. I hadn't any idea that gas had accumulated in the back part of the arch. It caught fire and came out in a big blaze. It did not even give me a chance to see it coming - let alone get out of its way. My mustache, eyebrows, and lashes and hair below my cap were all burnt away and my face blistered. There was no heat after this big flash which threw me back some five feet against the building. No harm was done to the boiler or the furnace.

I pulled for the pattern room and smeared linseed oil over my face and my neck and then put a coat of flour over the oil. I went back to the engine room and had the steam up on time. I stayed at work all day with my face smeared up. The next day I did the same. I had my wife clean me the evening of the second day and had no scars or blisters.

There were three machinists who started at the same time at two-fifty a day. In two years they were still getting two-fifty a day while I, a farm lubber, was making three dollars a day for the same kind of work.

They were trying to get in the most possible time on any piece of work and watched the clock. I was always trying to do the most amount of work with the least amount of energy exerted. If I had a piece in a lathe or any machine requiring ten minutes to finish, I would finish it even if the whistle blew.

The first year when I only had steam to keep up and the shop to keep in repair, I had plenty of idle time. If any machine was empty, I was in it with something. I watched how they would set tools in lathes and the size of cuts to take and spent lots of time in the pattern department and tempering tools and welding. I kept my eyes and ears open and my mouth shut when about the shop and

As I stated, I acted as simple-minded as I could and asked all kinds of foolish questions. The pattern maker got a rush job and asked me to help him. /There was a casting was two feet long and he told me to make one like it only a quarter of an inch longer. I asked, "Why do you want the pattern longer than the casting?" I guess to give the boys in the machine shop some work."

"Oh, you dumbhead! Don't you know casting shrinks one eighth of an inch per foot?"

Another point was stored away.

When I was certain I could do all the work to build a ditching that would do better; i.e., more accurate work than by hand; all I had stored in my needle and the wheels in my head bothered me in my sleep.

I called on the manager and stated what I was up to. He said, "Let me see your drawings or blue prints."

I replied, "The only way to see my drawing might be with an Xray, as they are all cooped up in my head."

He asked, "What do you want?"

" - you to furnish the material to build a traction ditching machine - and the use of any machine in the shop when it is idle. I shall not interfere with your men on their work or with the machines in use. ¶ (CONTINUE PARAGRAPH)

The boiler (This was in 1891 and before any motor but steam) and engine are standard and sell for more than cost. I will open the shop and keep up the steam. ¶ For the rent - and if there won't be any if's, as I have too much at stake to make a failure: four boys and two girls, ages one through twelve, and nothing ahead for a rainy day - if it won't work and is a failure; I will stay and work out the balance due."

"Well, Jim, you have made good at everything we put you at and we do not care to lose you - and doubted very much that you were as simple as you pretended to be. You learned to be handy at everything." He finally said, "Well, Hill, if you are so confident, go to it and we will see that your family has plenty to eat."

(By the number of mistakes this machine is making I guess it is as tired as I am.)

H Maybe you think it is an easy task to determine the ~~velocity~~ speed of the business part of a machine. I had that salted down. While ditching by hand, there was a man plowing in the same field and there was some stone in the soil. I staked off four lots of five hundred feet each and asked the farmer if I could plow around.

"Go to it. I'm tired."

I had a man with a watch and paper time me with a team between the stakes. I had the team walk slowly. Through Station I I noticed the plow wiggle through the stone easily. Through Station II the plow went a little faster. Through Station III there was some trouble with stone. Through Station IV on trot we encountered stone that broke the plow point.

This was some fifty-five years ago and I haven't forgotten the figures. I geared my cutting apparatus to move through the soil the way the plow did when doing its best work and knowing that with the stones and roots in the soil would cause the cutting part to become locked at times. This would make it necessary to have machinery strong enough to hold the engine if the machinery became locked, and at the same time have power enough to operate in any kind of soil. Most inventors would have had to experiment. My little fairy whispered the proper size of engine. The engine made 250 revolutions per minute and had to back gear so the machine would move forward three to eight feet a minute, depending upon the depth and kind of soil.

The soil was very soft at times and I had to avoid weight wherever possible. I had to know the kind of metal to use for different parts of the machine and it was my hobby not to follow anyone else's pattern. The machine looks easy and simple enough after it is furnished; but try to make a machine of this size without any drawing or photo of the machine. I have a gift of seeing in my mind how a machine to do a certain kind of work ought to look and of knowing how to measure with my eye the size of the working parts and the strength required to do any kind of work for which the machine is intended.

Mine was the first self-propelled ditching machine anyone ever attempted to build. The excavating part at the rear of the machine put no weight on the back after the ditch was cut. There was no differential on the axle. The power was

Well, at last I got started on the machine. I made the patterns first. There were ten different sprocket wheels, a pinion/ and gear and a number of other patterns. These were easy ^{as to} ~~to~~ ^I size in diameter, had to depend upon a suver mind as to strength. The diameter was all figured so as to give each part the proper speed; except for the fly wheel. I do not know why it is called the fly wheel. Its purpose is to turn the crank over when the engine is on dead center. The momentum in the wheel carries the crank shaft over the center. If it is too heavy or too large the momentum would be too great if the machine became locked and some of the parts would consequently break. If it is too small and light it would not carry the engine over the center. I knew of no way to figure out the size and the weight. I called on the Super Mind as I saw the machine in my mind and measured by sight what I saw in my mind. I must have gotten the correct size since we used the same pattern as long as we used steam engines - and we did on some five hundred or more machines.

In fact, I saw how the finished machine ought to look and I had the gift to give the correct size by sight.

I saw in my mind the full size of the machine and not a small one on a certain scale. I had learned different grades of steel and iron and knew the kind and grade to use for different parts of the machine according to the work each part was to do. I was advised to buy my engine. The only one available was a vertical one with a fly wheel too large. I knew it had too much momentum for my machinery to hold it if it became locked. I wanted the entire machine as I saw it. The vertical engine jumped too much and I was advised that a horizontal engine would keep the machine moving back and forth. I know better because a machine on the move would hold steady against the work, keeping it from rocking.

Now as to the pattern for the engine bed, my design was different from any I ever saw. The engine bed was easy to make; but the cylinder where you had to send your mind inside and look out. The pattern was just a big block with burrs on it for core prints. There was a core for piston two and a core for the steam chest and the cast iron crank shaft. Talk about shop! I thought Jim was a little loose in the upper story!

PAGE 2: 1-28-43

I was not too far gone to put a cast iron crank shaft there there are frequent sudden stops. I just let them have their sport and I went ahead with my work as planned. Instead of a one and seven-sixteenth of an inch forged steel shaft I used a one and fifteen-sixteenth inch shaft, setting one-fourth of the steel. We used these cast iron crank shafts on all small machines and never heard of a broken shaft.

Mrs. J.B. Jung had a shingle cut: "washing taken in here". She said she wanted to help and she really did help because every evening I would take home the patterns and sandpaper and with her help would smooth or sandpaper the patterns. Sand paper calls to mind a country boy, a backwoods boy, who wanted to learn to clerk in a store. He got a position with an old Jew.

"Now, young man, if we don't have what the customer wants, try to sell him something else, especially at the first sale in the morning."

A young lady called for toilet paper. The boy had never seen toilet paper and looked all over the store for it.

"We haven't any toilet paper. Would sand paper do?"

I was up at 3:00 a.m. and at work. There was no let up except just long enough to fill the hole under my nose until 9:00 p.m. every day but the Sabbath.

The know-it-all's had more uncomplimentary remarks when they saw my traction wheels twelve inches in width and forty-five inches high with three-quarter inch cleats to pull a machine to cut a ditch one foot wide and four feet deep at one passage.

"Oh, my, that is the best yet! I thought Jim had some sense!"

As I would pass on the street I would hear people say, "There goes that crazy Hill".

After some nine months I had my machine completed and christened the Fockye Traction Ditcher. I reasoned that if I named it Hill Ditcher people would get it into their head that the machine was intended to ditch hills whereas it was intended for low flat land. One fine day in October, 1892, I ran the machine out and got the grade stakes ready. We were all set and ready to go at 12:30; so the men in the shop could see how simple-minded and crazy I was. I turned on the steam and lowered the cutting apparatus cutting to grade and threw the lever. The machine started down the

read at five feet a minute cutting a ditch twelve inches in width four feet deep, leaving the excavated soil all on one side near the ditch, making it easy to refill. the bottom of the ditch^{was}/eval and on perfect grade. There was no stopping to adjust anything in cutting some five hundred feet. The show men gathered about me and said, "Jim, forgive us. You certainly put it over on us. You're not the dumbhead you pretended to be. That sure is a great machine."

The big boss phoned for reporters and the big men of the town to see the wonderful machine at work. The paper gave me a half page puff. The boss said, "I was certain the way you came at me that you knew what you were doing and were not as simple-minded as you pretended to be."

I had eight hours and a helper to pay for the work I could not do by myself. I sold the machine the next day, netting me three dollars a day by cutting the eighteen hour day to ten hours and I had my patterns, templates and forms clear.

I got a little puffed up and thought I would be a blessed bond holder. I had not bought but bargained for five thousand dollars worth of stock in the company and I gave my note. The stock was one hundred percent below par. My note was the same at this time because I had just enough to pay all the bills due but the five thousand dollar's worth of stock, leaving me with the papers, etc., to make a new start.

In the fall of 1891 - I was going to say a man, but instead I will say - a creek - will not give his name as he may be living, which he is most likely as he was too creeked at that time to place in a coffin - will refer to him as Seal Away - he had a patent on a self-sharpening cast iron point. A little case hardened off set on cutting edge of the point. In very sandy soil we would have work out a point in a day's plowing. It was a cast iron plow and point. It weighed about six pounds and sold at seventy-five cents each. There was no work on the point but a little grinding of a grind stone. It was guaranteed to outwear ten ordinary points. We put five men on the road taking orders from implement and hardware stores on consignment. This was a good seller since no one paid for the points until they were sold. Every

a hundred
 place for a radius of ~~1/4~~ miles and some places as far as five hundred miles had them
 shipped by the carload. It was not new pig iron; but, all old scrap - very cheap and
 no good for any purpose. It was too hard to be worked.

The sand had a small ~~1/4~~ core to cast the hole in the point to bolt the point to
 the plow. The core shifted or it was never in the proper place on the pattern.
 Anyway, when a farmer attempted to change points he found the hole a half or three-
 quarters of an inch off with no way to change the hole so the bolt would fit. I
 doubt if the company - if there was a company at that time - received pay for a dozen
 points. There were a number of damage suits on hand. The cause - carelessness. The
 points were just rushed out whether they fit or not. Seal was paid for time. He was
 the foreman of the foundry.

The shop went into the hands of a receiver and ran a month. The receiver said,
 "Well, no work tomorrow." My fairy whispered, "Jim, get your patterns and tools and
 belongings away from the shop. The receiver was out of town that day and there was
 no one to stop me. I moved everything I owned out of the shop at once. Had I waited
 I would have had a hard time getting my possessions as the receiver was a heartless
 Jew.

I received an order for a machine and an offer of cash as soon as the machine
 was completed. Seal was wanted to become my partner. After being kicked out he tried
 in every way to get a finger into my pie. He had made too many promises I knew he
 could not keep. In some way he learned that I had an order for a machine. Being a good
 talker and a much better promiser, he hustled around and found a small deserted
 machine shop with a very good iron lathe planer, drill press, forge and small engine.

Seal came to me and stated that he had a small shop and had no use for the machine
 department. All he wanted was the foundry and I would keep up steam on casting days
 and buy castings from him at three cents. I found I could use the shop and machinery
 free. Seal made the arrangements with a big store to give me credit until the machine
 was ready. He drew up a contract ^{of} what he would furnish. My little fairy whispered,
 "Careful, Jim! Cut that all out and say, 'Furnish the castings at three cents a pound'".

He gave me ample time so I would bite. His object was to make the casting so hard that they could not be worked. There was a small foundry in the same town of Peshler, some twenty miles from Bowling Green. There was there a Mr. Suber, who had been the first to make the self-sharpening points, and who was at loggerheads with Mr. Seal Awag and very willing to help me. Suber did all the casting that was necessary for me.

Scal saw me getting castings from another foundry and said, "Here, I was to make all your castings."

I replied, "You could do so if you used soft scrap or more pig iron. Your castings are so darned hard it's impossible to work with them. If you look at the contract, you will see that it says "casting", not even castings. You get me; but I will get you yet."

The machine was nearly completed and I ordered the boiler by mail. Mr. Scal Awag spied on the young lady in the post office and told her that I had sent him after the letter I had just mailed since I wanted to make some changes. Scal's brother or partner was a very honest man and told me that Scal had taken my order out of the post office. I kept my mouth closed and wired for the boiler. When it came a few days later, Scal was wild and could not imagine how I received the boiler so soon. I never gave it I never gave it away until this day, January 29, 1943, fifty years later.

The machine was completed on time and the cash was received. I settled with everyone but the worthless stock. It was not honest, so I lost no sleep nor worry over it.

At this time Varburen and son operated a small foundry and machine shop at Cary, Ohio. They were looking for something to manufacture. The young man called on me and we agreed on a deal. Since the shop belonged to his father, he would have to see the machine at work; and would be back the next day. I was to have the machine in operation nearby.

The train arrived. This was before the time of the auto. There were no Varburers. There was nothing to do. In passing the station I saw the Varburers ready to catch the train home. The young man said, "How did you get here?"

the ~~fact~~ ^{fact} ⁱⁿ ^{the} ^{new} ^{world}. I made a deal with the Ventrucians. That was the last time I saw scallywags. It says, be

Page 30 2-2-43 CLOUDY DAY, CLOUDY, FOGGY, DAMP, WARR 10:00 a.m.

To keep me from being hemsawgled out of my invention I had in the contract any changes or new machines. My head was full of wheels keeping me awake not in the daytime; but, at night. I was to build the same at my expense. They were to furnish the labor and the material at cost. I was to have free use of the shop and the tools. There were no wages when working on new inventions or improvements. I was to receive three dollars for a ten hour day. These were big wages for that time. I was also to receive sixty percent of the net profit on any machine sold.

Vanburen's shop was at Carey, Ohio. We moved there in 1897 and orders came as fast as I could build the machines. I had charge of the erecting room where the parts were assembled and machine tested and painted.

There was no one available who knew ditching or how to set grade stakes and machinery; so it became my task to. As we called it, I was an expert at all machines.

I call to mind what I think was Machine No. 7 in Southeastern Ohio. An old gent bought the machine for his ~~son~~ son. The son broke in ready to settle. The old gent called me into the house. He was standing. He said, "Have a seat, young man."

He came to me and began to run his fingers over my head. I remarked, "There may be some small ones, but I doubt very much if you can find any large enough to catch."

He laughed heartily, stepped into the next room and came out with the cash for the machine and gave it to me. He was a theologist. I think he found my honesty bump well developed since he did not hesitate to give me the cash even though I was a stranger to him and he did not trust banks.

Everything rolled smoothly for a year or two. Passing through the shop I heard the old gent tell his son that he (the old gent) had never made any money and that he wanted to make some and quit. My little fairy said, "Jim, keep your eyes and your ears open."

A few days later I came in unexpectedly from exporting a machine. I was passing through the assembly room. There were four five inch rods, some forty-two inches long. There were only bolts to keep the main frame together. They had run out of new iron

The old giger hunted over the old scrap pile started in his boyhood days and found some short pieces half eaten with rust and had them welded to the proper length. The men were ready to put them into place. I picked up all five of them and broke them in two and three pieces and threw the pieces down. The men asked him for rods to bolt the frame together.

"My, I just placed the bolts by the frame."

"Yes, but Bill broke all of them."

The old gent could make a prayer in church as long as your arm; but what he said was longer by far than my leg. Some of his remarks were not at all complimentary; but I held my angry passions in check and my fly trap shut.

He finally cooled down so he could talk with reason and listen to what I had to say. "I heard you say recently that you never made any money", (He gricked his ears up.)

~~He gricked his ears up~~ "and wanted to make some and retire". I continued, "I don't care how much you make as long as you make it honestly. You have enough to keep you and your two children. All I have is my machines and a wife and ten babies to feed. A 1 material is going into ditching machines as long as I have anything to say."

He knew I was right and had my eyes open. There was no more trouble.

His son couldn't stand prosperity and began flying his kite and living beyond his means. I saw where it was leading to. He had grown too large for the shop and the town. When I heard that young Vanburen was negotiating with a large shop at Findlay, Ohio, I thought that if I lipped I might spoil the whole deal and anything is better than a spentthrift. He never consulted me until the deal was closed. I learned several years later that he sold my patterns and templates, forms, etc., to the Company of Vanburen, Heck and Marvin as so much stock in the company. I am a poor financier and making a living did not worry me. Oh, well, I am still on top and the scalawags are all gone.

I had no stock in the company. I bit once and never tried again. Myers, Heck and Marvin were two very nice gentlemen along in years.

I was placed in charge of the erecting department over some twenty men. Van's brother-in-law got it in his chuckle empty head that he was the only man for that position. He was along in years and I favored him by giving him easy tasks and letting him choose what he liked to do. He kept going to the office with all kinds of tales about not letting men loaf and having some pots. The shafting was not in line - there was some complaint every day. Mr. Marvin spied on me. He called me into his office and asked if I had any pots or favored anyone.

"No one but J. He's getting old and is a stockholder and would take an interest and do a fair day's work."

"Don't you know J is a very bad snake in the grass?" He said he had been bally-asking for a month.

After that J always had plenty of work ahead of my choosing. When he saw that he could not run me out and get the position he quit.

Van was sales manager and appointed agents at a very fat commission. There was one each in Ohio, Indiana, ^{and} Illinois and two in Iowa. By giving a fat commission Van could get a rake off. We received more orders than we could fill and a number of them from men who never had a dollar and never would have. I am of the opinion that some of them were John Doe/ men. Early in April the agents swarmed in to collect the commissions on the orders. Hears, Beck and Marvin refused to pay the commissions until the machine/^{was} stolen for. Van told the agents in my presence, "You boys spent your time and money getting these orders. It isn't your fault that the machines are not delivered. Do not promise. Sue/ them for every penny."

Van was a member of the company at that time.

We grew out of our swaddling clothes. The dough was getting low with Van as a sales manager. We organized the Backhoe Traction Ditcher Company. We were now on solid footing and everything was okay. I was kept on the road most of the time. I had occasion to switch my youngest boy. He ran to his Mama crying, "Mama, that man who comes here sometimes spanked me. Backhoe!"

Oh, no, it was not an easy task for me to hang on to my invention - just Dutch

I got started on my downs and could not stop; so I shall have to start back several years. In 1894 the state of Ohio bought a large farm for a new experimental station at Wooster, Ohio. My reputation as an expert ditcher had spread throughout the country. I did work in Henry, Wood, Lucas, Ottawa, Sandusky, Seneca, Hancock, Putnam, Spaulding, and Williams Counties. I was personally known by Professor Thornton, the big boss in the Ohio experimental work. He insisted that I do the work of tiling, as we called the work of cutting the trenches and placing the drain tile. The state field engineer had half a dozen drains staked. The hub was fifty feet apart. The depth of the drain was at every stake.

We were ready to start. He showed me the first ditch to cut and gave me a paper with a lot of figures. I told him I had no use for all these figures. All I wanted was the depth at each end and if there were no break in the grade.

"But this drain is only two feet deep in some places and three feet deep in other places. I told him I did not care if the bottom of the drain was a foot in the air or four and one half feet in depth. All I wanted was the depth at each end and if the same grade.

"I do not see how you are going to do it."

"Let me have my way and if the drain isn't out on true grade its full length, it won't cost you anything."

When the trench was finished he came with his level, figures, and tape. I said to him, "That will take a lot of figuring and time and I ought to be at work. Let me show you how to check the grade with no measuring or figuring."

I placed the level over the lower end of the drain and elevated the upper end to a very good guess as to the fall in the drain. I placed the staff in the drain and marked where the level showed. I sent a man with a staff to the upper end and placed the staff in the drain and adjusted the level to the same mark as the lower end. As the man came down the drain he placed the staff in the drain every five or six feet. He found that the grade was perfect at the full length. Well, I see I will have to hunt another job.

There were some fifty miles of drains in this job and I hustled all I could to be able to attend the World's Fair in Chicago. I finished the job the same day that the fair closed. By keeping my eyes open I learned a lot that came in handy when I returned to the farm - which was a hankering I could not resist.

Nothing of importance happened until August of 1895 at the Exposition at Atlanta, Georgia. The Van's and I decided it would be a good place to advertise our ditching machine. I was to go with the machine. There was a lot of sport, telling the same story from 8:00 a.m. to 10:00 p.m. a dozen of every ten. Some would ask the second time. They would ask, "What if you strike a stone?"

If the party just asked to have something to say, I would answer, " - just strike a stone".

It may be of interest to those who read this to know that this point was taken care of while the wheels were still in my head. By having slow moving cutters and the draw bar near the top of the cutters a stone that was not too large would be rolled out of the bed by the cutter. It was hinged at the top. The bottom wheel in rising would back, making it very easy to roll the stone out of the bed. The operator soon learned by the sound whether or not the stone was large or small. I have operated in very stony soil by going very slowly.

I arrived in Atlanta late at night and needed a pair of overalls early. I found a store open and bought a pair, the regular price of which was \$1.25. Since I was late they charged me \$1.75. I gave the clerk a twenty. He gave me \$18.00 and walked to the rear for the quarter. He gave ^{them} me \$18.25 in change. I told him he had already given me \$18.00.

"So I did. Here, take these \$1.00 overalls at cost."

Several of the men in the rear of the store took me back and introduced me as an honest Yankee. They and friends were worth more than the paltry \$18.00.

A young man from Chicago had wind mills and machinery to unload and set up. He employed half a dozen black darkies. The exposition was some four or five miles in the country. There were restaurants on the grounds. At noon Mr. Windmill Man marched his crew to the restaurant for dinner. The manager told him kindly that colored people were not permitted to eat in there. Windy said, "This is a public eating place and my money is as good as anyone's and I will eat here."

"Stand aside."

The manager had to call the police to quiet Windy and teach him that he wasn't in Chicago.

I did my car unloading by my lonesome. Just steam up to run off

One of my overalls friends was one of the superintendents of the grounds and gave me a very good position next to the United States Exhibition Building. Everybody had to see what Uncle Sam had to show and in unpacking the lathe were very careless. I got permission to use scrap lumber to keep up steam. There were no gasoline or electric motors at that time - I just used the broken pieces and saved all the good pieces and sold the same to Uncle Sam to repack the exhibit at the close of the exposition.

The soil was red clay. There was no room to keep the machine running. I cut the back so the dirt would roll back into the tank, handling the same dirt all day. So much handling caused the clay to become dry and the dust blew on the folks. I thought I would try a little water. This did away with the dust nuisance far beyond my expectations. It caused the red clay to form ~~very~~ small balls the size of ordinary pills and by continuous rolling from day to day, became covered with a brownish smooth coating with a center of reddish brown clay. The coating resembled a common pill. People were surprised to see how pills were manufactured, especially a delegation of colored doctors. So many people wanted the pills I got small containers. More or less than a ton of my pills were carried away, mostly to show the home folks the red clay soil. The paper gave me a puff on the pill machine.

Away from the machine I saw President Cleveland with his cronies stop at the machine. I became a little flustered and started the machine before the water had all drained out and since I was burning soft coal and pitch pine; there was plenty of black soot in the smoke stack. The President was in the proper place for the breeze to carry the black sooty water over his stove pipe hat. I had him well bespeckled. I apologized the best I know how. He wanted to know who invented that machine. I told him - and that I had been reeked in a hickory cradle and had hickory splinters in my hide yet. He remarked, "Never mind about the black spots. That will all come out in the wash."

We talked for half an hour. He thought I had a great machine. There was a farmer's yard just outside the exposition grounds. Hillbillies

came as far as one hundred miles with a few potatoes and pumpkins corn. There was a false bottom in the wagon box with moonshine and schnapps between the floors. B set-

loggers would cash out of it and sell it in blind tigers about the exposition grounds. There were all kinds of skin-they-alive games just outside the gates. The street car conductor was a steel pigeon. He would place a five on a number spinner and whirl the wheel. When he was given a ten he would pull out with his car and a lot of suckers would try their luck. No one would win but the steel pigeon.

At the close of the exposition I sold my lumber to Uncle Sam for twenty-five dollars. I had to see a damn man to get the check so I could get it cashed.

I received several orders. One was from New Jersey. I went home that way to export the machine. The railroad company would sell return tickets to Atlanta and return for a dollar or two more than the one way fare. The holder would sell the unused or return ticket to ticket scalpers. The tickets were not transferrable, but it was pleasanter for the conductor to punch your ticket than give you a return ticket from the the first stop and see you get off without being put off and in some cases held the train up half an hour and maybe receive a colored eye and a cracked nose.

The railroad company had spotters to see who bought cheap tickets and tip the conductor off. I paid \$1.50 for the ticket from Atlanta, Georgia, to New York City. The ticket was void after six hours. The conductor had me spotted and I knew it. The conductor looked at the ticket.

"You have only six hours until this ticket is void. Where did you buy this ticket?"

"In Atlanta."

He gave me a ticket back to Atlanta. I arrived in the wee small hours and found a scalper with a ticket to New York void after one hour. I paid fifty cents for the same. There was a fast train ready to leave and I had to hustle to get aboard. I did not look at my ticket. I guess I looked honest or the conductor did not want to stop the train and examine my ticket. When he did examine it, he said, "The time limit on this ticket expires in an hour."

I replied, "I started when the ticket was good."

There was no more bother.

I had been over the northern states exporting machines and never in any place but that did I know someone or did they know someone I knew.

The next machine I sold at League City, Texas. This was midway between Houston and Galveston. I thought, "Surely no one here will know me."

As I stepped off the coachman said, "Hello, there, Hill."

There was a flowing well. There was an inch pipe eight feet high and nice clear water right where I ran the machine off the car. He fired up everything okay and started for the country. I hadn't gone ten feet before there was water in the boiler. I tried to see where it could get out the fastest: the pop of the exhaust. I had to hustle to draw fire. I filled up with water from the road ditch and had no more trouble.

This was in March of the same year as the Galveston washout. There was a storm on the way home. I had to lay over at Houston two hours and did not care to stroll about the city with all that cash in my pockets. I thought I would loaf around the depot. A talkative fellow came in and wanted to know where I was going. I told him,

"Oh, what luck! I am on my way to Columbus. We can go together."

After talking some time he asked me if I would have a beer with him. I stated that I never drank.

"Well, have a cigar."

"No smoke."

He insisted I have pop or lemonade. As I stepped into the door of the nearby barroom I saw a table with slots in the top. I turned and went back to the express company and sent the money home. He saw me in the express office and had no more interest in me, nor did he catch the train north. I never could figure out how he imagined I had money unless he was kin to the rats we have here on the Raccoon prairie. We drill our corn grains fourteen inches apart and a rat will go along the row and only dig where there is corn. He must have a keen sense of smell or super knowledge as to the exact location of the corn the same as the two-legged rat who knew I had money. At least he had no interest in me after I shipped my money. He forgot he was going north.

I do not know if being at sea level for ten days or eating raw strawberries March 1st made me look like an easy mark or if it was just my natural look.

LOCH-

PAGE 66 3-12-43

ing as an easy mark, I noticed a newbutcher looking passengers over carefully. Coming back he soon stopped at my seat and showed me a fine looking ring he had found in the sleeping car. He said it must be worth twenty-five dollars, "B ut if you give me five dollars, you can have it."

The ring was from a ten-cent or quarter counter. I had intended to report the new butcher to the conductor; but I thought it would be best to ask a traveling salesman.

He asked, "Are you from the North?"

"Yes."

"Have you time and money to appear in court every month or two for the next year?"

"No."

"If there is any chance of getting any money out of you Yanks, some skinner pettifogger will defend the new butcher and let the case drag on as long as the/fees are paid . You need not invest-especially in strangers."

I accepted the advice and thanked him. The advice is still holding good. This was some forty years ago. There have been great changes here. In Yanks were as welcome as the Cajans. Four of my children married Cajans and the second Mrs. J.B. was of Sulo. descent, born and reared in the parish of Lafourche, Louisiana. She was born September 28, 1871 .

On my way home from Houston, Texas, I was to stop and see a party who used to live in Ohio. He had started a tile yard in Tennessee along the Tennessee River about midway between Memphis and Nashville. The nearest railway station was twelve mile away and so I hired a horse and buggy to go the twelve miles and it was some going. ^{Somewhere} I had been hauling railroad ties eight to a load and three ~~four~~ yoke of oxen to the wagon. The road was out and washed into gulleys. I had to get out three times and tie the hitching strap to the top of the buggy bow and walk beside the buggy to keep it from upsetting. I finally reached the river at Centilla. I put the horse up and found a man to ferry me over. He said it was only a mile to where my party lived. I was to follow the river to a fence and then follow the fence to the man's house. It was getting ready to rain. A cold north east rain was brewing. I walked a mile or more and found no fence. I thought perhaps the fence had

I started back for the boat landing. A lot of cattle snuff that I was a stranger and followed me. Cattle have very sensitive noses. You can have blood from any animal, bird, reptile or human and they will pay no attention; but if they smell a little cattle blood, they will make an awful fuss: bellow, paw and scratch. If you want to give a ~~girl~~ cow a calf that is not her own, you have to catch some of her water and pour it over the calf and let her smell the calf while wet. This has never failed.

I finally got back to the ferry landing, intending to go back to town for the night. The wind was from across the river and it was raining. No one was out - at least no one answered. I found a hollow tree that had been burnt out and had its back (i.e., good side) to the wind. I stood there until day break and could see the buildings where I wanted to go; but the river rose during the night and I had to wade in water knee deep for a hundred feet.

I had a good warm breakfast and put on dry socks and pants and was ready to be on my way. My friend ferried me back to where my horse and buggy were.

There was no sale for my ditcher machine; but my friend was kind enough to inform me that there were a few bears in the woods which were still very wild - and there were pole cats. Nothing molested me during the long rainy night - not even sleep. The cattle would call occasionally to see if I were asleep, I suppose. And old bull pawed around and let out a few challenging bellows. When I showed no fight he left.

I was getting a house full of young lads and lasses. I bought a house to match our position and became a member of the Junior Order of Mechanics Red Men. My wife and I joined. She was Pecahentas and was a leader in the lodge at Findlay, Ohio.

I bought a house suited to my position and my young men and ladies.

I never joined any church or society but the three lodges and Odd Fellows. via we put our ticket out one year. They were short of members and placed me as a city marshall. The votes were all tabulated and I received one vote. No, I did not vote for myself. I was way out in Colorado near Pike's

country. The next Sunday I attended church in Mimi. There was a hall across the street from the church. It was a church hall. As soon as church was over everyone rushed out and into the hall and sat at the tables for beer and pretzels for the young as well as the old - and there was stronger than beer if you called for it. After having my eyes and my ears open, and roaming among the people of the United States, I have it summed up in this way: The greater majority of the heads of different churches are sincere and honest in their beliefs as they interpret the Bible, taking the part that suits their fancy.

The most simple is the thief. It is written in the Good Book, "Thou shalt not steal, let them steal." That is all the pericaine curse that the good Book says. - no more. There were so many different churches that it was hard to decide which one is best; so I just decided to "Do unto others as I would have others do unto me". In digging trenches for drain tile by hand I would find places of stony hard pan. The thought would flash through my mind, "Go over the hard pan and roll the tile in to cover. No one will be the wiser."

My little bird would peep, "Yield not to temptation for yielding is sin."

Then I would reverse. If it were my farm and someone did a bum job such as that would be, I would boot the culprit off the farm.

The rule holds good today as I am sorting seed corn and looking for my eighty-seventh nilocene here on this mundane sphere. It is more tempting than ever because there is a great demand for my seed and there are very good prices for it. I am turning away more orders than I am filling. There is no first class corn left. It has all been sold. I am not yielding and selling second grade corn.

Back to church, I think there are a few sects started by someone wanting to make an easy living; others, to gain position and power to rule. I think Adolph Hitler is one of these. I believe that if you willfully commit a sin against your neighbor, state, country, self or anyone, including the Great Ruler of the universe, you will be punished in some way during your life, no odds how much you ask for forgiveness or ask others to pray for you or pay

(This is St. Patrick's Day and I am not as brave as the saint; but am almost eight years older than he was when he drove the snakes out of Ireland. Just a half an hour ago I caught a full grown, live - not snake, but - mouse crawling up my leg inside of my breeches. I was sitting quietly with my legs crossed reading a letter from a grandson in the army. I felt something crawling up my leg on the inside and inside my breeches. I did not know if it were a snake or some small bug. It felt as if it were a full grown rat. It got up as far as my knee. I grabbed where I thought the head ought to be - outside of my pants - and yelled for help. I rolled up my pants and found a full grown mouse with its head mashed. I haven't any idea what it was after.)

Everyone was in a hurry to get the cars loaded. There were no trucks or gasoline meters at that time. Some companies had three or four cars to load after 6:00 p.m. Since I was alone I was shoved back. At 11:00 p.m. the cars with machinery pulled out and my car/^{was} spotted at the loading platform. The machinery men bade me goodby, stating that they would see me some time next week in St. Louis. I had the steam up in a very short time and had the machine on the car and blocked ready to go. The livestock train had the right of way. Since mine was the only car of machinery, these responsible did not want to come after just one car. It was hooked on the tail end of the stock train and I was left there until we reached the fair grounds in St. Louis. In order not to be bothered switching my car in placing the stock cars; my car was at the unloading platform first. When the machinery men arrived Sunday noon I had my machine in place, my tent up and everything ready for the show.

"Hill, how did you manage to get here? We were sidetracked a dozen times. - thought we would never get here and felt sorry for you in Springfield/ all by yourself. We weren't looking for you until the middle of the week? How did you manage to get here ten hours ahead of us?"

At noon on the last day of the fair a contractor came and looked the machine over and asked all kinds of questions as to what the machine would do. Well, if your machine would only cut a trench two feet wide, I would pay you cash. A machine trench a foot in width is too small for men to get in and cork pipe.

I asked him in what part of the city he wanted to use the machine. By always keeping my eyes open I knew sandy clay soil was ideal to work. It would be cut but it was solid enough not to cave in. My little fairy whispered/ how I could cut a trench two feet in width within that kind of soil. I asked how soon he wanted the machine and he said, " - by seven a.m./ Monday."

I called up a small machine shop nearby to do some work Saturday night. Everything checked out okay. I told the contractor I could be there but that, instead of the machine cutting 360 feet per hour it would only cut 180.

"That will be okay."

"Can you get me a permit to run across the city Sunday afternoon?"

"Okay."

I ran the machine to the shop and ordered the material I needed. I merely had to extend the dirt conveyor and a roller to keep the lower part of the excavator in its place. The first time I tried this improvement it worked perfectly and I had used no drawings, planning or studying.

advertised for
Now unknown the contractor had ~~ordered~~ two hundred men to be ready for work Monday morning. I was on hand early by 6:00 a.m. with the man I was supposed to teach to operate the machine. The men came and found me doing the same work/it would two hundred men the day to do. Some of the men saw me at the fair and learned that I was the inventor of the machine. There were a lot of very

unpleasant remarks hurled at me. Had I been sensitive I would have flown the coop. It so happened that most of the men were Irish Catholics and the contractor's brother was a friend who would take me to lunch and to and from my hotel. There were police nearby all day. In three days I had a man able to operate the machine and no holes in my hide; but there was a lot of nasty talk as work was scarce and the labor market overstocked. This is another time the Dutch got ahead of the Irish.

Up to this time we had only built machines to cut trenches on farms for drain tiles and these trenches were one foot in width and four and one half feet in depth. The only water for domestic use the city had was from wells scattered about the city. There was a dam in the river which would get very muddy after a rain. For fire, etc., there was a cave fifteen miles from the city. It was in limestone rock twenty feet under the surface with a good stream of pure water passing through it. The city of Findlay decided to pipe water to the city since the surface at the cave was thirty feet higher than the city and all that was required was a gravity line using thirty-six inch sewer pipe placed in a trench four and one-half feet deep.

The big boss called me into his office and said, "Jim, can you build a machine to ditch for that water main from the cave?"

"I certainly can."

"Go to it at once."

There were no changes to make. It was only necessary to widen and add strength and power. I had the machine on the job in a very short ~~time~~ time working successfully the fifteen miles of trench. When it was finished there was no work for that size machine.

A few days later a Mr. Smith from Shannen, Mississippi, called at the plant wanting a machine to straighten small creeks. The only fertile spots in his locality were in the valleys one hundred to five hundred feet in width and with a heavy downgrade. Rivulets or creeks would run from side to side. Mr. Smith wanted a machine to cut across these points, cutting a straight ditch so the land could be cleared and farmed.

We made a deal for the machine, we had just finished the water line with. Mr. Smith was to pay a small deposit and was to pay the balance as he earned it with the machine. I was busy in Iowa and did not go to expert the machine. I sent a man who had been an operator on a machine at Findlay. He reported that there were too many roots in the soil for it to operate. Smith did some work with the team and scraper, when coming in contact with the roots. When nothing was in the way, it was easy to cut the roots. Not so with the machine in the way. The company had to take the machine. Smith broke.

A party had contracted to load ten acres of clay four feet in depth into railroad cars for a cement factory. He saw my ditcher working at fair and was pleased with the machine's work, especially in mixing soil from the bottom to the top of the pit. I was out in the country. The superintendent and the foreman in the different departments conferred for some time and decided that there was no way the machine could be arranged to do his work. He asked when I would be home.

"In a few days."

"Write me when I can meet him. I'll bet a dollar he can build a machine to do my work. He is a wizard for designing machines for any kind of work."

In a few days I was back. The big boss said, "Jim, see if you can do anything for this man. He won't take, 'No'."

He stated what he wanted and the kind of soil and the amount of earth to move. My little fairy whispered, "Jim, you have excavating apparatus at the rear of the machine boiler and the engine as a counter balance on the opposite side."

I could see in my mind just how the machine would look when completed. If the machine had been in front of me it could not have been plainer. This was in the latter part of November. I asked him when he wanted the machine.

"Oh, about April 10. You do not mean to say you have a machine planned that will do my work?"

"Rest assured that, weather permitting, April 10th the machine will be at work in your pit."

"Well, I was certain you could design a machine to do my work; but I expected it to require at least a month to make the drawings."

"Oh, shaw! I can see the machine at work in your pit now."

I possess this gift/- I call it my little fairy - of seeing how a machine must look to do a certain kind of work. At that time I could measure accurately to one-sixteenth of an inch with my eyes. I never used a ruler to get belts or any size of iron when working in the shop. This ability to measure distance with my eyes was a wonderful help to me at this time. It is still a great help (March 20, 1943) in driving my old Ford across roads and junction points.

Any improvement on new machines I was to build at my expense and I did all the work in most cases. As it required much less labor and study for the company draftsmen to make a copy of the finished machine than to try to dig it out of my head. I did not need drawing to build a machine.

While talking to the man who wanted the new machine I thought of the machine in Mississippi. It was the proper size and strength and no parts were worn. He was astonished at the price I gave him. "Why, your drawings and patterns will cost you a lot!"

I bought the Shannan machine from the company on royalty account and went to Shannan to get the machine. I found it out in the country and there was no way to get it out alive except by building ^{several} bridges. Since I was going to dismantle it at the shop I decided to do it there and ship it as junk. I had a darky helping me evenings. I had some twenty pounds of fittings.

"Rastus, you carry these fittings to the house."

"Yes sir, boss; but I can tote them."

"I told you to carry them."

He started up to the barn and in a few minutes I saw him coming with the team and a wagon. I learned that in Mississippi "carry" is to convey by any means. "Tote" is to carry by yourself.

Since all I had to do was rearrange machinery with the small wheels to run on ~~it~~ on rails and place the machinery so that most of the ~~weight~~ weight would be on the wheels as the rest from the pit. I geared the four wheels to traction. As the cutting apparatus cut its way the traction wheels did not slip on the steel rails.

The machine would make a four foot ~~gap~~ cut across the lot, elevate the excavator and move the track over four feet, place the traction in reverse high gear. Then it would go back to the starting point and let the cut down to depth, and apply traction gear. There was nothing more to do but sit in the shade and smoke and keep up steam until the end of the run. The yard dump cars were in the pit on rails. It would load a yard a minute. Two men were needed: one to keep the dump cars under the conveyor and the other to sit and see her go.

The first time I did not think I got a square deal because Mr. Smith was offered this machine for one hundred dollars and then asked me for it and at the same time owed me ten times the amount in royalties. I made money on the deal and there was no kicking. I had a very good trade on this type of machine.

For brick and drain tile yards, I had the first machine of this type at work several days ahead of schedule.

two others came saying, "Greenhorns, newsmen - in this case, knew it all". Neither one had ever ~~climbed a mountain~~

tried to climb a mountain ~~and~~ nor even asked if the mountain were climbable. We left the hotel at 9:00 A.M.,

telling no one where we were going.

All went well. We were half way up. It was late in November; but the sun was very hot on the side we were climbing. The last two hundred feet were very steep. The mountain was so steep that a pole would slide down onkays. We had to pull ourselves from bush to bush or rock to rock. There was no going back, since it was easier going up than going down unless you are in a hurry. We found one place where there was nothing to get hold of for fourteen feet. I stood on a stone. A man crawled over me. The next man crawled over us and grabbed a bush. Then I did the crawling. Then the next one crawled and then the next. Then we pulled the last man up. We finally reached the top. Our clothing was wet with perspiration and the air was full of snowflakes. It was too cold to take a rest. There was a winding road to town three miles away.

We got back too late for dinner. We were tired but wiser. We were told we were the first to climb the mountain at that point.

In the fall of 1903 there was a two weeks' fair at San Antonio, Texas. The company sent me with a small machine. There was nothing doing except for the fact that a wealthy Mexican wanted me to build a machine to ridge up cane runs. He was a man from Beaumont, Texas and had a pipe line spindle tap to Sour Lake. It was late in the day when the car was ready to load. It was very warm and the car became overheated. It was early morning when I arrived in Beaumont. I stopped at the first hotel I saw. I was shown to my room. I saw a bed with the tap over it trimmed in lace. I thought he had given me the wrong room. This one was trimmed, or rather decorated for a newly married. I removed the screen so I could vacate in a hurry.

When I went to breakfast the next morning, everyone gave me the right of way. Some even stopped into the street. I stopped into a barber shop and looked into a mirror. My face was a sight. It was full of red spots. The folks had thought I had small pox. My blood had been overheated and I was tired and sleepy. The mosquito net had had a great effect. I had not been the same since.

I ran the machine out to the pipe line and found the six inch pipe all fastened together. I ran the machine astride of the pipe. I only cut the trench twenty inches deep as trench side of pipe easy to shove pipe into the trench. The soil was a heavy, very stiff clay and it did not mix with water but stacked up as if it were wood. The chips were dry and hard enough to rattle. There were two or three inches of soft mud on the top soil, when it was dry. The machine did not bog when the mud was six to ten inches deep on the surface.

The last invention of a gumbe bucket did the work here because it did not pick any of the water in the trench. There was water on the surface half the way. The weather had been very warm. It was the latter part of November and there had been no frost. This day was hot. We sat out in the open country at lunch in our shirt sleeves and no underwear. It was too hot for comfort. At 3:00 p.m. a very black cloud came from the north. At 5:00 p.m. there were snowflakes in the air. By 7:30 the ground was frozen. The boarding place in the country was a very run-shackled old shack with cracks and holes all around to let in the cold/north wind on. Finally my helper and I struggled around the wood stove trying to keep it warm. At 1:00 a.m. the wood was all gone up in smoke. We donned all the coats and old bags we could find and walked until morning. Then we went to town for several days. I labored in the tail end of a saw mill in Northern Michigan one winter when the weather was thirty below zero; but I did not suffer as much as I did that night in the sunny South.

I was too far from my stopping place; so I telephoned ahead and found a place I thought was two miles ahead. We worked a little late and started on foot. There was soft mud three or four inches deep with brush and grass. We were carrying our grips and other belongings. I started to walk on pipe. If you need exercise, just walk five miles on six inch pipe carrying a fifty pound suitcase. Instead of ~~1 1/2~~ miles it was five miles and when we finally arrived we found that all had retired because we were not expected so late. The lady got up and stirred up a snack for us. The next morning my calves were so sore and stiff that I was unable to walk. I had to lay off two days. I sold the machine and the job to my helper.

I met two rich Hallamiers at Beaumont wanting to invest in oil territory.

In 1900 Edward Wisner got a notion that the floating prairies of the Louisiana Gulf Coast had something other than water under the floating prairie and if the surplus water was removed the mud underneath ought to be very fertile, balanced soil; since it came from twenty-five states and was brought there suspended in the water of the Father of Rivers. When the water reached sea level, there was no longer any current. The water became stationary and the suspended soil settled and built up the country next to the river and bayous. There was more mud in the water here and the land would build up faster than the back country. This land was off the beaten track.

Mr. Wisner and his company bought almost one million acres from the state and levy board. A dam was placed in Bayou Lafourche where it leaves the river. No water was flowing in ~~the~~ Bayou Lafourche. The water in the bayou was at sea level and some three feet lower than the water in ~~the~~ ^{Fields Lake} ~~the~~ ~~fields~~. There was a lake which ~~joined~~ ^{joined} the Raceland. The project was to cut a drainage canal from Fields Lake to Bayou Lafourche. This would give gravity drainage to the Raceland Prairie. There were four items that were not taken into consideration: high tide, tropical storms, one to three feet of decayed vegetation which would burn when the water was removed, and the three to six feet of soft mud under partly decayed vegetation which would shrink twenty-five per cent when dry, leaving the surface of the Raceland prairie at or below sea level.

To drain this land it was necessary to cut ditches every two hundred feet, ^{to be} The ditches were ~~four~~ ^{four} feet deep and three feet at the top. There were too many snakes for the colored folks; so ^{they} I got a bunch of fifty ~~hounds~~ ^{hounds}. There were too many mosquitoes and it was too far from town. It was two to six miles and the only conveyance was foot or walking. ^{They} I only stayed two weeks.

Some six thousand acres had been sold to northern farmers who were ready to move in as soon as it was drained. I had quite a reputation for solving drainage problems. Mr. Wisner and his drainage expert called at the ditcher plant and I was called to take care of them. They stated the size of the ditches they wanted. It was very easy cutting because there were no stones or roots to contend with and the soil was too soft for

to support cattle or horses; but would support a man, especially if he had very large feet. My little fairy showed me how the machine must look to do the work; but my fairy did not see the depth of soft soil under the partly decayed surface. The company said that they were working on a dozen projects and that if the machine would do the work they would want a number of them - at least twenty-five.

I told them I could build a machine to do their work. I gave the contract for the machine. Now all the mud and soft soil was on the surface. The deeper the ground the more firm it was. I found the reverse in Louisiana; and since the wheels were round, the most weight was in the center. The mud would spread and the machine would bog even with the wheels, seven feet in diameter and six feet in width.

I arrived in Raceland, Louisiana, January 6, 1905. The railroad station was on the east side of the bayou and the work was on the west side. There was no bridge to cross on. The levees were all in place some twenty feet from the top of the water and rather steep. I had to hire a barge to cross on and the only time the barge was available was Sunday.

Mine was the first self-propelled machine in this country. It was a nice warm day. I estimate that not over five hundred Cajans were out to see me go up and down that steep bank into the bayou. In fact I felt a little shaky as to whether or not some wheel or chain might break. I had no trouble whatever. I moved up the bayou half a mile to where it was not quite so steep and ^{the machine} ran up the levy with its own power and started to cut a ditch four feet in width and three-and-a-half feet deep. The Cajans were so numerous around the machine that I had trouble to keep up steam. The surface next to the bayou was eight feet higher than it was a half mile back to the swamp.

The next day I cut a ditch to the swamp. There were too many roots and stumps. ~~It~~ It was a half mile across the swamp to open prairie. I made a road between trees and stumps to use extensions on wheels. I cut four timbers eighteen feet long and flattened one side. I would run on these timbers. I had four men to tote the timbers forward. While I was running off one set the men would stand and watch the machine. As soon as the timber was ready to be moved, one man would remember that he hadn't smoked for ten minutes. By the time he got his cigarette carefully rolled and lit, another

remembered he hadn't smoked since the last time. By the time all of them got smoked up ten or fifteen minutes were gone. The men had ample time to smoke while I ran the machine from one set of timbers to another. I was a Yankee in a strange country among strange people and strange customs. All I could do was buckle my belt another notch, grit my teeth and pull my hat down when my hair would bust it up too high.

Wages at that time were a dollar from can to can't - feed yourself. We finally got to the open prairie and put the extension on wheels. Everything went okay for awhile to within one hundred feet of Bayou Falso, my destination. Then I begged way down. It required two days to get unpegged and the machine next to Bayou Falso on firm soil.

I forgot to state that I had two darkies helping me. When it was near quitting time I said, Boys, we'll knock off and in the morning we'll put down a dead man and pull her out."

No darkies reported for work. I waited until 10:00 a.m. No helpers. ~~for~~ I walked the two miles to Bayou Lafourche where everyone lived and located my helpers.

"Why didn't you boys come to work as you promised?"

"Well, boss, you said you was going to put down a dead man and didn't say if you would take us or Boston, so we both stayed home."

I explained what a dead man was. The two reported the next morning.

The promoters and land agents kept telling me it would soon dry up so I could show what my machine could do; but instead of drying up it got wetter. While the leafing weather was fine and warm I thought I would see if anything would grow in this light loose black soil, or rather decayed vegetation. I bought a hoe and garden seed and planted in February. I had radishes to eat in twenty-one days. After growing seed corn ~~for~~ which was knee high by March; I planted peas, beans. Everything grew showing a balanced soil - and why not, coming from twenty-one states?

I wasn't home when idleness passed. I just had to do something; so I looked over all the other reclaimed projects - a dozen or more as to using ditching machines on them. I found plenty of canals and bayous but there were no bridges to cross the machine on and very few roads to the projects that the machine could be moved on and as it

cost me forty dollars to cross Bayou Lafourche for the use of the barge and the tug.

It took one hour; but I had to come from Lockport. It was seven miles downstream.

The captain of the tug boat did not know I was a stickler and he was certain the machine would not work. Since he thought this was his only chance at me, he decided to nail me for all he could. He made sounds in later years when he saw I did not give up.

While looking for something to do I thought I would build a barge to move the machine on. I had never seen a boat or a barge built. I passed the ship yard and saw men pounding up corking.

I knew the weight of the machine and the weight of the lumber in the barge above the water line. I found out how much water I would have to displace to carry this weight. I ordered lumber for the barge which would be twelve feet by forty feet/^{the} by thirty inches deep. I had ample lumber for/scaffolding of the deck plank and supports. I built the barge by myself bottom up at the side of Bayou Fosse. It was easy to tar and cork, etc. I had only to lower the scaffold on the bayou side. She took the water and there was not a leak a dyck but as a rat dove under had her anchored with ropes and so it could only go eight feet from the bank. Since the water was ten feet deep it was an easy task to roll her over with ropes and wench - not the colored kind, but contraptions of gears to pull. She rolled over as easily as a fish. There was no strain or twist on any part of the barge; but in rolling over she filled with water.

The next thing to do was to remove the water. There had to be a way easier than by using a bucket. I found a joint of half inch pipe and filled the end with sand and made this end very hot and bent what we call a goose neck. I closed the end to a quarter inch and attached the other end to the bellows of the ditching machine. I placed a four foot length of three inch pipe over the gooseneck in the barge and turned on the steam. In a short time the barge was empty.

There was not a leak of any kind. I put in a frame to support the deck. I decked her over and tarred the deck. At this time the sales manager from Findlay called on me. It was very hot in June. I thought we would take a little ride with fish poles. The canal was narrow with tall weeds on the bank. The deck was very hot. The sales man had thin soles. His feet were too hot and he thought he would get in the

When speaking of this reclamation project the people of Raceland and along the Bayou would say, "Out behind". The land was high enough to farm a half a mile back from the bayou. Then there was a half a mile of cypress trees to the open prairie beyond which was called "out behind". At this time Raceland consisted of a depot, a post office, a bank just opened, a large plantation, a store, a hotel and a livery stable.

On the west side of the bayou there were all small farms and one Italian fruit stand. A dummy railroad went two miles to the main line. The salesman - I'll refer to him as M.H. - arrived at 9:00 a.m. and called at the hotel which was operated by two Spanish maidens. He asked, "Where will I find Mr. Hill?"

"Out behind."

He waited an hour. No Mr. Hill. He stopped around looking about the out buildings. One of the girls called, "That hain't what it is. It's upstairs."

Mr. H. finally located me. The next day we were to go to Lockport. The only conveyance was a horse and buggy. Mr. H. did not care to climb the stairs, so he thought he would wait until we got out of town. After some three miles, Mr. H. asked, "Hill, how much farther is it out of town?"

"Oh, about forty miles."

"Stop. I'll have to climb over that levy."

The levy was some ten feet high. On the west bank is the longest street in the world, a hundred miles, averaging a house every two hundred feet. It had a tree path along the bank. The men would pull oyster luggers. When a bayou is connect with a river, it always has a current to the Gulf. The levies along the bayou would break so often that it was decided to place a dam in the bayou at the river. This was done in 1900. Now the water in the bayou flows both ways according to the tide and the wind. The rainfall is so heavy that salt water never gets this far from the Gulf.

Some people may wonder why streams are called bayous in some places and creeks, brooks and rivulets in other sections. A bayou is connected to a gulf or sea water moving either way according to the tide. The other three waters flow only one way, towards the center of the earth.

The rainfall varies greatly here/ - at least it has in the past thirty-three years

one day was ten inches. The next day was 77.37 inches. The next was 38.45. The next, thirty-three years was 38.45. The next, in the next, thirty-three years was 38.45.

3-27-43. Well, here I am back to my barge - not only a barge, but the hull for my steam boat. I had paddles made to clamp on the wheels on the machine; then I would jack up the machine so the wheels would free the barge, and I would have a steam boat.

I placed the barge to run the machine on. Not being a good navigator, I made the barge too long - or the bayou wasn't wide enough! I had to place the barge diagonally, one corner against the bank, the opposite corner at the other end against the other bank. I ran the machine on the barge; the weight made her settle, but the two corners on the bank could not settle; the twisted barge sprung a leak and tilted the machine. It was so near tipping in the bayou I think if a hummingbird had landed on the machine, it would have toppled in. I anchored it with rope so it would not tip over and rigged a windlass, pulled it back and mended the barge.

There were so many stories about it drying up - or not drying - that when the machine was safe on solid ground again, I thought it best to investigate the project where it was firm enough to use horses. The party who wanted the machine sent two Mexicans to move a small barge to their place. An old native came along as pilot. The barge was eight by twelve feet, and they were to use poles for motive power. The barge was in Bayou Folse where my machine was. I was to go with them to learn the route, to come later with my steam boat. It was 9:00 A.M. when we got started to make the ten-mile run; expected to land there not later than 1:00 P.M. Taking a few cans of eats and two gallons of water, we started off. Okay to midway across Lake Fields. Strong head winds. Had to tie up until 6:00 P.M. Eats and water were gone by noon. The sun was hot; no shade; water was too hot in the lake to hold in your hand. The lake was full of wigglers and very muddy. It got hot and dry enough to spit fire. It was getting dark when we reached Lockport Canal. I wanted to go to Lockport for the night. The old native said it was further to town than it was to camp, but he missed the channel and ran on a mud flat, with the tide going out. No getting out and pushing. The Mexicans gave out. Don't. Hunger.

Thirst. And Skeeters. Finally gave up. Down and out. We covered our heads the best we could while fighting the skeeters. Many would weigh a pound (do not know how many). They would sit on the logs and bark, if there was any bark on the logs. Having jokes aside, the skeeters were awful! But I became immune to them, and did not mind a dozen getting a meal at a time. ~~Along in the wee small hours, the earth rolled~~
Along in the wee small hours, the earth rolled over to face the Man in the Moon. Do you know why he never got married? He only makes a quarter a week, and has to have that to get full once a month. Even if he was an old bachelor, he was mighty good to us. As he lit up the interior of our craft, I saw a long, six-inch board I could remove from the bottom of the barge; it was long enough to reach solid ground. There was a small rope and reel at the end of the barge. We tied the rope to the board. One would operate the reel and try to rock the barge; the other would hold the board down and rock. Got her to move, but we could only move the length of the barge at a pull. Kept at it, the skeeters keeping us awake. Nothing to make a smudge with - tobacco and matches gave out the same time the Mexicans did. At day-break, we got back in the channel in short order, and made it to Lockport, where we got something stronger than water. We drenched the Mexicans, and soon had them able to move and eat.

3-28-43. You probably wonder why we did not abandon our craft and wade or swim out. Soft mud, three to four feet deep, with water two to three inches on top. Not a tempting place to take a quarter-mile swim. It was two miles to the nearest inhabitants, other than snakes and gators. Our throats were too dry to holler, and there was nothing for a signal light but our duds, and no matches or flint to start a fire for signal.

I rested a few days, then went to investigate where I was to cut ditches. The right-of-way had been cut around a quarter section. I started to walk around this track at 9:30 A.M. It was a very hot day. A shovel, meant for testing the soil, found other use. The path was only three feet wide, with grass and weeds above my head. I had to

dig holes to the water often, to cool off and put wet grass in my hat. I doubt very much if I could have made the two-mile tramp in very soft walking without my shovel.

I learned in that tramp the reason they could use horses. There were so many logs and blind stumps, a horse could not bog if he wanted to. A "blindstump" does not mean that some stumps can see, and others are blind; the stumps are covered with partly decayed grass, so that the human eye cannot see them.

3-30-43. It was impossible to operate the ditching machine. Not idle, I found that a round wheel placed too much weight in the center, causing the soft mud under the top crust to spread. It would not carry the same weight as the same number of square feet of flat surface; i.e., a board three by four feet will support a half more weight than a wheel four feet wide sunk to cover three feet on a wheel six feet in diameter. I also learned that in order to keep open, a ditch in this soil must have sloping sides. The machine I had here cut the ditch the same width at top and bottom.

January, February, March. The Land Promoters would run excursions each month, made up of farmers from Ohio, Indiana, Illinois, and Iowa. Natives called them land suckers. They paid full fare coming out, and if they spent all their cash, they could get back home on the same ticket. I always took time off to go with the land agents to talk up the ditching machine. Sometimes the lady folks would come along. On one trip a young lady came. While we were talking land and machine along Bayou Lafourche, our maiden and a very good-looking husky Cajun swain were making goo-goo eyes. After getting home, she wrote him a letter. There were no schools at that time, and no one he knew could read but the priest. He asked me if I could read his letter. I said, "Yes", so he got it out of his pocket and started to hand it to me. He scratched his head, and said, "Wait a minute!". He rushed in the house and came out with two little wads of cotton to put in my ears so I could not hear myself read his letter. He had never seen anyone read to himself; the priest always read out loud;

of course he did not want me to know what the girl wrote.

3-31-45. After being in Louisiana six months, and rambling over eighteen Reclamation Projects, I was impressed with the fertility of the soil. Every place corn grew twelve feet to the ears. Weeds in one season grew seventeen feet tall. I was in one field when they were planting corn; came back in four weeks and the corn was four feet tall. I have planted thirty-three crops of corn on my farm, with corn every year, and no manure, fertilizer, or legume of any kind. In 1941, I had seventy bushels of shelled corn per acre.

Digging in the soil in twenty-four states and Canada with eyes open, and taking notice, I never saw any soil to compare with the Louisiana swamps when drained. The only sand or gravel we have is what is carried here by birds coming for the winter. The soil is all brought here suspended in the water of the Father of Rivers. It required a very great number of years, and the process was at work centuries before we knew there was a place like the earth.

Realizing that my machine as built would not do the work required here, and realizing the amount of ditching to be done, I would not give up, though this venture cost me plenty (over \$4,000.00). I was pleased with the climate and the natives, who were Cajuns, French, a peace-loving, industrious people. My motto is "Never give up". So I designed a machine I knew would work. I dismantled the original, hauled it to Lockport where the branch railroad had extended from Raceland just in the past two months, and shipped it back to Findlay, Ohio, as scrap.

Back home again, I built a very light machine to run on plank. I used the same engine and boiler and excavating apparatus, but placed the digger at right angles to the ditch. The machine was stationary while cutting down to the desired depth, a width of four feet; then we raised the digger with power, and moved up four feet for the next cut; had two conveyors to remove the excavated dirt. The machine cut a very nice round ditch, eight feet at the top, and any depth to five feet. Used a heavy plank to keep the machine on the surface. To

avoid "cigarette rolling", I had my booms extend ahead, and used cable on a reel to move the plank ahead. (Formerly, it took two good men to move the planks; whenever it was time to do this, the men needed to roll their cigarettes; much time was wasted.)

While this machine stayed on the surface, several features did not suit me. As the cutters passed down, grass or any obstruction would hang over the cutters, and the soil was too loose to cut it. All of my previous machines cut from the bottom up, avoiding this grass and roots hanging over the cutters. Also, there was too much labor involved: one man had to be at the levers all the time, lowering or raising the cutter, or moving forward, another moving the plank and keeping up steam. (By the way, we cut one ditch by keeping up steam with dry chuckleberry stalks.) And it required too much time in moving from ditch to ditch on the plank. ^{Also} ~~And~~ the machine cut a larger ditch than necessary for farm drainage. For good drainage, a farm needed a ditch every two-hundred feet; the ditch should have a four-foot top, and eighteen-inch bottom, about three feet in depth. In watching the machine a week, I found this soil cut so easily, I could make the cutters the shape I wanted the ditch, and bolts would hold them in place.

Some five acres from our starting point on Hill Road, Subdistrict No. 2, of Lafourche Drainage District No. 12. It was a hot day, and I was watching the men moving the plank. My little fairy whispered, "Jim, why don't you make that machine lay its own track?" I saw at once how a traction apron must look to do the work required. As soon as I had apron U.S. Patent No. 866 647, and cutter U.S. Patent No. 941 145 well stored in my head, I pulled out for Findlay. Two failures were too many to suit me; I dare not make another, especially as the family had increased to ten, and the ditcher was our only income.

I left the machine out in the open prairie, running; it cut some two miles of ditch. It was three miles to the nearest residence or building. I got all the necessary parts to change the machine, to equip

it with extension cutters and apron traction. Did this here in open country in January, 1907.

At first I had a farmer where I lodged, three miles from the machine, to help me. The first job I gave him was to cut a three-inch steel axle in two with a hack saw. He worked an hour, and said, "Hill, I won't get this darned thing off in a week," and wanted to quit. I persuaded him to keep at it; I had another one for him the next day. He said he had to get ready to plant corn, and wouldn't be back; he had to walk the three miles in the morning and back in the evening. I got a Cajun to help me; he had five miles to come a-walking. In the evening I asked if he would be back the next day. He said, "My sister, he's very sick; if he better, I will come." He was on hand next morning. I asked how his sister was. "O, he died last morning, and they buried him last evening."

The blue sky was our roof. No labor trouble. Worked long hours. Soon had the machine ready and in position to start early next morning, with the same machinery and power. By my lonesome I cut a ditch 2500 feet in length, as compared with 250 feet in the same time with three men. No stops. A continuous stream of dirt rolling out, no levers to adjust - just watch, and keep her straight, and keep up steam. No trouble keeping on top any place, while at work, or moving from ditch to ditch. We received all the orders we could handle, for machines to cut open ditches.

My apron traction is the main part of the modern tank used in modern warfare, to crush everything in its way. I invented this seven years before the First World War. Nearly all machines are now equipped with apron traction. I call to mind the first apron on the machine to cut eight feet deep. I shipped it to Minnesota to lay sewer pipe from lake - or rather pond to pond. The soft, sandy soil would cave before the pipe could be placed. I built a cribbing the width of the trench, placed it at the rear of the machine, attached to the machine with apron traction. The trench would cave against the cribbing. We would place pipe in the cribbing, and let her cave on the pipe. A round-wheel traction never would

have pulled the cribbing with the trench caved against it.

4-1-43. When I was unloading the machine, the first iron traction in Minnesota, two wise Germans were telling each other how the apron worked. Said the frame would move forward on idlers, then flop over sideways, and forward on idlers again. Just after a rain, the mud was some three inches deep. They operated large tractors, and thought they knew everything worth knowing about machines. An end-over on that mud would throw mud over everybody. "Well, he has steam up," they said; "we'd better get out." I understood every word. They got back of a building when I started, and stuck their heads out. Saw the machine moving over the mud as easily as a turtle would. No splashing. Stood with eyes and mouth open, and ears flopping! The time isn't far away when Hitler will have his ears flopping and mouth and eyes open, as they should have been in 1938.

Having solved the drainage problem for the U.S., I turned my sluggish mind to new fields to conquer. First, the drained swamps of Louisiana were too soft for several years, after being drained, to use horses, oxen, or round-wheel tractors. Instead of a high-speed light tractor, I built a stronger machine, and instead of pulling one or two plows, I had a gang of seven plows, drawn with a traction apron ten feet long, and six feet wide. While perfecting the tractor, I learned that the native grass, *riefino*, did not produce seed, but was propagated by roots nearly as large as a lead pencil, running parallel with the surface, and not over four inches under the surface. I learned that turning the roots over with a mould-board plow seemed to cultivate, rather than destroy the roots.

I designed and built a machine to pull the roots out and place them on the surface to dry. It had three six-foot cylinders, with four rows of teeth placed spirally, so only one would strike at a time. If the teeth were in a row, and all struck at the same time, it would cause the cylinder to jump. It required some figuring to

know the speed to run the cylinders, so the dirt wouldn't scatter too far, and yet fast enough that the dirt would fall first, and the roots on top. Had five hoppers of corn planters operated from the motor to drop corn on the surface ahead of the cylinders. This machine, pulverizer we called it, would plow, harrow, plant, and cultivate eighteen feet in width at one passage. The corn scattered some, but since there were no weeds, and roots were a mulch to keep the grass down, there was no cultivating to do, and it did no harm. This machine was only for use where the surface was covered with decayed muck and vegetation.

In the fall, we removed the cylinders, and put a box in place to gather the corn. It would carry a hundred bushels to a load. I used the pulverizer on my farm for three years, until the ground settled and became too firm for it; then it was firm enough to use horses and tractors.

By having the cylinders turning the same direction as the pulverizer moved, the resistance of the soil propelled the machine forward, thus not killing any of the power moving the machine forward. In place, the cylinders would move the machine forward, but I had it geared to the motor to prevent the cylinders from going scalawagging, hopping across the field, as the cylinders ran at a much higher speed than the apron traction. We sold a number of these machines.

A year later, weeds had taken possession of one field; they were six to eight feet tall by June 1st. The only known way to cut them was by hand. I removed the cylinders on the machine, and in place put wheels, with sharp knives attached, ten inches apart. The motive part of the pulverizer propelled the machine, which would mash the weeds all forward, and the knives rolling over them would cut the grass and weeds in ten-inch lengths. This would cut eighteen feet in width at one passage and move forward as fast as one could walk. There were no stones or anything to dull or break the knives.

It is said that a man who makes two blades of grass grow where one grows is a benefactor. How about a man who makes two blades of corn grow where one hundred blades of grass grow?

I feel quite certain that if it had not been for the machinery I invented and built, the reclaimed projects would be scarce and far-between. I am not superior to others of my race, but I think we all have some gift. I call my gift my little fairy. It's the gift of seeing machinery as it should look to do a certain job; also a staying quality and bull-dog stick-to-it-ness to accomplish anything I undertake, regardless of cost, and advice of friends and old wise-crackers.

4-2-43. On the first machine, I was told dozens of times I was crazy to think that traction wheels would pull that machine to cut a ditch four feet deep at one cut. Same here at Raceland. The old natives said what a crazy notion - that heavy machine staying on top - why, he will never see the smoke stack! They knew the prairie, but did not know the staying, stick-to-it-ness in my head. Never give up! I often heard people remark when I passed, "There goes that crazy Hill!" Both here and in Ohio.

I never had a desire to hoard up money, but spent it freely for any thing that would help to get the wheels out of my head. O, I never squandered money; never gambled or bet on another man's game, never bought lottery tickets (but once, when I was 20!) Never^{was} intoxicated, smoked a few times when a young man because I thought it made me look manly - never enjoyed a cigar; there were no cigarettes at that time. I never fancied the idea of sucking dry smoke in your mouth, and letting it mingle with rotten, decayed teeth, then blowing it out in a room for the fair sex and children to inhale. Never fancied the idea after I got old enough to know anything. And here I am eighty-six years, four months, and three days since I first saw the light of day - and able to wait on myself, and operate this one-fingered machine.

My fame in solving difficult problems had reached northern California. I was called there, sixty miles north of Sacramento, early in January, 1908. They wanted a canal and levee along the foothills, to catch the mountain brooks, and keep the water off the wheat fields. The bed of the river was so filled with placers (gold and mineral

the Juggernaut resembles a traction engine on land, it becomes amphibious when it reaches the water, and we travelled a considerable distance without check or delay, with the utmost comfort.

I called it the "Juggernaut" because through the saw-grass, maiden cane, myrtle bushes, and small custard-apple trees, it made its steady and irresistible way, crushing everything before it, just as did the Juggernaut in India in ancient times. When surmounted by the Hindu God, it made its way through the country crushing all before it, including its human victims.

Very truly yours,

Richard J. Bolles

Mr. Bolles is a known millienaire, Major Bolles.

Major Wright, Governor of Florida at that time, made the trip with us, and other state officials and prominent men, nine in all, ~~including me.~~

4-6-43. On the way home, we crossed the state to Fort Myers, stopping at Lake Okeechobee for two days. We met several farmers from North Dakota looking for farms they had bought from a land agent there. They asked the engineer, and surveyors where their farms were located; they didn't know. The farmers pulled maps from their pockets and pointed to Section 23, asking where this section was. No one was able to tell them; no section, or county lines had yet been run - never did find the farms!

We made the trip from the lake to Fort Myers via a small motor boat. They had just recently had a flood rain - and it can rain some here when it gets started. Flooding the country! A land agent with us was telling us of the wonderful climate and soil - he was a talker! A wise old farmer wanted to know what made the trees muddy so high up, some four feet high. "Oh", said the land agent, "a lot of wild hogs wallow in mud holes, then rub on the trees."

The next morning, the agent sensed the farmers had started off some

of their crouch, especially after a good breakfast. He asked if they wanted to invest in some of that high land. "No", said the farmer, "but I'll pay you cash for fifty of those hours."

Got back to New Orleans. No train to Raceland. The river levee was broken some thirty miles below Donaldsonville, flooding the entire country west of the river and east of Bayou Lafourche. Water was over the railroads. No trains. By closing all canals leading into Bayou Lafourche, there was no water on the west side. We had to go to Donaldsonville, on the East side of the river, down the west side of Bayou Lafourche to get home. This was in June, 1912.

My juggernaut was built three years before the First World War. The modern tank is patterned after it. The apron traction I invented and built in 1907 is the main part of a modern tank.

I had been reared on the farm - mush and milk, fried mush, corn pone, buckwheat cakes, maple syrup, good home-made bread. An old lady I knew had a dollar for bread and whiskey. She meditated, "Bread is the staff of life; whiskey is life itself - give me all whiskey, please." Apple and cherry dumplings boiled and baked with sweetened milk, flavored with grated nutmeg - to say nothing of the pies, jellies, jams, puddings and cakes. Also the meat at butchering time - liver and blood sausage, spare ribs, boiled back bones, fried and smoked hams, and that good ponhaus. O, why can I not turn back three-score and fifteen years and start life over? Or just go back to the farm? Either way. I always had a desire to get back to the farm.

Things were not going at the factory the way I was used to. Too much overhead. If a laborer wanted a bolt costing half a cent, he would have to get an order, then go to the stock room, give the order to the man in charge, who would order a clerk to get the bolt. Then the orders were gathered and checked over.

When I built the first machine and I was boss, there was no overhead; I did my work at night. I still belong to the old school, i.e., every man - and some of the fair sex - earns his living by the sweat

of his brow, or every tub stands on its own bottom. The last straw was when I built my Juggernaut. I located a motor at a nearby town, just what I wanted, for \$300.00. The Company owed me several thousand. I stepped into the office to get a check. The office said tell them to send the bill to the office, and we will mail a check. I did not use any of the Company labor or tools, etc. I was charged 60% overhead on this account. As my royalties gave me ample funds, I just kept my mouth shut and walked out. Rather than being provoked, I quit, and went back to the soil.

4-7-43. After passing most of my first thirty-two years here on earth on farms, I had a desire to get back to the farm. After being off the farm for twenty years, and seeing the wonderful fertility of the reclaimed floating swamps of Louisiana, I could not resist the desire - Back to the farm!

I did not overestimate the fertility of this soil. We have grown thirty-four crops of corn on the same land, with corn every year - no fertilizer or legume of any kind; and the soil is good for twenty more corn crops without any extra feed.

This is perfectly level country. No hills. At sea level. I thought I would make it a little Hill-y; so I built four residences on my 146-acre farm that I had traded ditching machines for, taking machines for my royalty, and trading them for land at one hundred dollars per acre. There were no ditches or buildings on the land. Moved my family, six boys and four girls. Two boys and one girl were married, and I had nine grandchildren at that time. But my children had grown up in city life, and it was too hum-drum way out here on the prairie. Now the Hills are all gone but the youngest son, Cloyce, and myself. As near as I can check up, there are now living eight children, forty-six grandchildren, and forty-six great grandchildren, and thirty-eight in-laws; last, but not least, the wife and I total one hundred and forty. The Raceland prairie would be rather Hill-y if all had the stick-to-it-ness Grandad had. (Ed. comment, son Dick, "Hum Fun!")

I operated a ditching machine cutting trenches for drain tile on Ohio's new experimental farm at Wooster, in the fall of 1894. Professor Thorn was in charge. I wasn't backward about asking questions; the knowledge stored up is mighty handy here fourteen years later.

There was no corn grown here worthy of the name of corn. I sought the aid of Professor Tracy, who had charge of the U.S. Experiment Station at Biloxi, Mississippi. We planted two acres each of eight of the leading varieties of corn. Professor Tracy knew the number of days it required for each variety to mature. We planted the corn so that no two varieties bloomed at the same time, and got mixed up.

4-8-43. Some varieties made a good yield, but the shuck was too loose; weevils would get in the corn before we could gather it. Imperial White was the only variety that was any good, but it grew too tall: ten to twelve feet to the ears. And such stalks! I built a step-ladder of four corn stalks of Imperial. The ladder was four feet high, with corn leaves used to tie the braces; the top cross-bar was a corn stalk, or part of a corn-stalk. With the aid of a standing stalk, I mounted this pedestal, and had a photo taken just reaching a low ear. My weight at that time was 155 pounds. This was a very good variety - a very heavy shuck, well closed over the end, late maturing (120 days). But it grew so tall a good stiff breeze would blow it down in this loose muck soil. And the trade began to want yellow corn. There was not enough corn grown along Bayou Lafourche for home consumption.

The Professor tried a number of plants on my experiment plot. Tried hemp tobacco, but the soil was too rich; the stalks grew too rank. Para grass and Rhodes grass were no good. Guinea grass did fine; all the stock were very fond of it. It is intended to be planted in hills near the barn; when it's some ten inches tall, cut and feed. I have had it grow two inches in twenty-four hours. This was in 1894. There is some on the farm yet, seeding itself year after year. There are forty to sixty stalks in a bunch, four to five feet tall; it has re-

seeded itself for thirty-four years - not enough to do any harm cultivating corn, or the yield of corn.

The only yellow corn here was the Yellow Creole. In the Flint Variety, the shell over the germ was supposed to be too hard for Mr. Weevil to drill through, but along in June and July, Mr. Weevil would sharpen his bill and drill through the hard shell. I used to wonder why weevils would fast all winter, and get so hungry in hot weather.

We have a short course for farmers every year at the State University; I used to attend every year. I learned that the female weevil would sting her egg in a grain of corn when it was soft; it required a temperature of 75 degrees for this egg to produce life; these are the criminals that ate up the corn, not their daddies, grandpas and grandmothers boring in, who were blamed for the dirty work. In the white flint corn, you can see the grub before it eats itself out. I began to investigate, and found that the natives planted corn in February, never later than March. The corn matured the later part of June. They would gather it in July and August when the weather was hot, and put it in a tight barn; there was enough moisture to cause it to heat and hatch the weevil: then he went to work. I learned this by keeping eyes and ears open. It was up to me to find a way to fool Mr. Weevil. My little fairy whispered, "Plant later; let the corn stay in the field until cool weather." After keeping close tab for several years, I found that the best time to plant corn on this reclaimed land was April 10th to 15th, and gather it after October 15th. Then there was no weevil to do any harm until July, when the young begin to hatch.

Looked up the best Yellow Creole corn, and planted part of the farm with it, to balance Imperial White. By careful selection, I received First Prize at the State Fair four years in a row on my ten-acre exhibit of Yellow Creole corn. There was very little demand for seed of this variety, and prizes at fairs could not feed my family. There was very little demand for white corn.

A seed house in Texas advertized very nicely a yellow dent corn. I ordered a bushel at \$5.00 a hundred pound. I found four distinct types of grains. I sorted 500 grains of a type to suit my fancy. This was the start of Hill's White Cob Yellow Dent Corn. I planted the 500 grains on my Experiment Plat. The corn made a very good yield; the heavy shuck was all Okay, but the ear was too near the ground. It was only three feet high, and that was too low to bend the stalk as is necessary, to keep the corn in the field until October. If the stalk is not bent, it will fall with the ear on the ground. As soon as the stalk dies, brace the roots with decay, and the stalk falls over. By bedding the top to the ground, and making a brace with the ear tip down, no rain can get under the shuck to spoil the corn.

4-9-43. My next problem was to get the ears of corn some two feet higher. I saw corn a neighbor had brought from Southern Illinois with ears the proper height. I selected some fifty ears with grains as near my type as possible. Planted it with my corn on an breeding plat. By selecting the ears highest up, in three years I got the ear up where I wanted it.

In the fall of 1918, while shucking, I found five very nice ears of my type, and realized I had bred a very good type of corn. My continuing First Prizes at the State Fair convinced me I was right. Now for a name for my corn. To call it Hill's Yellow Dent would make no more comment than Reed's or Hasting's Yellow Corn. Since I wasn't a Burban~~k~~ or great professor, and not being known in the agricultural department, wise men would ask, "Who is this man Hill? Never heard of him in agricultural papers. They tell me he never was in a college or university, and only to be Fifth Reader in country public school. He's been off the farm for 25 years, and has bred the best corn ^{for} in the South?"

White Cob would make a longer handle to the name - Hill's White Cob Yellow Dent. In my roaming over thirty-five states with ears open, I never saw yellow dent corn with a white cob. It may be that by having Yellow Creole, which has a white cob, near by, that some of the

pollen sneaked over and settled on cobs of my corn. It required six years of careful sorting to breed the red cob out. Just as I expected, the old - and some not so old - wise crackers ~~talked~~ argued me out as to my white cob. They would argue, condemning both it and me - Who ever heard of yellow dent corn with a white cob? Why, in a few years, the corn will be white. The white cob is too soft. Neighbors tried to persuade me to plant red cob corn. They said, "We've been planting corn the past fifty or more years, and you're a green horn just out of a factory, and trying to tell us our corn is no good, and you have a superior corn." The party who did the most letting off surplus wind was from my native state, reared on a corn farm; all he knew was corn. What he did not know about corn wasn't worth knowing, he thought

4-20-43. My corn has a very heavy shuck, well closed at the ~~top~~ tip, making it as near weevil-proof as the Yellow Creole Flint Corn.

My next move was to find a market for my seed corn. After travelling over the U.S. for forty years, I learned that folks around home think they know as much as, or more than, you. It was a difficult job to get something new on the market around home where known. It was hard to find a market for my corn where I wasn't known.

Selecting sample ears and the best seed, I started west, remembering that Greeley advised, "Go west, young man." The first stop was Franklin. I went as far as Gueyden. Received orders for several hundred bushels. Made a trip up Bayou Lafourche to Plaquemine, and sold out. Had all the orders I could fill the next year without hunting.

At this time, the state placed an out-field station on the Raceland Prairie. A wise-cracker stated, "Now, I will show Old Man Hill who has the best corn." The first year on the prairie my corn made the largest yield of twelve varieties planted. Hudson, the wise-cracker, was near the bottom. After three years, he still ranked so low he pulled out. In 1934, my corn ranked first of twelve varieties at ten out-field stations over the state. I started it on the prairie in 1928; they are still planting Hill's Yellow Dent as one of the

leading varieties in the state.

Crop Report. Hill's Yellow Dent and Truxpan have made as good yields on the average as the established breeds. On some of the richer soils, they have given even better results.

At present, most of the corn grown on the Raceland Prairie is my White Cob Yellow Dent. No rotten cobs. It weighs two pounds more per stroke bushel than any other yellow dent corn.

The first year on the state out-field station on the Raceland Station, my corn gave the largest yield of the twelve leading varieties in the state. I am known over the South as ~~Dad~~ Hill, the Seed Corn Man, or rather, Dad Hill.

5-11-45. Well, after twenty days away from this machine, I hardly know where I left off. I only stated solid facts as to the soil and its products. Now I will talk about the air in motion. It gets rather unruly every six to ten years - and the condensed moisture at the same time.

My first tussle with a tropical storm was on September 21, 1909. The family had all gone North for the summer. Clarence and I came back some ten days ahead to have everything ready for the family - now some thirty grandchildren, children, and in-laws.

The second morning was a fine morning. At 10:00 A.M., it began to get cloudy. At noon, the air got in motion, and it began to rain. As night approached, the air got more motion. Chickens trying to go to their sleeping quarters could not get there. It was built up some four feet high, with a six-inch board with cleats as a run-way. The wind would blow them off this run-way.

Clarence and I had to catch them ~~where~~ so the hens could be roosters - you know, when a hen is on the roost, she is a rooster. I not only had to look for chickens, but had to keep track of my son as well. Saw him being blown into a big ditch. Had to help him out of the ditch four times, and he a husky lad of fifteen. We finally caught all

the chickens.

An old gentleman named Cary lived a half mile from my place. He got frightened when the wind kept getting stronger. As night came on, he left for my place; said he was blown in the ditch three times.

We did not mind getting wet, as the rain and air were warm - just coming from the Caribbean Sea. That afternoon and next day, we had 4.96 inches of rain.

These tropical storms are not like the cyclones north. We know several days in advance where they are likely to hit the coast, and we get ready to receive them, but they generally stay 24 to 36 hours, with plenty of thunder to keep you awake, and enough water to take a bath. On September 29, 1915, there was ten inches in a day, the most rain in any one day in the past thirty-three years.

5-12-43. When I traded for this land, we just juggled accounts, and let the banks keep their money. You see, the Ditcher Company owed me for royalty on machines. The Land Company owed the Ditcher Company for machines. I owed the Land Company for land, so we just juggled accounts. The only thing on the land was plenty of snakes, a few gators, bull frogs, and skeeters too numerous to count. Skeeters were not a bad pest; we soon became immune to them. I have had a dozen getting their supper at a time, milking good red blood out of the back of my hand. There was a great heavy mat of piefine grass, no buildings, fences, or ditches, and no place to drain the water in as the surface is at sea level. Ten acres of my farm are two feet below sea level.

The Land Company, all men from northern states, were going to show the Cajuns what they (I wasn't in it at that time.) were going to do with their swamps. They thought that by dredging old bayous and cutting new drainage canals, the land would drain enough to be farmed. But there were two factors they did not consider. First, when they removed the water from the layer of partly decayed grass (two to three feet thick, resting on water or soft mud three to ten feet thick)

the decayed grass rotted and wasted away. Most of it was left to burn, and it is quite a task to stop a muck fire. Second, the soft mud, in drying, shrank one-fourth; thus a farm four feet above sea level would be at sea level in a few years.

The Land Company found that instead of gravity drainage, they had to install pumps. Here is where I came in, getting this surplus water to the pumps, with my ditching machines cutting ditches every two-hundred feet, the ditches leading to the pumps.

5-13-43. The Raceland Prairie was too soft for cattle to graze on before we - Yanks, we were called - began ditching and dredging. Even a Dutchman, with his large understanding, had trouble to keep on the surface in some places. The first farmers - I mean men who had nothing in their noodle but the good old way - used ox- or horse-drawn implements. The oxen would wallow through where a horse would bog. By using muck shoes on horses, they could sometimes get by. A muck shoe is a round board some fifteen inches in diameter, clamped to the under-side of a horse's hoof or foot. The mule did nearly all of the hard work. At that time here in the South you were a lucky guy if your feet were too small to clamp muck shoes on. This was in 1904, '05, and '06.

I arrived with my traction apron and pulverizer in 1907, and we began to grow corn. No roads to get it to market. We would place barges in our drainage canals, and barge our corn out via Field Lake to Lockport, then Bayou Lafourche to Thibodaux to a whole sale firm who bought our corn in the shuck. As to roads, we did not have any, part of the year, just a mud trail. I remember one August we could not get out to Bayou Lafourche on horseback for mail or cats, etc. We had to walk the last mile and a half and tote supplies that distance. We do not have a dry or wet season, but July and August are the wettest. Will give the most and least rain each month in the past 36 years:

January	1930	9.71
	1927	1.09
February	1927	15.75
	1921	.27
March	1926	15.82
	1910	.86
April	1940	12.80
	1910	.03
May	1939	12.38
	1940	.00
June	1928	13.89
	1917	1.05
July	1923	15.28
	1919	4.18
August	1917	13.36
	1924	1.71
September	1932	12.75
	1933	1.11
October	1937	17.10
	1938	.65
November	1919	11.86
	1917	.17
December	1918	15.22
	1919	1.37

The most rain at any one time since May, 1909, started in October, 1915, and is as follows:

September 26	.54
September 28	.40
September 29	10.00
October 4	4.67
October 5	1.20
October 12	5.12
October 13	1.95

This made a total of 24.70 inches in 7 rains in 17 days.

I had a motor boat that would carry twenty people, and as we always had plenty of water, we could get out to Lac Pont at any time for eats, etc. I built a small barge and hauled my own corn to market stores along Bayou Lafourche.