

**Working at the Panama Canal, 1914-1918**  
*an Oral History*

Leo Gutting, Interviewee  
Of Ottawa, Illinois

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Q: This is Helen Hayner of the Starved Rock Library System. I'm interviewing Mr. Leo A. Gutting of Ottawa, Illinois. Mr. Gutting lives at 716 East Main Street and he will tell us of his many and varied experiences throughout his long life. Mr. Gutting, could you tell us when and where you were born, some family background?

A: At 622 Grafton Street, east Ottawa, Illinois, August 29, 1890.

Q: Now I think that you now live in the home of your. . .

A: 716 East Main, Ottawa.

Q: And that's the home of your. . .

A: My grandparents bought it in 1884.

Q: Now what did your grandparents. . .

A: Huh?

Q: Your grandparents did what?

A: My grandfather, Steven Arnold, came to the United States from Germany in 1852 when he was fourteen. Two years later he came to Mendota, Illinois and he was justice of the peace and he was elected as County Recorder at Ottawa, which position he held for twelve years. He then moved, of course, to Ottawa.

Q: Okay, anything further you have to comment about any of your family?

A: Nothing in particular, my mother had four brothers and one was County Treasurer in Ottawa for many years. My father had four sisters.

Q: Big family. Do you remember your mother's maiden name?

A: Amelia Arnold.

Q: Okay, where did you go to school?

A: I went to the Washington School on the east side and then to Ottawa High School, which was then located on North Columbus Street approximately across from the old Reddick's Library building. I, for some reason I don't know, I took quite a few solid subjects, physics, chemistry, two years of Latin and so forth, so I had fourteen advance credits from high school when I graduated from high school. I can't imagine just why I did that because I spent most of my time up the Illinois River fishing in summer and hunting in winter.

Q: How did you fit all of that into your schedule?

A: How?

Q: Yes.

A: Well, so I went down to the University of Illinois, didn't even know the name University of Illinois, there were a few kids that went to what they called Champaign, that's all I knew about it.

Q: What year was that, Mr. Gutting?

A: That was in 1907.

Q: So you would have graduated from Ottawa High School in about 1907?

A: Yes, in 1907. So with these additional credits I always took something in a later year than my year was at the University. So I got my electrical engineering degree -- and by the way, the reason I happened to take electrical engineering, I saw engineers up on the Rock Island Railroad, that looked interesting, and electrical sounded interesting, that's all I knew about it. (laughter)

Q: I imagine electrical engineering has, well through your experience, has changed greatly through the years. Could you recall of, say the subject matter that you had in those days?

A: Let me think. At the University I had some very fine professors (CUCKOO CLOCK STRIKES) one of which was Dr. Ernst J. Berg, B-E-R-G, who was the head of the department for two years, from the General Electric Company. He had as a close friend and had lived with a person with a phenomenal mind, Charles Proteus Steinmetz, from Hungary, a hunchback, who was with General Electric Company and developed many engineering formulae and applied to some solutions the square root of minus one, which is of course imaginary, but is used effectively for some solutions. Then after Dr. Berg had left Elery B. Paine was head professor of electrical engineering, and a good one. He had been before coming here at the North Carolina University and. . . PAUSE Dr. Berg, by the way, had one time Charles Proteus Steinmetz at Illinois for a lecture course, and I have a piece of chalk that he used in demonstrating on the blackboard. He started out this way, "In zee simple electric soircuit. . ." and then he went on to great length with higher mathmetics that was necessary for solution of alternating current.

Q: Now this textbook that you had showed me written by Mr. Steinmetz, was this used in your course of study?

A: Just for reference. So Elery B. Paine was, as I said, head professor at the time when I graduated. After graduating I went out to work for the Muskogee, Oklahoma Gas and Electric Company as station engineer.

A new Allis Chalmers cross-compound steam driven generator was synchronized, when it was synchronized with a previously installed similar unit resulted in considerable hunting action, cross-currents, which would blow out a switch. By solving this problem simply by applying a true-fault Hartford shock absorber to one of the governors to keep it from fluctuating perceptibly, let the other governor take the change of load, governor on

A: the other machine. So having solved that problem Allis Chalmers offered me a position in their testing and erecting department.

Q: How long were you in Muskogee, Oklahoma?

A: A little over a year at Muskogee, and when I was going to leave to go to Allis Chalmers because I could learn more, they said, the top man there vice-president by the name of Hogland, H. G. Hogland, said if I'd stay there he'd give me \$250 a month, which was unheard of then. I had started out there at \$60 a month and was raised to \$80. So, but instead of staying at that I wanted to learn more, so I went to Allis Chalmers at West Allis, Wisconsin for 18¢ an hour. Now living there was rather inexpensive in this way -- there was a club called the Allis Chalmers University Club in which there were fifteen graduates of various universities around the country, Maine, Cornell, Wisconsin, Purdue, various ones. In that group we had a house and a cook and a second girl and lived at minimum expense, had to be minimum at my 18¢ an hour.

Q: I was going to say, you didn't have steak often I wouldn't imagine.

A: No. So after two years there, in January 1914, I was interested in going to the Panama Canal construction because a very good friend from North Carolina named Jack Davidson who was a very interesting person, had gone in September 1913 to the Panama Canal Zone. So in January of 1914 I signed up and went down. My trip from New York was on a little tub of about 600 tons called the Alianca. We got into some pretty rough weather but I didn't have any seasickness although practically everyone, including the ship's doctor had seasickness. Got down to the Canal Zone, was first at Corozal on the Pacific side and then went to Gatun on the Atlantic side. This was during construction days which were very interesting.

A: I had charge of a group of machinists and electricians and working out when I was at the permanent shop building at Balboa. Then when the Canal was getting finished a great many who had been working there wanted above all means to be able to stay there, but practically none of them did. With my experience of having operated an electric station at Muskogee, Oklahoma I was asked if I wanted to operate at the hydro-electric plant at Gatun. That was very interesting and I was very glad to have the opportunity.

Q: Mr. Gutting, could you describe the terrain what you worked with in the construction of the Canal? The problems involved in the actual construction, the kind of ground and so forth?

A: In constructing the Canal which the French had started some years before and given up because of yellow fever which was quite prevalent -- there remained from that some excavating which of course had been abandoned and some machinery that had been used for it.

Q: Did not the French first decide to build a sea level canal?

A: Yes, the French at first thought they might be able to, but it would have been out of the questions because of the high ridge going down on the Isthmus. But DeLesseps who had had to do with the Suez Canal had started and advised in this respect. The construction would have been very difficult and there would not have been any excavating machinery in that day that would nearly approach doing it, to make a sea level canal. Another problem would have been that there is two feet of tide in the Atlantic and eighteen to twenty feet in the Pacific. So it was decided to build locks and dams and have a lake cut across the Isthmus. So Gatun Dam, the largest then earth-built dam in the world, was built and this was 85 feet above sea

A: level, the lake was about 110 square mile area. It was performed by damming the Chagres River and the locks then stepped up, three sets of them stepped up from Atlantic sea level to the lake, then across the lake to Pedro Miguel and one set of locks for going down to Miraflores Lake, a small lake about a mile in diameter. Then from Miraflores Lake down to the Pacific level. At Miraflores was two sets of locks and then several miles from there out to the Pacific. To protect at that time the Canal operation from any military trouble with foreign countries, islands at the mouth of the Canal, Pacific side, known as Naos, Perico and Flamenco were all three fortified with mortars behind the height of ground to be safe from foreign ships and so that shells could be dropped anywhere in the bay.

Q: Now those names of the locks going then from the Atlantic side to the Pacific would be, Gatun. . .

A: Would be, well three locks at Gatun, G-A-T-U-N. Then across the lake to Pedro Miguel where there was one stop down to the small Miraflores Lake and then at Miraflores two locks down to the Pacific level of water.

Q: I think, I don't know how many people realize that traveling through the Panama Canal, when you travel from the Atlantic to the Pacific you are going in supposedly the opposite direction, that the Atlantic side is further west and north of the Pacific.

A: Yes, that is correct on account of the bend of the Isthmus, that is correct as you say, that the direction seems to be confusing.

Q: We used to laugh that the sun would set in the Pacific, pardon me, that the sun would set in the Atlantic and rise in the Pacific, and I was forever confused when we lived down there, I never knew which way I was going because I kept trying to think of the sun in the west and west to me always was Pacific, it was a complete confusion.

A: Now there was a great deal of trouble when the Canal was first built at the ridge of land and the channel through it from Gatun Lake. The rainfall caused many what they called slides, there was one side was Gold Hill the other side of the Canal was Contractor's Hill. The rainfall would cause upheavls in the bottom of the Canal and they had to continually dredges of three types, dipper dredges, ladder dredges, and suction dredges.

Q: Would that be the area that we call either Culebra or Gaillard Cut?

A: Culebra Cut, culebra in Spanish means snake. That cut was the difficult problem for a long time and these slides would obstruct traffic at those times. The spanish in the early years seeking for gold had gone down in South America and robbed the Aztecs in Central America and the Incas in South America of gold. They had a paved trail they called it, across the Isthmus, they would take this gold across to galleons to take to Spain. Then the pirates, Sir Henry Morgan, took to raiding these ships when they'd be going and that put an end of that traffic. Now the Sapanish at that time had at Fort Lorenzo Fort San Lorenzo which is down at the mouth of the Chagres River into the Carriben, on a promontory of rock which si accessible only from one narrow path up quite high, about 150 feet, where they had fortifications. Then at another point considerably east of that, around the bay, was Portobelo where also they had fortifications. By the way, yellow fever was pretty well conquered by Dr. Gorgas who found that it was carried from one afflicted person to another person by mosquitoes. so they put oil on all small bodies of water across the Isthmus and there were not any places much where the mosquitoes then could develop. The yellow fever was then pretty much conquered, however when I first went down we had at the government restaurants wine with liquid quinine in it,

A: which I didn't take. But if someone had malaria which also was prevalent then the treatment on the Isthmus was 120 grains of quinine a day and then after the quinine treatment at 120 grains a day on the Isthmus, anyone who needed it was sent to Taboga Island out a little ways in the Pacific, and there they had 30 grains a day for two weeks, 30 grains of quinine a day for two weeks.

Q: Was that like a rest area for them, a recovery area?

A: That's right, a recovery area. Now in Panama City and thereabouts there are many interesting things -- there is an old tower at what is known as Old Panama where the people lived in the very early days. And then in Panama, as it is today, there is a flat arch at a church which spans a considerable distance with only about two feet rise. On the Pacific side, upward along the Isthmus, was a trail to a village called Arraijan, A-R-R-A-I-J-A-N, where there were natives. Walking up to that village, usually from Miraflores, it seemed to be as much up and down as horizontal. There at the point we saw some of the natives washing clothes in a stream by beating them against rocks. By the way, while system operating engineer in 1915, the ship Endurance commanded by Sir Ernest Shackleton -- an Antarctic exploration became crushed in ice 180 miles from land. Shackleton and Captain Wild rode in hazardous seas to South Georgia Island, obtained help and proceeded northward along the west coast of South America to form a relief expedition. Arriving in Panama they stopped at Gatun where I showed them the dam and hydro-plant and then took them to Sojourners Masonic Lodge at Cristobal. On leave from Panama Canal service I was offered the management of the Southern Indiana Utilities firm, gas, water and electric, with steam driven generators, ones with steam turbines and steam driven water pumps.

Q: If we may talk a little bit more about Panama itself, I had a very short experience in Panama quite a long time after you had been there, could you tell a little bit about the people in Panama?

A: The help there largely was West Indian. Each employee had a West Indian helper, mine was a very good one, his name was Paul, he was from Trinidad. He was a very loyal person and one time we were testing towing locomotive cables to 25,000 pounds and one cable started to break, he jumped between me and the cable to protect me from being hit with it.

Q: Nice man to have around.

A: Yes. Had I known when I was coming to the States that I would stay here I would have tried to bring him up here, maybe he wouldn't have liked it in this part of the country.

Q: You spoke of West Indians in working there, were there any other particular types or kinds of people that came in there, say to do the work on the Canal?

A: There were some Spanish. They had then what they called the silver employees and the gold employees. Silver employees were the West Indians and so forth, gold employees were from the United States, and they paid us in gold. You'd go to the pay station and you got twenty dollar gold pieces, tens and fives and so forth. Now in Cristobal there was a very interesting person, postmaster named Gerald Bliss. In order to cash out paychecks we had to show our metal check, each of which had a number, we had a number, and one time I went down to Cristobal to cash my check and I didn't have my metal check on my watch fob where I usually carried it and I hailed Gerald Bliss and across from him was the paymaster. So Gerald Bliss called across to him says, "He's all right, I know him, give him his money."

Q: This idea of the gold and silver workers, that's caused a number of problems over the years hasn't it?

A: Yes, that made a difference there. The silver coin called a balboa was as big as a United States dollar and worth 50¢ in gold. The problems increased through the years of of course sometime ago were abolished, the gold and silver rolls differences.

Q: Could you tell us something about some of the household help that you had?

A: Yes, there were West Indians -- when we were at Gatun my wife, Fan, had a black West Indian that she called Thundercloud. (laughter)

A: Mrs. G: She never smiled.

A: And she -- when she did the washing she asked Fan whether she wanted the clothes to sleep over night, on the line. Then, but on the Pacific side at Pedro Miguel we had one of the best persons for help that we ever had. She was smart, and capable and loyal. After not too long a time there, she came one time and wanted to use out stove for cooking, brought all the ingredients and made a large cake, layer after layer peaked up pyramid like, and she was going to get married, so that ended her services with us.

Q: What were the various places you did live in while you were in the Zone?

A: Well, when I first went to Panama it was Corozal for just not long.

Then at Gatun and then at the last part over at Pedro Miguel. We had then some changes in towing locomotives, electrical connections that I worked out. The locomotive operated at 440 volts direct current and there were slots where they went along, there was an arm projected down to make the connection on top of the rails underneath. These towing locomotives worked on a rack-track with gears, and they of course went up rather severe slopes

A: where the lock were, three on the Atlantic and that was at Gatun, as I said before two at Miraflores and one at Pedro Miguel. These towing locomotives had above them a reel on a vertical axis with a cable, and this cable would when the ship would be coming along to go through the lock, the cable with a loop on one end would be thrown out, first with a rope, and the West Indian catching the rope would snub it over a snubbing post on the boat. Then for an ordinary vessel four towing locomotives, two on each side of the Canal was sufficient. The larger ones there was three on each side. There'd be the front tow, one in the middle that would both pull to start it and brake to stop it, and one at the rear end which was braking only.

Q: Now these were called mules?

A: Mules, yes electric mules, they were called that.

Q: When we first went down there they commented about going to see the mules and I assumed mules was an animal-type mule and I was so surprised when I found out that the mules were these electric. . .

A: Mules, by the way, description I once heard, "No pride of ancestry nor hope of posterity."

Q: Very good. (laughs) So the ships that were, that would enter the Canal then they would be pulled in effect by these mules through the locks?

A: That's right, yes, through the locks only. Then when you get to the places to release them it was always difficult with the ship starting up and the cable out there, looped to a snubbing post, to get that free so that it would be clear from towing locomotive as the vessel started out. Sometimes the cable would be oh, stuck between strands, between rounds on the reel and then we'd put on the brakes and let the ship pull till it

A: would open that up. These towing locomotives were very effective. The ships then were not so large, each of the lock chambers was 1,000 feet long. Now the vessels many of them are too large to use them. The towing locomotives of course would pull them in to one chamber and then the mitered gates would close and the water level would be equalized from it to the next chamber and it would go through, and the gates would close again and so forth till we got them down.

Q: So then the ship would go under its own power, say through the lake area?

A: Yes, through the lake on its own power.

Q: And then through. . .

A: Then out from about eight or nine miles I suppose to the Pacific. There were a great many interesting ships, there were some United Fruit and some, usually painted green, from the west coast of South America. One time I came up on a United Fruit boat, the Abgenaries, and came up to New Orleans. We stopped on the way at El Murante [Limon], Costa Rica to load bananas and these bananas were brought down to the dock in small boxcars, narrow gauge railroad, banana leaves around the side to kind of protect them from the heat. Then there'd be a double row of natives, colored folks there, facing each other, facing each other they'd pass it on all the way along, and if you'd look down at them, there'd be a row of bananas coming kind of through the air to get to the ship, because they had to be careful not to bruise them. These colored folks would be singing their song, native songs, as they were doing that. When I came 38,000 bunches were taken on, a rather small load, most years it was 50,000 bunches. When we got down to New Orleans and coming up for a ways, I suppose at one time New Orleans was right at the bay but later water washed a great deal of earth down

A: and so New Orleans is somewhat up now, upstream on the Mississippi from the lake. There there'd be some natives down there would come along in boats and they'd yell, "Please throw off to me a bunch of bananas." And once in a while they'd have some rejects and there'd be some a little bit bruised or something, they'd throw them out and they'd float and the natives would get them.

Q: When we were in Panama the ship that they the biggest problem going through the Canal was the old Enterprise.

A: Was what?

Q: The Enterprise, the air craft carrier.

A: Yes, they had a good many at this time during the way, they had ships like from Australia and different places going through ~~that~~ were camouflaged, had different figures painted on the sides of them so at a distance they wouldn't be very conspicuous.

Q: Are you speaking of World War I or II now?

A: This was in 1914 and 1915 and 1918. Yes, I came back up from there in 1918.

Q: Do you think with your experiences with the Panama Canal you could comment on the present situation of a new treaty formula or something?

A: Well, you know the way the Panamanians first got independence from Columbia was, in order to get building the Canal, Teddy Roosevelt worked out a scheme and a sort of an insurrection and \_\_\_\_\_ and then the Panamanians had freedom of separation from Columbia. Now they've been in recent years clamoring about taking over the Canal. The Canal, of course, is a fourteen mile wide strip called the Canal Zone from ocean to ocean. To operate the locks and all the mechanism there takes considerable knowledge and training and it's a question whether these

A: Panamanians, we used to call them spickitties, because they no speak the English, it would be a question whether they could maintain it, I doubt that they could. But, there are always going on some negotiations, then our Secretary of State Kissinger has talked some about giving in to them in some respects, which should never be done, because we have the Canal Zone for perpetual occupation, that's the way it was worked out in the beginning and it should remain perpetual. To give up that thing -- you got to give up something else in some other location -- and there you go.

Q: When we lived in -- we lived both in the Republic of Panama and also in the Canal Zone -- while we were in the Republic of Panama we definitely felt an unkind feeling towards us. Now we were Army people and it was just a -- I didn't ever feel comfortable. Other than the language barrier which was there which always gives you a problem, it was just a, I always felt people weren't happy to see you as another individual, and this bothered me. When we moved into the Canal Zone there was the same kind of feeling on another level, is that we were intruding upon the Pan Canal Company people, and we were Army, but at least you felt a little bit more at home simply because it was more like it was at home.

A: Well now, when I was down there was the 5th, the 25th, and the 27th and a Lt. named Frank Milburn from the 10th and I went around on Gatun Lake quite a good deal.

END OF SIDE ONE

SIDE TWO

A: Frank Milburn was an interesting person from Jasper, Indiana, his father had been Attorney General of Indiana, and when he had command of

A: the 83rd at Fort Atterbury Indiana we got back and forth quite a bit. Later then at World War time, as I said before, General von Rundstedt of the Germans. . .

Q: This is World War II then?

A: Yes, no in World War I. But he was very particular who he'd surrender to and he surrendered to Milburn. BELIEVE THIS INCIDENT MUST HAVE HAPPENED IN WORLD WAR II, AS MILBURN DID COMMAND AN UNIT IN WORLD WAR II, AND A LT. WOULD NOT HAVE HAD COMMAND OF AN UNIT IN WORLD WAR I Then Milburn went out to Montana in some \_\_\_\_\_ position there.

Q: Could you recall what the various military bases were when you were in Panama, where they were located?

A: Of course there was Fort Amador and well, I don't recall any other places where they had bases for on the Pacific either.

Q: Amador is on the Pacific.

A: Amador is on the Atlantic, isn't it?

Q: No, I believe that's on the Pacific side of the Canal. Now Fort Clayton is. . .

A: Oh, Clayton, that's right on the Atlantic.

Q: Was that in existence? Was Fort Clayton there when you were there, that's opposite Miraflores and Pedro Miguel?

A: Yes, that's right.

Q: Was there anything on the Atlantic side that you recall?

A: Well no, I -- on the Atlantic side there were of course troops, as I said that the 5th, the 10th, and 25th infantry. I don't recall any others there.

PAUSE

A: Social life, there was on the Pacific side at the Tivoli Hotel was sort of a dance club called the Tivoli Club, very limited membership and very selective. I was glad to belong to it. On the Atlantic side was the Washington Cotillion Club, at the Washington Hotel. So that was the background of most of the social life.

PAUSE

Q: Mr. Gutting could you explain the operation of and what you did at Gatun Lock and Dam?

A: Well, as I said the dam was the biggest earth-built dam in the world then, at Miraflores Gatun Lake, 85 feet above sea level. Where the Chagres River came through, it provided the water for that. Then at the side of the dam to let water off of the lake were fourteen spillway gates that let water down on an ogee curve to baffels and then out through a stretch of the old Chagres River to the Carribbean. Now at that point there was a hydro-electric station, you had the water with the 85 foot height coming down through three water turbines we had there to drive generators for electrical energy that went across the Isthmus on two 44,000 volt transmission lines, to various sub-stations.

Q: This facility then provided all of the electrical current that was used on the Isthmus?

A: Yes, but there was a steam station there in the early days for the starting up where they had some Curtis vertical turbines, driving generators driven with steam. That was before the hydro-plant came. Now then, we mentioned about Madden Dam, and that of course was built to supply more water to take care of the great amount lost in Gatun Lake by evaporation, and some by lockages and some by hydro.

Q: Now Madden Dam was built long after you left there?

A: That's right, yes it was.

PAUSE

A: One of my very best friends there was a diver named Page and he did diving in the Atlantic and Pacific and around and up at Madden Dam later we went down and in coming up a little too fast from the pressure down below he got what they call the bends, nitrogen in his blood and he didn't recover from that.

Q: Mr. Gutting, could you tell when you lived when you were in Panama, what kind of living quarters you had?

A: The quarters that we had were the bachelor quarters, we had one place special, we had four rooms upstairs, ~~two~~ of us in each, and down below we had a dining room and a sort of a living room. We had a cook there, and then a waiter, a West Indian boy named Smoke, we called him Smoke. So that was the only place on the Isthmus like it. And it was -- my roommate was named Quinn from South Carolina and there was Harry Morehead from Newcastle, Indiana and various ones, Roberts from Connecticut and so forth.

Q: Where were these quarters located?

A: They were located in Gatun on a hill near the fire station. There was there in those days, a fire station, it was operated by two very nice men I knew, Jim Albert and Logan Albert, brothers, and they were from Decatur, Illinois originally. And so there was a big depression from it where the road went around to what we called New Town, New Gatun, where the natives were. And they'd come sometimes and try to steal things for us. I had a gun down there, an automatic pistol, and in the bachelor quarters here somebody would come there and try to steal and they went running down through this depression, go on the other side. A fellow named Goree who was in the next quarters there yelled at me, "Shoot the son of a bitch!" (laughter)

Q: That was a problem then I'm sure and I think that problem has continued, the natives, natives as we called them, had light fingers so to speak.

A: Yes, they are, you can't trust any of them. Well, as I mentioned before there, when I got back from the hydro-plant one evening about eleven and went to bed, why I had this black palm cane next to my bed and so after a while here is the silhouette of a man against the doorway and I took this cane ready to knock him over the head if he came closer, and I think he sensed it, and so he said, "It's Musca." Well, Musca was a Hungarian policeman and I still think he was in there going to try to steal something because later they put him in the Gamboa stockade, they had a stockade there like a police station. So, but he had an alibi, he said in the next building somebody had gone in there, that he wanted help to get. I said, "Well, I got this shooting iron here and if anybody comes at me with one, I'm going to shoot first and you've got to take the blame for it." So we went down there and he went in and who came out was a hunter from the Pacific side who had just come there to sleep overnight in some vacant room.

Q: You mentioned commissaries somewhere along the line, is this where you obtained all of your. . .

A: All of our food, yes, from the commissary. But then we'd go out in the jungle region where they had been squatters and they often would have what we called them alligator pears, up here now they call them avacados, alligator pears. And we'd go up there, my roommate Quinn and I would go there, and we get a big hamper full, they had hampers full and they'd be about two feet or more high, handle on one side, and they could put one on each side of mules.

Q: What did you think of the citrus products that they had in Panama?

A: Well, the citrus, the oranges were kind of what we called bitter-sweets and full of seeds. Then they had, oh they had several. . .

PAUSE

When I was first down there I saw what I thought were some conderful looking bananas so I got a half a dozen of them and they were nice yellow looking jobs, and I went and tried to eat one and it was just like a green banana, and what it was, instead of a banana, a papaya. They cooked that then, didn't get it straight. But they had some other wonderful bananas, they had what they called ladyfingers, little bananas, you know.

Q: We had a banana tree in our yard and we had the small bananas like that.

A: They were wonderfully good.

Q: We ate so many we got sick, but they were very good.

A: You see the ones they grow now down there in South America on the coast, are some kinds that will take shipment better.

Q: Were there mangoes?

A: Mangoes, yes, there were mangoes. When you had them, you had a seed and the seed had a whole lot of shreds on it, you'd eat around it.

Q: Our joke was if a mango was, either if it was good it tasted like a peach and if it was bad it was like eating gasoline.

A: That's correct.

Q: And I think every one I had tasted like gasoline. I couldn't take them anymore.

A: Well now, there was breadfruit, I don't remember eating that, I don't remember, it was something, I think, like it in the United States, a hedge orange, it looked something like that, but I don't remember

A: having any.

Q: Did you do any fishing down there?

A: Well not much, I -- we did like fish, we liked red snappers above all of them. I went one time on the Pacific side and we were fishing there and we'd get several pretty good kinds, hardly ever a red snapper, but then there'd be some pelicans you know and you could tell where the fish were because there would be a school of fish near the surface and the pelicans would be diving for them. We used to talk about the pelican, "What a wonderful bird is the pelican, his bill holds more than his belican. He holds in his beak enough for a week, and I don't see how the helican."

Q: (laughs) I think that's Ogden Nash that said that of them. We used to in the evening watch the pelicans dive for fish, they were just lots of fun to watch.

A: Yes, they were. Now let's see, should I go on a little bit and tell you from the Panama Canal Service, while on leave of absence, I was offered a job when on vacation. We got 24 days one kind of leave and 30 days annual leave which could accumulate, the 24 couldn't and travel leave of seven days, and they encouraged us to come to the States.

Q: I'm sure on one of your trips to the States you got married, is the right?

A: Well yes, I was down \_\_\_\_\_ time and then we were married in the States in 1916.

Q: Could you tell me your wife's name, we've mentioned her right along the line but. . .

A: Her name is Fanny Hill Gutting from Champaign.

Q: And you have. . .

A: We have three sons, one is Steve and he is in New Jersey, manager of international sales for Ingersol Rand Company, largest compressor manufacturer. One is down in Florida, a captain in the Navy and has some navigation projects he's working on.

Q: And what's his name?

A: Philip, John Philip, but we call him Phil. And then the youngest one is Paul, Paul A., he is a professor of mechanical engineering, Milwaukee School of Engineering, he teaches thermo-dynamics and fluid mechanics.

Q: Now of these sons, Steve was born in Panama?

A: Steve, that's correct, was born in Panama at Colon Hospital and then when I moved from Gatun on the Atlantic side where the Colon Hospital was, to the Pacific side at Pedro Miguel during that time, then they came across, Fan and the youngster came across on the Panama Railroad. I had passes on the Panama Railroad.

Q: I think you did show me before a certificate that you received from the railroad. Let's see if we can find that.

PAUSE

Q: Mr. Gutting had shown me a paper from the Panama Railroad, he's an honorary locomotive engineer. If I may read from it, "Leo A. Gutting is herewith presented. . ." pardon me, "The Panama Railroad, honorary locomotive engineer, is herewith presented to Leo A. Gutting who has demonstrated an inherent ability to operate a locomotive on the first, shortest, the widest and the oldest transcontinental railroad in the world. This certificate of qualification is presented the 19th day of July, 1969." I don't think people realize that this is true of the Panama Railroad.

A: See, in -- now on leave from the Panama Canal service I told you I was offered management position of Interstate Public Service Company, gas, water and electric in Indiana. So I managed that until I retired in 1955. Now -- but in recognition for design details that were used in the British hydro-electric development at the headwaters of the Nile, this reads, "Leo was elected a fellow in the Royal Society of Arts. He is listed in Who's Who in Engineering and the International Blue Book. In 1969 he was invited to return to the Panama Canal to receive a citation for his earlier work."

PAUSE

Q: Today is March 4, 1976, we are again visiting with Mr. Leo Gutting of Ottawa, Illinois. Mr. Gutting is going to do a little backtracking for us now and is going to relate some of the incidents when he was working in Muskogee, Oklahoma prior to his going to the Panama Canal. So we're back in time a little bit, Mr. Gutting.

A: Well, across from Starved Rock there was a large encampment of Illinois Indians, about 4,000. Now the Iroquois, a bloodthirsty group from out East came there and massacred them and then there were some Illinois Indians, a few that were up on Starved Rock that were left and so they starved them out. There was only one way accessible and is now, only one way up to the Rock. The French had had that, Starved Rock, as a fort in the early days, oh about 1781 or something like that. LaSalle had been there and Tonti and LaSalle had gone from there down the Illinois River down and out the Mississippi down to the Gulf and there some of his own group killed him. But there then on Starved Rock there were still, I remember years ago, not visible now I'm sure, some of the barricades that the early French used for fortifications up on that Rock. When they starved out this Illinois tribe they couldn't --

A: they tried to get water with long ropes from the Illinois River and they'd cut those ropes and kept them from having any subsistence, so there you go.

Q: It's my understanding that at this point there are some of the original, or I should say descendants of the original Illini Indians living now in Oklahoma, which brings us back to the tie-in, back to Oklahoma. So now Mr. Gutting, could you tell us of what conditions were in Oklahoma when you were there?

A: It was kind of an outlaw place in a way. I carried a gun at my waist, as most everybody did. There was one case there where one named Pony Star, kind of an outlaw, and he had shot someone of another group. So then, some of them waited at the top -- he was in town and when he passed -- waited at the top of a double stairway and so when he went past and went down to the bottom there, and shot him in the back, one of them ran off to the right there a ways, but they killed them all.

Q: I assume there wasn't too much law and order there at that time.

A: No, nothing came up in court or anywhere. That was just one of those things, they did nothing about it legally.

Q: Now Oklahoma was not a state at that time?

A: It was a territory.

Q: So then any government was of a federal marshall nature?

A: That's right.

Q: When you mentioned power plant with regard to Oklahoma you immediately think civilization, but it obviously wasn't as civilized as we're immediately thinking.

A: No, when I got there of course, they still had this going on, but I operated that power plant there. Then we had two large cross-compound steam driven generating units. They did not synchronize well, they'd have what you call hunting action, cross currents that would throw out the switch. So what I did there, I put a true-fault Hartford shock absorber tightened up on one of the governors to take it still, and have the other governor take the variation of the load, which it did. So that solution led to my being invited up to Allis Chalmers in their erecting and testing department, where I then went in 1912.

Q: Now this power plant in Oklahoma supplied power for approximately how large an area?

A: I think then <sup>M</sup> Muskogee was about 10,000 population.

Q: And it was just for this city?

A: Yes, just for that area, municipal area.

Q: Was this, you mentioned steam drive, there was no water power connected with it?

A: No, no. Lead boilers, we burned usually in the steam boilers sometimes coal, mostly oil. Then the steam was fairly high pressure from that and operated these -- they had 70 ton fly-wheels on them and two large Allis Chalmers units, cross-compound.

PAUSE

A: While in Indiana, on leave from the Panama Canal service, I was offered management of Southern Indiana Utilities and then in recognition of design details which were used in the British hydro-electric development at the headwaters of the Nile, I was elected a fellow in the Royal Society of Arts in Britian.

Q: Could you elaborate on that situation now?

A: Well, I had some design details that they could use for the hydro-electric development there that they used. A Britisher who was there then took this back to England and they then elected me a fellow in the Royal Society of Arts.

Q: About what date was this Mr. Gutting, do you recall?

A: Let me see, that was, let me see, just a minute here.

PAUSE

A: Here it is, 1955. Then I was listed in Who's Who in Engineering and in the International Blue Book. And in 1969 was invited to return to the Canal to receive a citation for the earlier work.

Q: Now Mr. Gutting, could you tell us of your work in the Indiana power plant that you were in charge of?

A: At Shelbyville, Indiana I was manager of Interstate Public Service Company. We had on the Blue River a powerplant that was driven with steam turbines and there were coal boilers, at 250 pounds steam pressure, and water pumps driven also by this steam. Then this steam plant occasionally needed to be taken off the line because of refuse coming down the Blue River which was used for an intake for the condensers, it would clog up the condensers, then the steam turbine would not carry the load and we'd have to shut off some of the load of the circuits. To reduce the load in order to clear out this jet condenser -- it was a Westinghouse LeBlanc condenser which threw little discs of water into a tube and that way ejected air. When that often gave trouble I got from out east, Pittsburgh, an Elliott Earhardt ejector, steam ejector. That operated and took the condensate from the turbine condensers, removed it by a steam jet and we had no more trouble from whether the Blue River was high or low and no matter how much refuse was in it, we still operated well.

Q: Now what area did this operation service?

A: It took in Shelbyville and close surrounding territory. But then we had a transmission line connection come in from Louisville and up, but whenever there was a lightning storm that would sometimes kick out a switch, lightning discharged into it, so that would throw off the power and then we'd be in some trouble.

Q: Those storms weren't good news for you.

PAUSE

Q: Mr. Gutting, could you tell us of any further education that you have taken with regard to your particular area?

A: Well, at getting my B.S. degree in electrical engineering in 1911, I had taken besides the regular curriculum these extra courses passed and credited, in addition to this full curriculum for \_\_\_\_\_ science and electrical engineering; mechanical engineering 24, advanced chemistry, commercial law B, differential equations higher than the required differential and integral calculus. I became a member of the American Institute of Electrical Engineers, American Association for the Advancement of Science, and was a past president of Rotary International, and the Indiana Chamber of Commerce.

PAUSE

Q: Mr. Gutting, could you tell us a little more about Ottawa when you were quite young, about the I & M Canal?

A: The Illinois-Michigan Canal came along and crossed the Fox River, it was called the aqueduct and that made a good place of swimming, and up the Canal a ways also used to go fishing, catch bullheads and so forth. Then down west of town where now is the Ottawa Silica Company all mined out, there was an Ottawa Chautauqua. Chautauqua started at

A: Chautauqua, New York and they had them in different places in the country. Had speakers from out of town, William Jennings Bryant was once there, I shook hands with him. I took in tickets at the gate, the Interurban Gate, at the Ottawa Chautauqua. Charles Caton from the North Bluff sold the tickets at the gate while I took them in. Should I tell about Will Caton disappearing?

PAUSE

A: At Chautauqua Park as I say, Charles Caton sold the tickets and I took them in. Charles Caton had a daughter, Kitty, and two other sons who were younger \_\_\_\_\_ and a son Will, elder. Will Caton was married to a lady named Dallenbaugh from Champaign. At Champaign he went and got on the Illinois Central to go to Chicago and that was the last they ever heard of him, and she still looks forward to sometime seeing him. When we were down in Panama, after I'd been there a while and came up and got married. And now -- William B. McKinley had in the area where my wife lived at 311 West Springfield, in the early days he had a wheel cart that he sold vegetables. He some way, he was married for a short time to someone named Burnham -- to get off the hook someone named Burnham who needed to be taken off the hook. He didn't live with the gal any length of time but he had, he seemed to have gotten quite a bit of compensation on that, he was a good financier and he developed that into considerable money, so he was the wealthiest man in the United States Senate. Now when we were down at Gatun and William B. McKinley had won an election he brought down with him two men who had helped, one was named Stipes and another one who was Dallenbaugh. Now by the way, Dallenbaugh had a man named Carl Dallenbaugh who was head of the psychology department of Columbia University and later down in Texas as a consultant at the University of Texas. Now they came down to Champaign, William B. McKinley bro

A: brought them down on the trip after he had won his election. So at Gatun they looked up my wife, Fan, whose name was Hill, last name. Then off to one side Dallenbaugh asked me if I had ever heard down there of anyone named Will Caton, but I hadn't.

Q: They were looking for the erring husband?

A: He had just disappeared.

Q: That's very strange. Now this William B. McKinley was the owner, so to speak, of the entire Interurban System?

A: Yes, he developed Interurbans. The Ottawa Interurban that was built here in 1903, sometime later I was a motorman on it down west. It went -- it was called Chicago, Ottawa and Peoria but went from just Joliet to Princeton. Then he had of course over in Champaign one that ran from Danville down to Springfield. It's a wonder how in those days they could finance the right of way, the tracks and ties and everything, the pole line and the trolley wire and everything for the little fares they got. The fare didn't amount to much, you could go to Marseilles for a dime. He had also the streetcar line in Champaign-Urbana, and you could ride anywhere around there for a nickle. They had one out went across the campus at Oregon Street, there was no street there but it went across just the campus, went out to what they called Crystal Lake, north of Urbana. How they operated so with just small fares has often been a wonder to me.

Q: Now Ottawa also had a streetcar line, is that correct?

A: Yes, they did. It was not in east Ottawa, there was never any business in east Ottawa, it's been ruled out, but it went from the north side across south, the bridge, and went out east on the south side to Ellis Park and then it went out on the west side to Ottawa.

Q: Now that was a privately owned company and not a part of the Interurban?

A: No, it was not a part of the Interurban. And they. . .

PAUSE

Q: Mr. Gutting would like to relate an interesting work experience when he was between, I believe, his junior and senior year in college, so it's a little different perspective of job hunting.

A: It was very difficult to get a job of any kind, our head professor of electrical engineering gave me a recommendation to work in Chicago and there was a University of Wisconsin older graduate sometime before named Wulfin, W-U-L-F-I-N-G, and so I went up there and he said they were having something in the nature of a strike with the Cosmopolitan Electric Company who had been started up sort of in competition with Commonwealth Edison. So I had, I got a pair of spurs, brand name of Klein, which is the outstanding kind of pliers and spurs from that time, I went out and I would climb poles and we then did not have the protection we had later. When I had line gangs later in Chicago which I managed, we had what we called rubber blankets that they could put over, and insulator caps to put over as insulation and rubber gloves that would come clear up so a man could tie them and we'd take them and double them up and squeeze, see if there was any pin hole in them which might get through. I didn't have any of those. I did have rubber gloves only, but no rubber arm pieces or anything like that. So I used to climb these poles and I'd worm my way up through, 2,300 was the lowest and I'd get up higher and it would be 6,600 and I'd get through dodging them and so forth to fasten up the wires. Now, as I said, they had something in the nature of a strike and one time my boss who was over at a blow-pot melting some lead, some one of

A: the strikers came up and hit him over the head with a lead pipe. The company furnished us with our meals and one big thing I recall was we had the best strawberry pie that I ever have tasted, we had at those meals that they supplied.

Q: What area of Chicago was this, Mr. Gutting?

A: That was in the main area of Chicago and I was went to one time at Kedzie and Ogden streets where we were putting in some transformers and down below were a lot of little youngsters, poor kids they'd run around, and as we cut off a little piece of copper from the end of a wire that we were using fastening up the transformer and drop on the ground, they'd got over there like a bunch of rats to pick that up and take it off.

Q: Now you were about what age at this point?

A: Let's see, that was the summer, I was eighteen going on to nineteen.

Q: Heavy work for a young man.

A: Let's see, so then later when I was down in Panama and I had a bunch, a group of machinists and electricians putting in work in the permanent shop buildings, then I raised a mustache so to look older.

Q: Then you were then what, just about twenty when you were in Panama?

A: That's right, I was twenty.

PAUSE

Q: Mr. Gutting will tell us about a limestone operation in Indiana and then tie it in to something very local.

A: I was in Indiana, at Bedford, there were there stone quarries, there was one Furst and Kirber and another McClaren and they would take out big blocks of Indiana limestone and they sawed this with what they called gang saws. That would be, say, a beam across with just straight pieces

A: of metal probably about four inches up and down and a little over an eighth of an inch wide and no teeth of course on them. With an abrasive, they used sand, silica that they got from Ottawa, and there would be the water and the sand and as these saws would go back and forth down through the big chunks of limestone they would make a good clean cut, and the size of the blocks according to however they set these saws at the end. Now there was a very fine gentleman there named Edmund Thornton and we used to go to the Presbyterian Church together. He told me then that he had an interest up in Ottawa because here they got the sand that they used in cutting the limestone, that is for the abrasive. So he bought some area in Ottawa where this sand was produced. So that led now to the large operations of Ottawa Silica Company which has excavated where the old Chautauqua Park used to be, although there is still a pipe there with a well, they had an artesian well from that park. So that developed into Ottawa Silica Company.

Q: Now the Edmund Thornton you speak of then would be. . .

A: Grandson, Edmund Thornton now there, is a grandson of the one I knew over in Bedford.

Q: Very interesting.

END OF SIDE TWO OT

SIDE THREE

Q: Today is March 10, 1976 and we're continuing our interview of Mr. Leo Gutting. Mr. Gutting will tell us of the Gutting family background, he had already told us of the Arnold family and now he will tell us of the Gutting family, Mr. Gutting.

A: My grandfather, Francis Gutting, was born and lived in Rhinefaltz, Bavaria, Germany, just near the French section. He came to the United States I think in 1861. My father was born in Brooklyn in 1861 and two years later the family moved to Ottawa, Illinois. They lived in a small house across the street south from Shabbona Park. There were his older sister, Emma, married later to George Bommer, B-O-M-M-E-R, who moved to Houston, Texas about 1910. My father had a brother, Frank, who was a tailor in Chicago. A brother, George, who lived in west Ottawa. A brother Jake who was married to Rose Towne, T-O-W-N-E of New Albany, Indiana and they have a daughter, Loretta. Jake died in Ottawa, Loretta moved, was adopted by George and Emma Bommer, lives now in Houston, Texas, married to a man named L-E-D-I-N, Ledin. My father had two other sisters, Carrie and Anna, they had for some years a millinery store in Chicago.

Q: Mr. Gutting could you tell me that you father's occupation was here in Ottawa?

A: My father when he was fourteen was sent to Titusville, Pennsylvania where they was an old friend of the family named Fisher who had a barber shop and there my father learned barbering. He came to Ottawa and had then a shop at the Clifton Hotel for a number of years and then on West Main Street half a block west of LaSalle on the north side of the street for a number of years and he had in his shop three other chairs besides his, a front chair. Had working at the other chairs Frank Ackerman at one and another was Oscar Ackerman, who was quite prominent in the Congregational Church in Sunday school affairs. In east Ottawa lived a gentleman named Suehr, S-U-E-H-R who had in the Illinois River across from the east side on a ten acrs island a large asparagus patch. There he cut asparagus from

A: April until the 4th of July and he packed it, took it on the ferry boat back to the mainland from the island, and shipped to Chicago every evening. He had several children, one was named George, who worked for my father in the barber shop. Later on my father retired in about 1927 and sold out to George Suehr. My father lived then at 716 East Main until his death in 1937. My mother continued to live here to the end of her life in 1944.

Q: Mr. Gutting could you give us a little information about Mrs. Gutting, please?

A: Well she, as I said before, was, lived at 311 West Springfield in Champaign. Her father was C. S. Hill and she graduated from the L & A Liberal Arts school, then took up library science and was on the faculty of the University in library science and went over to Indiana and re-organized some libraries, principally Scottsburg and Union City.

PAUSE

A: Fan!

PAUSE

Q: Okay, Mr. Gutting is going to tell us about Mrs. Gutting's family.

A: Fan's grandmother was named Fanny Moore, M-O-O-R-E, from Goshen, Massachusetts where she attended Hadley's School for Young Ladies. They moved from there to Pleasant Prarie, Wisconsin just above the line. There she met Emeroy, E-M-E-R-O-Y, Stevens, S-T-E-V-E-N-S, they were married, moved up to New Hartford, northwest Iowa, where her mother was born. From there they moved to Webster City, Iowa and there her mother, Louena Stevens, met her father, C. S. Hill, who was a watchmaker and an outstanding musician. For his health they moved down to Bastrop, Texas, were there two years and then came back north to Champaign rather

A: Webster City. Fan's mother's father was Abner C. Moore and he was married to Louena P. Black. He was born December 21, 1807 and died in Champaign March 28, 1863. His wife was born January 18, 1803 died at Champaign December 5, 1895. They are buried at Mt. Hope Cemetery.

Q: Mr. Gutting has some family papers here and he'd like to read a little part of it which is of great historical significance, Mr. Gutting.

A: "The father and mother of Emeroy Stevens were New Englanders who became early pioneers in northern Illinois and Wisconsin. In the early 1830's John went with a group of men on a trek to north Wisconsin with the plan that the wives and children would join them after the weather broke and claims were staked. With Emeroy in her arms her mother started with the other families, a few men as guards against hostile Indians. Before going too far the little band was met by a courier with the news that John Stevens had been killed and scalped by the Indians at a point now known as Stevens Point, Wisconsin. The mother turned back with Emeroy. When the Moore family reached northern Illinois the family of five girls was considered a gold mine as there was plenty of work for women to do. Fanny, about seventeen, had gone to Miss Hadley's School for Young Ladies, now Mt. Holyoke, and immediately got a job teaching school at 25¢, which in the days of barter was considered to be overpaid by many. Emeroy Stevens' mother in the meantime had remarried and her son Warner Earle, E-A-R-L-E, was one of Fanny's scholars, thus she met Emeroy and later married him. Immediately the young pioneers went further west where wildlife was wilder. Emeroy had the contract for building homes in a little frontier village in Iowa. They lived at Rose Grove. The daughters, Mary and Myrtle, were both born at New Hartford.

A: "Emeroy later traveled all over the southwest selling farm machinery and binding twine while Fanny became the backbone of every community in which she lived, being teacher, doctor, midwife, advisor and minister to all. In 1881 after having lived in Texas a short time, they came to Champaign with their daughter Mary and her family, probably because Fanny's father, mother and brothers and sisters were living there."

PAUSE

A: Fan's grandmother, Fanny Moore, had a brother Chauncey, who was killed at Missionary Ridge in the Civil War, buried now in the National Cemetery at Chattanooga. Her mother and one sister, Myrtle, lived in Champaign and Myrtle had been some years before married to someone named Sparks. Myrtle Sparks who taught Latin and Ancient History at the Ottawa High School from 1892, when she graduated from the University of Illinois, until about 1932.

Q: Mr. Gutting, you've told us about Mrs. Gutting's family, but now I think maybe you should tell us just how you met Mrs. Gutting.

A: At the University on Saturday afternoons they had at the Armory what were called Cadet Hops. There a man named Charles Sayre had Fan and I had my sister, Hilda. We used to trade dances on our programs in those days, and that's how I met Fan at the trading at the dance. I told her. . .

A:Mrs.G: He came over and apologized for giving away one of his dances, but he said in retrospect. . .

A: I told Fan that she had down in Urbana, Crystal Lake, was kind of a mudhole, whereas up in my town of Ottawa there were two rivers, the Fox and the Illinois. Then she told about her aunt teaching at the Ottawa High School.

PAUSE

A: Fan's father was a very capable in tuning pianos and the University when some celebrated artist would come would always have him tune the piano, once when Paderewski was there.

PAUSE

A: . . .Iowa, from there they moved to Webster City. Her grandfather, John Hill, wanted her father to have a good musical education so he sent to Chicago for an outstanding professor named Emil Phaffe, P-H-A-F-E-E to come and live with the family in Iowa and there he taught Fan's father, who later at the University of Illinois tuned pianos for the University and elsewhere. I guess, did I have that before?

Q: About Paderewski, yes you did.

PAUSE

Q: Mr. Gutting has in his possession quite a collection of old German books, most of them being medical books or one sort or another. And he also has in his possession very interesting pieces, of, shall we say, medical instruments. Could you tell us what those are, Mr. Gutting?

A: They -- in the early days they used to bleed people for almost any ailment, in fact that was the wrong thing they did for George Washington. We have here three of the bleeding instruments, roughly described they are brass cubes about an inch and a half on a side and on the bottom are nine slots with small cutters that can slip across these when it is set with a spring and tripped after being placed usually on the patient's back. Then there are a number of cups in which they measured the amount of blood that was taken. Two other instruments that we have are vein instruments with a single knife, also set with a spring that an quickly cut into a vein for letting out blood.

Q: There was something else you mentioned to me, could you explain what that would be?

A: Another instrument we have was known as a turn-key. It is a steel stem with a cross handle at one end and on a hinge at the other, a narrowed part which can come down over a tooth. This was used on the jaw to pull teeth and then it was either the jaw or the tooth. (laughs)

Q: I'm glad we have advances in science in both areas. Thank you. Mr. Gutting in his various activities has naturally become very interested in mathematics and he would like to give us a few examples of same.

A: From the studies of higher mathematics some solutions were developed to, which were called series, to expand into a series. As for instance, Taylor's series method and Maclaurin's. Now these would go on into infinity. The circumference of a circle by the way is pi times the diameter, pi, three and a seventh roughly, 3.1416 more closely, and still more closely 3.141592858 and so forth. Now, these measurements could go on to infinity which will all the mathematics I've studied has always been puzzling to my mind. There could be infinite time and infinite space. Now the closest star is Southern, Alpha. . .

PAUSE

A: . . .during the dry season down at Gatun it was very interesting to observe stars and from there we could see the Southern Cross, not visible from our part of the country here. There is also a false cross which can be seen further north, and not nearly as clear as the Southern Cross. Now as to these distances, Alpha Centauri is in the constellation Canis Major and three and a half light years away. Light speed, 186,300 miles per second. There are billions of stars in the galaxy of which our solar system is one. A billions is approximately the number of minutes since the birth of Christ.

PAUSE

A: Distances in space are often spoken of as light years, that is 186,300 miles per second for a year. In our galaxy of which our planetary system, the earth is one of some billions, we have. . .

PAUSE

A: Compared with these distances we can think of only two thousand light years away as being the distance since the birth of Christ and were we only that far away from the earth we might see Caesar crossing the Rubicon.

Q: I thank you very much, Mr. Gutting, for all this very good information about your own life, your own family and Mrs. Gutting's family. I'm sure that this will be a good addition to our Oral History collection at Starved Rock Library System. Thank you very much.

END OF TAPE

I hereby release all right, title, or interest in and to all or any part of my tape-recorded memoirs to Starned Rock Library System subject to the following stipulations:

PLACE Ottawa, Ill

DATE Feb. 26, 1976

Paul Guttig

(INTERVIEWEE)

Helen C. Wagner

(for Starned Rock Library System)