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Subject: *Stuart Ralston*, **Tape No. 6 (Call # ARC R 977.331 R164M)**

August 1, 1975

Recorded at subject's address: 1506 National Avenue, Rockford IL

Interviewer: Joanne Reid

- [*Currently, Tape 6 is broken, so the audio portion of this interview is unavailable unless and until the cassette tape can be repaired*]

Q: Stuart, did you go into electrical engineering upon your graduation from University of Illinois?

A: For roughly a year, or less, I sold electric lighting plants to farmers around the village of Caledonia. But in 1914 I got a job as a clerk in an electrical engineer's office in Rockford.

Q: Can I back up a minute? What is an "electric plant"? You said you sold electric plants to farmers. Could you describe those a little bit for us?

A: The electric plant was a little generator unit, run by a gasoline engine that we operated with electric storage batteries. During the time the engine was not running the batteries would supply light to the farm buildings and then the batteries would be charged at any time that they wanted to run the engines.

Q: And were those kept in the houses?

A: Those were usually in the basement or in a nearby shed. The batteries had to be kept from freezing, so they would be someplace where there would be warmth during the winter.

Q: What size were those batteries?

A: Well, they were pretty sizable. They would be in glass jars, and they would take a rack of about twelve feet. Two shelves full of glass jars with lead plates on the inside filled with sulfuric acid.

Q: And each battery, then, was four or five feet tall?

A: No. Each battery was about a foot tall.

Q: A foot?

A: Yes. And then there would be roughly fifty batteries, twenty-five on each shelf.

Q: Was that different than what I know, which we call a Delco Plant?

A: No. That was the same thing.

Q: That was the same thing.

A: Yes. Did you have a Delco Plant at your house?

Q: Yes. At my house, I remember, as a youngster, going down and seeing the batteries. But I remember seeing these big things that were dark blue – and I thought they were very large.

A: I don't know what they would be because the batteries were – well, they were about a foot square and probably about a foot high. That was the size of each battery and then there would be twenty-five of them in a row.

Q: In clear glass?

A: Yes.

Q: I must just remember wrong!

A: Well, I don't know – they could have had colored glass, but I wouldn't think that would be wise because they wanted to know the height of the liquid at all times to look at them.

Q: Could have been a little different variety, though, because it would have been 1933 or 34 that I'm thinking about.

A: Yes, well, it could have been different then. How long did you have that Delco Plant?

Q: Well, we got electricity in 1936. That was on Spring Creek Road. I was six years old then.

A: You had it before that. Yes, I knew those fellows that sold those. I used to room with Howard Rogers, and he sold those units. At the time I was putting in electric transmission lines around the country. That was in about 1925 or 26, in there. That's probably when you bought that plant. Yes, that's probably who sold it to you.

Q: Okay, then you spent a year doing that, and then you went on to be assistant in a...

A: No, I was a clerk in the Electrical Engineer's Office of the Rockford Interurban Railway Company, which ran interurban cars to Belvidere, Freeport, and Janesville and also operated the Rockford City Traction Company, operating the street cars in the town of Rockford.

Q: How did you get that job?

A: A friend of mine who was a mechanical engineer of the Interurban Company found out that they needed a clerk in the electrical engineer's office, and they told them about me, and they sent for me to come down and talk to them, and I got the job.

Q: Were you pleased about that?

A: Yes, very much so. And although the pay was very meager at the time, nevertheless it was a foot on the ladder of going someplace. I was there then for some time and then was given the job of supervisor of the substations on the entire system. The substations were units that were placed at intervals along the interurban line whereby the high-tension current was tapped and run into these substations and then through a transformer and the rotary converter, and the power was then changed to direct current and put out on the trolley lines that the interurbans used; they used direct current. We had several of those along the line, and we had to keep those machines in operation.

Then in 1914 – no, in 1917, the United States entered the war [World War I], and I made application to the Second Officer's Training Camp and then was accepted and went into training there and was commissioned a First Lieutenant. I went almost immediately to France; as a matter of fact, I sailed for France on January the 13th, 1918. And I was in France then until September of 1919 and then came back and was given the position of Electrical Engineer of the Interurban Company. In 1918, the old electrical engineer was retiring, and they gave me the job, so I went right on from there.

Q: Were you ever stationed at Camp Grant?

A: No, I went from Officers Training Camp at Fort Sheridan directly to Little Silver, New Jersey where there was a Signal Corps. I was commissioned in the Signal Corps, being an

electrical engineer. And there was a great shortage of electrical engineers in the Army at that time, and so I was sent directly to a Signal Corps camp in Little Silver, New Jersey and after a month or two there was sent on to France.

Q: Were you able to make use of your profession in France, actually, during the war?

A: Yes, I was – I went to school for a couple of months in France and then was given my first assignment in the army and was made a staff officer of an artillery camp in La Courtine, France.

Q: In where?

A: La Courtine, L-A-C-O-U-R-T-I-N-E, La Courtine, France.

Q: So you were not in Rockford during the disastrous flu epidemic?

A: No. No, I was not personally, but my wife of a few months was in the service of picking up the parents of boys that were sick in Camp Grant and taking them to where those boys were located, which was a very hard thing for them [the parents] to find. My wife and her sister were using their automobile to go to the railroad station, pick up these mothers and fathers and brothers and sisters and take them out to the hospital that their son was located in, and, of course, there were several hospitals there in Camp Grant during the epidemic, and they contracted the disease and died in October of 1918. Both girls were buried the same day.

Q: So, that did hit you rather personally, didn't it?

A: Yes, it did. Those were sad days for many, many people. I didn't hear of their deaths until thirty days afterwards because the cables were so clogged that they couldn't get messages through.

Q: Thirty days?

A: Thirty days afterward. I got a letter from my father telling all about it the day after I got the cable. So, those were sad days, no question about it.

Q: Well, we were just ready to talk about your position as electrical engineer for the interurban company.

A: Well, that continued on from 1919 until 1927. I was electrical engineer on the interurban company for that length of time. I saw it go downhill from a very profitable business to a business that was going further into the red, and in about 1930 it ceased to operate entirely.

Q: What was the reason for...

A: Automobiles, automobiles was the answer.

Q: But anybody that I talked to was very fond of the interurban.

A: Yes, it was a great help because you could go to Roscoe or you could come down to Ralston's Crossing and pick up the interurban and leave your horse tied there and go to town and come back and get in the buggy and come home.

Q: So, they would have stables at the interurban station?

A: No, they would have stables in Roscoe, but I think they just tied their horses and let them stand out, especially in the summer time, for the few hours they were in town. They had posts there, as I recall it, at Ralston's Crossing.

Q: Where was Ralston's Crossing?

A: Well, it's at the junction of [Route] 173 and North Second Street.

Q: [N. 2nd St. is] fifty-one, Route 51 [now Route 251, Martin Luther King Jr. Memorial Drive, at the time of this 2023 transcription].

A: Route 51. And Ralston's Park is right there now, between Route 51 and North Main Street.

Q: That must have been a center where people could go up to Beloit to school or go to Rockford to school or either place for business, too, wasn't it?

A: Well, lots of the people from the countryside took the interurban into Rockford High School, I'm sure of that. From out toward Freeport, out toward Beloit.

Q: Was the line to Cherry Valley part of that interurban system?

A: Yes, we went as far as Belvidere.

Q: Oh, you went to Belvidere through Cherry Valley?

A: Yes.

Q: Who owned the interurban company?

A: Who owned it? Well, it was owned by the Hoden Pyle Hardy Company, which was a holding company in New York City. H-O-D-E-N P-Y-L-E, I think, Hoden Pyle Hardy, H-A-R-D-Y.

Q: And so, then you would have a manager out here?

A: We would have an agent in the substation there, and he would sell tickets and then we had a waiting room in each substation. There was a substation right in the main street of Cherry Valley. And that was a ticket station and also the substation for supplying electricity to the trolley, picking it off the high tension line and converting it into direct currents for the interurban motors to use.

Q: And then you didn't have any other station from there to Belvidere?

A: No. That was the only station on that line.

Q: Belvidere was the end of the line?

A: Yes, we had a station in Winnebago, Pecatonica, Ridott; then we had a ticket office in Freeport. Then up north we had a [sub]station at what we called Number 2 that was a little way south of 173 now, and another one in Roscoe, another one in Beloit, another one at Town Line, north of Beloit, and another one at – no, I guess we didn't have one in Janesville. No, we didn't have one in Janesville.

Q: You were in charge of all of those substations?

A: Yes, after 1919 I was in charge of the entire electrical system of the interurban and the city trolley line.

Q: You had nothing to do with personnel?

A: Only in the – I had charge of the linemen that did the work on the line, and I had charge of the men that did the work in the substations.

Q: How did you manage all of those stations over such a wide territory? Did you go around and inspect them periodically?

A: Oh yes, we had the lead boys inspect them periodically, and then we had men in them that were there twenty-four hours a day. And they knew how to take care of the routine things around the substations, so it wasn't necessary for us to be there all the time.

Q: Was your job mainly an office job? That is, were you located in...

A: Possibly. I was out on the line a lot because I was involved in the mechanical end of the – well, it was principally when there was real trouble, I would be out on the line a great deal in that way. Yes, probably my time in the office would be about half my time and the rest of it would be out on the line.

Q: Did you feel that was a valuable experience?

A: Oh, very definitely, because it led to the Roscoe Electric Company.

Q: Would you like to tell us about that?

A: Well, the Roscoe Electric Company was a public utility that supplied electricity primarily to the town of Roscoe and the company was owned by W. C. Sparks, the General Manager of the Interurban Company and myself. And we built the distribution [system] in Roscoe so the people up there could have electricity. We tried to get people up there to form a company and buy the electricity from the interurban company, but they wouldn't do it. So, we formed this little company, and with approval of the Hoden Pyle Hardy Company in New York City, they gave us the right to form this little company. And so we supplied electricity to Roscoe. There was quite a number of customers in the town of Roscoe and that was the way the Roscoe Electric Company started.

Q: Was there some particular reason that you wanted Roscoe to have electricity?

A: No, but they were the active people that kept after us to give them electricity, you see.

Q: Oh?

A: You see, the interurban line ran through the different frequency until about this time and that frequency was twenty-five cycles. The ordinary frequency of the electricity in the house was sixty-cycle and the old interurban used to run on twenty-five cycle, and that flickered in the lights in the house until it wasn't practical to use it. But we changed over in one night, and all the substations are sixty-cycle. When we got that changed over, then they kept coming to us and wanting us to put electricity in the town so they could use electricity in their houses, which we did eventually.

Q: How could you possibly make a major change like that in all the substations?

A: Well, it *was* a major change. That was one of the highlights of my life as the Electrical Engineer of the interurban because, you see, it required two sets of machinery in each substation, and we had to get the new machines in place and the old machines out of place but still keep running. We were up – we kept the old machines running on a temporary foundation, and we had the new machines placed on their permanent foundations, so that when the change was made the old machines would be pulled out of there and that would leave the new machines running as it was. We had to go to every one of those stations that one night and connect up the different machines to be operative on the sixty-cycle current.

Q: So, you had spent quite a bit of preparation time getting the new machinery into place.

A: Oh, yes, a lot of – oh sure, we'd spent a lot of time in getting that...We had it all ready to connect up, you see. We could only stop at each station for a matter of thirty or forty-five minutes to make the connection and then go on to the next station so that we'd have them all changed over.

Q: How many substations were there? You listed them, but do you know offhand the number?

A: Well, there was Cherry Valley and Winnebago and Pecatonica and Ridott, that's four. Then there was Number 2 and Roscoe, Beloit, and Town Line. There were eight substations on the interurban.

Q: Then how about in Rockford itself – were there several substations in...?

A: No, that was – the direct current for the cars was supplied directly from the [electric] plant here. We didn't [have] any substations.

Q: The electric plant was Fordham [Dam]?

A: Yes.

Q: That's like a streetcar. There were tracks?

A: Sure, and you can see signs of the old tracks now on the streets. You'll see two rails sticking out of the pavement quite frequently. That was true on North Main until they resurfaced North Main.

Q: When someone says they took the streetcar, would that be the same thing as interurban?

A: No, the streetcar would be in the city. The interurban cars were great big cars almost the size of a railroad coach. They would seat forty or fifty people.

Q: I see. So, the lines came together in one central spot in Rockford.

A: Well, the interurban used the streetcar lines, you see. They used the same lines, same rails. The line from Beloit came in on North Second Street and crossed the river and made the loop around down Wyman Street. They would come to State Street on North Second Street, cross the bridge on State Street, and then they would turn left on Wyman Street and go round the block and come back on State Street again. That supplied them with a turn around to go back out north again – to go back to Beloit again.

Q: So if I lived on North Second Street, I could either ride on a streetcar downtown or I could ride the interurban?

A: Well, the interurban didn't stop.

Q: Oh, I see.

A: The interurban would start out here and wouldn't stop until it got out to Loves Park, see.

Q: I see.

A: So, you couldn't – well, there probably were stations out on North Second Street – like out at High Bridge there would be one, and another one further out. They had stops all along the way, little houses, you know, where people could get in as shelters from the weather.

Q: How much would a ticket cost me from Beloit to Rockford?

A: Gee, I can't answer that. Wouldn't be much, probably fifty cents or something of that kind.

Q: Was it an economically feasible operation to make that major change from sixty-cycle when it was a dying business?

A: Well, it was – we had to do it for the reason that the plant down here didn't want to put in any more twenty-five cycle machinery to supply us with electricity. They insisted that we change over to sixty-cycle so that they could supply us with the transmission lines that ran out from their plant and also that supplied the city of Rockford, so there wouldn't be any two frequencies in the town.

Q: So, you actually got to a point of progress where it was a forced issue.

A: Yes.

Q: What year was that?

A: When the change-over was made? Oh, gee, I can't tell you that. Well, probably around 1922 or so. '22 or '23.

Q: And the interurban ceased operation in 1930?

A: I think they ceased in 1930.

Q: So, you did have eight years after that financial investment.

A: Yes. You mean of changing over to sixty-cycle – yes.

Q: Because that must have been a very expensive thing to do.

A: Yes, it was. We had to buy new machines and, of course, the old machines were worthless. We just sold them for junk.

Q: Did you hire college-educated people to work in your substations?

A: No, they were usually old men because we couldn't pay them very much, and they were glad to get the work because it was pretty much sitting all day long.

Q: I see. But did they have to know how to...?

A: Do the switching.

Q: How to do the switching?

A: Switching. If the dispatcher would call up and ask them to do certain things and then they reported the trains by and they had a lot of little duties like that, you know, that they performed: kept the machines clean and the station clean and reported any unusual things that happened, and that's the type of work they did.

Q: And did you train them?

A: Well, yes, we'd have to train them. We would put them in with another operator for a while and then this other operator would let them do the work and they would supervise them, and then all of a sudden they would be capable of running the job themselves.

Q: Were you the only college graduate electrical engineer in the Interurban Company?

A: Yes, yes.

Q: Did you feel that your expenditure of going to college was an economical asset when you got into business?

A: Well, just the fact that I had gone to college wouldn't be, but the knowledge I got in college made it possible to be an electrical engineer of the interurban to start with, otherwise that would be impossible.

[END OF TAPE SIX]

(Jo Wald, Transcriptionist, 1975) / (Doug Janicke, Transcriptionist, 2023)