Janet Nolan interviewing Alton P. Aldrich in East Killingly on October 22, 1981 for the Connecticut Workers and Technological Change oral history project.

Aldrich: We're sitting up in the Whetstone hills in north-eastern Connecticut. I was born in the hills, in fact, I was born in the very house in which we are sitting this morning, in the room next door to our back. I don't need to tell you the date I was born. I was born the year of the great St. Louis World's Fair, commemorating the hundredth anniversary of the Louisana Purchase. Quite a few interesting things happened that year. Not only did they run the big fair, but they sold the ice cream cone for the first time at the fair, with a container that was edible. Campbell canned their first can of pork and beans that year and the Democratic National Convention was held at St. Louis because of the attractiveness of the fair and other factors. The democratic party had to look around for respectability to find someone to run for president, so they chose Alton Parker,- Alton E. Parker, a corporation lawyer from New York. He was born in the rural area up around Cortland. He wanted to go to Cornell but his folks couldn't afford to send him so he went to Cortland normal school and became a country school teacher - Parker, whom we're talking about, and then he went to Albany Law School and ultimately became a corporation lawyer. Strangely this was in the Republican era when anybody who was
respectable was also a Republican, but he was quite respectable and a Democrat. He ran against unfortunately, a great military hero, Theodore Roosevelt, with the Spanish war record behind him, so Parker was defeated probably the worst any man ever was with possibly the exception, Barry Goldwater. My folks being strong Democrats, I got his name, Alton Parker. A country boy, (I) went to the school here, in the local school for five years and then rode the trolley car down to Killingly Center for three years to go to school, because there was a schoolmaster there, Willis Shippee, who had taught twenty-eight years in that Killingly Center school, now the Grange Hall. I'm glad they kept it as a service center. I had a great three years with Shippee. I worked on his farm Saturdays and summer vacations and we got along just great. He inspired me with our heritage, the American heritage. He opened his class each morning with a biblical reading and the Lord's prayer, which didn't do any harm. We don't do that any more in school, therefore, we wonder what's wrong with kids. When I finished his school, I didn't want to go to Killingly high school because everybody at Killingly High School all took algebra, Latin, English, ancient history freshman year, ancient history. Well, all these years later, I plan in December to go to Israel and I'm looking forward with great interest to going to Israel. I'm going to stop off in Egypt on my way home and take a look at the pyramids and those great sites.
Well, I went to the state trade school in Putnam, which was quite new then. It had been opened in 1913, the third oldest of our vocational schools in Connecticut and I went there and took up the electrical trade - very, very fascinating, and our faculty was top level. This was in September, 1919, the day after Labor Day, and World War I was just over and jobs were hard to come by, so my instructor was fresh out of the United States Navy following his graduation from M.I.T., and came to teach at my school, because jobs, as I say, were not plentiful following World War One.

So I had the opportunity of studying under a MIT electrical engineer, way, way beyond the mental capacity of his students but a great guy. Many, many things I learned in his classes that are so relevant to today's living. He took us up to a little electric plant, a hydro plant on the French River, and showed us how they generated electricity with the power of falling water. Two days later, he took us to one of the big textile mills and showed us how they generated electricity with the combustion of solid fuels, coal; and then a few days later, he took us into the classroom we had and explained everything we had seen in the two places.

He went to the chalk board and he drew a picture. We were all farmers so he drew a picture of an inverted onion - a great big onion on the chalk board - and he said you all know how an onion is constructed. It's got a thin skin on the outside and then it's got layer after layer of onion.
You keep peeling off a layer until you get down to the center. There's a little tiny onion in the center, a little core. Now he said, we think that all physical matter is built like an onion. He said, we call this the atom. We can't see the atom, it's far too minute but the atom, we think theoretically, is exactly like the onion. Holding these layers together is a tremendous source of energy. We don't know just what that energy is, we don't know how to release it, but he said, some day, somebody is going to release the energy that holds those layers of the atom together and we're going to have a whole new source of power. What you folks have seen is going to be antique. It will have to go to a museum in order to see it. I was fortunate and grateful that I lived long enough to see the atom exploded and that energy released, and now the chances are pretty good that the light burning over this table this morning is being supplied with nuclear energy, which heats water to make steam. I had men like that to emulate, to pattern my life after. My drafting instructor was a man who had come to Pomfret to retire or to farm. He came from the great Northern Railroad. He graduated from Perdue University in civil engineering. Hanging over his desk was his diploma, a degree in civil engineering from Perdue University. We used to have a Wednesday afternoon activity period when we could hunt around and do most anything we wanted, and half a dozen of us used to gather around his desk and he'd tell us about his work with the great Northern Railroad and
also his work with the Panama Canal. He was a civil engineer on the Panama Canal. What a thrill to listen to him talk. One day he said to me-I wasn't doing too good in drafting. He said, "Oh, Aldrich, you print beautifully. Your lettering is masterful. Never mind about the questionable drawing. If you've got a good looking printing job on your blueprint, they're going to give it careful thought. Keep it up." Well, associating with men like that didn't do me any harm. Just as I was graduating on July the 29th, 1922 - you see, our course was different. Vocational schools in those days were innovative. They're talking about innovation now in education but they're behind the times. We were really innovative. The Connecticut Light and Power Company had started out in Litchfield County, in Canaan. They were working their way east and they had got well east of the Connecticut river buying up small power companies. All the power companies were little, local affairs, locally owned power companies. But they were coming east and were getting ready to buy the Danielson and Plainfield gas and electric and the Putnam Light and Power Company. These were privately owned companies and they were getting ready to buy these. I graduated just as they were coming up into the Whetstone hills for their lines, because the local people weren't too dumb. The more miles or lines they had built, the more money they'd get, so they built lines just as fast as they could to sell to the Connecticut Light and Power, including all the lines around this area. My dad was
a registrar of voters. He worked in the mill as a mill right but he was a registrar of voters. He worked up in the village store a day or two a year registering voters. A.M. Paine, a very wealthy merchant and eccentric bachelor, said to my dad, "I hear the boy is through school." And dad said, "He is." He said, "Send him up to see me." So I went up to see Paine and Paine said, I don't know whether you know it or not, but the power company is coming up into our area with electric lines. He said, "Can you wire a house?" I said, "Yes, I can." He said, "How about wiring mine, I have seventeen houses and the store. How about doing that job for me?" And I said, "why not!" If I can wire one house, the seventeen will be fairly easy. So, you go around to these houses, he said. Half of them I own and half of them, my aunt owns. You can keep them separate, keep the material separate. So we made a list of all the things we were going to need. I made his list. It took me a few days. And then he said we're going over to Providence and buy this material. So I presented the list, a couple of thousand dollars worth probably. Things were cheaper in those days. We agreed on a labor price for my services of sixty cents per hour, forty-four hours per week. I forget if we worked forty-four or forty-eight, but ultimately it got down to forty. We were in Providence the next Monday morning and went into the Union Electric Supply Company. I had never been into Providence except for two or
three times and never in a place like the Union Electric Supply Company. Up at the old Putnam schools, supplies were few and far between but over there the contractors were coming in and buying hundreds of dollars worth of electrical supplies. Finally the clerk got to us. Paine was an interesting fellow, kind of seedy looking, and here was this eighteen year old boy standing beside him. Paine said, the boy has the list of material. The guy looked at the list and he was kind of stunned. He looked back and forth between the two of us and finally looked at Paine and said, "How are you going to pay for this?" Paine said, first they asked me if I was an electrician. I had my credentials in my pocket from the school (which) I could have shown him, but I didn't. He said to Paine, "How are you going to pay for this?" Paine said, "with money." You can look me up in the book if you want to. He disappeared out to the back room and consulted, I suppose, Dun and Bradstreet, but he came back with a big smile on his face and he said, "Gentlemen, anything you wish you can have," because Paine owned a good share of the Narragansett lighting company in stocks and bonds, so my credit was established with the Union Electric Supply that morning and I could have anything I wanted so I went to work for Paine.

JN: May I interrupt just for a moment. Your first job as an electrician, you were working for yourself, hiring yourself out to different people on a contracting job basis?

AA: Right. Then I went back and forth between East
Killingly and Putnam for a contractor in Putnam. I had a partner out of the school who hadn't finished his work yet, so he worked for me on that first job.

-- Lloyd C. Cutler. Right in the other room, near my telephone, is the pencil sharpener that Cutler installed one morning over sixty years ago, about sixty years ago because I was always hunting for a pencil, so he came one morning and installed the pencil sharpener. It's still there. We worked as electricians and my reputation became well established. People had confidence in me and I did a couple or three mills, three different cotton mills. Two cotton mills in a reed factory where they made loom reeds. I did their electrical work and this kept up for four years until about the middle of April, 1926. My telephone rang one Sunday evening. It was Harvard H. Ellis, my old director at the Putnam school. And he said, "Oh, Aldrich, how are things going with you?" I said that I was keeping busy all the time, I can't keep up. "Well," he said, "I've got another job for you. I want you to go to Danbury, Connecticut and take a teaching job." I said, "I'm not a teacher." He said, "that's what you think." And he gave me the details of this job in Danbury. It was a seventh and eighth grade industrial arts job. The town of Danbury had a contract with the State of Connecticut. Connecticut did their industrial arts, their music and fine arts and homemaking on a contract basis. All that Danbury had to do was pay the bill
once a year but all the instruction was supervised by the state. The instructors were hired by the state. He gave me the name of a man, George W. Buck, who was the director out there, a grand old gentleman. I had to find out how to get to Danbury. I had never been in Hartford up until that time but I found a train route to South Norwalk, then up to Danbury, and I called on Mr. Buck. He took me around the school. He showed me what my job was going to be. These kids had been without an instructor for about six weeks so anybody that came would be the Messiah because they'd been without, so I agreed to take the job two weeks later. I had to come home and pay up my bills and settle my accounts and collect some money that was owed me, and I said I would be here in two weeks - it was on a Monday morning, May first, 1926. I left home reluctantly, the first time I had ever slept away from my own house and went to Danbury. The boss was out that morning when I arrived. I had met a fellow in the school on the faculty and had asked him if he'd get me a boarding room and that I would be back. He met me in the little diner. The arrival in Danbury was interesting, I mean, the second time, after the two weeks absence. I came from New Haven over to Danbury on a New England transportation company bus and I didn't know where to stay that night so I waited until everybody got off the bus and I walked up to the bus driver and said, "Where does a person get a place to stay overnight, or perhaps much longer?" He said,
"What are you going to do here?" I said I had a job teaching. Well, he said with much reverence, "May God help you." He said, I've stayed long enough in this town to turn this bus around and get out. (laugh)
So he told me about the hotel Green, which is now gone and he said it was second rate, but he said you stay there, so I went up and got a room. Obviously, I didn't sleep. I bought a Sunday paper and read that most of the night. I didn't sleep and the thought kept coming to me - should I go home and not say anything to my new boss, what should I do? I was awakened by the trolley cars running down the cobble street in Danbury and I got up and bathed. There wasn't any food in the hotel so I walked down and found a diner. It was crowded so I went in and one of the finest men I ever met was behind the counter, Eddy Costello, and Eddy started naming off the good things he had to eat, and I had got about half way down the stack of pancakes when he came over and said, "You're a stranger in town." It was pretty obvious from my clothing, my appearance that I was a stranger in town; and I told him what I was doing, that I was going to teach up the street at the Danbury Trade School, and he said you have come to a great school. He asked my name. "You have come to a great school, Mr. Aldrich, you have come to a great town. I hope you stay here long and have a successful career." Well, that was pretty encouraging, so I approached my job that morning with extra enthusiasm. These kids hadn't
seen an instructor in six weeks so we got off just great. After I had been there a few days, the boss came in and sat down with me after the kids had gone, and he said, "Aldrich, you're off to a great start. We like your approach." You understand, I had no teacher training, which didn't do me any harm. He said, "you're off to a great start, but I want to give you a little advice. Don't stay over two years unless you plan to make it your life's work." And I stayed over two years. Going to the movies the first two or three nights because there wasn't anything else to do and I was pretty lonesome. I did have a nice room. Mr. Norcross had got me a very fine room for six dollars a week. When I went to the movies, it flashed on the silent screen an advertisement from the International Correspondence School in Scranton, Pennsylvania, saying write here for information. I went home and wrote a letter for information and signed up for an electrical construction course, electrical theory and electrical construction, and I pursued that vigorously, teaching my kids out of the ICS books because we had no class outlines in those days, no recognized textbooks, so I used ICS texts and I finished that course but not until after I was married. There was an office girl in the office and I asked her for a date. She said, "We can't afford an engagement ring, Mr. Aldrich, but I'm honored" with the suggestion we have a date. She introduced me to a lady, a friend of hers, whom three years later I married and she was
very cooperative in my home studies and after I finished the ICS course, I began at the Danbury Normal School, taking teacher training courses—all women, I was the only man in the course but this made for expansion of my study and knowledge and I kept at it. I never stopped taking courses. Ultimately in 1948 I earned a degree, Bachelor of Science in Education at the Central Connecticut State College. It was then called the New Britain Teachers College, so I had myself a degree. Every little kindergarten teacher had at least one degree but I didn't have any until then, and then World War II --

JN: You taught in the school in Danbury right through the twenties, thirties --

AA: Yes, '26 until '30, until the great depression, I taught these industrial arts students, but in the great depression, 1929, 1930, they closed out anything a kid would need during a depression and I took over the regular trade school work, teaching practical electricians. No loss of pay, and talking about pay, my starting pay was sixteen hundred dollars a year. I lived in a boarding house and got my meals in a boarding house while there were several high school teachers—and they were all Vassar, Smith college, Mt. Holyoke, those kind of people—and they found out what my salary was some way or another, took an interest in that, and then one evening, one of the teachers said, "How is it that you can get sixteen hundred dollars for teaching down in that trade school
and we get a thousand dollars a year. A few of us get ten hundred and fifty dollars." I said, "Girls, out in my car I have a toolbox. I keep that toolbox in the trunk of the car. With that toolbox I can earn sixteen hundred dollars and more any year, starting out working as an electrician." That quietened them down because they knew they couldn't. The only thing they could teach was Latin and English and algebra and history but they had no box of tools with which they could earn a living.

JN: Teaching algebra and Latin is not an honest living? (laughs)

AA: Now we're getting into that academic vs. vocational argument. I love to - and I'm glad to know it still persists - this vocational versus academic education. You see, as I became more enlightened, I realized how old vocational education was. I'd read in the Holy Bible about the building of Solomon's temple in the Book of the first Kings, chapter five and I'm going to Israel December second to study the ancient origins of the Israelites and their contribution to technology, but we're getting astray here.

JN: You're back in Danbury, now.

AA: We're back in Danbury now and the boss has called me upstairs with the president of the Danbury Teachers College, one Ruth Haas, and she had a group of fifteen or eighteen boys home from World War II, and she wanted to start a course in electrical technology and electronic technology for these GI's. They would take math and physics with their regular teachers and they would
take electricity with someone who I could get to come in and teach it. The boss said, "Aldrich, do you want to do this?" I said, "on one basis." "On what basis?" She said, "one day a week." I said, "If I can have these boys, say on Friday, from eight or eight-thirty in the morning until four or four-thirty in the afternoon and have no other responsibility, I'll gladly do it." They agreed that that was fair; my boss agreed that it was fair. I took this group of fellows in and taught them Fridays about eight-thirty in the morning until four.

JN: May I ask this now – you started working as a teacher of electricity in 1926.

AA: Electronics wasn't in when I started teaching.

JN: All right, it comes in later. That's what I want to get at. Could you explain now - we've gone from the twenties to the forties in the story so far; what changes in the technology of the electricity did you observe in those twenty years?

AA: I would like to take a separate ten minutes on that if you won't forget it.

JN: This is kind of what we're looking for here, too. That's the key idea.

AA: I know, but you're in my house, so you're going to listen to my story.

JN: Okay.

AA: So we've got the boys teaching, and I'm teaching them right off the top of my head. I taught regular courses during the other four days, then Thursday night I'd go...
home and tell my good wife that the college guys are coming tomorrow. I had to get busy and work up something for them to do.

Anything the mail sorter didn't know what to do with in the mail, she'd put in my box. One morning,-this is 1948, she got in the mail a course offered at Cornell University to train industrial teachers. New York State was opening that fall ten technical institutes all over the state under the University of the State of New York, and Professor Lyn Emerson and others were putting on a three weeks intensive course teaching these engineers and accountants and others how to teach. Attendance at his course was by invitation so she put this in my mailbox by an act of God or faith in what I was doing - I don't know. I wrote to Professor Emerson and he said "welcome, come on up." So I went up that three weeks during the summer vacation and we studied with him from eight in the morning till about four in the afternoon. He would come in in the morning and lecture to us and then he would come in in the afternoon. I told him what I wanted. I wanted to prepare a course of study and he said, "Well, do just that. I want a whole year's study in electrical technology. You help these other fellows." He had been an old tech school director himself, had a lot of experience and he used me to help some of these other men that were engineers and accountants in the art of teaching. The three weeks
were coming to a close and I saw him at his desk in the afternoon, just twiddling with a pencil or something. I saw he wasn't too busy so I went over and said, "Dr. Emerson, I'm sorry this course is ending and wondered if Cornell could consider me for the master's program." He smiled, and said, "two or three of us have been talking about you and we were going to invite you to do just that." So he showed me how to go about it. When you go for a graduate degree, as you know, you do all your own work, so I registered for the graduate degree and spent five long, hot summers there, six to eight week sessions, and got in 1952 the degree Master of Science in Industrial Education. My boss back at Danbury had caused me in a weak moment to promise that I would never leave him as long as he was the director, so I came back with my thesis and that thesis which I wrote was called a problem. You could do a problem instead of a thesis without the foreign language, so I didn't want to take the time on the foreign language and did a problem. Danbury was just changing over from a hat town. They had been a hat town from 1780, manufacturing hats, and they didn't want to change, but through a combination of circumstances, I got involved with two or three new industries and I did my thesis and entitled it: A Problem Resulted. I did a problem on "Industrial Transition in a New England Community," the story of Danbury, Connecticut.
Dr. Ruth Haas took my thesis up to Hartford and showed it to the commissioner and said, "Did you know your tradeschool men were turning out this kind of literature?" I was sent for and I was transferred out of Danbury to Hamden, nextdoor to New Haven, to build the Eli Whitney Technical School. They talked to me, showed me the blueprints and so forth in Hartford, and I went over to Hamden and broke ground for the building of that new school and as I was finishing up, the 1955 flood hit the Quinebaug Valley and ruined more than half the city of Putnam, including the old trade school. Twenty percent of it tipped over onto the railroad tracks and Harvard Ellis was getting on in years, had a bad heart and my boss said, "Aldrich, you're just about finished here, why don't you go up and help Ellis build the school at Putnam. We don't know where we're going to build it yet but in northeast Connecticut somewhere." We had an appropriation easily obtained to build a new school because there was tremendous damage to Putnam. So I came up and closed out my affairs at (Hamden), going back one day a week, and started on the plans and specifications for the Putnam school. Ellis only lived a few months and died from a heart failure so I carried on alone and built the new school. We finally decided to build it at Danielson and we
decided before Ellis died to name it for him. One morning I was busy, very busy, and he said, "Aldrich, I'm sorry about naming the school for me. Why did they do that?" I was a little bit irritated because I had a lot of work to do, and I said, "Look, do you believe in the processes of democracy?" He said, "very much." I said, "by those processes, you were nominated to have your name placed on the school." He said, "I'll say no more about it." The local committee, an invited committee, had picked his name. And so we built a new school and I continued on as the director until I reached the age of seventy, when I was automatically asked to leave. I like to tell people that actually, I was dragged out of the front door kicking and screaming, because education is the great contribution to life, so that's for me. Now, specific detail that you are interested in, and I'm sorry to have talked so long; the specific interest that you have is what things have changed. Well, since we're here in the whetstone hills in East Killingly, we had in this very house - I had to leave here a minute ago to answer the phone, somebody calling me from Norwalk - we had the first telephone on this road back before World War I. I was quite young but I remember when the telephone company came to build our little line of eight or ten poles - not much bigger than a bean pole but they were poles and they came with a two horse express wagon. I remember the horses having their dinner under the trees near the house with
the canvass feed bags on their noses and eating their oats or whatever they fed them, and the linemen sitting around with their dinner pails eating their lunch. They came in the morning and they dug the post holes, set the poles and that night we had a telephone. They did the whole job right off of that wagon, installed the phone and were gone. Going along years later, I told you about the coming of the electric lights and we were the first ones on our road to have electric lights. I wired my own home here. Now, how much has line work changed in fifty years? Tremendously. These fellows that built our telephone line had what they called spikes or leg irons. They were hooks. Some called them hooks. They strapped around their legs and you climbed each pole and you did your work standing on these iron hooks. Now they have buckets, plastic buckets with a derrick and the people go out right among the live wires in absolute safety because they're in a -- not absolute safety, they have to have certain precautions, of course, but what a change. Now they can work in the rain on telephones if they have to with little tents that they build on top of the pole. These are changes that have taken place. The horses, of course, went to gasoline driven trucks. Now they have fleets of trucks that have enclosed cabs that will carry four or five men and all the materials, and electronics came along, you see. What I think about the development of any industry, I naturally think about electronics because if I go into the average,
even the most humble office these days, I don't know what the girls are doing because they've got strange looking typewriters with television sets on them and they not only type but they file all with the same operation. This is just beyond me, naturally. I don't understand it but in that early day, things were so much more simple. All our life, I'm not talking about human life now, all our industrial and technological life has been the result of evolution. Now, don't get me wrong. I'm not talking about human evolution. I still am a firm believer in the first book of Genesis. I believe this, it's one of my great comforts. The evolution of technology - I've got two little museums on this property - I've got two hundred years of education in one little schoolhouse - the evolution of public schools and parochial schools. I have that and then I have a shed which is a museum of tools, tools and technology. I have a statement out in the shed that goes like this on a chalk board - One, "reverence for the past." Two,"respect for the present." Three,"hope for the future." We used to have an icebox in this kitchen. You would put a cake of ice in it and the water ran out through a pipe through the side of the house.

When I was first married, we had a little icebox from Sears Roebuck that used a twenty-five cent cake of ice for a short while and then out came the frigidaire. We have here in the kitchen my third refrigerator now, so evolution has brought on these things. This used to be
a wooden floor in this kitchen. Now it is a wall to wall carpet. Evolutionary process in homemaking. And of course, in all the mechanic arts, whoever heard of a beauty shop when I was a boy? When the girls first got their first haircuts, we thought they were strange creatures indeed but think of the size of the beauty business now, and the cosmetic trades. We've talked about utilities, let's talk about buildings. This particular house that we're in this morning was built in 1819 by a young couple who inherited the land, which is my land. They built this house with their own two hands. I can open the cellar door and I can see crude looking laths, various widths of laths, and then there's a few pieces of modern laths. Now you go into a new house under construction and there are no wooden laths at all, there's wallboard, plaster board upon which they paper or paint directly. No longer do they plaster houses. They use a dry wall, a whole new series of skills. If my father was back now, he wouldn't know how to put on a dry wall. He could plaster and do other skilled craft things but just the construction industry, how it has changed. Then the transportation industry - as a boy, if there was illness in my family, and Dr. Todd came here from Danielson, six miles in a Maxwell car, not an old one, a new one; it didn't even have any doors. (end of side 1)
In 1903, electric trolleys came through this town from Providence to Danielson.

Hal Paine said, "Can you wire a house?" And we went over to Providence and bought the material. What did we buy? We bought rubber covered wire, porcelain knobs, nail knobs, porcelain tubes of various lengths, three to four to six inches long, eight inches long. We bored holes through the beams and put these tubes through and then pulled the wire through the tube and then for places where we couldn't bore, why, we used to do a process called fishing. We used a loom, a tube made of fiber and of course, those things now are out in museums. In my own museum there are a few pieces still existing. Then we went to a wiring called BX cable, a metal clad cable spiral wound with three rubber covered conductors inside of it and that went on for years, many years, and then we went to a non metallic sheave cable which is used practically everywhere now for interior wiring and pipe wiring; wiring inside of metal conduits are still used almost exclusively for commercial buildings, banks, stores, garages and factories - metallic tubing. You really should have, to do this job properly, some slide films of the pictures of these different materials
because I don't have enough of a vocabulary to describe (it).

JN: With the new materials, did this make it easier to wire more effective wiring?

AA: Much easier and much safer. Probably I shouldn't say safer because this house we're in, much of it was wired in 1922. This light overhead is new, but most of it was wired in 1922, so you can't say safer, but easier to do, much easier. Of course, wages is another thing. I started at sixty cents an hour and my dad's comment was - what is this world coming to when they'll pay a boy a cent a minute? (laugh) Now electricians are getting, well anywhere from nine to twelve dollars an hour or more.

JN: Do they need to have any more skills today? Do you think it is more difficult to do electrical work today than it was when you started?

AA: There's more automation and that requires deeper thinking. We had a little skit here, you and I, a minute ago, about academic versus vocational education. An electrician has to think. All the skilled trades, even a bricklayer has to think. I shouldn't say, even a bricklayer. Bricklaying is not only an art. It's also a science and in talking about trades, it doesn't make any difference what your trade is. You've got to think. Automation, of course, I can press a button in my car and raise and lower my garage door --

JN: The wiring itself, how the electrician works when he puts in the wires - has that changed much over time?
We know the results have but --

AA: It doesn't take much intelligence to bore a series of holes through beams unless it's in East Killingly where they're all white oak or beams, extremely hard woods. It doesn't take much intelligence but it does take effort, and we've got such beautifully automated industrial processes. When I started in up here, this was in the textile country. Looms were powered with single, overhead belts from an overhead line shaft, but now they're all individual, motorized; and automation in the textile industry - if a thread breaks, one thread breaks, the loom stops automatically. Well, that takes thinking ability. I haven't been in the electrical trade directly for thirty years.

JN: Thinking ability hasn't really changed then, over time. You had to think in the twenties, you have to think today --

AA: It's part of this evolutionary process as new things came out. Let me give you a 'for instance'.

JN: Good, that's what we need.

AA: Back in 1938, Fred Carley in Danbury came into my electric shop with a jeweller's case, a small briefcase, velvet lined. He opened it up and there were two or three tubular glass tubes there. I said, "What are they?" He said, "We're going to have a world's fair in '39 and '40 in New York, and it's going to be lighted with these tubes. They call it fluorescent lighting." This is 1938. I went to the World's Fair in '39 and '40 and took groups of students down and
showed them the whole place was lighted with fluorescent tubes. Well, what place isn't lighted now with fluorescent tubes? This house, for instance, is one that isn't. I have all incandescent lights but it fits in with the decor of the whole house. The amber, less intense light fits the architecture of the house. Fluorescent light would change that, so it wouldn't look as attractive. Yes, fluorescent lighting; neon signs --

JN: How does the electrician's work change with these new innovations? In other words, we know these changes have occurred.

AA: Well, this whole technique of procedure.

JN: Could you explain that to us?

AA: Well, this becomes quite technical. An ordinary bulb -- you twist in. It has a screw thread on it and you twist in the bulb. You've probably put in a bulb or two yourself in your life, but when you go to put in a fluorescent light, you've got to pay attention to the little pins at each end of the thing and if the tube is four feet long or longer, you've got quite a job of reaching up standing on a step ladder and putting in a fluorescent tube, and they're quite easily broken. A person who isn't skilled in putting in a fluorescent light, can break one in an instant.

JN: So they're harder to install.

AA: Right.

JN: Are they better lighting fixtures? What would be the advantage --?
AA: The great advantage is efficiency. You get more light per kilowatt purchased with fluorescent light than you do with incandescent light. I give a popular talk to rotary clubs and other places on the evolution of light and I go all the way back to the candle and the whale oil lamp -- the evolution of the light bulb. I've got one in the next room there, one of the early Edison bulbs with two little terminals on it. If you'll shut off a second, I'll go get it.

JN: That's quite an antique.

AA: That's about 1914 and that's a replica of probably the fiftieth anniversary of Edison's accomplishment. So this evolutionary process - every day something new. If I was to go into the Union Electric Supply today - they're no longer in business, of course, they're sold out, but there'd be many new things I'd have to think about. Now since I retired in 1974, I still continue to get my electrical trade journals and the magazines I taught from in school. Keeping up to date, that's what caused the -- one of the causes of the great educational rebellion of the 1960's. Professors and teachers weren't keeping up to date. They had a lot of old, faded notes that they would unwrap for every new class in the fall and kids in colleges all over the country rebelled. Very interesting reading, but as an electrician and an electrical instructor, there were great satisfactions. Those satisfactions were preparing youngsters to earn an honest living and also showing them just how to do it. You learned
from their readings. They would read and ask you questions which kept you alert. Tools have changed. Electric drills now, electric hammers, air compressed driven tools, lifts, elevators, various convenience items that make you work more efficiently as you pay more labor per hour, you've got to work more efficiently to get the job done. Do you have a question?

JN: Yes, I have many questions. When you were teaching students in the 1920's, what different things did you teach in the 1920's for instance, than in the 1940's, 1950's?

AA: We dropped all this knob and tube wiring, the BX wiring.

JN: What replaced this kind of thing?

AA: The BX wiring replaced the knob and tube wiring and the fibrous materials, the non metallic sheathed cable, which is being used now and conduit wiring. Of course, conduit wiring required a high degree of skill because the conduits come in ten foot lengths and if you wanted to go around a corner or down through a hole of a floor or something, you had to bend the pipe with a pipe bender, called a hickey. Big pipes, we used to go out and bend in the crotch of a tree, and that was not good. It wasn't accurate, you couldn't measure accurately bending through a crotch of a tree. I got a terrible bawling out from a tree surgeon one time for bending a piece of conduit through an apple tree down in Bethel, Connecticut. I well remember that ordeal. He said, this man is paying me hundreds of dollars to keep his trees in good shape and you're
skinning them and breaking them, using them as a pipe bender. They have hydraulic pipe benders now that are terrific. Green Leaf, Black Hawk, many trade names. Power, driven by air, pumped with an air pump to bend pipe with. Those are the important improvements and then color coded wires. You can get wires in almost any color you want. In designing your circuitry, you know the green wire, the blue wire, the red wire, the pink wire. In telephone work particularly, this color coding is an exact art because their wires have so many shades of pink or green or blue; many, many different shades so you've got to have good color accuracy to work with wiring. Another question?

JN: Would you say it is harder today to be an electrician than it was in the twenties or would you say the opposite is true? Did you have to know more in the twenties or less in the twenties than today when you're starting out?

AA: You had to know everything there was to be known about your job in the twenties and the same today. You have gradations of workmen. You have lead men or foremen, what we used to call the lead man on a big construction job was the gaffer. He was the boss, but he's the one who gaffed you, like the gaff of a big fish, to pull him out of the boat. You have a language, terminology and so forth. No, this evolution is such -- Now, I wouldn't know how to go into the inside of that refrigerator right there but to my good friend, Kenny
Gonzales of Putnam, who's retired from the Connecticut Light and Power, he'll go in there and do things to it. It's a continual learning process, a continual learning process; but now you can retire as early as age sixty-two, I guess, so there's always a new crop coming along. I listened to the ball game last night -- these guys are good. Some of them have been at it twenty years or more but some of them are new. They had one last night, this was his first world series. Evolutionary process. Another question?

JN: No, I think that will do it. That's been very helpful. Do you have any final words you want to say to our tape?

AA: Only a word of apology and what I ought to do with this tape recorder right now - my grandfather's anvil still sets out on the well stone where my two cats are sometimes resting - one of them is now - I ought to take the tape recorder out and lay it carefully on the anvil and go inside and get a sledge hammer and put it through the thing because we had a breakdown in communication. I didn't know exactly what Ms. Nolan wanted me to say and I didn't give her a chance to ask enough questions. In other words, what this is, is a hodgepodge of philosophy. Blessed is the man who has found his work. I found mine early in life by a combination of circumstances. I fell in love with electricity because of some electricians my dad had working in the mill and I continued in electricity. Since retiring, I've been thrust into history and I
collect artifacts which I will give away sometime, somewhere to museums. I lecture all over, I've lectured in all of the six New England states and New York state for free. I do a nice job on the story of American oil, from "Titusville to Tankers"—a lot of people in Connecticut don't know that the oil industry started in Connecticut, but the first oil well was drilled out in Titusville, Pennsylvania with a New Haven bank financing it, and Edwin Drake, the guy they sent out there to investigate the oil, came from Connecticut. He was a retiree from the New York New Haven Railroad, having been injured in a railroad accident and got an early retirement. He had a free pass on any railroad in the United States as a condition of his retirement, so the wealthy bankers looked upon that as a favor of theirs, so they sent him out to make the investigation. He was responsible for getting the first oil well drilled. From Titusville to tankers. I spoke about my grandfather's anvil out on the well stone. My grandfather, when he was nineteen, left this town and went to New Bedford and shipped on a whaling ship. He wanted something more exciting than farming and he went from New Bedford to the Aleutian Islands to hunt for whales. He was gone for four years and five months. When he came home, he recalled that he didn't look back to see how the ship looked, but I inherited one of his diaries from the homeward trip—from the Aleutian Islands back to New Bedford—talk about evolution. When he came around Cape Horn back into the Atlantic, he wrote in
the diary - The Atlantic Ocean again, thank God. Sixty days, and a fair breeze and we'll be home. The New York Yankees and the Los Angeles Dodgers played last night at Yankee field in New York. Today they're flying in a very few hours to Los Angeles and they'll be back in New York probably, to finish up the series. My grandfather wouldn't understand that if he was living now. He did know about the automobile but he wouldn't understand; he wouldn't understand me flying from Kennedy airport to Israel December second. This is evolution of industry.

JN: Well, Mr. Aldrich, thank you very much. You have seen a lot and contrary to what you think, this tape will be very useful to us, and we appreciate your help this morning.

AA: You'll get some good laughs out of it.

JN: I don't think so. I think we'll get some good information out of it. Thank you very much.

(End of Interview)