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## Oral History Interview: A. B. Chapman

A. B. Chapman

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637 South Terrace

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Date August 6 1973

Mr. Chapman was born in Lawrence County in Ironton, Ohio. He is now 85 years old and living in South Terrace, Huntington, West Virginia.

Interviewer: Mr. Chapman, can you tell me what it was like when you were little?

I went to work, usually it is a little different than it is Mr. Chapman: today, when I was about 9 years old or a little past. My brother and I lived over there above the Shops at 28th Street, and we used to get up at 4 o'clock in the morning and we had to go to 4th Avenue and 9th Street to get our papers. There was no electric lights in those days, and we used to do there were 17 coaches (that's train 17) that used to leave here at 5 o'clock in the morning and went to Maysville and on to Cincinnati. We used to walk over in the Shop and catch those coaches usually. My brother at that time had a route passing papers which was the shop train which used to leave at Gwinns Mill at 6 o'clock in the morning and come up the river track, the belt line, with about four or five coaches pulled by a yard engine, and it would pull right into the shopyard picking up the employees all along the track. My route was from 9th Street out to 6th Avenue up to 16th Street; from 16th Street out to 8th Avenue. I had a few customers on Artisan. In those days there was no 9th Avenue, it was all farm land. And I passed papers on up 8th Avenue and, of course, there wasn't many houses at that time below 21st Street, just the brick row where the C & O employees lived. The supervisors and foremen. Then I went to 22nd Street on up to 23rd, what was called Frame Row, which housed C & O employees. Then I went on up into what they call, it was generally spoke of as C & O Hollow. In other words, I passed the papers all through There was no houses on 8th Avenue between that area. 24th and 25th Streets. I passed papers all through that area and got .50c a week. I was passing the Cincinnati Post and Times Star. Do you know what they cost at that time? Twenty-five cents a month. One particular home on 6th Avenue just above 14th Street had complained repeatedly that I was not leaving the paper, so wtold Mr. Sider, who had the agency for the paper in Huntington, and I was working for him, that I was leaving no papers every morning. To prove this Mr. Wider sent his son, Don, to go with me and see that I put the papers on the porch for three straight mornings. Each morning, the paper disappeared again. Mr. Wider asked his butler to watch and see who got the paper. They did, and on the fourth day the butler saw their dog pick up the paper and carry it to the back of the house and under the house. He got up under the house to see what he had done with it, and the dog had all the papers and had made a bed out of them under the house.

I said in the beginning that there was a lot of difference, there was no electric lights. We used to, my brother and me, light a pine shaving.

Interviewer: What's a pine shaving?

Mr. Chapman: A pine light to see by. One day, when we were walking by the Round House a gust of wind came and blew out the flame on the pine stick and about that time my brother disappeared. So I stopped and said: "Henry, where are you at?" And he said: "I'm down in this Drop Pit, come and help me out." He fell in the Drop Pit.

Interviewer: What's a Drop Pit?

Mr. Chapman: That's a corner of the Round House. When they first got these 'mallies', they were not prepared in the Round House to handle these and they made a Drop Pit where they could drop the wheels out of the engine and pull it back and drop another one. Well, that was a pretty good depth. But, anyhow, I went back - I don't know why he walked as far over to the left as he did, but he wasn't staying on the walk - but I went back and got him out of the Drop Pit.

> We got 17 coaches when I went to work. I passed papers, the Times Star and the Post, a short while before I went to work at the Shops. Mr. Wider got the agency for the Chicago Tribune, and then I passed the Chicago Tribune practically over the same route I did the other papers. I got .75¢ a week for that. Now, think of walking over here across from the Shops to 4th Avenue and 9th Street, if we didn't get the 17 coaches you see. Well, I went to work at the Shop when I was 15 years old. You can't do that anymore. I went to work running a steam hammer. I got .06¢ per hour, ten hours a day, nine hours on Saturday. Worked all month every day for \$19.00 or \$20.00; the the pay cars ran in those days and they paid you in gold. It was a rare thing if I would ever draw a whole \$20.00 gold piece.

> But, another thing that might interest them. When I first went to work over at the Shops, each individual's department had their own boilers to make steam and they had their engine; and instead of having motors like they do now on machines, they were line shafts run over the top of these machines and a big belt from the main engine that drove the main line shaft, and then every belt from the line shaft down to the individual machine was all belts. It went that way for several years. And then finally when they got to putting in electricity in there and lights, about all we used to use was torches.

Well, I started to serve my apprenticeship in 1905 as a blacksmith. I went to work over at the Shop in April, 1902. Well, in them days, you had to serve 3000 hours to the year. Now it didn't hurt you too much when you worked war hours a day and Wine on Saturday, but when I was about one-half way through my time, I was about halfway through my apprenticeship, they went down a little. Hard times hit them, kind of a panic hit them as you use to call it, and they went down to one-half day on Saturday. Well, then we had to make all of them up. When you figure 3000 hours to the year, you have only 365 days and count your holidays off, it doesn't give you much time to fool around.

Well, I just as well tell you, from my first year apprenticeship, I got .07¢ an hour; on my second year, I got .08<sup>1</sup>/<sub>2</sub>¢ an hour; on the third year, .11¢ an hour; on my fourth year, I got .14¢ an hour. Now the helpers at that time were only getting, the married men, were only getting .10c an hour, ten hours a day, which made \$1.00 for the helpers. Well, when I finished my apprenticeship, the blacksmiths that were running the heavier fires, believe me in those days it was all blacksmithing, there was no cutting torches and there was no electric welding at that time, I got .30c an hour. The machinists were only getting .262c an hour; the boilermakers .26½¢ at that time. It used to be that there was no steel foundaries that makes the steel castings like they do in this day and time. If I had a molding that had to be made or a tumbling shaft for a locomotive or a lag for a frame, you would have to go to the scrap pile and you had to work them pretty hot to forge it, and the same way if you went to bend it. If you didn't work it hot, you had to be very close and careful that you didn't try to bend it cross grain. If you did, you would split it. I'll have to write you a book on that stuff.

As I mentioned before, there were no cutting torches or no electric welding nor even thermal welding had come in at that time; and it used to be that if an engine had a broken frame, they had to take off the cylinder and take all the bolts out of the frame and take the whole frame to the blacksmith shop.

Interviewer: How big was the frame?

Mr. Chapman: A locomotive frame? Oh boy! The frame itself was probably about 4 by 5, thats just your top rail. Then you had your legs coming down from the frame and you had your legs coming down to the bottom rail and where the binder goes up on the bottom of the hose or the frame to hold the driving box in position, that whole thing, that would be practically the length of the locomotive, and it had to be taken to the blacksmith shop and the repairs had to be made there. I mentioned about the cross grain on the iron, we used to "V" out the place, back up the edge both ways and make what we call a "Dutchman" out of the iron; and it would be cross grained because the grain of the frame would run this way and we put that cross grain in there it would be as strong as any other part of the frame, see what I mean? It used to be that Fred Reed and me would have to lay the frame on what we called a faceplate because you couldn't handle it on the anvil. And they would aly it on the faceplate and they would block up the ends of the frame and just have it in position and call allthe men up there - and they used to call practically all the blacksmith shop in there - and turn that plate over and put it in the fire. Then we would get that section of the frame where we were going to put the Dutchman in and make a weld on that one side. He would get that melting hot and somebody else would heat the Dutchman. And when everything was hot enough, both the frame and the Dutchman, they would call the men up there by pounding on an anvil and turn the frame over and place the Duthcman in there and the fellow with the sledge hammer would drive it down and make it weld, and they would pick up the chisel and trim off the side. Then they would have to turn it over and beat out the other side.

What I'm talking about so that you will understand; now say that this is the top rail and here is the leg of the frame and, of course, this section is where the driving And, of course, that would be and this box goes up in. would be where the driving box would go up. I spoke about the "toes". The toes on the bottom of the frame come in square like this. In order to make this stout, the binder comes across here on this section of the bottom rail, and the binder went across and when in place fit tight. That binder supported the legs. We used to have to heat them when they would wear and stove them up; and if there was a shut off on the inside here we would heat that and stretch it and make it come up here tight and stove this. But what I was talking about like this would be the top rail here and this would be the top edge of the rail, we would cut it in like that, take that section out and while that was red hot, take a punch and set that the same way here that would give it a little bit of extra stock. Well then that would be white hot and the Dutchman would lay right in there and we would hammer it down. Then we turned it over on the other side to be done the same way.

Now I might say the first method of welding that we got over at the Shops was really developed in Germany and was known as thermal welding. In other words, instead of taking the frame down off the locomotive and hauling it to the blacksmith shop, we would first use a wooden Dutchman Welding, as shown for top rail of a locomotive frame

"V " cut widthwise (crossgrain) in rail, for wedge shaped Dutchman

top rail

break

leg

space

for drive box

toe

bottom rail (binder?)

> A "V" shaped cut was made into the rail, this was then heated( as described in the interview) and "punched up" for texture and a tighter weld; the Dutchman (white-hot also) placed in the "V" and pounded down, and the excess metal chiseled off when cool.

The frame was then turned over and the process repeated on the other half of the break.

Thermal or Thermat Welding simplified matters by reducing the repairs to pouring molten metal into the prepared break, saving manpower and hours.

pattern. We would open up the frame. Now that would be the top rail, we would have a break, this would be the other part of the leg and this would be the top rail. Now regardless of where the break was, whether it was the top rail or the bottom rail between the legs, we would, of course, tram it to keep the proper length and then we would either drill; well anyways, instead of taking the frame down and all that extra doings, we made a pattern the size we wanted to make our collar around; and at first this wooden pattern after we trammed it, in order to keep the length, and then we would set a jack in here to jack this open, depending on the size of the frame, maybe as much as 1/4 of an inch depending on how hard it was to get it open, and that was done to take care of the contraction of the weld metal. Then we had to put this box up around the frame and then tamp fire clay all around that and then use a brick, granular brick, all around close to this because when the thermal welding went in there, it was so extremely hot, 5500 degrees, aluminum oxide was really the reaction, and that box had to be put up there in sections for awhile until we learned a little bit better and we put paper between these sections so we could take them apart and pick out the wooden pulp that we had up there, and that would be left an open space like molding to get the size of the collar that But later on, we used wax. We put wax up we wanted. there on the collar and then we would put up the molding form around it and wouldn't have to bother taking it down. We could just put it up there and tighten it up. In some cases, like it was up here, we could just take it up between the legs and shove it up underneath there. Well then we could light our torch, which was oil for awhile and then we got to using gas, and we had a risor on top of here and a risor on the back and a pooring gate here. We used to, it would take on an ordinary size prime about 100 pounds of therm; and we had a crucible that was swung over the top of that with a pin under it. The crucible of course was where you put the thermat. We would light it off with a little powder and within probably about 15 or 20 seconds that whole thing would be bubbling up out of the crucible, and if that didn't break through in the right time, we would take a rod and tap that nail up underneath there that was put in the bottom of the crucible, and raise up on that and the thermat would run down in. Of course, we had to heat these frames to a dark red before this was touched off. This was thermal welding.

Well, then we got electric where we used to have to drop wheels, maybe to make a thermal weld, or take down a guide. With the electric weld, which was much cheaper and just as good if you done it right, we would have to let that thermal weld stay on there all night until it would cool off. And if it happened to be a weld made on the leg, then all that collar had to be dressed off here where the shoe or wedge went up on the leg when the driving box fit on it, you know. Well, another advantage with the electric we would make the weld and not have to put any extra metal here; and of course, when the electric weld was finished, you could start putting your work back because the welder put it just the way you wanted it and the right amount and was finished with no extra metal put there. But we usually put a little reinforcement in this location; usually if we knew we had room we would put a little plate underneath there. Then make a "V" something like we did for putting the Dutchman in and weld it up.

Interviewer: How long did you work as a blacksmith?

Mr. Chapman:

I went out on my apprenticeship in 1909, and I taken up welding in 1912 and 1913. We got acetylene first and then we got the electric. The electric came in about 1913. Of course, it was said so much about it would do for you, about your going blind and this, that and the other. There wasn't anybody hardly that would get on it. But there was a boilermaker over at the Shops by the name of Lee Newman and myself as a blacksmith. He went down there to work and I went to the blacksmith; and for a long while the machinists wouldn't have nothing to do with the welding. But, of course, it kept building up and finding more things we could do and at a saving, and I mean a good savings. And in 1922, I had a bunch of men working for me in the daytime as well as at night on the second trick, and I was laying out all the work for them to see that they done the job. Then in 1925, I went on a road job. Well, what I was speaking about, I was made general welding supervisor in 1925, and I could tell you a big story about that. Anyhow, then I had the entire C & O down at the waterfront, and my territory extended then to Norfolk, Virginia to Russell, Kentucky upon the Big Sandy, the Toledo Docks, Chicago. And then I was given the Nickel Plate and then I got the PM, and I used to go up on area and I used to have to cover all of this outside work, building locomotives and building cars. I spent 28 years on the road, never knew where I was going to be, subject to call 24 hours a day. For over ten years, I was traveling through 12 states and up in Canada on a Pier Marquette; St. Thomas, that was the shop there. So, I am still here.

I retired in 1952. This coming November, I will be retired 21 years and still going strong.