

**Oral History Interview**

**G. P. Shingler**

with

Roy R. White

(6/30/59)

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ORAL HISTORY INTERVIEW

Mr. G. P. Shingler

Lake City, Florida  
June 30, 1959

**White:** Mr. Shingler, will you tell me first of your connection with the Forest Service?

**Shingler:** I was transferred to the Chemical Bureau from the Chemical Warfare Service Jan. 1, 1923. I came to Savannah, Georgia and set up headquarters with the Chamber of Commerce in a room provided by them for me. There I began to work with the factors that is, those people who advanced to the naval stores producers. I visited their turpentine locations to help them with distilling problems and also to handle such problems as related to distilling in the woods. For instance, they might be using rusty cups which causes low grades of resin. That was also brought out in the process of distillation which did not make the high grades of resin it was expected to make. For instance, first year resin was supposed to make high grade resin but sometimes they would get the lower middle grades. The explanation was found in the type of cups used. As gum is an acid it attacked the vulcanizing and exposed the iron which colored the gum. That gum color was not removed in distillation so it affected the resin grades as resin grades are determined by color. With this understanding then the relationship was started with woods work. They brought out then in woods work the effect that deep chipping had on grades of resin. That led into work with the Forest Service and at the time we began the work I was fortunate to meet Dr. Cary who came to my office to know what my business was and we together formed a schedule of visitations to the naval stores operators in Georgia and Florida. At first Dr. Cary took me to places where he had already visited and there we established relationships between forestry and distillation. My problem was to improve distillation methods and also to remove fire hazards and to train the

turpentine distillers in the better ways of distillation. So this connection between Dr. Cary and myself began in this state. We went to a Mr. Smith's location and there we had our first demonstration on the relationship of woods work to distillation. Dr. Cary was showing forestry and we had Miss Gerry who was teaching light chipping and there we demonstrated by distillation and woods work and light and heavy chipping the effect on resin grades, which was the principal study at the time. We demonstrated that the chipping, the light chipping or deep chipping had no particular effect on the resin grade except it did cause what they called "sterch" that entered into the gum and lowered the grades expected from here down. So there was more pure gum resulted from light chipping than from deep chipping. That was brought out by subsequent studies begun at this location. So this work spread from this beginning, the relationship between forestry and forestry work, tree selection, tree sizes, and production together with what you get at the turpentine still. Down at the still the method of distillation was by ear, listening to what happened inside the still at the oven tail gate where the distillate was going out into the separatory vials where the turpentine from the low line, the low line being a very dilute heliginous acid. So this turpentine then was taken off by rotation into the turpentine casks and there it was ready for market, the vials having been cleaned beforehand. The relationship between the distillation and the result, in as much as it was controlled by sound only, any interruption or noise like a thunder shower would affect the distillation as the distiller couldn't tell what was going on inside and sometimes would burn the product and make a much lower grade of resin. So we worked out a method of distillation with the "nursing bottle." In as much as many of the distillers were illiterate but most of them of course would understand a nursing bottle of course, we started the ten ounce nursing bottle, each ounce corresponding to 5%. I started out with exactly 100 cc's and they thought I left 5% of the turpentine in the flask which was equivalent of course to half an ounce. But when I put half an ounce across the [sic] forgot

about the 5% and got away with the amount of turpentine left in the flask which was not 5% of the entire bottle but they couldn't see it. So I acquired the name of "Nursing Bottle Shingler," as a result of that change-over. A great many of the turpentine operators then changed. This was started out in Mississippi at the turpentine operations of J. B. Newton Co. at Poplarville, Miss. That's the way the nursing bottle started. I introduced the 10 ounce nursing bottle at the Chipley Co. out in Miss. and from Miss. I worked on the nursing bottle at the Kaul Lumber Co. in Ala. Then I came to Waycross, Ga. and worked with the independent operators, Dan and Oscar Lawrence. I introduced this thing in Georgia. And we explained this use of the 10 ounce nursing bottle, the points where it was to discharge, and where water was to be added and how high the turpentine should get. For those of the distillers who couldn't read and write, and there was quite a number of them who could not at this time, we introduced the distillation. At these distillations we invited the turpentine operators from the area we were working to the distillation where we were going to demonstrate. The factors who furnished the operators had all of their clients to come and then they allowed all the clients of other factors who were competitors. They all came together and were shown this method. This method of visitation expanded from N.C. to Texas and in all covered 900 of the 100 stills according to the census. Not in one year but in the years I worked with forestry operations. During that time we improved the entire still to such an extent that they could get insurance. We reduced the fire hazard so the turpentine operator could get insurance which he was not able to get until we introduced what is called the depth style of buried stills which of course used less wood and controlled heat. Knowing just how to fire so as not to burn the product; the still was set in such a way that instead of having a high fire pad we had the fire pad below the level of the product so it wouldn't burn the metal above.

Then we introduced the recording thermometer. There was a thermometer in use at the time which was inside the still and

through the still that was a registering thermometer called the Neal thermometer. These recorders we have now were introduced at distillations. The big lumber companies encouraged the use of recorders. These recorders were started in Miss. before I went into the work but I carried the idea across from Miss. and Ala., where the big lumber companies were using them, and brought it into Ga. where most of the operations were going on then as now, and where most of the turpentine is made today. The first place that I introduced the - I don't know whether I ought to give the name of it because I would be giving away something that shouldn't be - was at the little place called Oliver, Ga. I put in the first recording thermometer. The still was old style, looked like it was falling down, but the operator insisted I put in this type of thermometer. And that was the first still the recording thermometer was introduced outside of Miss. and Ala. at these large turpentine operations which were connected with the big lumber companies.

Going back to the lumber companies, the lumber companies had adopted on their operations Miss Gerry's light chipping methods and they had already adopted the use of cups that didn't stain. They used aluminum cups and aprons that didn't stain with the action of the organic acids in the gum. So they were making much higher types of resin, grades of resin, than was made "East" as we called it. That is in the western belt than in the eastern belt [sic]. So I brought over the idea of using aluminum cups and aprons to Ga. and Fla. where most of the cups were iron and with age they would let down and discolor the gum. But the cup originally, the box type cup, was originated in the west by McCoy, who was connected with the big companies. So he really introduced the box type cup. The clay cup was never largely used throughout the industry because it was proved to leak. The gum led into a smaller opening, receptacle, than the true base and they lost the gum which tended to flow over, so they adopted the box type cup for that reason. So the Herty clay cup, though it made the best resin, was not largely used in the western part. It was used in parts of this section, that is the East, but not to any great

extent. They introduced another type of clay cup called the Clayton Cup. It was very much like the metal cup, the box type. It was a box type cup. And so that type cup broke during the winter to such an extent that it wasn't suitable. Likewise the Herty cup was not suitable for winter chipping so most of the industry left the clay and went to the metal cups because they wanted to do winter work. That was the changeover from the galvanized and clay cup to the aluminum cup, and zinc in some cases. I brought back the aluminum cup from the West, where they were making the lighter type resin, to the East. That was my relationship to the woods work and the distillation, bringing the two together.

When we would have these meetings with the operators we would first take them in the woods and go through their woods work to see if they were losing any gum, if the bases were too wide and they were spilling gum on the other side of the cup, or whether they were using the cup that wouldn't stain. We also looked into the type chipping along with the Forest Service to see if they were carrying out the Forest Service recommendations to conserve the timber and the advantages of light chipping making more gum than to use deep chipping which made scrape and less gum. Scrape produces less turpentine than your gum so the lower you keep that content the better the grade of resin. For that reason we connected up the light chipping with gum production and less scrape and high grade of resin to be expected for a longer period of time for in the fall scrape formed anyway. So those were the connections we worked out together with Dr. Cary, Miss Gerry and myself. It was worked out in the woods for we would go out in the woods and Miss Gerry would show how to chip. She would take her small axe in her hand and illustrate it. Dr. Cary took measurements of the trees for diameter. That also had to do with production. He would measure the diameter and explain why these smaller trees were not productive but they were losing money on them. He would explain right there before the people just exactly the effect of lack of tree selection and would point out just how much more they could make by tree selection. That led to the "9

inch diameter, vest high," as it used to be. That was the start of that subject, I mean that effort of distinction.

Dr. Cary brought his work to the level of the producer. He met him on his own terms and talked his language. He associated with them. He let them believe he was no better than they. He was right along with them and he got their affection as well as their respect. They listened to him as they wouldn't listen to any other high-brow. Remember Dr. Cary was one time professor of forestry at Harvard University. He was no low-brow in any manner of means. Anyway his method of operation was such that no operator ever thought of him as being a high-brow. They took him on his own level as he brought it down. That was one of the outstanding characteristics of Dr. Cary.

The plans or itineraries were worked out in the field in connection with the weight of the naval stores' pocketbook. They had to get together the people so we would meet with the factors and they would tell us what places they would like for us to visit and we would announce our plans as worked out through the Naval Stores Review. They would publish our itineraries. Then we would meet at certain towns and then these factors would get their people together so they could take advantage of our instructions.

**White:** How was this financed?

**Shingler:** That brings us to another point. We did not have at first enough money for travel for more than about 4 or 5 months out of the year. So much of this travel was financed by the companies, both for us and for the Forest Service. We had to work it out in connection with the big companies and the factors. The only part they paid was the travel and accommodations. All our salaries had to be paid by the government. We were working for the government. We couldn't work for them. We, of course, were entertained in homes as well as put up at hotels, but as far as possible we paid our own way because we could feel under obligation to these people if we accepted too much hospitality. So we narrowed it down to barest essentials so that we would be able to do almost as we

pleased. So when we did not accept their hospitality in the home we usually paid our own bills at the hotels. That was a distinction we thought it best to make for obvious reasons. When you are traveling you are not representing any particular group, you are representing the government. For instance, I was often asked, "Are you working for Carson Naval Stores Co.?" that was one of the firms that helped us most. My boss and Carson got to be the best of professional friends. Carson Naval Stores Co. did the most for us so they wanted to know if we were working for Carson. So I wrote my boss just what was happening: that people were beginning to think we were working for Carson Naval Stores Co. instead of the federal government. So that brought about a change in our particular relationship and with my travel. Of course, I don't know what Dr. Cary or Miss Gerry did. That was their affair. But they did accept hospitality just as I did and many times we were all entertained at the same hotel. But I soon cut that hotel business, supported by private enterprise, out; and went altogether on government expense. Only when I was entertained in the homes it was free. The arrangement of joint demonstration was generally worked out with large companies, with people who had large holdings rather than the small men who began to feel they were discriminated against as compared to the big operator. We had to desist from that joint demonstration because it represented too much support from big people. We split apart and carried on my demonstration with local people, small operators. Dr. Cary and Miss Gerry would carry out their demonstrations with the larger companies because they were better able to handle their work than the small man. Our joint work lasted for about a year and a half and then we had to split apart. That was not in the sense we had nothing more to do. We often met to discuss common problems and when we could we did get together, without planning as we had first done.

**White:** Was this teamwork on specific assignment from the government or did the idea originate with you and Dr. Cary when you first discussed your joint problems?



**Shingler:** The idea originated with Dr. Cary himself. Largely at Dr. Cary's suggestion. He was the man who made the suggestion and it was not from higher echelon. Dr. Cary didn't work with higher echelon. I suppose you know that. He used to write letters and put on the outside, "Dr. Cary, Logging Engineer," and put them in the mail - no stamp. They were never challenged. I don't know how many times I've seen him do that. It was strictly government business inside - if you could read the handwriting. That was a job in itself. There were very few men in the department who could read Cary's handwriting. One of them was Captain Eldredge. He was often sent matter to be ready by the Chief of the Forest Service. He would read these letters and send them back. Dr. Cary never fooled with a thing like a typewriter nor used a stenographer. He did his own writing. If you could read it that was all right - if you couldn't, why, it was there. It was your hard luck if you couldn't read it. He used to write me letters often and I had to figure out what he was talking about anyway to see what it was all about. But this idea of cooperation was a joint idea of Dr. Cary and myself.

**White:** Then after it was in operation you had government approval?

**Shingler:** Service approval for a general type work had to be given to me or I couldn't travel. My letter of authorization was very general because people who were over me didn't know too much about what I was to do anyway. They trusted me to carry out the plan because they realized they didn't have the practical knowledge. The turpentine operator, as they knew, was very independent and he does his own thinking and draws his own conclusions, and he takes orders from nobody. You had to know and understand him before you could put over any ideas. If one appeared to know more than he did he wouldn't listen to you. You had to make out he knew what he was talking about and then gradually introduce your ideas and let him see the error of his ways. That quiet skill of understanding was what we had to work with.

**White:** A background of experience outside of the service was one of the things you and Dr. Cary had in common, wasn't it?

**Shingler:** That was a characteristic of Dr. Cary. His ability to deal with the man who hadn't knowledge - and without impressing him with his superior knowledge. That was his characteristic.

**White:** How did he approach these operators?

**Shingler:** Dr. Cary would ask a man, "Well, are you having any trouble with this woods work? Having any trouble with fires? Having any trouble with insects?" Directly the man would tell him what his troubles were. Then he would go out in the woods. He'd say, "Let's go out in the woods." He never would try to answer a question right then. He would go out in the woods, and he would show the man what he was trying to put across to him and what the trouble was. That was his way of handling the problems: deal directly on the spot with the man. The direct approach was through what was their common knowledge and he introduced his ideas. He tramped through the woods and carried his axe with him. He always carried the blade part ahead so you had to look out if you were walking in front of him so you could step aside because the axe was liable to be on you before you knew it. He carried that axe with the blade front, not back. He would go along and cut a tree down and do a little thinking to illustrate thinning. He would give him the reason why he was cutting that tree down. Then he would go through the woods and use his borer to show him the age of the tree and the growth of the tree and how the tree would grow when it was crowded together. That was the type of woods work he did, you see, on our trips together.

Now when it came to chipping, Miss Gerry would go out in the woods and show the chipping effect on direct production. That's how they worked together. One worked on tree selection, the other worked on chipping. They worked as a team; a perfect combination. It was a sort of platonic love, as we used to call it. They

respected each other most unusually, the profoundest respect one for the other. Miss Gerry was a very wonderful woman. She was a microscopist. She was a graduate of Radcliffe and a University of Wisconsin Ph.D. So she knew her way around. She was very highly respected in the industry. She worked almost all together with the big operators. Dr. Cary worked with big and little, but all demonstration by him was for big operators.

**White:** Was there at that time mostly large operators?

**Shingler:** There were large and small but most of the gum was produced by the large operators for the naval stores.

**White:** How would you describe Dr. Cary's personality?

**Shingler:** Dr. Cary was a very simple man and he had a one track mind. For instance, he invited me to dine with him one time in Savannah at the Savannah Hotel. I was to meet him at 7 o'clock. He came in the restaurant with his axe and all his paraphernalia. He laid them down and the various help would look around in amazement. He paid no attention. But he ordered the meal, "What do you want, Shingler?" I ordered my meal and before I finished he said, "Well, I'm going." And he left me there with the whole bill. He didn't mean anything by it but he had something else on his mind so he just told me goodbye and left me with a bill I had to pay. That was an example. We had him in our home. My wife was a musician and she thought he would be interested in popular stuff so she turned on the radio for Eddie Cantor. Cary asked her, "Do you like that cheap music?" She turned that radio off right now. He was very outspoken. He didn't mean to hurt anyone's feelings; that was just Dr. Cary's way. He had nothing at all of subtlety. He meant what he said. We had a demonstration at the naval stores station and we invited the Chief of the Forest Service whose name was Silcox. Dr. Cary was invited and we had a combination of the Forest Service and of the Bureau of Chemistry out there at this demonstration at the naval stores station. Dr. Cary came out

there by himself. He didn't have a lady with him. He came out and said, "Howdy-do, Silcox." "Dr. Cary, mighty glad to see you." Silcox called, "Come up here and speak to us." "I haven't got time," Cary said, and he drove right on off and left him. That's typical. He didn't care whether he was Chief Forester or what he was. It didn't make any difference to him. That was characteristic of the man. He had a single track mind. When he got to thinking about something he went right ahead with it. We would be riding along on the train. He would be dozing and I would be sitting there by him. "Wait a minute, Shingler, look across over there," he would suddenly say. I would fail to see what he was talking about but it would be a patch of pine he had investigated some time ago and had grown very fast. He just carried that idea of forestry and forest management on his mind wherever he went and whatever he did. That was typical of the man. When he was at a forum and people were interested in something else before going with him he would go with them. Yes, go with them on picnics, go with them to their prayer meetings, make a talk if necessary, get their confidence. That was what he was driving at. He had his point in view. That was not ulterior, but just the man. He was wrapped up in his work. That was his objective and he was getting the confidence of the people.

**White:** What type of people was he dealing with mainly?

**Shingler:** Well, he was dealing with people, most of the time, who were sixth graders or maybe a high school education. Those were the ordinary garden variety of the small operators. Of course, the big operators were quite different because they came from every section of the country. Hauss Lumber Co. for instance, their people lived in Chicago. They came South and bought up these lands you see, and they would work them for a few years and would then pull out.

**White:** Where the virgin timber was cut over Dr. Cary was interested in reforesting?

**Shingler:** Oh, very much so.

**White:** Was he able to interest the turpentine people in that idea?

**Shingler:** Most of his work in forestation was in thinning, not in planting pines. He had very little to do with planting pines reforestation; mainly in management of stands. That was his largest contribution.

**White:** He didn't have much confidence in planting?

**Shingler:** No, he didn't. For instance, he didn't have any use for Dr. Herty. They never got along together. Dr. Herty didn't dislike him but he didn't like Dr. Herty. Let's put it that way; it was one sided. They didn't see the same lands at all. But Dr. Herty was a different type of man. Dr. Herty worked with organizations as well as with operators. He worked with groups more than with individual operators. Dr. Cary's work was with a combination of small businesses and big businesses. Dr. Cary worked with organizations, with factors, manufacturers, with forester; while Dr. Herty was a chemist. He worked with the group plane; his idea went down from the group to the individual and his ideas worked that way. Dr. Herty was interested in quality production. Dr. Herty has probably had more to do with the research program in naval stores getting on its feet than any other man and he worked in forestry as well as in chemistry. He worked in close cooperation with Miss Gerry, strange to relate. He helped get appropriations for Cary's work.

**White:** What did you think of Dr. Cary's strong economic views? What reactions did these views have on individuals?

**Shingler:** Here's the reaction along the line of individuals, company or business or factor. He didn't believe in having the factor tell the producer what to do. The producer should do for himself. He was a strong individual in more ways than one so he didn't get

along too well with the factors. He didn't know enough individuals to put over his ideas as it could have been if he had been more yielding, more compromising. That's just my view of it. But, you know, sometimes to put an idea across you have to compromise. Dr. Cary had his ideas and he wanted to put them over. He worked very closely with Captain Eldredge toward the first. They worked very closely together. Captain Eldredge probably knew him better than any man because he was best man at his marriage. That's how I got my information.

**White:** What information do you have on his marriage?

**Shingler:** Captain Eldredge told me that he was at his marriage. And I understood him to say he was best man. I may be wrong about that. But he was at his marriage and he said Dr. Cary was very devoted to his wife and marriage. He said they lived together for about a year and she died very suddenly, and he never had any other interest in matrimony or any other woman that he knew about after that tragedy.

**White:** Prof. Fraser told me he had heard Dr. Cary was aware that his wife had little time to live at the time they were married. Did you know that?

**Shingler:** Captain Eldredge didn't mention that. He said she died about a year after they were married. He didn't mention that. Captain Eldredge can tell you more than I can.

**White:** Some of Dr. Cary's strongest opinions had to do with government or public acquisition of land. Do you remember that?

**Shingler:** Well, I don't know that he talked about that very much. But I do on the matter of the factor. That's where we talked together and where he differed very strongly with the trend. He didn't go with the trend. The trend was, and had been, and is, towards help, governmental help. The industry has leaned on the government.

I'm out of the government now and I can talk freely about it. He didn't believe in that. Although he worked for the federal government he didn't believe they should do that. That was his idea on it. The factors were using the government to forward their interests and he opposed that. That's the only feature I got in to that he was opposed to. And he didn't mind peaking out at a meeting at any time and at any place. It didn't make any difference to him whether you agreed with him or not. That was Cary - outspoken.

**White:** Many have attributed their start in forestry to Dr. Cary. The work you did together had to be a part of that. Do you think Dr. Cary merits this much credit or was it a service endeavor rather than that of the individual?

**Shingler:** This is my idea of that. A great deal of work was done by the government through the Forest Service. Lenthall Wyman did a monumental job at Starke. I worked with Lenthall. He did a monumental job. He and I worked very close together. Then I worked with Bill Harper, the vice-chief of the Forest Service. Men like that had much more to do with the practices today of lumber people than Dr. Cary.

**White:** His role then was reaching them with the information?

**Shingler:** That's right. An individual getting right down to the grass roots. The other men worked down but Cary went down. That would be his distinction there. But Dr. Cary never worked with anyone too long. He was a lone hand.

**White:** Did you know Dr. Cary when he lived in Starke?

**Shingler:** He boarded with some people in Starke. He didn't live with any member of his family. He owned some timber there at Starke that he experimented with and used as a basis for his work with others. He had a Mr. Smith, one of his very best friends, who was a

turpentine operator. He's the man with whom we worked for some time, Dr. Cary and myself. We had very close relations with him and they had some investments. Another man he worked with was Alec Sessoms. Sessoms had business relations with Dr. Cary. They had lands together, owned timber lands together. Alec Sessoms and Smith were two men that he had most to do with and he stayed at Alec Sessoms' home whenever he was up there.

**White:** He used his own lands for experiments?

**Shingler:** Yes, thinning experiments, that was his strongest point. He really worked quite steadily with that. He talked that with anyone who had lands and cared to listen. That was his strongest point. He was a very strong man to grow the timber for what use it was to be put. Timber management was his greatest contribution, and to work through individuals rather than organizations.

**White:** Do you recall his taking notes?

**Shingler:** Yes. He used to bring up things that I had said to me when I had forgotten I said it. He had it in writing. I couldn't help but - of course I couldn't read his writing but he had it and it sounded like what I had said. If it was contradictory he would sure bring me across the poles on that too. He had voluminous sets of notes and he would unfold them on you too. Pull them out on you maybe in an embarrassing moment. But he did make notes. He would go to meetings and he'd be sitting making notes. He wouldn't appear on the program but he'd sit and make notes. He never put himself forward at any public meeting; you had to find him in the crowd. He seldom appeared as the principal speaker. He would be called upon and he would say something.

**White:** What sort of manner did he have when he was addressing a group of people?



**Shingler:** Well, he would stop talking and the crowd would gather around him and he would say, "Now if you would just remove this tree here that would give this tree a chance to come out. This tree here has a better growth. It will grow faster than this other one. This one is stunted." He would point that out and then cut the tree down. He'd say, "Now this tree will come out. Come back here in about a year or so. I'll try to come back and see what it's done." Maybe he'd never come back but anyway he'd leave that idea. He would bring it out and show them. Whoever he had there would drink it in. Maybe a labourer, maybe a farmer, maybe a land owner or what not, but he would take that in. that was his method of approach, direct, on the spot, not the lecture type at all.

**White:** Thank you, Mr. Shingler.