

COVER SHEET

TRANSCRIPTION NUMBER: 3 OF 17

Transcriber: Amanda Fickey, ABD, Independent Contractor
Date of Interview: 5/30/2012
Duration: 58:13 Track 1 (Stored on 1 DVD)
Interviewees: Gary Cornett & John Rice
Interviewer: Jesse Wells
Cinematographer: Sean Anderson
Location: Workshop, Louisville
Sponsoring Organization: Kentucky Craft History and Education Association, Inc.
Funding: LexArts, Kentucky Oral History Commission

Transcription Notes:

JW: Jesse Wells

GC: Gary Cornett

JR: John Rice

In some cases, words such as “um”, “uh”, “and”, “so” and “yeah” have been excluded.

Time notations have been included at approximately 2 minute intervals.

... Indicates pause, delay in conversation, or, weak transition/no transition in themes.

The following names of musical genres have been capitalized: Bluegrass and Classical.

Attempts were made to verify the names of all musicians and geographical locations referenced throughout this interview.

0:00

JW: (Video begins after interviewer has started announcement)... Interview with the Kentucky Craft History and Education Association, May 30th, 2012, with Gary Cornett and John Rice. Thanks for being here.

JR: You're welcome.

GC: Thanks for coming. You've made a long trip.

JW: It's a beautiful day for a trip. We'll start with Gary. Give us a little background about your personal life, your childhood, when and where you were born, some of your family background.

GC: Yeah, I was born in Bowling Green, KY. We actually lived in Woodberry. Bowling Green was the nearest hospital, 30 miles away or so. And, other than that, there's not a lot that I would care to talk about. Did get one lucky break though, I met my wife of, soon to be 40 years, when I was 16 and she was 14 so I kind of used up all my luck right there. But, like so many other people of our generation, John and I have talked about this a lot... all of us boys developed manual skills working on old junky cars and anything that came along. So you had a whole generation that started out building models anytime that you could scrap the money together and keeping cars running. John still keeps one running to this day. I think, in a lot of ways, kids of the 50s had childhoods very similar.

2:00

JW: Did you play music first or did you work on instruments as a luthier first?

GC: No, I played, I was trying to learn how to play first and I've had a lot of people who were really kind to me. Harry Bickel, if you want to go back far enough, if you want to trace a path back far enough, Harry would be the one responsible for me doing what I'm doing. I met him and he put up with me and introduced me to Tom Hale. So that's where I first got my started. Tom was really kind. By that time of his life he was getting older and he would let me come over for hours on end. I just thought everything he did was magic. To this day there are times that in my mind I go back and watch him hair a bow and laugh and joke, carrying on all the time he was haring it. I just wonder how on God's earth did he do that because to me it's one of the most frustrating things that there is. It requires absolute attention. At the time, it is one of the most boring things you'll ever do, sort of like doing a fret job - they require the same set of skills, just absolute attention while you're bored to tears.

And so, Harry was responsible for me being acquainted with Tom. Tom really was kind. I look back on it and I guess you have to get this old to see how kind he was to put up with me hour after hour, digging through all his drawers and asking him endless questions, and he was kind and generous through it all.

JW: Are there other people who served as a mentor in your quest...?

GC: There are. I've been really fortunate. I've had a lot people who were kind to me. One very important person was Bill Goldsmith here in town. He wasn't a famous gun maker, although he was a good gun maker, and he'd let me come over to his shop. And I remember the first time I saw lathe work, Bill was doing it and there was, to me there wasn't anything more magical than watching a lathe at work. So he

did the same as Tom, and those two were kind of in conjunction. I would go to Tom's house, and I'd go to Bill's house, and...

4:59 – 5:13

Interruption – door bell following by off camera conversation

5:14

GC: So, to pick back up where we were. For several years, we would get together over at Harry's house every Friday and Saturday night and play music. Harry actually planted the seeds of everything I know now about old time music. So, from there I had Roger Cooper, I got an apprenticeship from the Arts Council and spent, actually, 2-3 years with Roger. So I've had a lot of people be kind to me.

John Rice has been very kind to me. Anytime you take somebody with \$100,000 dollar plus instrument and they trust you with it, that's a huge kindness. Although I'm sure it's one they would rather not have to participate in.

JW: John, would you like to tell us a little bit about your mandolin?

JR: February 18, 1924. It's a Lloyd Loar signed F-5 Master Model Mandolin made by the Gibson Company, Kalamazoo, Michigan, and it was one of somewhere between 250 and maybe as many 300, probably less, that were made between 1922 and the end of 1924. These are generally considered to be the equivalent of a Stradivarius for mandolins. Now Stradivari did make mandolins, but his weren't very good by today's standards. These instruments were made, as we were talking earlier, at the tailend of the era when music became electrified and amplified. As a result, the design of this instrument is to project to the very depths of a large concert hall, and it does that very effectively I think. These instruments are loud and they are very focused in their tone and their loudness and that is something that is unique and very desirable for all types of mandolin players. I play Classical music on mandolin in an orchestra, and I play in a Bluegrass band. I try to use it for both of those purposes. This instrument is in a batch that was made in early 1924 and it's very close in the serial numbers to some of the most famous mandolins that are being played today by a variety of mostly Bluegrass musicians. I am very proud of it. I've had it for a little over 10 years. Before that it was owned by a man named Herschel Sizemore in Roanoke, Virginia, who is considered to be a mandolin player's mandolin player. Very stylish, technically superior player, and before that it was owned by a gentleman named Taylor who was involved with an instrument shop in Nashville with George Gruhn, who we've heard some about today, who is probably the most knowledgeable person about acoustic instruments in the country.

9:05

JR: Before that, the instrument was owned by a man in Atlanta who had an instructional shop where he taught people how to play. I don't know much about what use he found for it, but I'm grateful to all those three people who have owned it and kept it in good shape. I'm very grateful to Gary for putting it back to rights when the inevitable wear of 80, now almost 90 years, has caused a few defects to show up and unlike museum pieces this instrument has been played professionally for a long time and has shown wear, but that's also preserved its tone and sound quality. Gary has been instrumental, I hate to use that word but that's his role in keeping this instrument healthy and stable and able to stand up to

rigors of whacking away at it in a Bluegrass band or tinkling away in the 3rd or 4th position in the Classical setting.

JW: Gary, what are some of the benefits of being able to work on such a classic instrument by Lloyd Loar?

GC: I think, for anybody doing this sort of thing, there are a couple of requirements. Probably the first requirement is that no matter where you live, say if it was where I came from in Butler County, or wherever you're from, you have to get up every morning and try to work at a world-class level. If you don't do that you are lying to yourself. In order to work at a world-class level you have to get better every day, but you have to have some good luck, and good luck is that people would trust you with world-class instruments. When you do get the opportunity to work on a world-class instrument, it becomes a lot more than about money. While John was right, this instrument has been used hard all of its life, it has never had any serious trouble. That says a lot about the people that made it. You'll start seeing some instruments, as it became more and more about money, you'll see instruments with more and more problems. But, nothing serious has ever gone wrong with this. Everything wrong with this instrument could be tracked right back to the fact that it was used daily. It was just ordinary wear. So it's a remarkable good solid instrument. From what I can gather it's one of the loudest Loars and it's certainly a wonderful instrument to own. I've gone to see John, he and Mike Schroder are kind of in charge of the mandolin orchestra, and they do a wonderful job with it. I know that there are some people who have their ideas of what their instrument sounds like, as you well know when you get out in the audience it's a different story. So, you can hear this instrument above everything, even when other people are thinking to the contrary...

13:13

JW: Wow.

GC: You can always hear it. And so really, you need to get people to trust you with world-class instruments and that's asking a lot of somebody. They've got this fabulous instrument that's a huge part of their life and they're gonna just hand it to you and that's one thing that I don't allow to happen. Anytime something special comes in I refuse to make decisions. I will discuss options, but I won't make decisions. So, once all the options are discussed and learned, I think it's a huge benefit to the instrument that the owner and myself know exactly what can and can't be done. Then hopefully we will make the right choice.

JW: Do you have a preference for instruments you work on? I know you do a lot of fiddle and violin work.

GC: I do. I think I get the most enjoyment out of working on fiddles and violins, but it's really a selfish enjoyment because they are more forgiving. When you have a mandolin, there's no overhang. There's no forgiveness in mandolin. A fiddle, fiddles were made to be repaired. They have an overhang even though that, in most cases of factory instruments or instruments that we see, they'll shrink maybe from 3-5 mm in the first 100 years and then it kind of stabilizes. If you had a mandolin that shrank 5 mm you wouldn't have a mandolin. So the reason I like to work on violins is they're just more forgiving, lower stress. The most difficult thing you could work on, I guess, would be a mandolin. I think Mike Schroder said it right, he said the stresses they're under, everything about them makes it very difficult and a guitar is not far behind. A guitar would be a little easier to work on but there again; they weren't made

to be worked on. Really we would have to go back to a repairman in Oklahoma named Don Teeter who I would call the father of modern guitar repairing. I'm sure Don's long ago gone. He wrecked his health breathing lacquer, but he is the father of modern guitar repair and he did two books on it. A lot of it just is just treatment of the instrument has long ago been set aside. He just treated them as old guitars, and now those old guitars have become important instruments and they can't be treated that way anymore, but Don deserves all the credit in the world.

There are a lot of very unselfish luthiers across the country, like Frank Ford in California. If you try to study on a world-class level, it involves spending a whole lot of your life on more than just working at the bench.

17:34

JW: Are those materials what you've used most to study the art of repair or working with other people? What methods have you used?

GC: Books. Fortunately, like I said Tom Hale was really kind, but Tom Hale didn't have the Violin Society of America. The Violin Society has done a huge amount for everyone because they're the only organization that has had the money to fund and try and analyze how an instrument actually works. So, we know a great deal about how a violin works. You can't, nobody knows how each individual one is going to work... So, we have to thank them because of the spill over into other instruments and I've been really fortunate having started on fiddles and then taken on other things you gain all this cross-knowledge. The main thing is that they become valuable and it's your responsibility to see to them. It's not always pleasant.

19:00

JW: What are some of those unpleasant experiences?

GC: Well, I've got one lying over there waiting for me right now and it belongs to a world-class musician, Jeff Guernsey. He's played with Steve Warner and Vince Gill. Unfortunately, musicians are not always the best judge of what kind of shape a musical instrument is in. They see it and they love it and that's as far as it goes. Then they bring it to you and you start pointing out things and you can see their minds start to work. I've got a real neat old 65' J-50 that looks like somebody just took a glue bottle and poured in it. So, when you take an instrument apart it absolutely has to be together by the third day. Actually, every hour after the second day gets critically important. There are a lot of times I'll stay up 15 -20 hours a day working on it just because I know my deadline. But that's under ordinary circumstances. Something like this, where somebody has poured a glue bottle in there, you start to wonder what you are going to do. I've got one policy that has served me well throughout my life and that is, I never touch anything until I've repaired it in my mind. Once I have worked out all the steps and I know how it's going to be I will physically start on it, but if you don't have it worked out in your mind you're going to get some unwelcomed surprises.

21:02

JW: Is that true for every instrument?

GC: Every one. Yes, positively, it is. And the one thing you don't want is unwelcomed surprises when you are working on a three day deadline. It's like we were talking earlier, I had a guitar here one time and a lot of times people will tell you, oh you just take as long as you want and three days later they're calling you. I had this guitar and it lay there six weeks, unless a miracle from heaven happened it was going to lay there another six weeks. It just struck me and I was able to attach a piece of metal to a brace, and get it in place with some magnets, therefore I didn't have to take it apart. You really have to be extremely careful.

22:07-22:24

Interruption by videographer - inserted new tape

JW: Were those your CT Scans in the article?

JR: Yeah, in the Mandolin Magazine.

JW: I'll go back and...

JR: If you have that issue...

JW: Yeah, I have it.

JR: It was a few years... Actually, what happened was that somebody wrote a letter to the editor saying boy, if you really want to see that you ought to do an MRI of the mandolin. Of course, you could never do that because this [points to mandolin] has some ferromagnetic components. If you put it in magnet it would literally explode. So I wrote a letter to the editor, I forget her name, and I said please don't do that. But at the time I said, I had done several X-ray CT Scans which is a totally non-destructive technique, unlike the MRI.

JW: Like the MRI...

JR: And it shows a lot of information about thickness obviously, there are a lot of cross-sections. You can see the grain patterns, and another thing you can see are repairs. The glue is very dense. It looks like somebody painted a white streak in a crack that has been glued, whereas somebody might tell you oh that's just a finish crack but when you scan it and there's, whoops, there's glue, how did it get there? Anyway, it was kind of interesting stuff, but there have been a number of people I've talked to. There's a fella over in Slovakia, a guy name Adrian Minarovic; Hogo they call him. He has published a very detailed set of plans of a Loar and they're based on his analysis of instruments. I sent him the CT scans and he was able to use that to some extent. That and a Hacklinger gauge will get you a lot of information.

JW: Yeah. Have they done that with violins?

JR: Yes, that's actually the first piece of it. A guy at Michigan State whose name is escapes me, but another brother of a radiologist who wrote an article about it. He actually, they actually made a fiddle and a cello based on their dimensions.

JW: What were the results, do you remember?

JR: Mostly what I remember is that the article that he wrote was very self-aggrandizing. He was patting himself on the back for such a clever thought and how carefully it was being used to turn into these wonderful instruments, but I don't know what's become of it since then. It was a year or so before I started doing it. I had already thought about it before then, but never got around to doing it.

GC: There have been a couple of updates. You want to tell the new stuff they are able to do...

JR: About what?

GC: You know, doing the X-rays, there's apparently some new way of going about it that gives clearer pictures.

JR: Oh well, on newer scanners it gets better.

GC: Yeah.

JR: You get thinner slices and greater spatial resolution so you get better pictures than we did in 1996 or '97. That was ages ago in terms of medical imaging technology.

GC: As a matter of fact that fiddle that I've got started is from a poster in Strad Magazine and it's got the new images of the original Strad on there.

JW: Is that the one you have the bolt for?

GC: Yeah. You know, one thing, I know people beat themselves to death trying to slavishly follow dimensions. I've seen two pretty expensive fiddles, you know, \$10,000 range, that's pretty good money for a new maker, where they had just slavishly followed these dimensions even to the point of putting in an excessively thin spot that slipped through the Stradivarian shop, shouldn't have been there, but it was... What they're failing to consider, and John is really good at this stuff so he can correct me anytime he wants, the coldest part of the little ice age actually corresponded to Stradivari's life. Stradivari actually outlived it. I think the coldest 80 years started in 1645, 1650, and Strad's birthday they argue was between 1644 and '48, but then he lived to 1737. So, that was the coldest 80 years. But the little ice age went on and I think it finally came to an end around 1840. When you think of trees, and you think of Martin Gibson Company and other companies in the 20s and 30s, they were probably harvesting trees that were growing in the little ice age. Now enough time has passed that Red Spruce is not the same, nor is anything else the same. We're dealing with, for practical purposes, just entirely different species of wood. You can't just follow numbers and hope to come up with some wonderful. I know that if you look at John's, we've measured it countless times, it's a healthy instrument. If I remember correctly it's 4 – 4 ½ mm in the center and it's just a healthy instrument. I know we've seen others, John and I went to Gruhn's one day and he had one or two there didn't he John? And then, Ronnie McCory was telling us about his, but one thing I noticed was Ronnie couldn't put John's down for about 40 minutes.

What I've, you spend your life, if you're going to do this you spend your life, and you have to start somewhere so maybe you do start with given numbers. From there what you devolve into, or evolve into is, you start recognizing characteristics of wood and maybe this is really light and flexible, and maybe too light and flexible, so maybe you need to add stiffeners. And then for everything you've learned, there will come a time where something will come along and just call you a liar. Al White got a fiddle from me that when I got it together I had no hope for it at all, it was so heavy and stiff, and it is

fabulous. He wouldn't take anything for it. So, for everything you believe there will be an exception. Al said nothing made him happier than to pay money and be a better fiddle player.

30:18

JW: What do you look for in fiddles when you're buying them? Do you find them...?

GC: I look for workmanship. If the original workmanship is good, you will have a good instrument. There is one thing that we talk about, Harry and I talk about, John and I talk about, this whole circle talks about, and it's something that I don't ever see mentioned and that is with any instrument, doesn't matter what it is, you have a physics equation. You have, when someone is hunting for an instrument, you have a physics equation solvable only through trial and error. You take that person's makeup, added to an instrument, and then, if it comes out the end with a wonderful sound you've solved the equation. So, just because it's a good instrument doesn't mean it's going to be a good instrument for everyone. Each person has to go through that hunt.

JW: Where do you find instruments most of all?

GC: There are some people I know in different parts of the country. I have bought a few off of EBay, but I think I've been sadly disappointed for the most part. It's getting harder and harder. You know, how many good instruments have we lost just because they were played to death? Maybe this is the right place, maybe it's the wrong place, but I have read and found it to be true that a luthier can do more harm in 5 minutes than a player can do in 50 years. So, if you don't take the right approach in removing a fiddle top you'll break it, it will just split from one end to the other. It's something you have to be very careful with.

32:46

JW: Are there any unique methods that you use for building? Any shop secrets that you'd like to share?

GC: No, I think the Violin Society of America has really laid down a set of seriously good guidelines. One thing I do that is different from what has been tradition in violin making... The traditional way in violin making of repairing a sound post crack is to, of course, scoop it out to about one mm thickness and add new wood. You chalk fit it and do the whole thing.

33:88-34:02

Interruption by videographer – clock chimes in background

34:03

GC: And so, one way I differ from that is, anytime I take a top off I put a prophylactic violin patch in there that does not involve removing wood, it's just to keep it safe so that an ill-fitting post won't crack it there. It's just to try to make it last longer.

JW: Do you find a difference in the sound quality with that type of repair?

GC: I think that you do. I think that, from what I've been able to tell, it adds a little stiffness and I think you get a little better sound. I think it's just something that's necessary to live with. You know, this far removed, a good number of instruments have sound post cracks anyway. I know Bruce Greene sent his up with a nasty crack, and ended up doing that, but I think that's actually a better way just to put that patch on rather than scooping out the top because the question arises how many times can you do that scooping out method? Each time you would have to make sure that the glue is removed, so each time you would get thinner because you're simply putting it right back to the way it was and the same thing can happen again. So no, I don't have any secrets, it's just hard work, and the secrets would be to maintain high standards.

35:57

JW: What are your thoughts on finish work on a violin?

GC: That's one place I've been lucky. I retired from Ford after 30 years and the last 10 years I was there I was a metal man and a paint repairman. That's pretty much a dying art. The work I did was with lead. So, I got to practice on hundreds and millions of dollars' worth of Ford trucks and went to, got trained with very good painters, and so the last ten years I was at Ford I got a really good education in chemicals of all kinds. That has enabled me to be better than someone who didn't get that opportunity. I'm not saying that I'm any better, but I did get the opportunity. I'm constantly exploring new finishes because they come out with some all the time and you'll read an article and somebody will swear how wonderful it is and you'll invest a hundred bucks and you'll say that that needs to go in the garbage can because it isn't so wonderful.

One thing we all need to know, and I know in the interview with Harry Bickel he used the word restoration just like I use it, we all use it, but really we have to keep in mind that once damage is done it can never truly be restored. You might touch it up to where it's nearly invisible but once it's done, it's done. There's no restoring it, there's only repairing it to the best of your ability. So, with finishes what I do is whatever is required. On some instruments, on violins, I would prefer to use an oil varnish although sometimes spirit varnish is required. Sometimes one thing you hate to use is lacquer, but sometimes you have to. And so, there is a multiplicity of coatings out there, and it requires a lot of study and updating of your knowledge, and its one place where a person can go wrong. If you choose the wrong one, you've made a mess. And I've chosen the wrong before. I always try to practice on things that belong to me so when I'm working on someone else's I'm sure of what the results are going to be. But you actually asked the most difficult thing any luthier will deal with is coatings.

39:28

JW: Finish works seems to be the...

GC: Yeah, even modern factories are having trouble with finish work. You get into water-based coating because of the health of the workers is at stake and they fail to adhere. There are a lot of problems with new instruments right now. The old finishes were fabulous, but they'd just kill you.

JW: So that's the difference, the health risk of...

GC: Yes.

JW: Health risks and using water-based... What are some of the best instruments you've worked on that you can...?

GC: Depending if you are talking monetary value of course John's instrument was the most expensive I've ever worked on.

JW: Sure.

GC: I've had an opportunity to work on several really nice guitars. I'll probably, the most expensive one would probably be \$25 - \$30,000 dollars and fiddles, not so much. Probably the ones we see around here, the ones that most people can afford run \$5 - \$10,000 dollars. But run of the mill instruments, I don't want to give the idea that everything is that much, you can get a very good ordinary instrument for \$1,000 bucks. You know that yourself.

JW: Sure.

GC: You've run across some steals I'm sure.

JW: Yeah, absolutely.

41:17

GC: With a fiddle it's all in the set-up.

JW: What are some of the specifics to a set-up that you, that you've tried to achieve?

GC: You know it's a funny thing, but the thing that actually doesn't matter at all as far as money goes... There are a couple of things. One of them is you need a bridge that's big enough. One of the biggest mistakes that I've seen and I didn't learn this myself I read about it in the Violin Society where they studied a hundred different violin bridges from the Rembert Wurlitzer shop, and everyone had 17 mm between the kidneys. Once I read that I found a blank that would allow me to have that much and it matters. And so, you want to start with a big enough blank for a bridge and then you do want everything to be as light as possible. These composite tail pieces and chin rests they all add a lot to sound. Most of the things that we would see day to day would be, over time, the neck set is wrong, and so you start there. Ideally you would start with a modern base bar. Everything we see and like, you see and like. I see and like every fiddle player... is usually German, turn of the century, something affordable, but you have to keep in mind that the base bar was smaller for gut strings and modern base bars are bigger. If you found a really nice fiddle you could pretty much imagine that it would sound dramatically better with some bringing up to the present time done.

One thing I have learned is that the basic core sound of any instrument never changes. John's, we've done work on it and, as a matter of fact I've developed a little gauge based on John's instrument. If John can play that up to the very last fret in the mandolin orchestra, then there's something wrong with a mandolin player that can't play with that string height. And so, little things like that matter. On a mandolin you can't get a lot of change, but if you were to move the bridge slightly to the base-side you can't ever move it more than a 1/16th, you can make it a little more "basier" or "trebly", but there are some hard and fast rules that you don't violate.

I know that I've seen you on TV enough with some very good fiddles to know that you know a good fiddle when you see it.

JW: Well, I'm learning.

GC: But, one thing you have to be aware of, and it's what I tell everyone... When a person is going to buy an instrument, whatever it may be, they're going to buy an apple. The person selling it is selling oranges. The people selling it have their own criteria. George Gruhn has his own criteria; it has nothing to do with the sound. So the person buying it is after something else. It's difficult to make that connection.

45:55

JW: Who are some of the people that you've heard that have attracted you to a certain sound with the fiddle? Some of the fiddlers you enjoy listening to?

GC: Oh I enjoy listening to you every time I see you! Roger Cooper, Roger and Charlotte were kind to me for three years. There were times that I spent every weekend at their house. And then for Bluegrass, the last four or five years I've been going to Jeff Guernsey trying to learn some Bluegrass. Through Roger I've really gotten acquainted with Buddy Thomas and a lot of those recordings that never made it to record. You know, that's my personal favorites but we have some wonderful players. We just lost Paul Smith which was a shame. Paul was a smart man and a smart fiddle player. He knew when he would be losing something and he would call me and we would discuss what could be done to address the issues he was having and so Paul followed hard his whole life to compensate what age had been doing to him and really succeeded at it. You know, I think it's kind of remarkable for those of us in this generation to look at what a hard time we had learning music and then to see how many aids are available now and its, I think I would call is jealousy, but we probably have some healthy envy of the aids that people in your generation have and it just makes younger players better and better. I don't think there's ever been a time when players could be any better than in your generation.

48:12

JW: Do you find that true with luthiers and builders and repair people who...

GC: Luthiers is a touch thing. There's a guy in California, Irving Sumagi, and he just put out a couple of books. Apparently he is a wonderful guitar builder and his instruments sell for \$25,000 bucks and he said it right. He and George Gruhn had said it years ago, I read what George said, and both of them said they didn't have high hopes for the craft of luthiery because, like George said, a child needs to start out at six or seven years old putting model cars together and developing his skills that way and basically Irving was saying the same thing. It's just like I said earlier, from model cars we graduate to real ones and it's very difficult to get children to work with their hands anymore. It's just, the culture has changed. So you've got to get manual skills somewhere and I don't know where on earth you would get them. And so I feel like George, I think George has a tough time keeping luthiers. I don't think there's ever a serious abundance of them. I know some things I've seen from Tom Hale I think, all of his repairs I saw were well thought out. I've seen some failure that were caused by bad glue and there again people don't understand hide glue has a pot life of eight hours. At the end of that, if you use it, it's going to fail down the road and it has to be dumped. So if you, I don't care if you stick it in the refrigerator like a lot of people are saying to do, you are talking about pennies and why would you risk a failure for pennies.

There are some certain hard and fast rules that you need to adhere to and if you violate them somebody is going to pay.

50:56

JW: What do you think about liquid hide glue?

GC: It has the, what makes it liquid hide glue is urea. Urea is an extender that prevents it from ever gelling. And so, hide glue has gram strength. I think normally for luther work, for violins the gram strength would be 251, and it will run up to 378. Pass 378 it becomes glass chipping grade and that's how they make fancy glass, they just put hide glue on it and as hide glue dries it will chip the glass it's so strong. Depending on the purpose on a fiddle I would use the lesser strength. A fiddle is made to come apart. On a guitar I would use the strongest. People are under the illusion that hide glue is reversible and it's not. If you glue something with good fresh hide glue you aren't going to get it apart. It will come apart a lot easier with tight bond that it will with hide glue. So, all these things have to be taken in to account.

52:29

JW: Yeah, it seems like a really powerful adhesive. I read somewhere where somebody got there violin back together with just hide glue and no clamps.

GC: Oh yeah, it will grab fast, but that glue you are talking about I think that would be good for nuts and things like that, but one thing that has to be done, there should be an expiration date and it should be six months. You have to periodically throw it away. One thing, the only problem with hide glue is you've got a one minute working time and if you want more than a minute you've got to clamp this all up in advance and if you're going to require more than one minute then you should put some urea in it and maybe you can get it up to a minute and a half, a minute and forty seconds, but that's the drawback no working time.

JW: Do you have any other thoughts?

GC: No, I just think that in addition to luthiers that we have to say luthiers wouldn't even be here if we didn't have customers and I think it's critically important that all of us have a healthy respect for the instruments that the customers own. John has some wonderful instruments that would be well worth looking at. John has that old snake head and some others and one thing we all have to know is that all these instruments made in the 20s and the 30s, they were just work horses through the 70s and now they've become valuable and all of a sudden we have to take care of them. Harry and I had this conversation before and I told him that when I tried to fix something I tried to fix it for the next hundred years or so and he said....

54:45-54:56

Interruption by videographer – background noise

GC: And so, we had this conversation about how long we were responsible for the instruments. Harry very succulently put it; you can't be responsible after you're dead. So I think that what we've got here is

one generation trying to pass on to the next generation some good instruments in good shape and if we all do our best maybe it will work out.

JW: Absolutely. I hope so.

JR: We're just the stewards, we're not the owners and Stradivari instruments, if you look at something there its three hundred years old. These mandolins are made every bit as strong and, given proper care will probably last that long and who knows what kind of music they are going to be playing. Bluegrass is just a few decades old. Classical music, you know, some of the stuff goes back to the 15th century, and there will be somebody out there that wants to be able to play on an instrument like this hopefully in a couple hundred years. So it's our responsibility as the stewards to turn it over to the next person in excellent shape because they won't be able to buy another one. Lloyd Loar left the building a long time ago.

JW: Absolutely.

GC: And if your work today is a success you'll be able to buy one of these.

JW: That's right.

56:46

Interruption by interviewer and videographer – JR asked to hold mandolin up for video purposes
GC leaves the video area
Background conversation

JR: It has some politically incorrect material. It has some ivory pieces on here.... The finger board is ebony and the top is Red Spruce. Picea Rubens, which is the gold standard, but the Spruce that they had in 1920s may not be the same as they have today.

57:46

Room tone check. End of recorded interview.

