WORK GUITAR No. 53

Spec for wooden spruce guitar.

(1) Deep bowl

Max fund @ 84 ~

(2) Minimum rim and ring

(3) Top .1 thickness

K around .8 - .9

(4) Series of fans

Large footprint 5/16 high trim @ ends

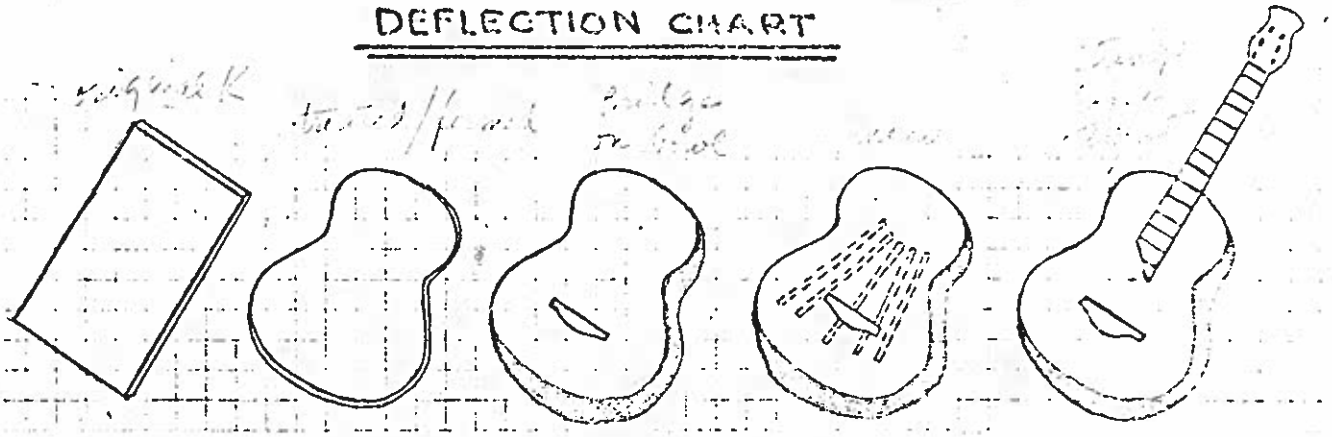
(5) Glue fans with slight up bulge to top say 1/8

(6) Masters finish

(7) Carved bridge and headpiece

(8) One hole 9 ⌀

DEFLECTION CHART



1 2 3 4 5

TEST No.	TYPE No.	MATERIAL	THICKNESS (INCHES)	LOAD (LBS)	DEFLECTION (INCHES)	K (IN/10 LBS)

SUMMARY DEFLECTION CHART

TEST NO.	MATERIAL	LOAD (lbs)	LOAD (lbs)	DEFLECTION (INCHES) 1	DEFLECTION (INCHES) 2	DEFLECTION (INCHES) 3	DEFLECTION (INCHES) 4	DEFLECTION (INCHES) 5
45 - 1	flat, untreated spruce			.70		.147	—	.075 —
- 2								.101 .09
46 - 1	flat untreated spruce			.84				.100 .15
- 2						.153.		.075 .07
47 - 0	flat untreated spruce			.77		.175		
- 1								.071 - .039
48 - 0	flat untreated spruce			original - .56 ground to .1 - .89				
48 - 1								.095 - .09
49	flat treated spruce			original - .57 ground - .81	.44	.180		
50 - 1	formed treated spruce			ground - .93	.66			.073 .06
50 - 2								.156 .13

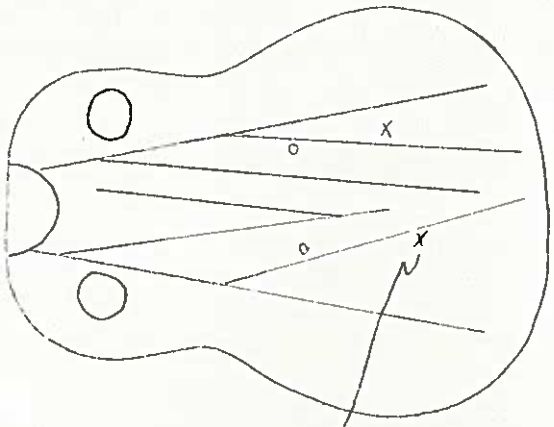
	R (E)	L(W)	S	N		FF
#33-0 Narrow bowl —						CM
.25					.074	12/23/7
.5					w/10# wt.	
1.0					—was .087	
#33-1						CMcD
.25	.028	.023	.010	.012	K = .070	3/1/75
.5	.051	.049	.021	.027		
1.0	.108	.099	.045	.057		
	sags					
#33-2 patch on , no strings					K @ 10#	CMcD
.25	.024	.024	.010	.009	.0365 x 2	3/4/75
.5	.048	.048	.020	.019	= .073	
1.0	.098	.096	.041	.039		
#33-2½ patch on — no strings					K @ 10#	CMcD
.25	.019	.018	.009	.009	.029 x 2	
.5	.038	.038	.018	.018	= .058	
1.0	.080	.077	.038	.038		
#33-3					K @ 10#	CMcD
.25	.018	.016	.008	.008	.026 x 2	3/3/
.5	.037	.033	.017	.017	= .052	
1.0	.073	.069	.035	.037		
#34-4 Large dreadnaught bowl					K = .075	CMcD
.25	.023	.023	.013	.012		12/13/7
.5	.060	.059	.034	.031		
1.0	.120	.118	.068	.065		

		RL	SN	K	F.
#33-1					
Same configuration as 33-0 . 3/1/75	.25	.028/.023	.010/.012		
	.5	.051/.049	.021/.027		
	1.0	.108/.099	.045/.057	.070	
		↖ sags ↗			
#33-0					
12/23/74 – CMcD				.074	
strings tight, patch on				w/10# wt.	
				–was .087	

MARCH 75

#33 – DESCRIPTION

Has a narrow main bout
Flat top – untreated
Round holes 2-7/16" – 4.5996□" x 2 = 9.1992□"
Fingerboard cut at 14th
Top dished 3/16"
Top edge flush with outside of bowl but 1/8" above top of bowl and filled.



Braces 1/8" wide x 1/4" high
mislocated bridge pins (2" wrong)
shelf 3/4" high oa x 1/16" thick
flange 1/4" oa

		RL	SN	K	F
#33-3					
Had another supplementary brace added on top of the new outboard brace (1/8"w x 1/4h) 3/3/75	.25 .5 1.0	.018/.016 .037/.033 .073/.069	.008/.008 .017/.017 .035/.037	10# .026 x 2 = .052	
We worked this one backwards. Configurations #33-2, #33-2½ and #33-3 were made over the weekend when testing wasn't practical. In order to assess the contributions made by these changes we shaved off the supplemental braces (outboard first) and ran the tests shown above.					
#33-2½					
Had supplemental brace added on top of original outboard brace (1/8"w x 1/4"h) 3/4/75	.25 .5 1.0	.019/.018 .038/.038 .080/.077	.009/.009 .018/.018 .038/.038	10# .029 x 2 = .058	no strings, patch on
#33-2					
Has had new outboard brace added (1/8" x 1/4"h) 3/4/75	.25 .5 1.0	.024/.024 .048/.048 .098/.096	.010/.009 .020/.019 .041/.039	10# .0365 x 2	patch on no strings
Note that in removal of this supplementary fan to make deflection tests that a sliver of the original brace came off (about .050"). This would be the right side, from the top view.					

Here is the configuration as of 3/4/75 → Have take on this