

# BIBLE REGAL - SHEET 1/6

The Danish Music Museum - Musikhistorisk Museum og Carl Claudius' Samling  
Inv. no. CL 596. Unknown maker.

Measured and drawn by Ture Bergstrøm 1969-1972  
Redrawn in digital format by Ture Bergstrøm 2015  
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The set of drawings consists of 6 sheets in A2 size

The instrument consists of:

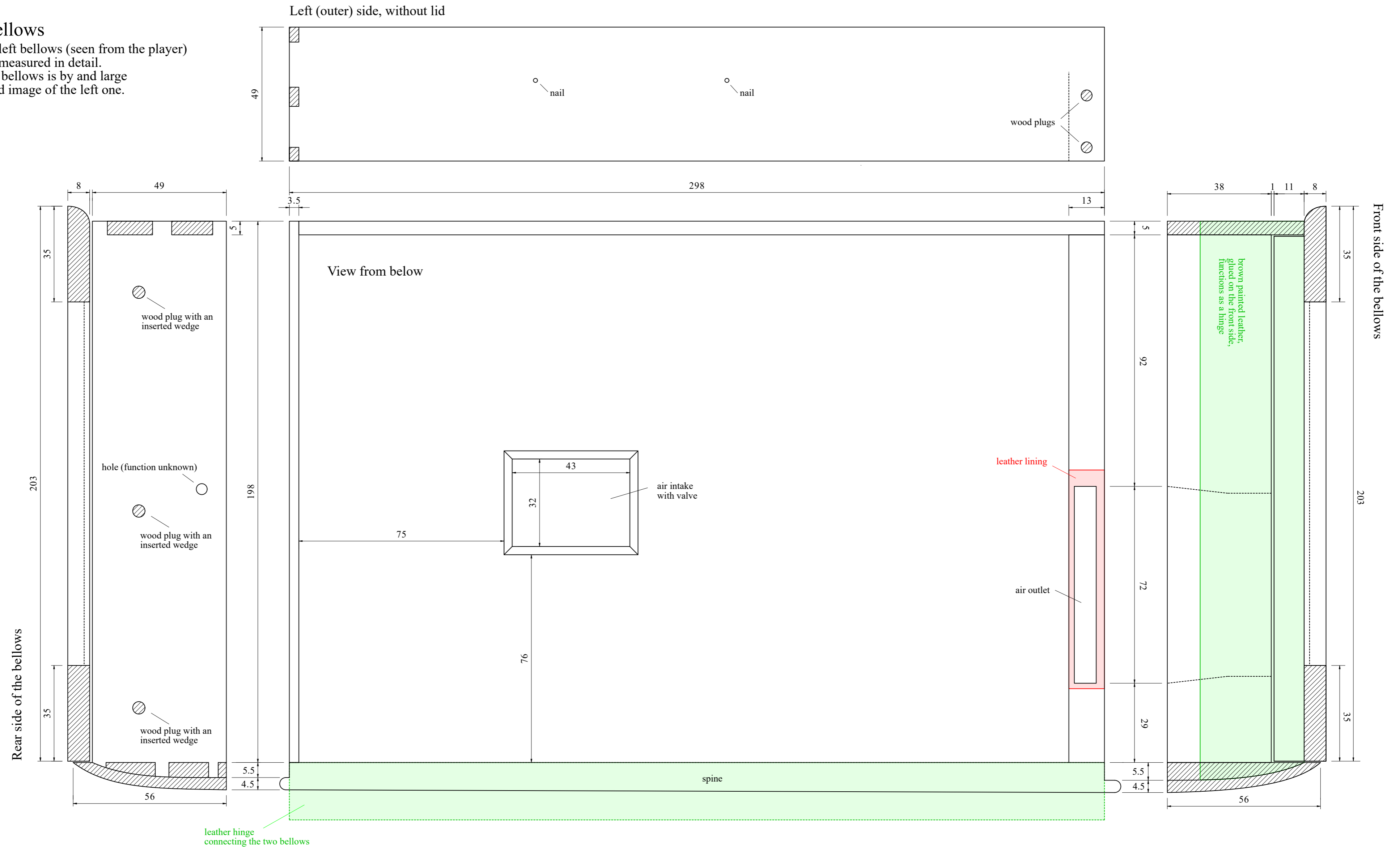
- Chest with keyboard, windchest and pipes, divided in 4 sections marked A, B, C, and D, respectively
- 2 wind-trunks leading air from the bellows to the windchest, marked A and B, respectively
- 2 bellows hinged together with leather strips
- 2 weights of lead covered with leather (not original, hence not measured)
- 4 sliding covers behind the pipes (not original, hence not measured)

The compass is C-b" minus lowest C#

The material is oak unless otherwise specified.  
All measurements are in mm. Hatching indicates end grain.

## Left bellows

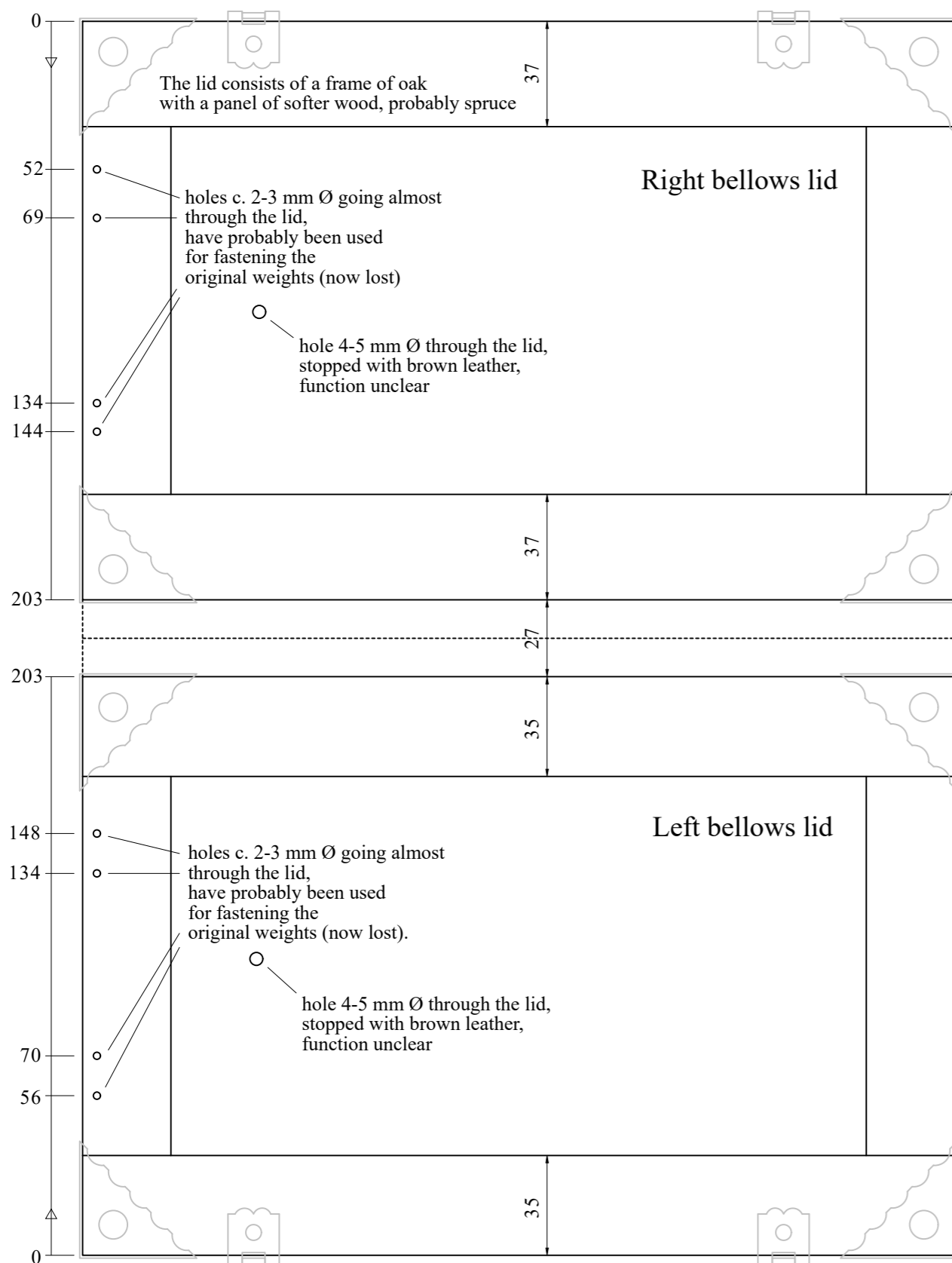
Only the left bellows (seen from the player) has been measured in detail. The right bellows is by and large a reflected image of the left one.



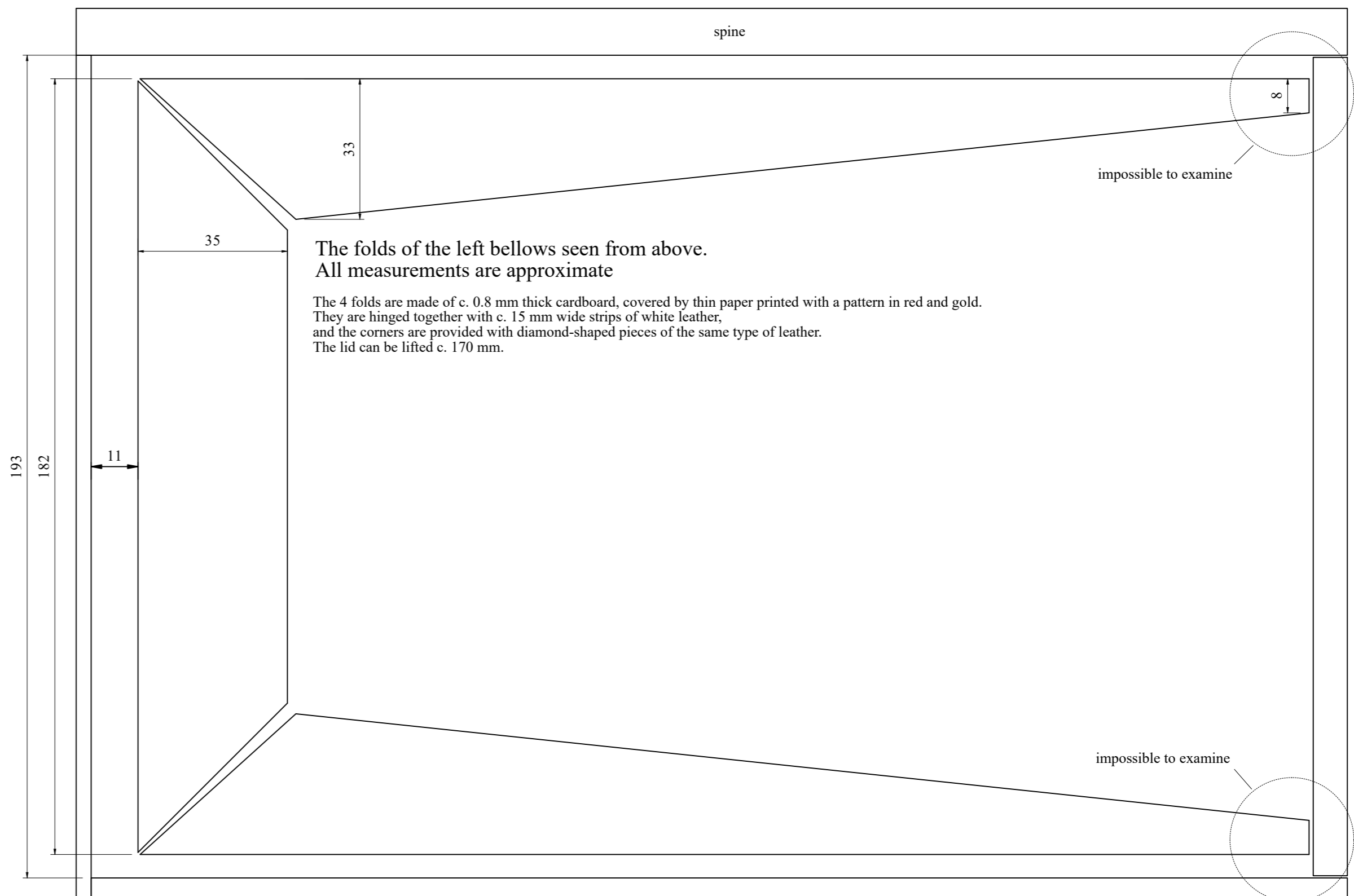
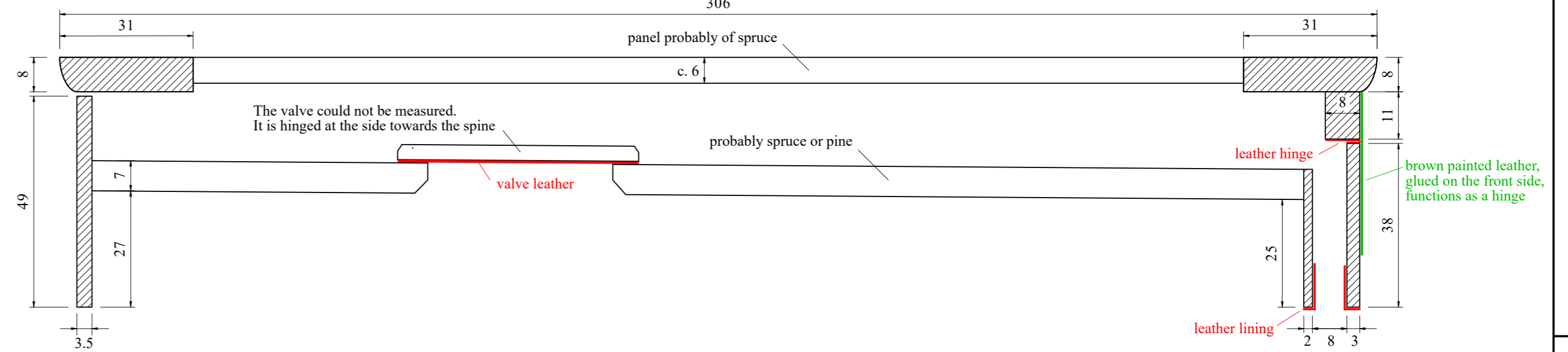
# BIBLE REGAL - SHEET 2/6

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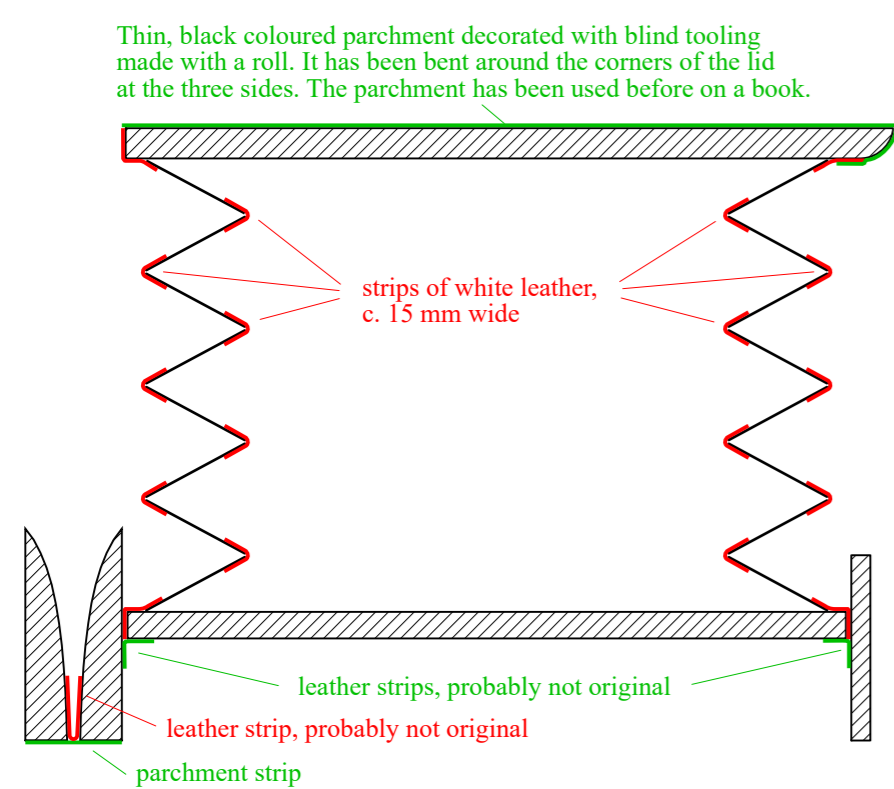
The lids of the two bellows, 1:2



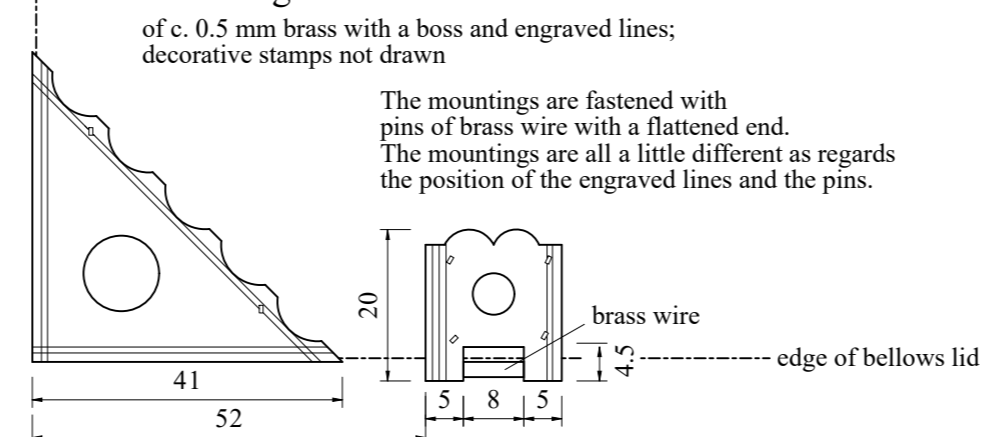
Length section of bellows



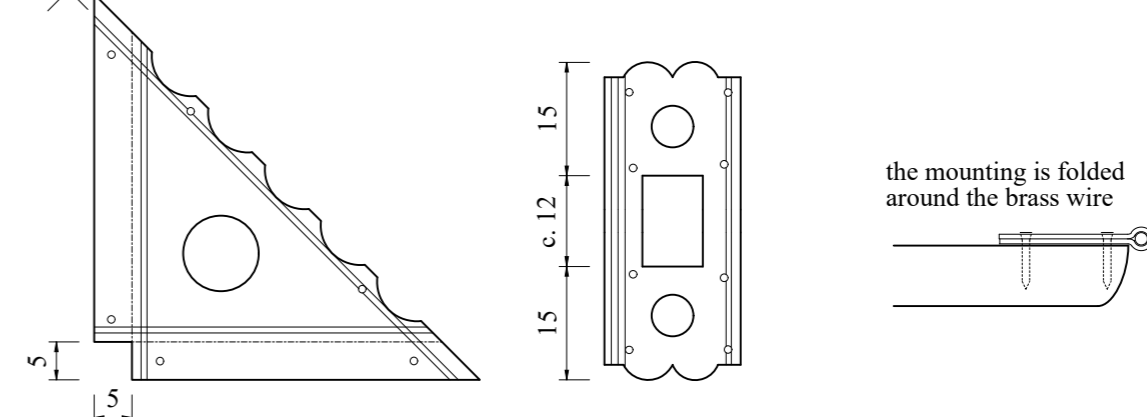
Cross section of a bellows 1:2



Mountings



The mountings unfolded

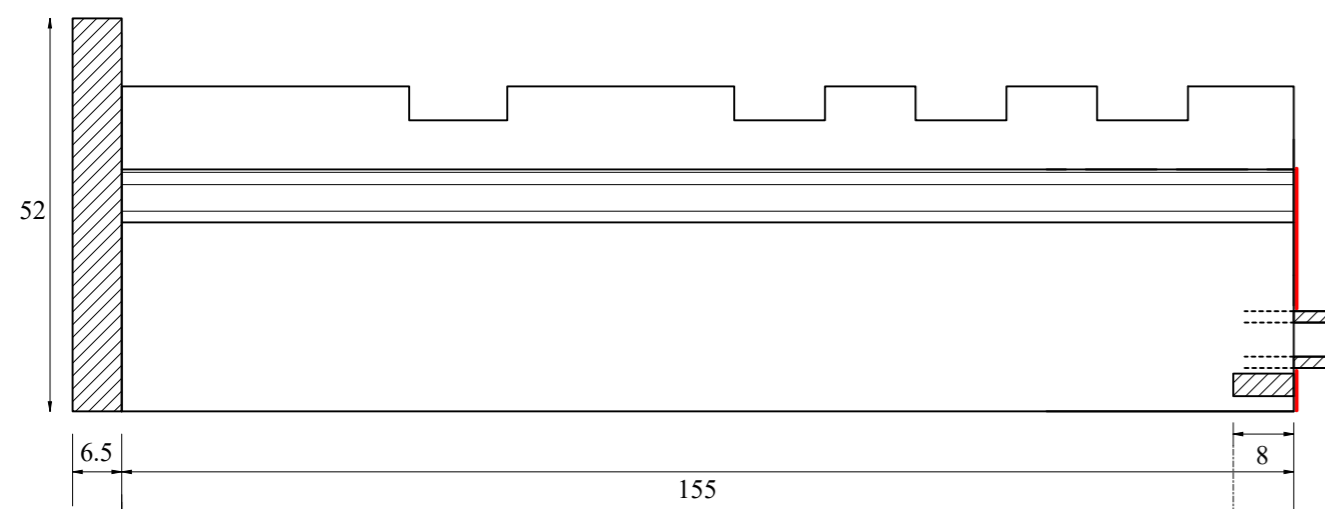




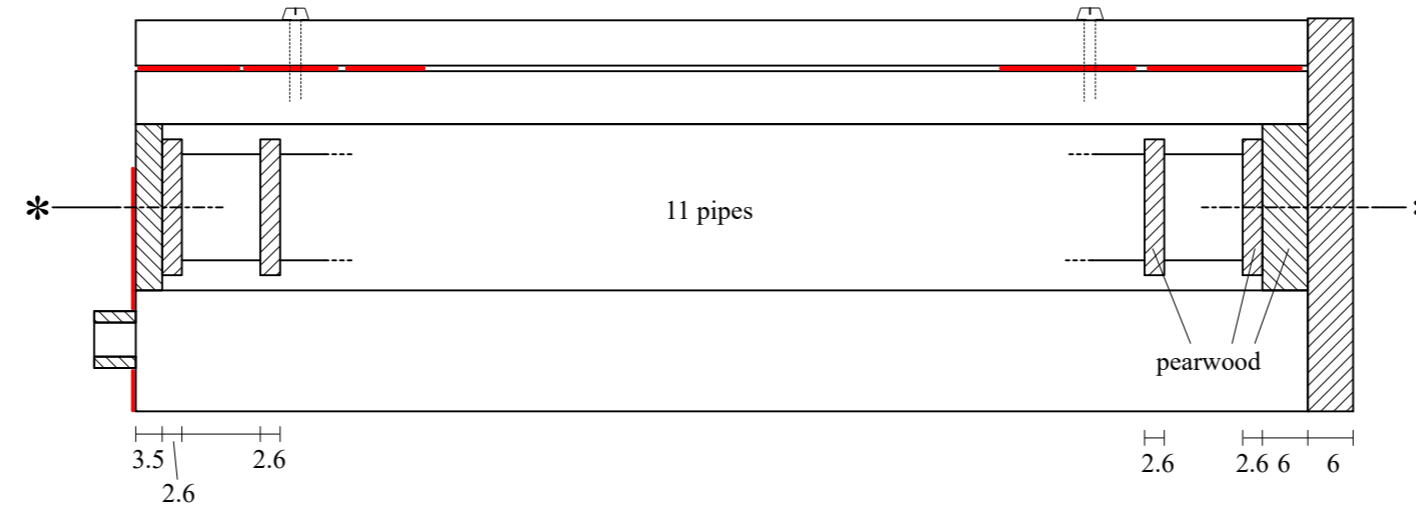
# BIBLE REGAL - SHEET 4/6

The Danish Music Museum - Musikhistorisk Museum og Carl Claudius' Samling  
Inv. no. CL 596. Unknown maker.

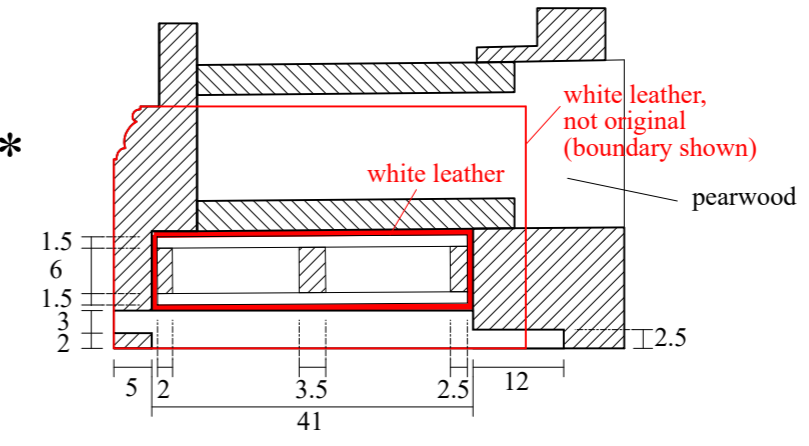
### Section A, front



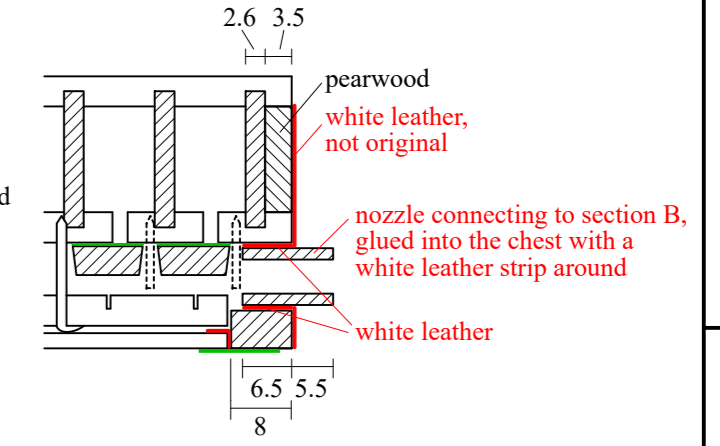
### Section A, backside pipes not drawn



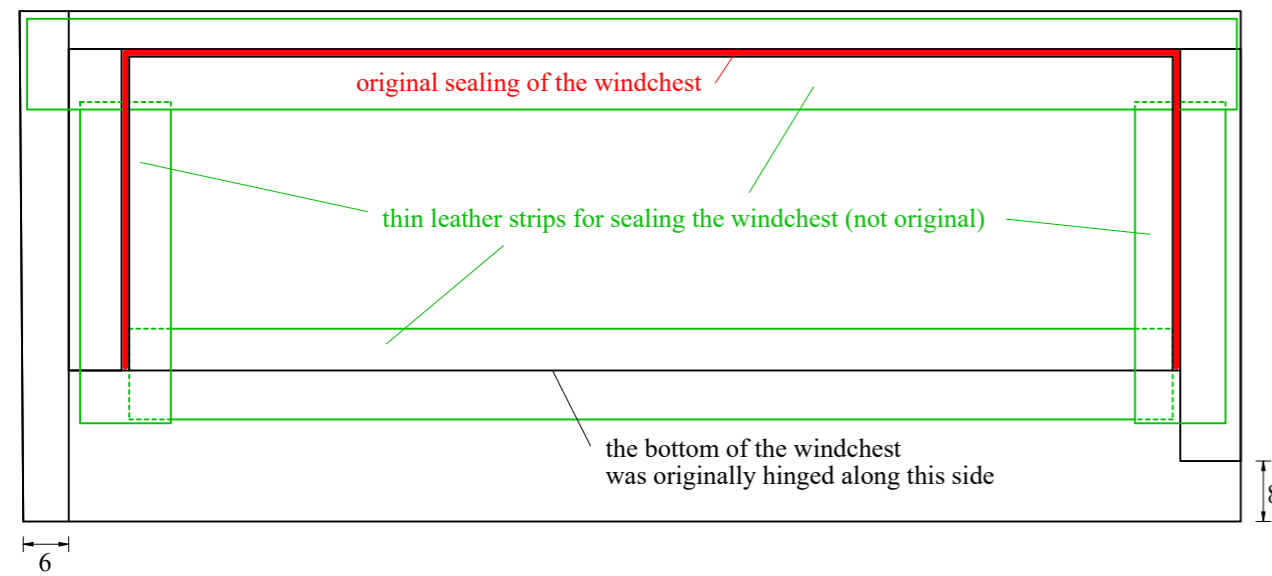
### Section A, right end



### Section A, right end length section

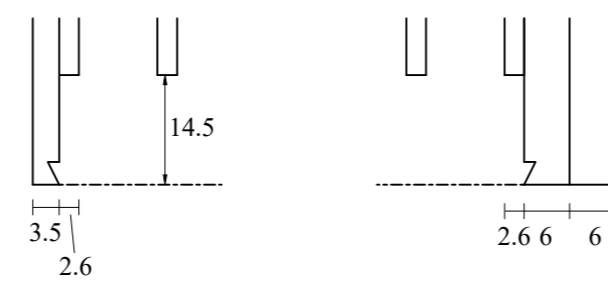


### Section A, bottom

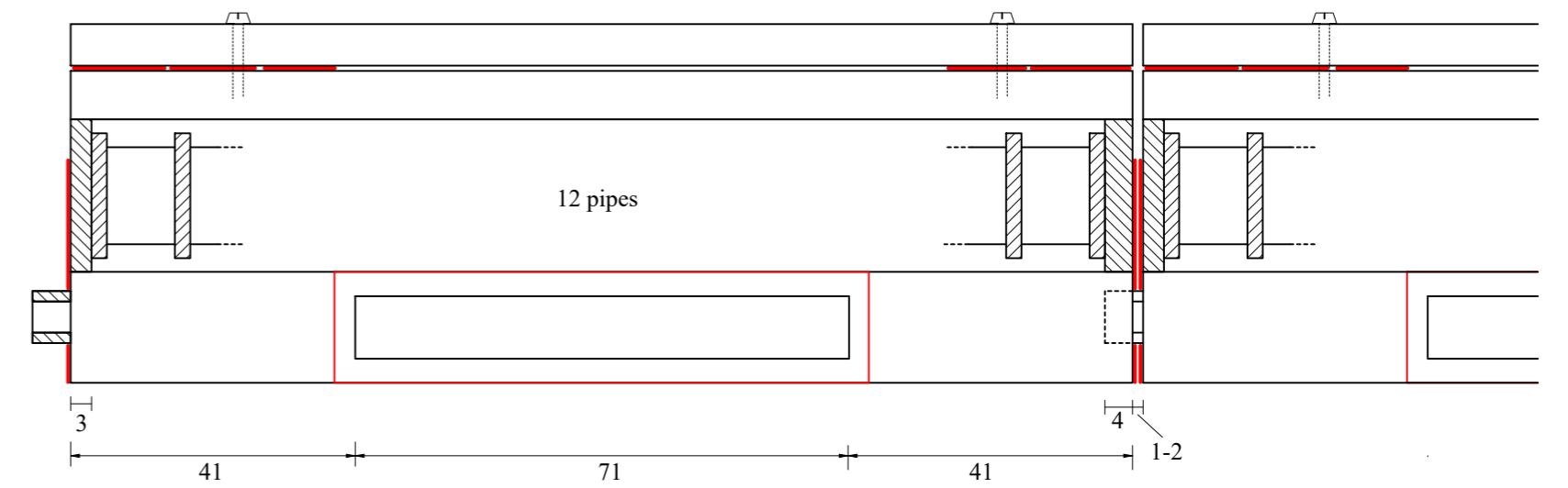


### Section A, horizontal section \*—\*

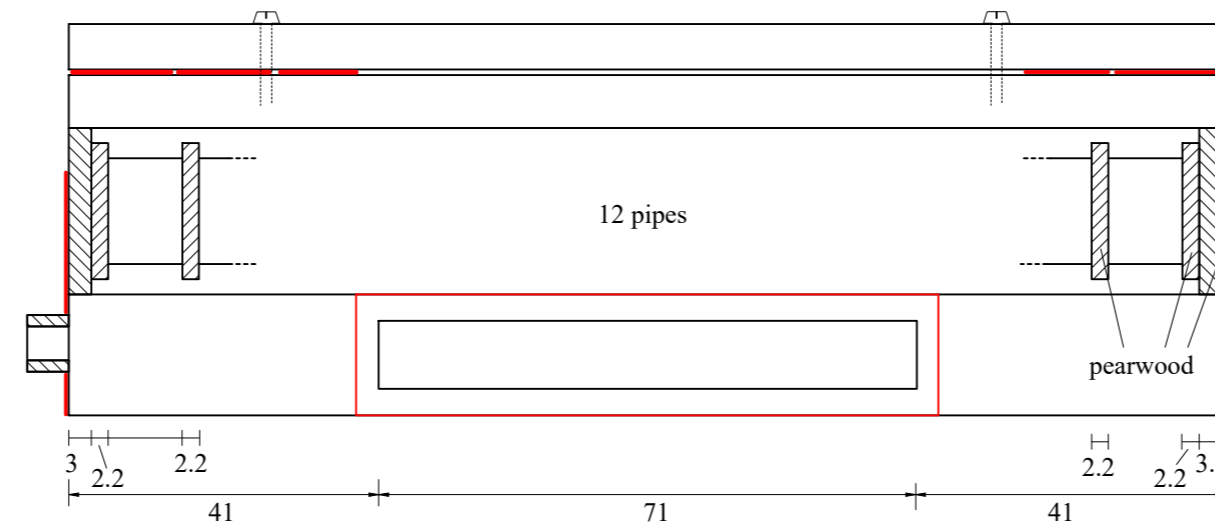
shortened, the original sliding cover has been lost



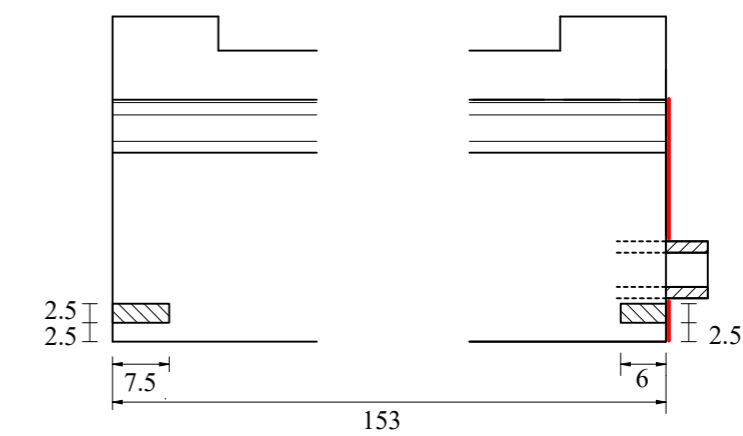
### Section C and a part of B, backside



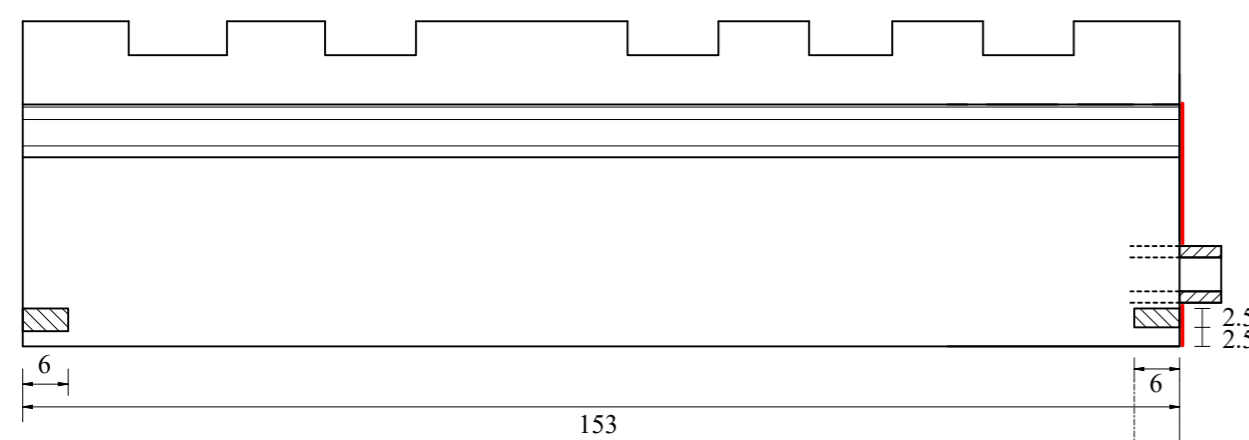
### Section B, backside pipes not drawn



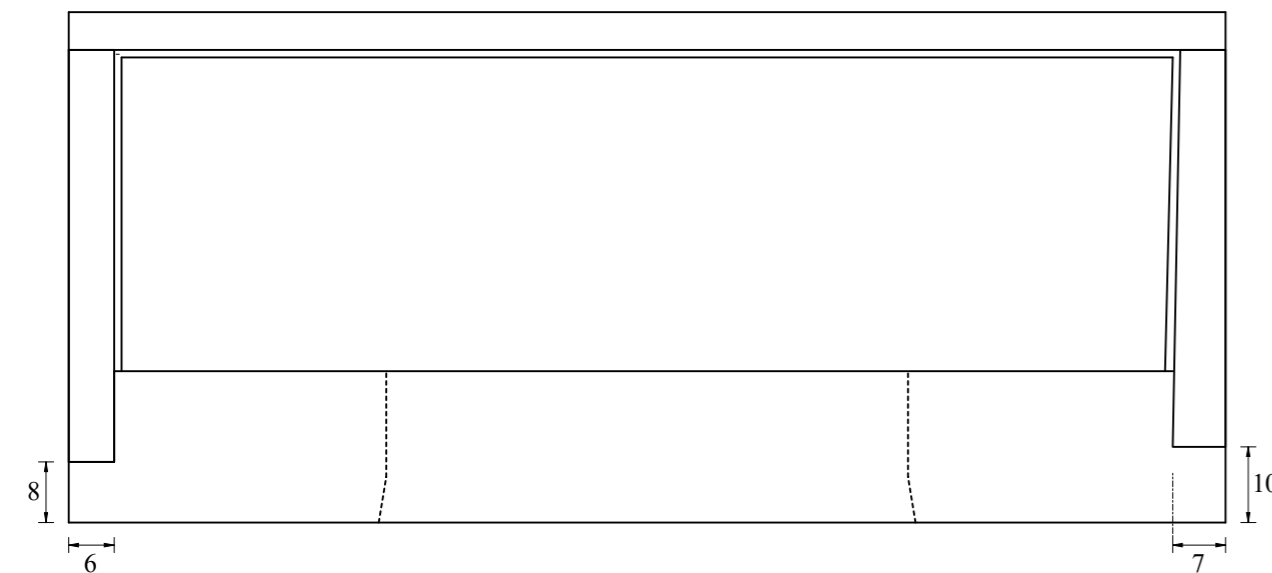
### Section C, front shortened



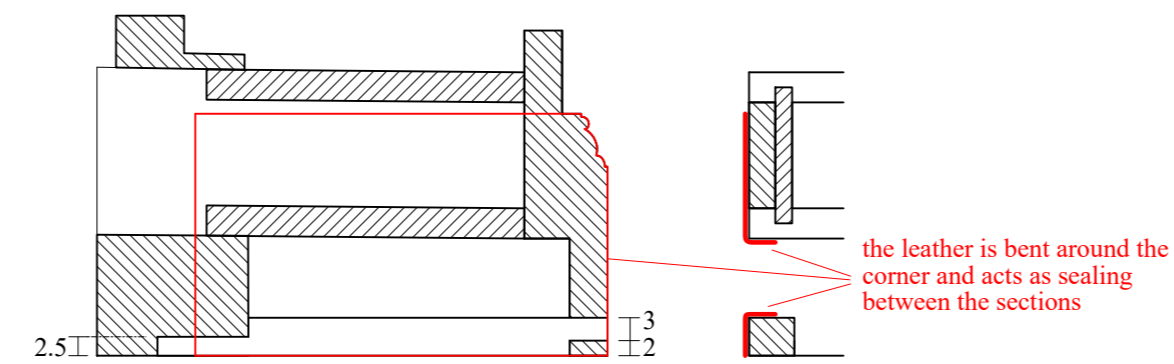
### Section B, front



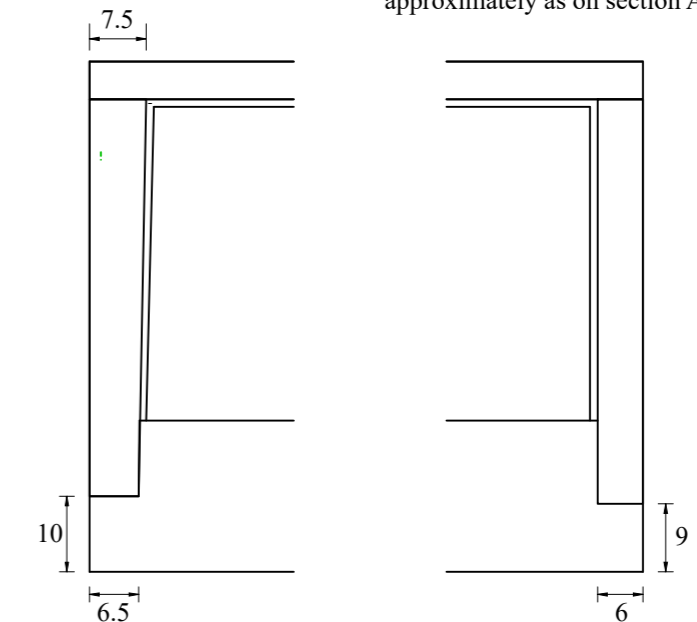
### Section B, bottom leather strips not shown, approximately as on section A



### Section B, left end

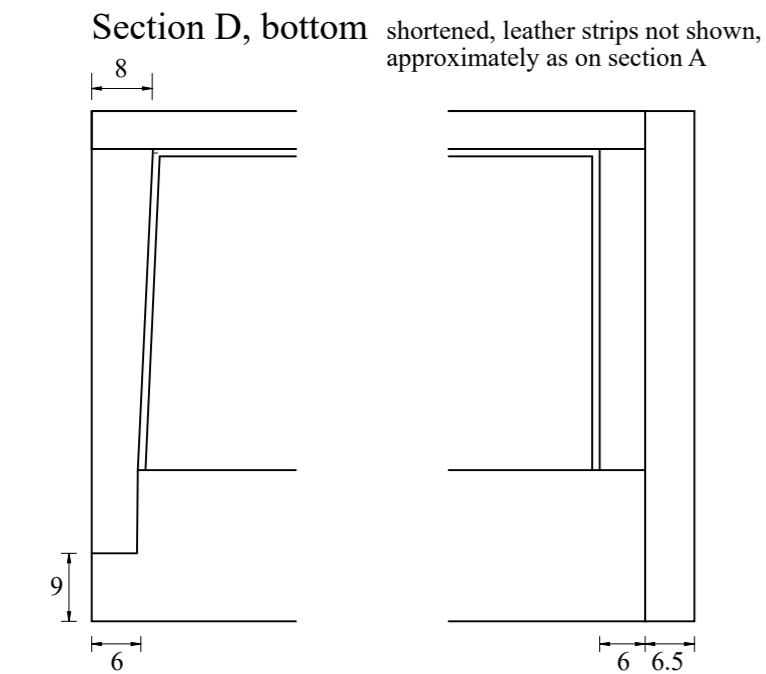
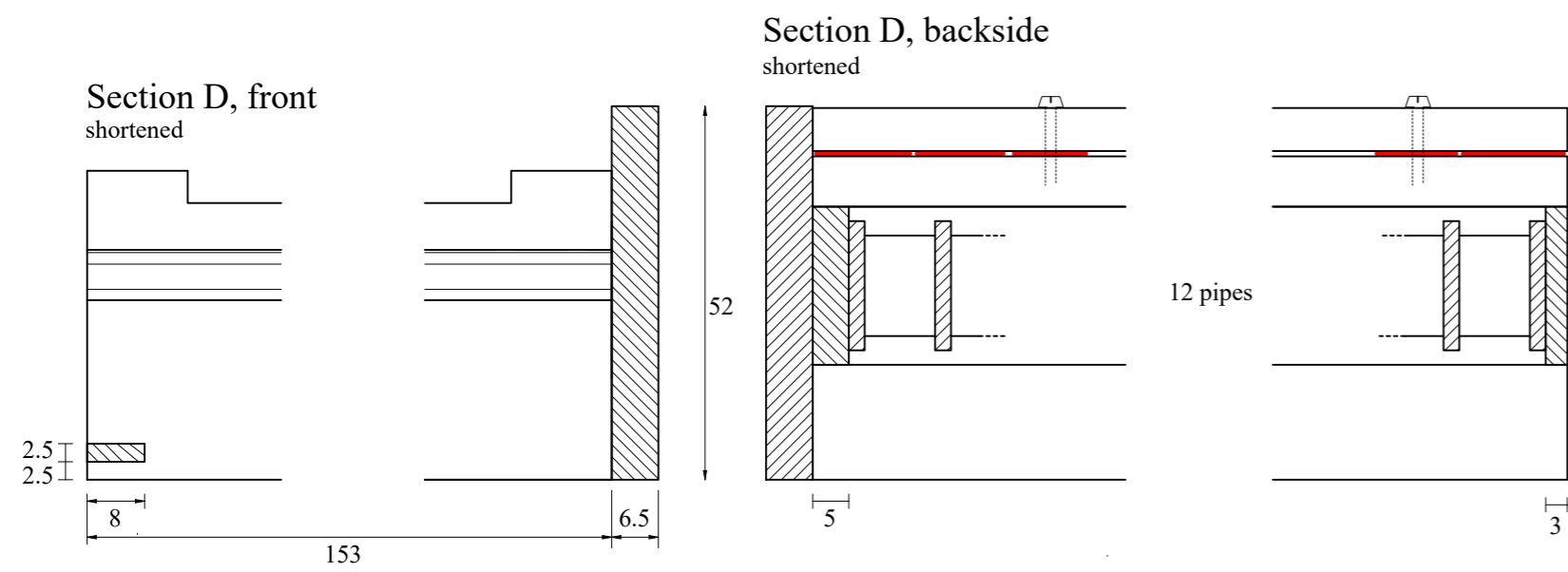


### Section C, bottom shortened, leather strips not shown, approximately as on section A



# BIBLE REGAL - SHEET 5/6

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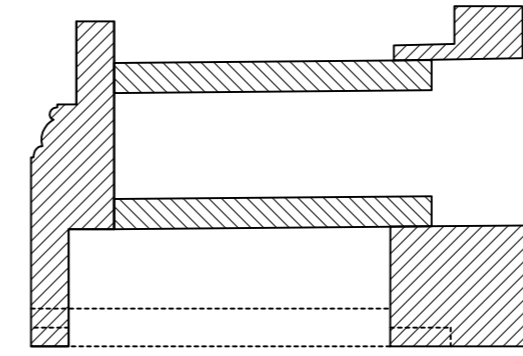


## Pipes

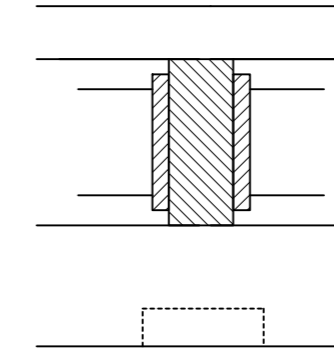
Materials:  
block: pearwood, each marked with note name  
wedge (not measured): pearwood  
tuning wire: iron, 1 mm  
shallot: tinned iron, 0.4 mm; the soldered-in end piece is perpendicular to the shallot  
tongue: brass

## Building procedure of chest

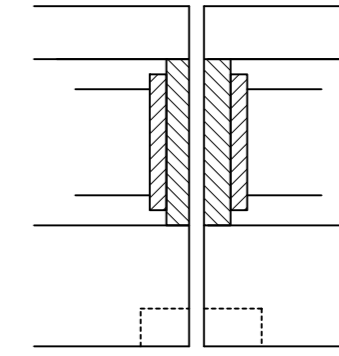
The chest has been built in one piece and subsequently cut into the four sections. Each of the shown lists and mouldings is made of one piece of wood running through all sections.



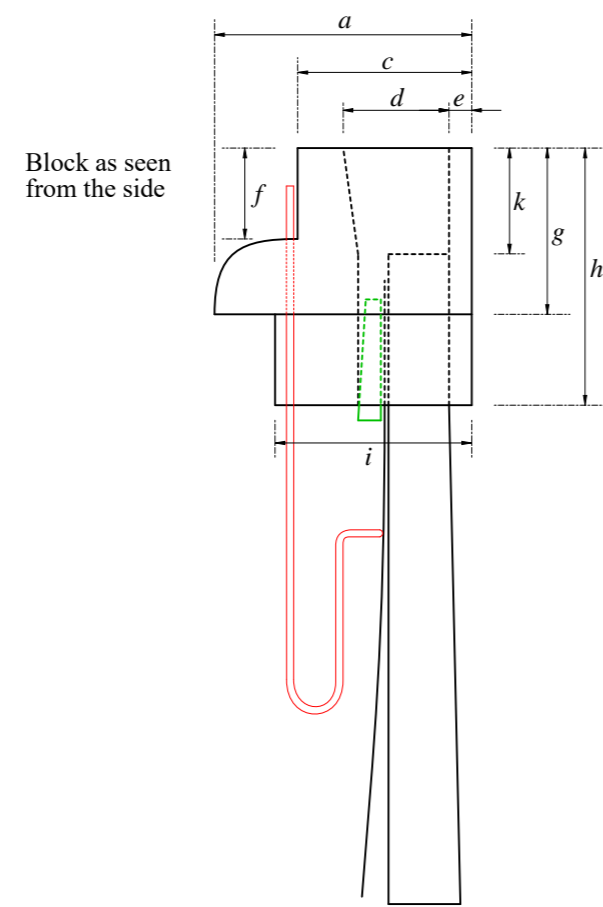
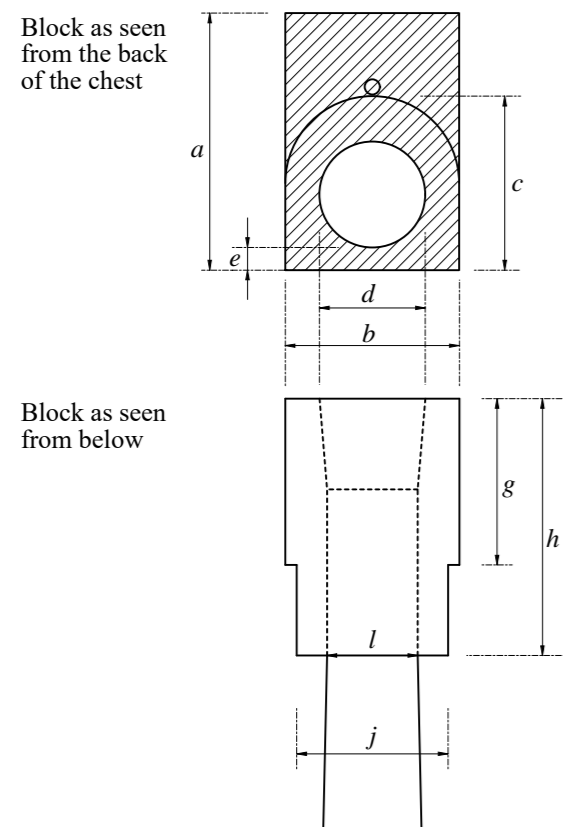
Joint between two sections before being separated



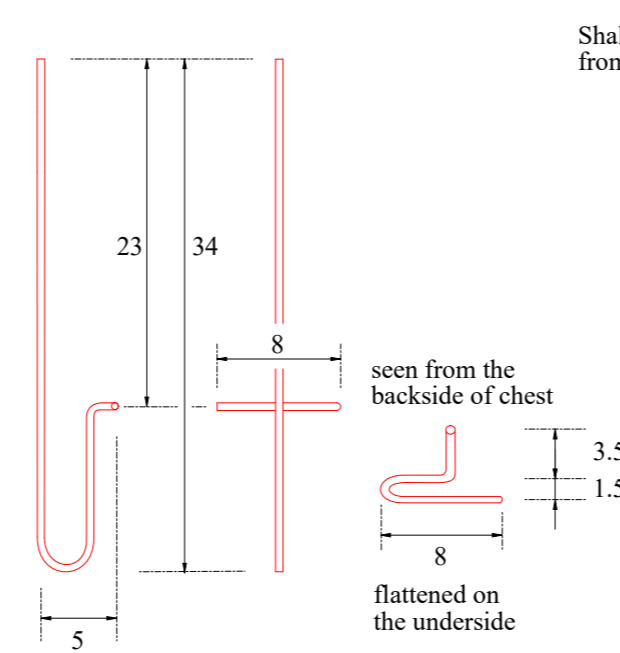
Joint between two sections after being separated



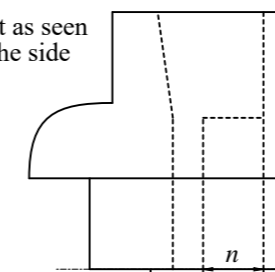
After cutting the sections apart, the nozzles between the sections are made



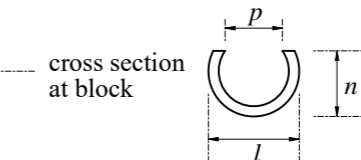
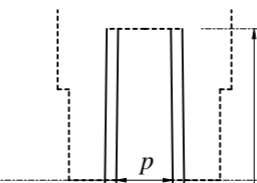
Tuning wire measured on f#



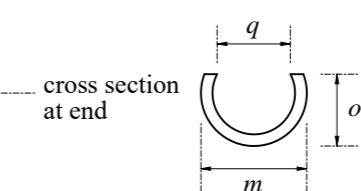
Shallot as seen from the side



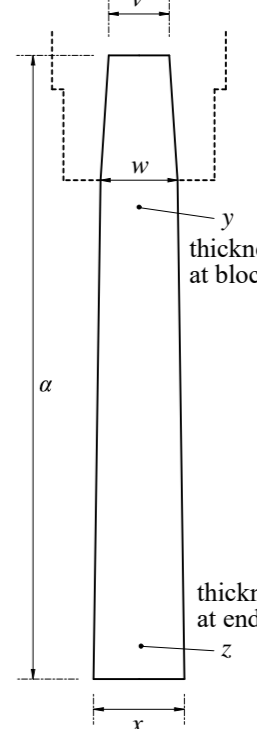
Shallot as seen from above



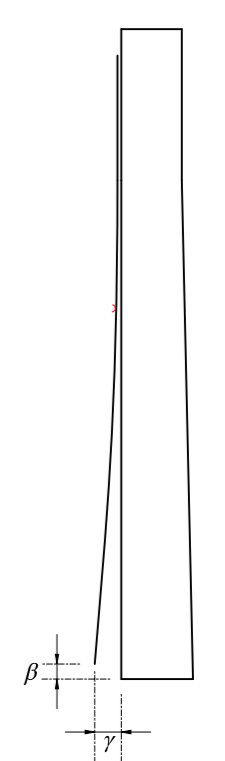
$u$  (calculated as  $r + h - k$ )



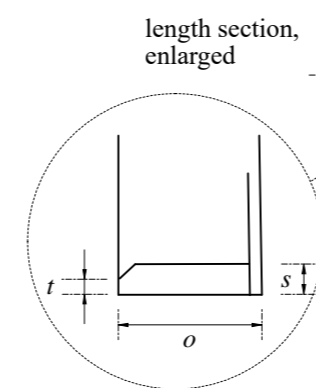
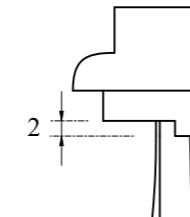
Tongue as seen from above



Tongue as seen from the side



On the two lowest pipes some of the block has been removed allowing for a larger vibration length of the tongue



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## Pipe measurements

The measurement *a* on pipe bb" differs from the other pipes because a piece of the block is broken off  
The entire pipe F# is not original, hence not measured  
The tongues of D, F, and G# are probably not original  
The tongues of e, c', c#, d', eb', g#, and d" are made of nickel silver and are not original

	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>	<i>f</i>	<i>g</i>	<i>h</i>	<i>i</i>	<i>j</i>	<i>k</i>	<i>l</i>	<i>m</i>	<i>n</i>	<i>o</i>	<i>p</i>	<i>q</i>	<i>r</i>	<i>s</i>	<i>t</i>	<i>u</i>	<i>v</i>	<i>w</i>	<i>x</i>	<i>y</i>	<i>z</i>	$\alpha$	$\beta$	$\gamma$
C	17.0	11.5	11.8	6.5	1.5	6.0	10.5	16.5	13.9	10.4	5.0	6.1	7.0	4.7	4.5	4.1	5.1	36.5	1.9	1.9	48.0	3.8	5.3	6.3	0.14	0.14	46	0.5	2.0
D	17.0	11.5	12.5	7.0	2.0	6.0	10.8	16.3	13.9	10.4	5.8	5.6	6.5	4.7	4.1	3.8	5.0	37.0	1.5	1.5	47.5	3.8	5.0	6.7	0.12	0.11		0.2	2.0
Eb	17.0	11.5	12.0	7.0	1.8	6.0	10.7	16.0	14.0	10.4	5.5	5.9	7.2	4.9	4.4	3.7	5.1	36.0	1.4	1.4	46.5	2.8	5.4	6.6	0.16	0.14	46	-0.2	2.0
E	17.0	11.5	12.5	6.5	1.9	6.0	10.7	16.5	14.0	10.4	5.8	5.8	6.5	5.4	5.0	2.3	4.1	34.8	1.9	1.9	45.5	2.7	4.8	6.3	0.12	0.11	41	0.8	1.4
F	17.0	11.5	12.5	7.0	2.0	6.5	10.8	16.7	14.0	10.4	6.0	6.1	6.8	4.9	4.8	3.9	4.2	35.7	1.5	1.5	46.4	4.0	5.5	6.7	0.12	0.12		1.0	1.5
F#																													
G	17.0	11.7	12.3	7.0	1.5	6.7	11.4	17.0	14.0	11.0	6.4	6.4	6.9	4.8	4.5	4.0	5.1	34.0	1.0	1.0	44.6	2.7	5.5	6.7	0.13	0.13	44	0.2	1.2
G#	17.0	11.8	12.2	7.0	1.4	6.5	11.0	16.5	14.0	11.1	6.0	6.2	6.7	4.4	4.3	4.4	5.0	33.0	1.2	1.2	43.5	4.6	5.7	6.7	0.12	0.12		0.4	1.2
A	17.0	11.6	12.0	6.8	1.4	6.0	11.0	16.5	14.0	11.4	4.5	6.2	6.6	5.7	4.4	3.8	4.7	31.9	1.5	1.5	43.9	3.5	5.2	6.7	0.12	0.13	42	0.8	1.2
Bb	17.0	11.3	12.0	6.8	1.9	6.0	10.8	16.4	14.0	10.2	5.3	6.4	6.8	4.6	4.3	4.0	4.6	32.5	1.5	1.5	45.6	3.4	4.7	6.6	0.15	0.14	42	0.1	1.2
B	17.0	11.7	12.0	6.8	1.4	6.0	11.0	16.8	14.0	10.5	5.0	6.0	6.3	4.3	4.3	4.7	4.8	30.4	1.6	1.6	42.2	2.8	5.7	6.5	0.12	0.12	46	0.0	
c	17.0	11.7	11.4	7.0	1.0	6.0	11.0	16.8	13.9	9.7	6.2	5.7	6.2	4.0	3.7	4.3	5.0	31.4	0.9	0.9	42.0	4.3	6.0	6.4	0.15	0.15	38	0.1	1.0
c#	17.0	11.0	11.5	6.5	1.4	7.0	11.0	16.8	14.2	9.5	6.0	5.3	5.8	4.1	3.5	4.1	4.8	30.0	1.4	1.4	40.8	3.6	5.8	6.3	0.15	0.14	37	0.0	1.0
d	17.0	10.8	11.5	6.0	1.4	7.0	11.0	17.0	14.2	10.0	7.0	5.4	6.2	4.2	3.9	3.7	5.2	30.9	1.8	1.8	40.9	2.9	5.0	5.9	0.14	0.14	39	0.0	1.0
eb	17.0	10.9	11.5	6.5	1.7	7.0	11.0	16.8	14.2	9.9	5.4	5.5	6.3	3.9	4.2	4.4	5.0	28.6	1.8	1.8	40.0	3.8	5.7	6.5	0.12	0.12	36	1.0	1.0
e	17.0	11.0	11.9	7.0	1.5	6.5	11.0	17.0	14.2	9.7	5.4	5.5	6.1	4.4	4.3	3.7	4.4	27.9	1.9	1.9	39.5								
f	17.5	11.3	12.5	7.0	1.5	6.5	11.0	16.7	14.2	10.2	7.5	5.2	5.8	4.3	3.9	3.3	4.5	30.1	1.5	1.5	39.3	3.9	5.4	6.0	0.15	0.13	35	1.2	1.0
f#	17.5	11.4	12.5	6.5	1.5	6.0	11.0	16.5	14.2	9.3	5.5	5.5	5.6	4.2	4.1	4.1	4.8	27.5	1.6	1.6	38.5	3.2	5.4	6.0	0.16	0.14	34	1.0	1.0
g	17.0	11.0	12.2	7.0	1.6	6.0	11.0	16.5	13.8	10.4	4.4	5.5	6.1	4.0	3.9	4.2	5.0	26.0	1.3	1.3	38.1	3.5	5.9	6.3	0.11	0.12	31	0.3	1.0
g#	17.0	11.0	12.5	6.5	2.0	6.5	11.0	16.8	14.4	9.8	5.0	5.5	6.0	3.9	3.6	4.0	5.0	25.5	1.5	1.5	37.3	2.8	5.6	6.6	0.12	0.12	34	0.3	0.5
a	17.5	11.4	12.3	6.5	2.0	6.0	11.0	16.8	14.2	9.8	6.8	5.5	6.4	4.2	4.0	4.1	4.9	26.8	1.4	0.5	36.8	2.9	6.0	5.9	0.15	0.14	35	0.0	0.8
bb	17.0	10.7	12.0	7.0	1.8	6.5	11.0	16.8	14.2	10.0	6.0	5.5	6.1	4.1	4.0	4.1	4.8	24.8	1.9	1.9	35.6	4.0	5.9	6.1	0.12	0.11	30	0.4	1.0
b	17.5	11.5	12.2	7.0	1.6	6.5	11.0	16.8	14.0	10.0	5.4	5.5	6.0	4.0	4.0	4.4	5.0	24.2	2.0	2.0	35.6	4.0	6.0	6.1	0.13	0.14	33	0.0	0.5
c'	17.5	11.5	12.0	6.0	2.5	6.5	11.3	17.2	14.5	10.0	4.2	5.3	5.5	4.1	4.0	3.0	3.7	21.5	1.4	0.9	34.5								
c#'	17.5	11.5	12.0	6.0	2.2	6.0	10.8	16.5	14.2	9.7	5.0	5.2	5.4	3.9	3.6	3.6	4.2	22.2	1.9	1.9	33.7								
d'	17.5	11.5	12.0	6.0	2.2	6.0	11.4	16.6	14.5	9.9	5.1	5.0	5.4	3.5	3.5	3.7	4.3	22.0	1.9	1.2	33.5								
eb'	17.5	11.5	12.0	6.0	2.5	6.0	10.4	16.4	14.7	10.3	4.1	4.5	5.6	3.3	3.5	3.8	4.6	20.5	1.5	1.0	32.8								
e'	17.5	11.5	12.0	6.0	2.5	6.5	11.0	16.3	14.3	9.8	5.0	5.1	5.3	3.5	3.6	3.9	4.1	22.9	1.8	1.8	34.2	3.0	5.0	5.9	0.12	0.12	30	0.6	0.6
f'	17.5	10.8	11.5	6.0	2.2	6.0	10.8	16.3	13.9	10.2	3.2	4.8	5.4	3.7	3.6	3.3	3.9	20.5	1.5	1.5	33.6	4.1	5.4	6.2	0.12	0.12	25	0.4	0.7
f#'	17.5	11.0	12.0	6.0	2.5	6.0	10.0	16.4	14.2	9.5	5.1	5.0	5.1	3.7	3.9	3.6	3.9	21.6	1.5	1.5	32.9	3.7	5.5	6.1	0.11	0.11	29	0.0	0.5
g'	17.5	11.3	12.0	6.0	2.0	6.0	10.0	16.2	14.2	10.1	7.2	5.0	5.3	3.5	3.3	3.2	4.0	22.9	1.7	1.1	31.9	4.0	4.8	5.9	0.12	0.11	27	0.3	0.5
g#'	17.5	11.0	12.0	6.0	3.0	6.0	10.3	16.7	13.9	9.5	3.5	4.9	5.4	3.5	3.4	3.7	4.3	18.5	1.8	1.0	31.7								
a'	17.5	11.0	12.0	6.0	2.4	6.0	10.0	16.5	14.2	9.9	4.1	4.9	5.2	3.3	3.3	3.9	4.1	18.8	1.8	1.0	31.2	3.3	5.1	5.4	0.13	0.12	28	0.7	0.4
bb'	17.5	11.0	12.0	6.0	2.8	6.5	10.5	16.0	14.0	9.1	5.0	4.7	5.2	3.4	3.3	3.3	4.1	18.4	1.4	1.0	29.4	3.0	4.9	5.8	0.13	0.10	28	0.7	0.5
b'	17.5	11.0	12.0	5.5	2.0	6.0	10.0	15.8	13.8	9.5	5.5	5.0	5.4	3.6	3.5	3.3	4.3	19.4	1.5	0.9	29.7	3.3	5.0	5.3	0.12	0.11	27	0.1	0.4
c''	17.8	10.6	12.5	6.3	2.4	6.0	10.6	16.5	14.0	9.7	5.0	5.0	5.5	3.5	3.4	3.7	4.7	17.4	1.6	0.9	28.9	3.0	4.7	5.5	0.12	0.12	27	0.7	0.4
c#''	17.8	10.8	12.5	6.3	2.8	6.0	10.1	16.2	14.0	9.7	4.5	4.9	5.2	3.4	3.3	3.9	4.2	16.5	1.6	1.2	28.2	3.4	4.6	5.8	0.06	0.06	25	0.3	0.4
d''	17.7	10.8	12.5	6.3	2.3	6.0	10.5	16.0	14.0	9.7	5.3	4.7	5.0	3.7	3.5	3.4	3.8	16.8	1.8	1.0	27.5								
eb''	17.7	10.8	12.3	6.3	2.5	6.0	10.1	16.1	14.0	9.7	4.6	4.7	4.9	3.6	3.8	3.3	3.7	15.8	1.6	1.6	27.3	3.2	4.5	5.4	0.14	0.11	22	0.9	0.3
e''	17.7	10.8	12.5	6.4	2.2	6.0	10.2	16.1	14.0	10.0	1.5	4.8	5.2	3.4	3.3	3.5	3.9	11.8	1.6	1.6	26.4	2.8	4.9	5.5	0.12	0.09	21	0.3	0.3
f''	17.7	10.8	12.0	6.3	2.0	6.0	10.2	16.2	13.8	9.8	1.2	4.4	4.8	3.4	3.4	3.2	3.3	11.6	1.5	1.5	26.6	4.0	4.5	5.0	0.07	0.07	26	0.4	
f#''	17.7	10.8	12.4	6.3	2.4	6.5	11.0	16.5	13.8	9.7	1.8	4.5	4.8	3.3	3.1	3.4	3.6	11.3	1.4	1.0	26.0	3.8	4.5	4.8	0.07	0.07	25	0.4	0.3
g''	17.0	10.8	10.9	6.3	1.8	5.5	10.9	16.0	13.6	9.5	2.7	4.5	5.1	3.2	3.0	3.2	3.8	11.9	1.4	0.7	25.2	4.0	4.7	5.1	0.07	0.07	25	0.4	0.3
g#''	17.5	10.8	11.0	6.3	2.3	6.0	10.7	16.4	13.7	9.7	5.0	4.5	4.9	3.0	3.2	3.4	3.8	15.2	1.5	1.5	26.6	3.3	4.4	4.5	0.06	0.06	24	0.7	0.3
a''	17.5	10.6	12.8	6.3	2.4	6.0	10.7	16.0	13.5	9.5	3.8	4.3	4.8	3.3	3.2	3.3	4.0	12.8	1.5	1.5	25.0	3.9	4.5	4.9	0.06	0.06	25	1.3	0.3
bb''	17.5	10.1	11.5	6.3	2.8	6.0	10.7	16.3	13.2	9.5	3.3	4.4	5.1	3.2	3.0	3.5	4.0	11.0	1.7	1.7	24.0	3.0	4.3	4.4	0.08	0.08	18	0.4	0.3
b''	17.5	9.6	12.4	6.3	2.8	6.0	10.8	16.6	13.2	8.3	5.3	4.7	5.0	2.9	2.9	3.4	3.9	11.8	2.0	1.0	23.1	3.0	4.6	4.8	0.08	0.07	19	0.5	0.3