

Instrumentet, P.-G. Andersen her henviser til, er ganske vist *Notre-Dame*-orglet i *Paris*, men beskrivelsen kan stå som fællesnævner for hele Aristide Cavaillé-Coll's produktion.

Efter orglet i Saint-Denis fulgte en lang række andre betydelige arbejder i Frankrig, således de store Pariser-orgler til Sainte-Clotilde, Saint-Sulpice og Notre-Dame. Også uden for landets grænser var Cavaillé-Coll's instrumenter efterspurgt, og der blev bygget orgler til så fjerne egne af kloden som Bolivia, Brasilien, Rusland og Kina (!).

Den 12. oktober 1899 døde Aristide Cavaillé-Coll i Paris. Firmaet videreførtes af Charles Mutin. Aristides søn Gabriel havde 1892 grundlagt sin egen orgelbyggervirksomhed.

Jesuskirkens orgel fra 1890 var et af de sidste, der udgik fra Aristide Cavaillé-Coll's værksted og i øvrigt også et af de mindste: i et romantisk-symfonisk ka-

tedralorgel forslår 20 stemmer ikke meget. Det første projekt var da også betydelig større: 40 stemmer, 3 manualer og pedal, men brygger Carl Jacobsen, der bekostede kirkens opførelse og indretning, valgte alligevel at reducere stemmetallet til det halve. Der er intet, der tyder på, at denne drastiske nedskæring var økonomisk begrundet; brygger Jacobsen fulgte blot sagkundskabens råd: Kirkeministeriets orgelkonsulent, organist ved Sct. Johannes kirke i København, Johan Henrik Nebelong (Nu falmer skoven trindt om land), der var blevet spurgt til råds i sagen, havde nemlig givet bryggeren den noget ejendommelige besked, at et orgel på 20 stemmer, 2 manualer og pedal ville være rigelig stort til kirken. (Orglet i Sct. Johannes kirke havde på dette tidspunkt 20 stemmer, men blev senere udvidet til 36 stemmer, 3 manualer og pedal.)

Jesuskirkens orgel fik følgende disposition:

Grand Orgue (manual I)

Bourdon 16'
Montre 8'
Bourdon 8'
Flûte harmonique 8'
Salicional 8'
Prestant 4'
Flûte douce 4'
Plein-jeu IV

Récit expressif (manual II)

Flûte traversière 8'
Voie de gambe 8'
Voix céleste 8'
Flûte octaviante 4'
Octavin 2'
Trompette harmonique 8'
Basson-Hautbois 8'
Clairon 4'

Pédales

Soubasse 16'
Bourdon 8'
Basse 8'
Bombarde 16'

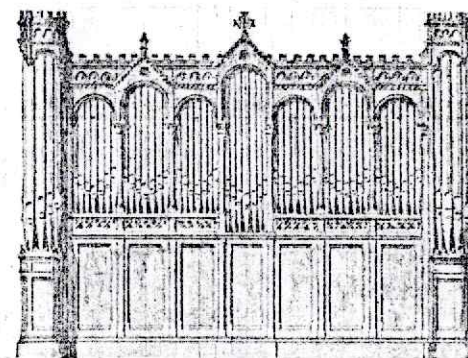
Kopler: II-I, I-P, II-P.

Svette for manual II.

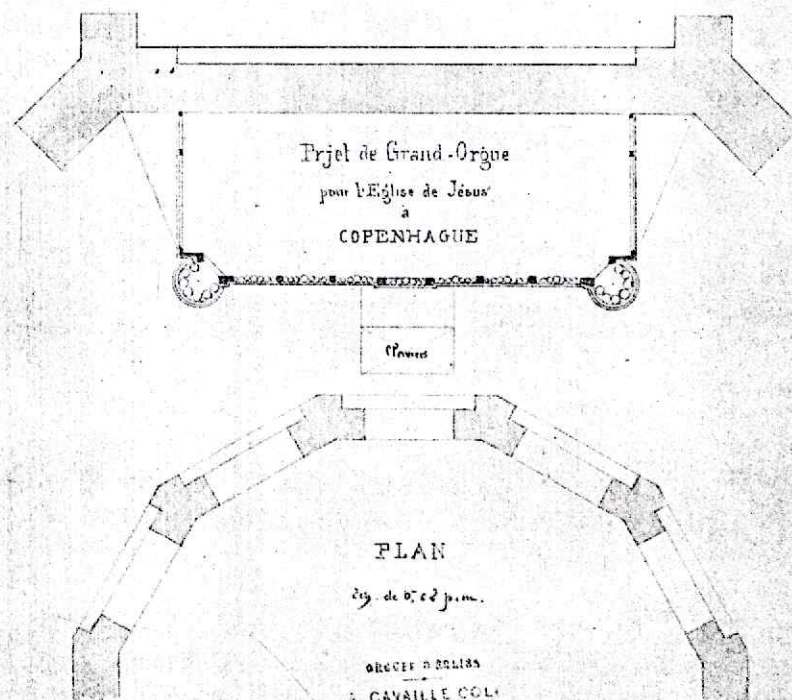
Kollektivtrin for

- 1) Montre 8', Prestant 4' og Plein-jeu IV.
- 2) Trompette harmonique 8' og Clairon 4'.

»Effets d'orage» (tordenvirkning): ved hjælp af et særligt trin kan pedalklavaturets 12 dybeste toner aktiveres samtidig.



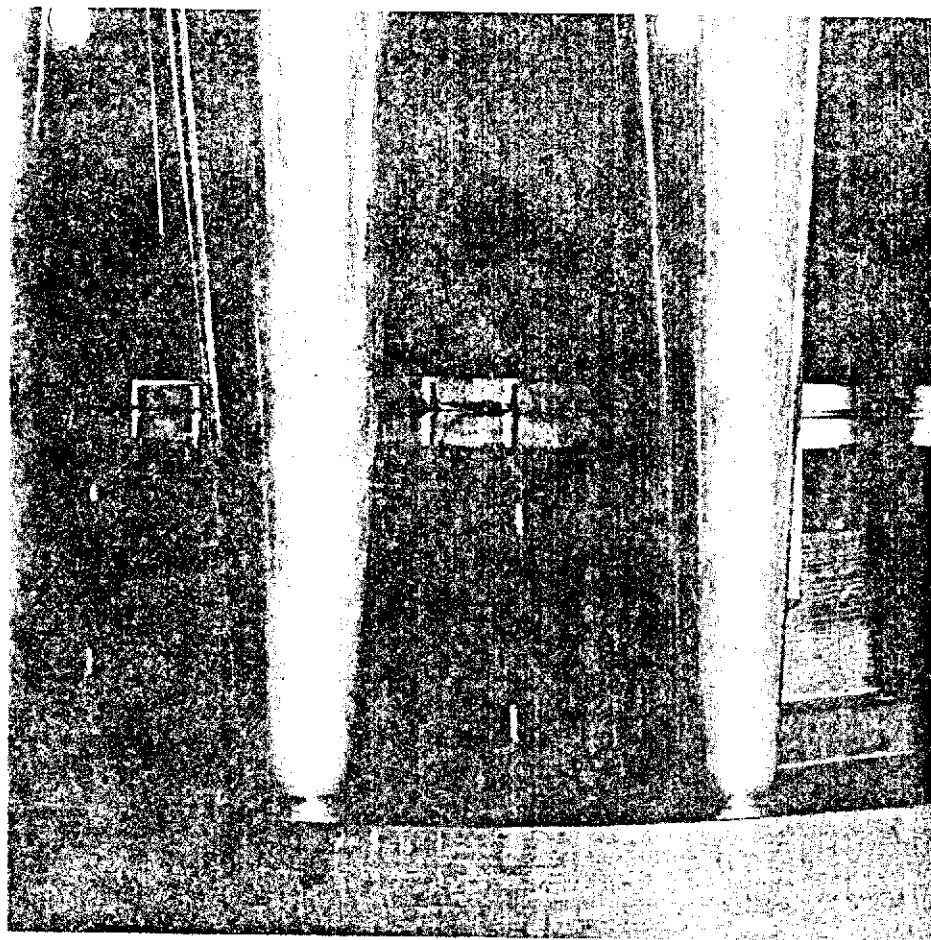
Elevation



PLAN

Fig. de 0,22 j.m.

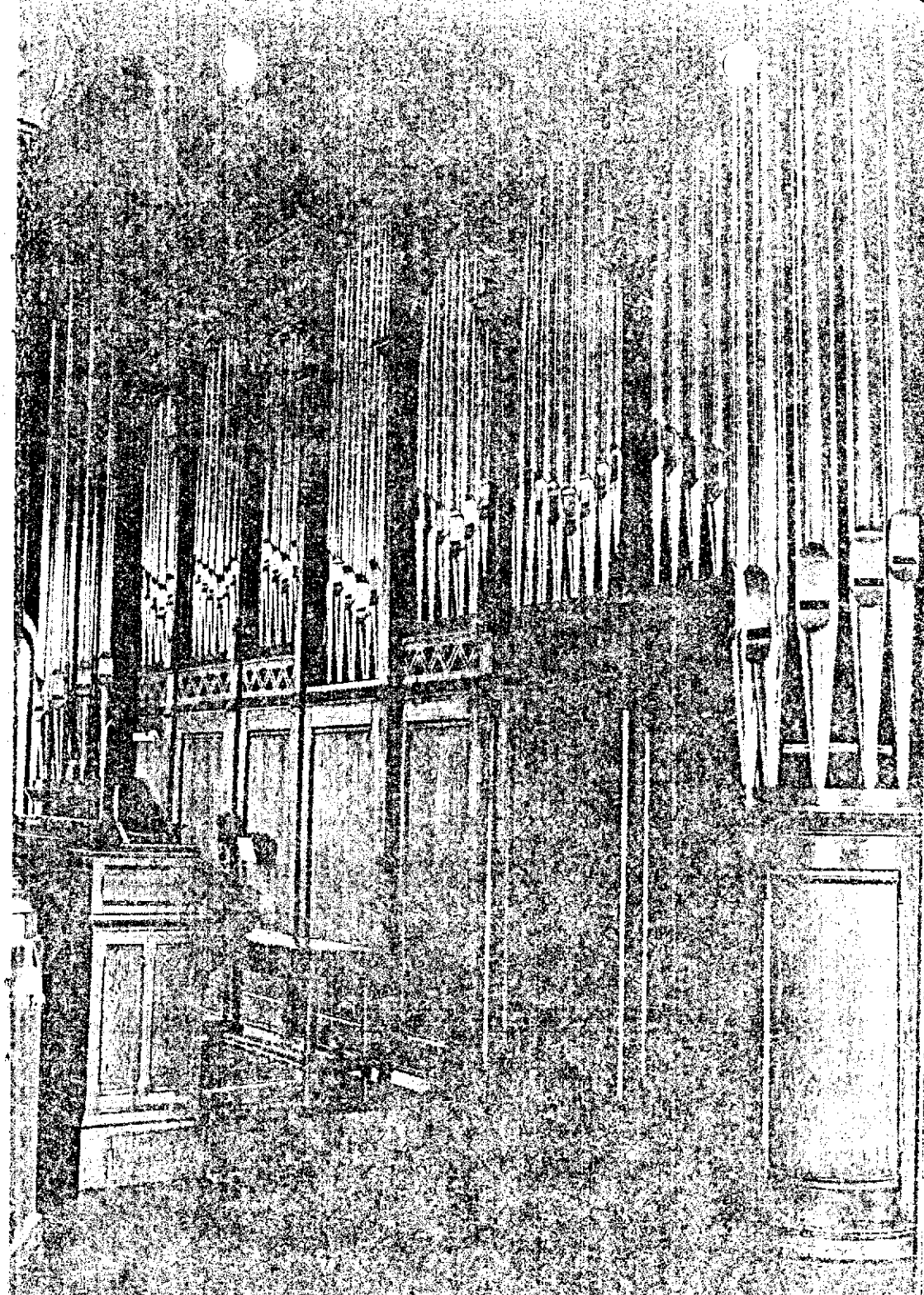
ORGUES & ORGUES
A. CAVAILLE COLL
Général des Orgues & C.
Paris, France



Danmarks ældste pneumatiske orgeldele findes her i Jesuskirkens orgel, hvor nogle af de piber, der er flyttet ud fra vindladen, står i pneumatisk forbindelse med denne. På billedet ses et udsnit af facadens ene sidetårn, hvor en sådan pneumatisk styret udflytterlade er anbragt bag prospektpibernes fødder. De pneumatiske bælg, der trækker udflytterventilerne, er anbragt oven på vindkammeret.

The oldest pneumatic organ parts in Denmark are to be found in the organ of Jesuskirken. Some of the pipes which are set on special wind-chests, are controlled from the soundboards by means of pneumatic levers. In the picture we see a detail of one of the side towers of the facade, where one of the pneumatically controlled chests is placed behind the feet of the display pipes. The pneumatic bellows which pull the pipe pallets are placed on top of the wind-chest.

Die ältesten pneumatischen Orgelteile in Dänemark befinden sich hier in der Orgel der Jesuskirche, wo einige der Pfeifen, die ausserhalb der Windlade aufgestellt sind, in pneumatischer Verbindung mit dieser steht. Auf dem Bild ist ein Ausschnitt des einen Seitenturms der Fassade zu sehen, wo eine solche pneumatisch gesteuerte Hilfslade hinter den Füßen der Prospektpfeifen angebracht ist. Die pneumatischen Bälge, die die Pfeifenventile ziehen, sind oben auf der Windkammer angebracht.



Orgel evægelsens forståelige reaktion mod den forrige generations frembringelser var lige ved også at ramme det sagesløse instrument i Valby. I 1947 skrev Kirkeministeriets orgelkonsulent P. S. Rung-Keller til Jesuskirkens sognepræst Th. Glahn: »... Jeg har kendt Instrumentet fra det blev skænket Kirken (Rung-Keller var født 1879) og hørt det ved Gudstjeneste og Musikopførelser dér, og fundet at dets Udseende med den Gothiske Fabrikfacade aldeles ikke harmonerede med Kirkeens Stil...» Konsulenten var ikke uden sans for orglets kvalitet og egenart, det hørte blot ikke hjemme i en kirke: »... Med Veneration for dette vort eneste Cavaillé-Coll-orgel bør det ikke omkalfatres, men bedst var det om det engang kunde komme til at gøre Nytte i en Sal i en KFUM eller i en moderne Skole-Aula i Valby og at Kirken så fik sit *rigtige* (fremhævet af forf.) Kirkeorgel i Vestgavlen. Skulde dette kunde realiseres endda inden det franske Orgel blev flyttet, kunde det udmærket

for Synets Skyld, tilhylles med Gardiner mellem Korets Søjler over Alteret og endda bruges ved særlige Musiklejligheder, hvor Menigheden ikke deltager...» (!) Det er ikke svært at forestille sig, hvorledes det ærverdige instrument ville have set ud i dag, hvis man havde gjort alvor af at betænke en af bydelens kommuneskoler med det; men så galt skulle det da heller ikke gå, orglet blev stående hvor det stod og undgik såvel flytninger som velmenende ombygninger. Nævnes skal det dog, at Voix céleste 8' i svelleværket i en årrække var udskiftet med en Bordun 8' af hensyn til det svage spil under altergangen.

Orglets pasning har i årenes løb været varetaget af firmaerne Starup & Søn, Marcussen & Søn og P.-G. Andersen. Sidstnævnte rekonstruerede for nogle år siden Voix célesten, således at Nordens eneste Cavaillé-Coll-orgel nu atter – bortset fra mindre tekniske ændringer – fremtræder i sin oprindelige skikkelse.

Opmåling af orglet

Registertrækkenes placering:

1	2	3	4	5
11	12	13	14	
	19		20	

6	7	8	9	10
15	16	17	18	
	21		22	

- 1: Sonnette (signalklokke til bælgræderne)
- 2: Récit, Octavin 2'
- 3: Récit, Flûte octaviante 4'
- 4: Récit, Voix céleste 8'
- 5: Récit, Virole de gambe 8'
- 6: Récit, Flûte traversière 8'
- 7: Récit, Basson-Hautbois 8'
- 8: Récit, Trompette harmonique 8'
- 9: Récit, Clairon 4'
- 10: Tacet (blindt træk, anbragt for symmetriens skyld)
- 11: Grand Orgue, Flûte douce 4'
- 12: Grand Orgue, Salicional 8'
- 13: Grand Orgue, Flûte harmonique 8'
- 14: Grand Orgue, Bourdon 16'
- 15: Grand Orgue, Montre 8'
- 16: Grand Orgue, Bourdon 8'
- 17: Grand Orgue, Prestant 4'
- 18: Grand Orgue, Plein-jeu IV
- 19: Pédales, Bombarde 16'
- 20: Pédales, Basse 8'
- 21: Pédales, Soubasse 16'
- 22: Pédales, Bourdon 8'

Trin (fra venstre mod højre):

1. Effets d'orage (torden), pedalklavaturets 12 dybeste toner.
2. Kobling Grand Orgue-Pédales.
3. Kobling Récit expressif-Pédales.
4. Kobling Récit expressif-Grand Orgue.
5. Expression (svelletrin).
6. Indføringstrin for Montre 8', Prestant 4' og Plein-jeu IV.
7. Annulleringstrin for forrige kombination.

8. Indføringstrin for Trompette 8' og Clairon 4'.
9. Annulleringstrin for forrige kombination.

Manualomfang: C-g'''

Pedalomfang: C-f'

Tonehøjde: a' = ca. 435 Hz

Traktur og registratur: mekanisk

Vindladesystem: mekanisk sløjfevindlade. Følgende piber har pneumatisk styret udflytterventil: Montre 8' D-A (i facaden), Salicional 8' C-F' (i facaden) samt samtlige træpiber i manualværkerne.

Bælgeanlægget består af følgende enheder:

2 pumpebælge, mål 114x60x10 cm.

1 pedalmagasinbælg, mål 360x120x24 cm.

1 manualmagasinbælg, mål 360x120x45 cm.

2 pedalstødbælge, mål 120x77x25 cm.

2 manual I stødbælge indbygget i vindladerne, mål ca. 85x38 cm.

2 manual II stødbælge indbygget i vindladerne, mål ca. 110x40 cm.

Lufttryk: 105 mm vand søjle.

Vindladerne:

Manual I,

2 vindlader à 1500x745x270 mm.

Manual II,

2 vindlader à 1500x745x270 mm.

Pedal,

2 vindlader à 1315x500x270 mm.

Ven. bninger:	C	c	c'	c''	c'''
	mm	mm	mm	mm	mm
Manual I	250x21	250x20	200x19	200x16	200x13
Manual II	215x20	215x20	215x20	170x15	170x13
Pedal	175x27	175x27	175x21		

dobbelte ventiler i pedalets store oktav.

Pibernes måsurer (indvendige mål i mm):

Grand Orgue:	C	c	c'	c''	c'''
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A Bourdon 16'					
diameter	197x155	125x97	77	51	34
lab. og opsn.	153/60	95/35	55/28	38/13	25/8,5
trætykkelse	20	15			
fodhuldiam.	28	15	7,5	5	4,5
C - g af træ.					

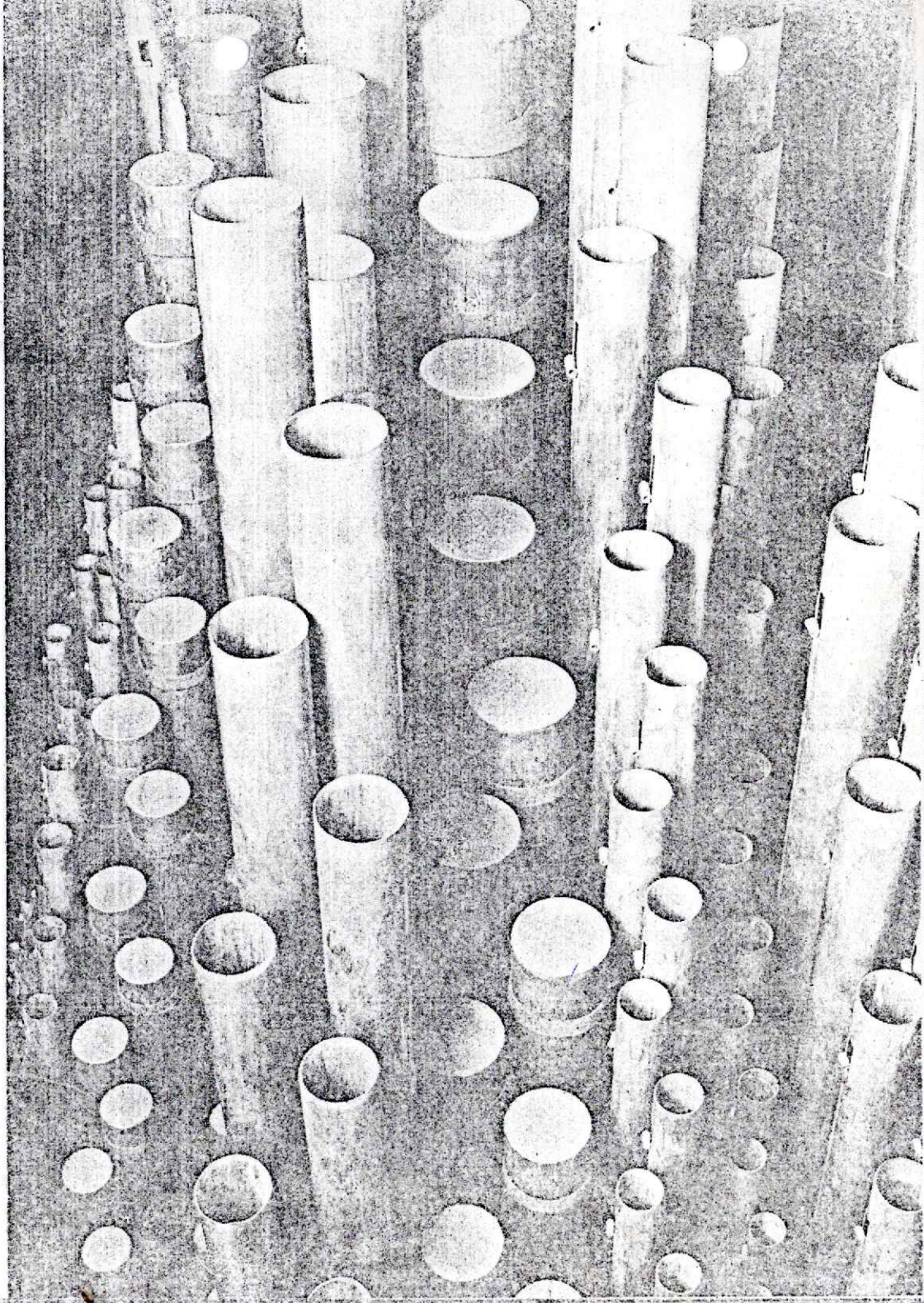
A Montre 8' (Principal)					
diameter	132x98	92	59	38	24
lab. og opsn.	98/27	66/20	45/12	27/8	17/5
fodhuldiam.	15	12	7	5	4
C og Cs af træ. D - H i facade. D - g''' med ekspressionsstemmeslidser.					
D - h' med sideskæg. c'' - g''' uden skæg.					

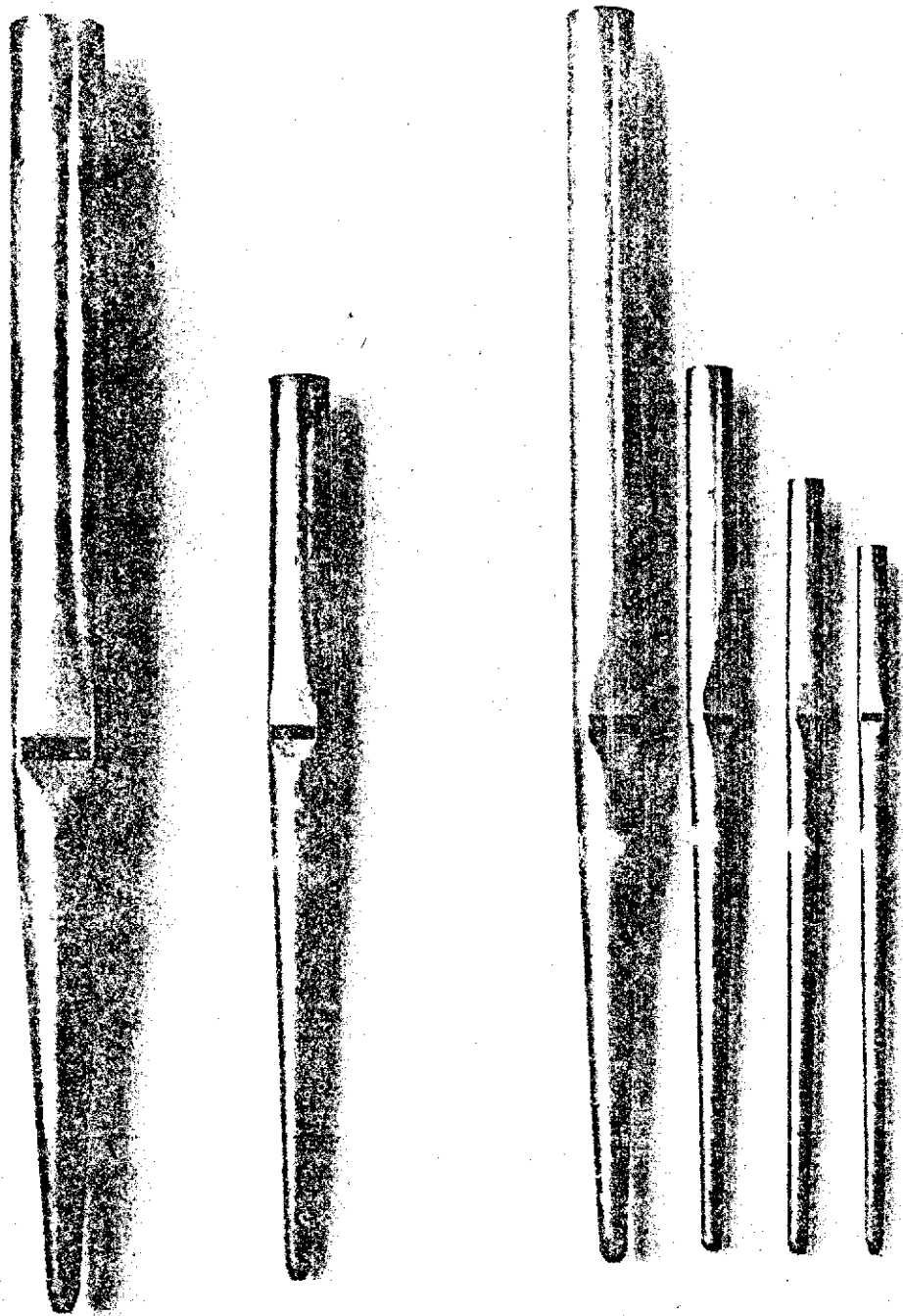
Salicional 8' #4					
diameter	122	72	46	30	19
lab. og opsn.	86/26	52/14	33/9	22/5,5	14/3,5
fodhuldiam.	13	6	4	3	2,5
C - H i facade. C - g''' med ekspressionsstemmeslidser.					
C - h' med sideskæg. c'' - g''' uden skæg.					

F Flûte harmonique 8' (overblæsende fløjte)					
diameter	148x110	83	63	47	32
lab. og opsn.	110/29	59/19	44/14	33/13	24/5,5
kroplængde				572	275
afstand fra kerne til overblæsningshuller				245	108
overblæsningshuldiam. (2 huller)				2	2
fodhuldiam.	15	8	7	6,5	5
fs' - g''' er overblæsende, helt uden stemmeslidser men med sideskæg.					
C - G af træ. Gs - f i facade.					

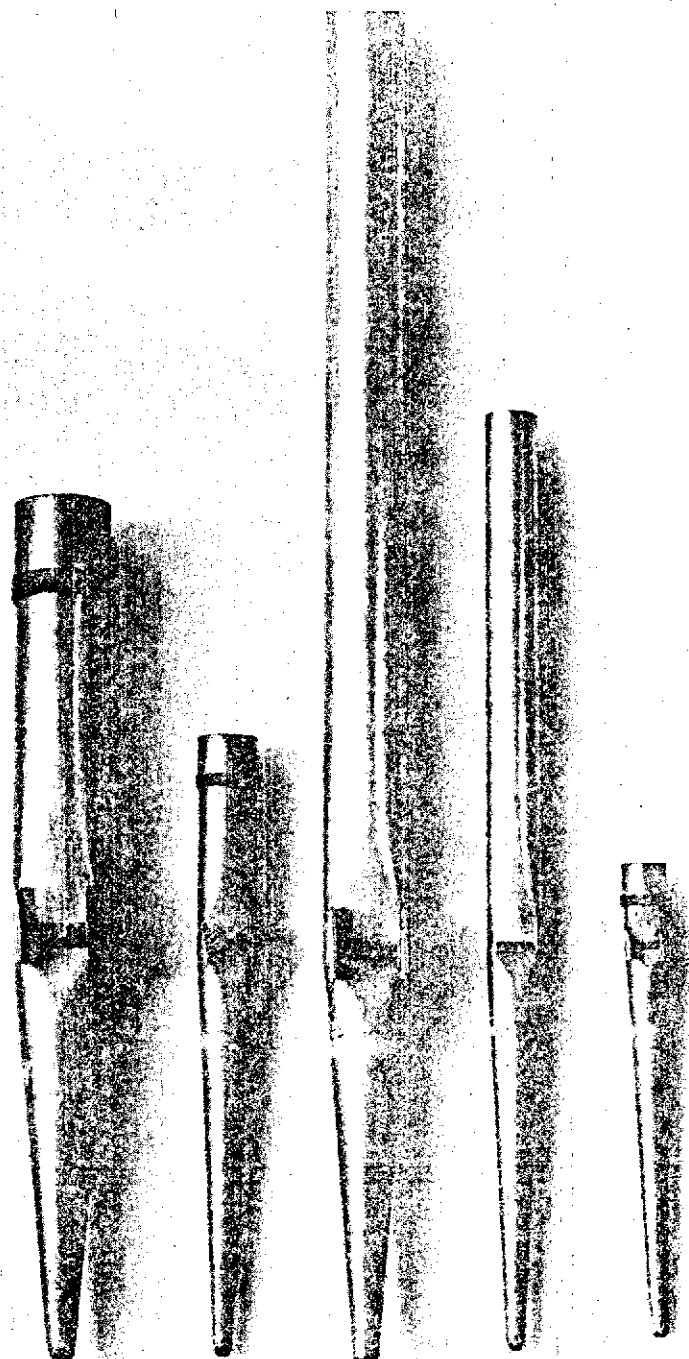
distance langside to harmonic hole

Grand Orgue: Detailfoto.





Grand Orgue (c''): Montre 8', Prestant 4', Plein-jeu IV.



Grand Orgue (c''): Bourdon 16', Bourdon 8', Flûte harmonique 8', Salicional 8', Flûte douce 4'.

Gra	Orgue: (fortsat)	C	c	c'	c''	c'''
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Y	Bourdon 8'					
	diameter	110x85	70	46	31	21
	lab. og opsn.	84/36	50/22	34/12,5	21/7	15/5
	trætykkelse	15				
	fodhuldiam.	15	7	5,5	4	3,5
	C - A af træ.					

H	Flûte douce 4' (Gedaktføjte)					
	diameter	78	52	34	24	8/16
	lab. og opsn.	57/21	39/14	24/9	16/5	11/3
	fodhuldiam.	8	5,5	4,5	3,5	2,5
	C - f'' er dækkede piber, fs'' - g''' er åbne koniske piber med ekspressionsstemmeslidser og uden sideskæg.					

A	Prestant 4' (Principal)					
	diameter	92	57	37	23	14
	lab. og opsn.	69/18	42/11	26/7	18/4,5	10,5/3,5
	fodhuldiam.	12	6	4	4	3
	C - A i facade. C - g''' med ekspressionsstemmeslidser.					

Plein-jeu IV (Mixtur)

C	$2' + 1\frac{1}{3}' + 1' + 2\frac{2}{3}'$				
c	$2\frac{2}{3}' + 2' + 1\frac{1}{3}' + 1'$				
c'	$4' + 2\frac{2}{3}' + 2' + 1\frac{1}{3}'$				
c''	$8' + 4' + 2\frac{2}{3}' + 2'$				
diameter I	42	34	28	28	18
diameter II	33	28	22	18	11
diameter III	28	22	18	14	9
diameter IV	22	18	14	11	7

Hele stemmen er forsynet med ekspressionsstemmeslidser.

Récit expr.:	C	c	c'	c''	c'''
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#2	Flûte traversière 8' (overblæsende fløjte)					
	diameter	130x100	77	58	42	29
	lab. og opsn.	100/30	56/21	43/12,5	31/12	21/6
	kroplængde			620	303	
	afstand fra kerne til overblæsningshul			255	110	
	overblæsningshuldiam. (1 hul)			2	2	
	fodhuldiam.	12	9	6	6	4
	C - H af træ. fs' - g''' er overblæsende. C - g''' med ekspressionsstemmeslidser.					

#7	Viole de gambe 8' 7/9 lab 1/3 cutup					
	diameter	95	56	35	22	13
	lab. og opsn.	70/23	40/13	25/8	16/5	9,5/3
	fodhuldiam.	10	7	4	3,5	2
	C - ds'' med tømme-skæg. e'' - g''' er uden skæg. C - g''' er med ekspressionsstemmeslidser.					

Récit expr.:	C	c	c'	c''	c'''
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7	Voix céleste 8' 1/4 lab 1/3,9					
	diameter	-	55	34	21	13
	lab. og opsn.	-	45/15	28/9	18/5	11/3
	fodhuldiam.	-	7	4,5	4	2,5
	c - ds'' med tømme-skæg. e'' - g''' er uden skæg. c - g''' med ekspressionsstemmeslidser. Denne stemme er af nyere dato.					

#3	Flûte octaviante 4' (overblæsende fløjte)					
	diameter	73	55	41	28	19
	lab. og opsn.	53/15	40/11,5	30/11,5	21/6	12/3,5
	kroplængde			585	290	140
	afst. fra kerne til overbl. huller			256	116	50
	overblæsningshuldiam. (2 huller)			2	2	2
	fodhuldiam.	6	5	5,5	4	3
	c' - g''' er overblæsende og helt uden stemmeslidser. C - h' har sideskæg, c'' - g''' er uden skæg. C - h har ekspressionsstemmeslidser.					

Octavin 2' (overblæsende principalstemme)

#6	diameter	49	35	22	14	8
	lab. og opsn.	35/11	25/11,5	17/6,5	9/3	6/2
	kroplængde		628	315	155	69
	afst. fra kerne til overbl. huller (2 huller)		268	125	56	25
	overblæsningshuldiam.		2	1,5	1	1
	fodhuldiam.	5	5	3	2,5	2
	c - g''' er overblæsende. C - f'' har ekspressionsstemmeslidser.					
	fs'' - g''' er uden stemmeslidser. C - h har sideskæg, c' - g''' er uden skæg.					

Trompette harmonique 8' (overblæsende Trompet)

	diameter for oven	110	92	92	75	61
	diameter for neden	13	10	11	7,5	6,5
	længde med kehle	2388	1200	1175	590	292
	kehle indv. diameter.	10	8	8	5,5	4,5
	kehle længde	124	76	57	37	25
	kehleåbning bredde	4,5	3,5	4	3	2,5
	tungebredde	8	6	6	5	4
	tungetykkelse	0,55	0,35	0,25	0,20	0,15
	fodhuldiam.	10	8,5	6	6	6,5
	c' - g''' er overblæsende. C - g''' har intonationsslidser.					
	Kehleform: rundkehle uden belædring.					
	Kehler af nysølv og tunger af messing.					
	C - H alm. hoveder, c - d''' nøddehoveder og ring-krykkestyr,					
	ds''' - g''' enkelt nøddehoveder.					

Récit (: (fortsat)	C	c	c'	c''	c'''
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Basson-Hautbois 8' (Fagot-bas + Obo-diskant)

diam. for oven	68	51	45	34	26
diam. for oven i nederste konus			19	13	10
diam. for neden	14	11	8	6	5
længde med kehle	2175	1102	599	297	145
øverste konus længde			144	84	50
kehle indv. diam.	11/16	8/11	5	4,5	4
kehle længde	122	75	59	43	31
kehleåbning bredde	3/8	2,5/6	2,5	2	1,8
kehleåbning længde	52	33	58	42	30
tungebredde	9/11,5	6,5/8	4,2	4,0	3,0
tungetykkelse	0,50	0,35	0,25	0,20	0,10
fodhuldiam.	10	9	6,5	6	5

C – h enkelt tragtformede lydbægre i forbindelse med koniske kehlere med lille kehleåbning. c' – g''' dobbelt tragtformede lydbægre i forbindelse med rundkehlere. Hele stemmen har intonationsslidser. C – H alm. hoveder, c – g''' nødehoveder og ring-krykkestyr. Lydbægrene c' – g''' er let indrundede for oven. Kehlere af nysølv og tunger af messing. Kehlernerne er ikke belædrede.

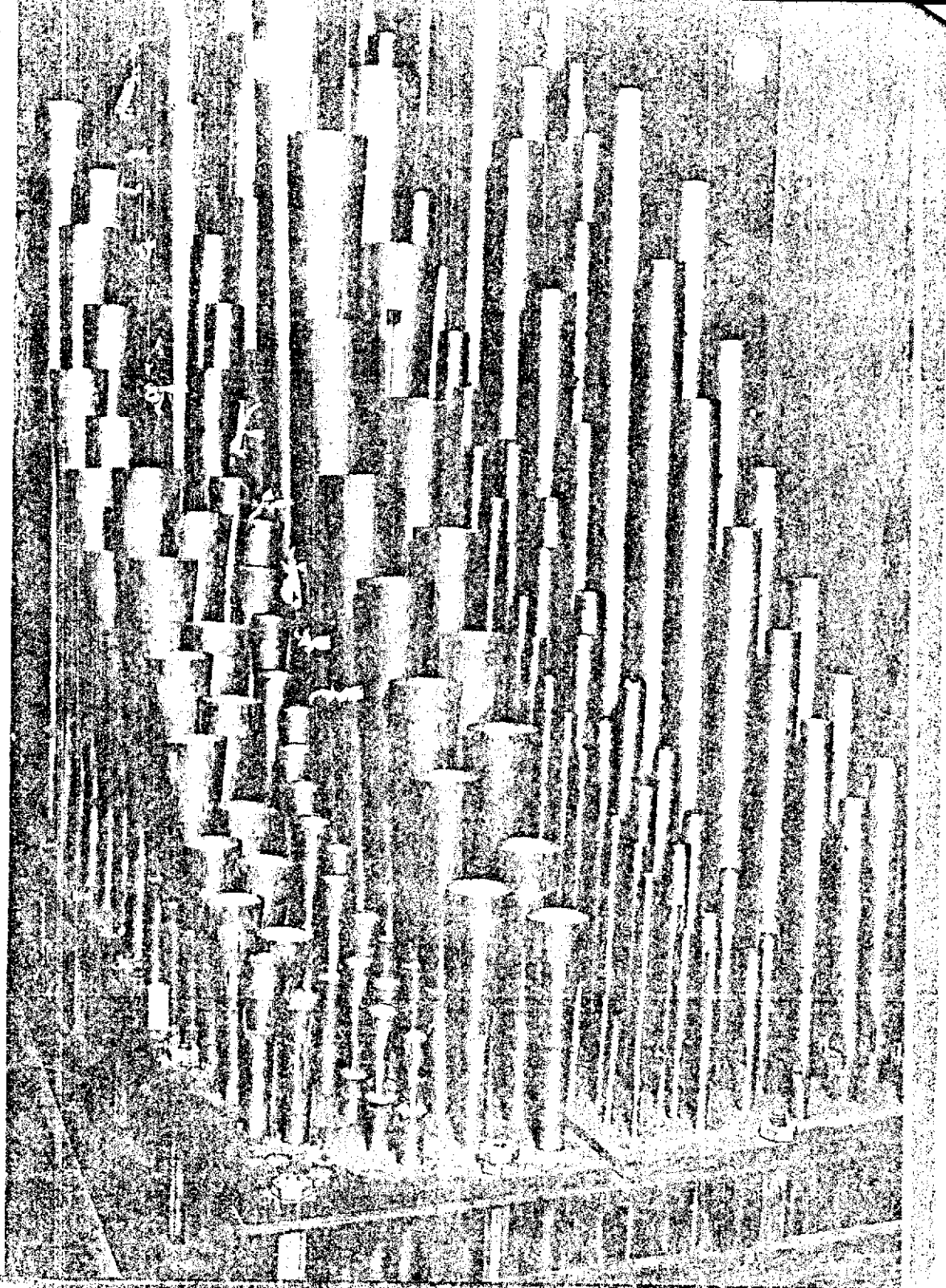
Clairon 4' (Trompet)

diam. for oven	92	74	75	61	31
diam. for neden	10	7,5	7,5	6,5	5,0
længde med kehle	1200	602	595	290	134
kehle indv. diam.	8,0	5,7	5,7	4,5	3,5
kehle længde	82	60	41	27	18
kehleåbning bredde	3,5	3,0	2,5	2,0	2,0
tungebredde	6,0	5,0	5,0	4,0	3,7
tungetykkelse	0,35	0,25	0,20	0,15	0,10
fodhuldiam.	9	8	7	6	6

c' – g''' er overblæsende. C – h' har intonationsslidser.

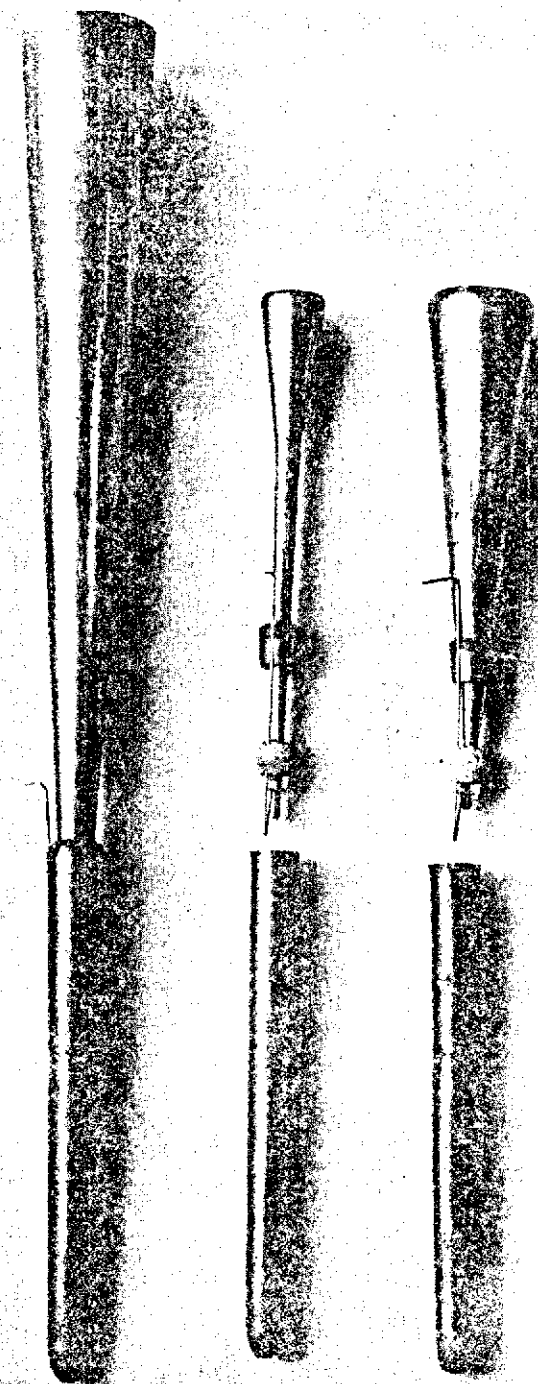
Kehleform: rundkehle uden belædring. Kehlere af nysølv og tunger af messing. Lydbægre c''' – g''' har krumhornsfacon. C – d'' nødehoveder og ring-krykkestyr, ds'' – g''' enkelt nødehoveder.

Récit: Detailfoto.





Récit (c''): Flûte traversière 8', Viole de gambe 8', Voix céleste 8' (ny), Flûte octavante 4', Octavin 2'.



Récit (c''): Trompette harmonique 8', Basson-Hautbois 8', Clairon 4'.

Pedal	C	c	c'
<i>Soubasse 16'</i>			
diameter	217x173	135x102	82x59
lab. og opsn.	173/62	98/37	58/26
trætykkelse	21	15	12
fodhuldiam.	35	20	13

Hele stemmen er af træ og forsynet med underskæg i metal.

<i>Basse 8' (åben fløjte)</i>			
diameter	178x136	105x82	64
lab. og opsn.	136/35	79/23	47/13
trætykkelse	18	13	
fodhuldiam.	21	12	7

C - f af træ og forsynet med metal-underskæg. fs - f' af metal og forsynet med sideskæg.

<i>Bourdon 8'</i>			
diameter	134x100	85	55
lab. og opsn.	100/38	61/27	40/16
trætykkelse	16		
fodhuldiam.	16	8	6,5

C - H af træ og forsynet med metal-underskæg. c - f' af metal og forsynet med sideskæg.

<i>Bombarde 16'</i>			
diameter for oven	200	145	103
diameter for neden	22	14	10
længde med kehle	4820	2415	1218
kehle indv. diam.	18	11	8
kehle længde	212	126	83
kehleåbning bredde	10	4,5	4,0
kehle metaltykkelse	1,6	1,2	1,0
tungebredde	16	9	6
tungetykkelse	0,70	0,50	0,40
fodhuldiam.	18	14	9

Kehleform: Rundkehle med belædring i glat, rødt skind.

Kehler af nysølv og tunger af messing.

Samtlige labialpiber har kraftige, dybe kernestik som for træpibernes vedkommende er svagt skråtstillede. Træpibernes kernespalter er alle indarbejdet i forslaget.

Opmåling: Carsten Lund.

Explanations to the pipe scale tables Erläuterungen zu den Mensuren aufnahmen

afstand fra - til - alm. (= almindelig)	distance from - to - ordinary	Abstand von - zu - üblich
belædring	leathering	Lederfütterung
bredde	width	Breite
dækkede piber	stopped pipes	gedeckte Pfeifen
ekspressionsstemmeslidse	tuning slot	Expressionsschlitz
facade	front	Prospekt
fodhuldiam.	toe-hole	Fussöffnung
for neden	lower	unten
for oven	top	oben
forsynet med -	provided with -	mit - versehen
helt uden - men med -	entirely without - but with -	ganz ohne - aber mit -
hul, huller	hole, holes	Loch, Löcher
indrundet	contracted	eingezogen
indv. (= indvendig)	interior	einwendig
kehle	shallot	Kehle
kerne	languid	Kern
kroplængde	length of body	Körperlänge
lab. og opsn.	width of mouth and cut up	Labium und Aufschnitt
længde med -	length including -	Länge einschliesslich -
messing	brass	Messing
nederste konus	shaft (of Oboe-body)	unterer Konus
nysølv	German silver	Neusilber
nøddchoveder	french nut blocks	Nussköpfe, Nüsse
overblæsehul	hole in the body of a harmonic pipe	Überblasloch
overblæsende	harmonic (overblowing)	überblasend
ring-krykkestyr	ring (upper part of french double-block)	Ring (der obere Teil des fran- zösischen Doppelkopfes)
skæg, sideskæg	ears	Bärte, Seitenbärte
træ	wood	Holz
tunge	tongue	Zunge
tykkelse	thickness	Stärke
tømmeskæg	a type of <i>frein harmonique</i> , consisting of a bent metal strip soldered to the sides of the pipe	<i>frein harmonique</i> in Form eines hochgekippten Kasten- bartes («Zügelbart»)
uden	without	ohne
underskæg	cap-beard	Unterbart
øverste konus	bell (of Oboe-body)	oberer Konus
åbne koniske piber	open conical pipes	offene, konische Pfeifen
åbning	opening, aperture	Öffnung

Jesuskirken is situated in Valby nearly 3 miles west of the Town Hall square in Copenhagen. It is a large and peculiar building in the resplendent style of an Italian basilica, making it a strange foreign bird among all the quiet and ordinary houses surrounding it. The church was erected in 1864-71 according to a plan by Vilhelm Dahlerup, the fanciful architect who gave Copenhagen some of its most remarkable buildings: the Royal Theatre, the State Museum of Art, the Glyptotek, the Pantomime Theatre in Tivoli Gardens and the Elephant Tower of the Carlsberg Breweries.

One of the first things you notice on entering the nave of *Jesuskirken* is the organ, rather unconventionally placed above the altar in the middle storey of the choir. There its neo-gothic oak façade looks beautiful between the polished clustered columns of granite from Sweden and Bornholm. Behind this façade stands one of our most remarkable historical organs. It was built by no less than *Aristide Cavallé-Coll*, the organ builder who created the French romantic cathedral organ and whose name is inextricably connected with César Franck's organ work.

Aristide Cavallé-Coll was a member of the southern French family *Cavallé* which numbered several organ builders among its members. The first person we become acquainted with is the Dominican Joseph Cavallé who worked as an organ builder in Toulouse in the

eighteenth century. In the last period of the monarchy, Joseph's son, Ariste (Aristide's grandfather), born *Paris* (the name 1745-1802), was one of the supreme organ builders in southern France. He also worked in Spain where he met his future wife, *Andréanne* de Coll. Their son *Francisque* was born in 1771. According to *Francisque* "my father was given the surname of *benédicte* (Latin and Provençal) and the name of *Cavallé*. Coll has since replaced *Andréanne*. Dominique became an organ builder like his father, and settled down in Montpellier, a small town in the south of France where Aristide was born on February 4, 1811.

Aristide was taught the organ building craft by his father, but on July 27, at the age of 27, he left his home to order a study in Paris or his own. Upon arriving at the capital, he learned of a competition for building a new organ to *Saint-Denis*, the abbey church. Even though there were only a few days until the deadline, he unhesitatingly started to work out a project. Then an incredible thing happened: his proposal pleased the judges so much that he was appointed to build the new instrument which was to have 69 stops, — manuals and pedals.

In order to be able to accomplish this task, Aristide and his father moved their workshop to Paris where the 62-year-old Dominique soon after handed over the management of the family firm to his son. However, owing to restoration work in the church, 8 years passed before the organ could be deli-

vered and dedicated; but that was just the same, as the young organ builder had to experiment a great deal before his new ideas could be realized. The difficulties were especially of a technical kind: how was he to construct the large mechanical system, so that all four manual divisions could be coupled without the touch being too heavy? The problem seemed insuperable, but fortunately a solution appeared: the Englishman Charles Spackmann Barker had just invented a device which could lighten the key touch in large organs, and was looking for an organ builder who could put it into practical use. The principle of the *Barker lever* was a kind of pneumatic «power» spring of the tracker action, and that was exactly what was needed in Saint-Denis. Barker's invention soon became standard equipment in the large romantic organs with tracker action; more than that, it was completely necessary for the future development of this type of organ.

The Saint-Denis organ had the following specification:

Grand orgue
 Montre 32'
 Montre 16'
 Bourdon 16'
 Montre 8'
 Flûte harmonique 8'
 Viole de gambe 8'
 Bourdon 8'
 Prestant 4'
 Flûte oct. 4'
 Quinte 2²/₃'
 Doublette 2'
 Gr. Fourniture IV
 Gr. Cymbale IV
 Fourniture IV
 Cymbale IV
 I. Trompette 8'
 II. Trompette 8'
 Basson 8'
 Clairon harm. 4'
 Cornet à pavillon 8'

Bombardes
 Bourdon 16'
 Bourdon 8'
 Flûte 8'
 Prestant 4'
 Nazard 2²/₃'
 Doublette 2'
 Grand Cornet VII
 Bombardie 16'
 I. Trompette 8'
 II. Trompette 8'
 I. Clairon 4'
 II. Clairon 4'

Positif
 Bourdon 16'
 Salicional 8'
 Flûte harmonique 8'
 Bourdon 8'
 Prestant 4'
 Flûte oct. 4'
 Flûte 4'
 Nazard 2²/₃'
 Doublette 2'
 Octavin 2'
 Tierce 1²/₃'
 Fourniture IV
 Cymbale IV
 Trompette harm. 8'
 Hautbois 8'
 Cromorne 8' + 4'
 Clairon 4'

Récit expressif
 Flûte harmonique 8'
 Bourdon 8'
 Flûte octaviante 4'
 Quinte 2²/₃'
 Octavin 2'
 Trompette harm. 8'
 Viole humaine 8'
 Clairon harm. 4'

Pédales
 Flûte ouverte 32'
 Flûte ouverte 16'
 Flûte ouverte 8'
 Flûte ouverte 4'
 Gr. Nazard 3¹/₃'
 Bombardie 16'
 Basson 16'
 Basson 8'
 I. Trompette 8'
 II. Trompette 8'
 I. Clairon 4'
 II. Clairon 4'

In spite of the many similarities to the specification and construction of the older French organ, this was a development away from the sound ideals of the Cliquot period. Poul-Gerhard Andersen describes the new trends of style in this way:

«The specification is similar to that of the older French type, but it has a greater number of foundation stops and fewer mixtures. The voicing is very powerful, and the foundation stops are beautiful and characteristic. For the purpose of the strong voicing, overblown pipes and wide scales are much used, the latter especially true for the stopped ranks. Conical pipes are very rare. The reeds are strong and blaring, with a specific reserved stateliness, and the mixtures are forceful and brilliant.*)

The instrument P.-G. Andersen refers to is actually the *Notre-Dame organ in Paris*, but the description is a common denominator for the whole of Aristide Cavallé-Coll's production.

After completion of the organ in Saint-Denis followed a long line of other important works in France, such as the large Parisian organs in Sainte-Gertrude, Saint-Sulpice and Notre-Dame. The Cavallé-Coll instruments were also in great demand outside the borders of the country, and organs were built for distant places like Bolivia, Brazil, Russia and China (1).

On October 12, 1899, Aristide Cavallé-Coll died in Paris. The business was carried on by Charles Muhl. In 1892 Aristide's son, Gabriel, established his own organ building firm.

The organ in Jesuskirken, built in 1890, was one of the last instruments from Aristide Cavallé-Coll's workshop.

*) Ceglet, Haandbog for Orgelspillere, Copenhagen 1929.

and furthermore one of the smallest: 20 stops seem insufficient in a romantic-symphonic cathedral organ. The original project was indeed considerably larger: 40 stops, 3 manuals and pedal; nevertheless, the brewer Carl Jacobsen, who financed the building and furnishing of the church, chose to reduce the number of stops by one half. Nothing suggests that this reduction was due to financial reasons; Jacobsen merely followed expert advice. Johan Henrik Nebelong, the organ consultant of the

Ministry of Ecclesiastical Affairs and the organist of Sankt Johannes kirke in Copenhagen, was asked for advice. He gave the brewer the rather curious reply that an organ with 20 stops, 2 manuals and pedal would be quite sufficient for the church. (At that time the organ in Sankt Johannes kirke had 20 stops, but it was later expanded to 36 stops, 3 manuals and pedal.)

The organ in Jesuskirken received the following specification:

<i>Grand Orgue</i> (manual I)	<i>Récit expressif</i> (enclosed) (manual II)	<i>Pédales</i>
Bourdon 16'	Flûte traversière 8'	Soubasse 16'
Montre 8'	Voix de gambe 8'	Bourdon 8'
Bourdon 8'	Voix céleste 8'	Basse 8'
Flûte harmonique 8'	Flûte octaviante 4'	Bombarde 16'
Salicional 8'	Octavin 2'	
Frestant 4'	Trompette harmonique 8'	
Clare de bois 4'	Basson-Hautbois 8'	
Plain-jeu IV	Clairon 4'	

Composers: II-I, I-P, II-P

Combination levers for:

1) Montre 8', Frestant 4' and Plain-jeu IV.

2) Trompette harmonique 8' and Clairon 4'.

«Effets d'orgue» (thunder effect): the 12 lowest notes of the pedal are activated simultaneously.

Even in this Lilliputian version we still find most of the features which are characteristic of the French romantic organ: the vast, wide-scaled diapason chorus in the great organ, the ever-flown stops, (there are no less than 3), the strongly voiced reeds whose magnificent effect is heightened even more when they are placed in the swell organ (an effect often utilized by César Franck), the intense strings – the Salicional, the Gamba and the expressively undulating Voix céleste – and finally the substantial foundation of the pedal.

This «dramatic» organ type, which shows itself to best advantage in a large cathedral, is the result of artistically conscious development of the classical French organ. It therefore seems unfounded when now and again it is accused of being less «organ-like» and «healthy» than e. g. the North German baroque organ; it merely originates from another – and just as valid – aesthetic ideal. Furthermore, Cavaillé-Coll had great respect for the traditions that were handed down to him. Thus he kept the baroque organ's mutation and

mixture stops, as well as the powerful reeds which played an important part in classical French and Iberian organ building. But most important, he mastered the advanced voicing technique which assigned to each stop its function in the totality without at the same time depriving it of its individuality. It is this respect for detail which explains why the organ in Jesuskirken did not turn into a «torso» but appears as a genuine and convincing work of art.

The installation and voicing in Jesuskirken was not carried out by Cavaillé-Coll himself but by his right-hand man Felix Reinburg. However, the old master came along to Copenhagen and travelled each day by coach from Hotel d'Angleterre to Valby in order to inspect the work. During his stay in Copenhagen Felix Reinburg was requested by C. M. Philbert, the French consul in Elsinore, to examine the Comperius organ at Frederiksborg Castle. It had not been played for many years and was out of repair. The examination, done by Reinburg together

with professor Otto Malling, resulted in a report which rekindled the interest in this treasure, and in the summer of 1895 the historic organ was restored to its original state by Felix Reinburg with the assistance of Jean Lafon, his French helper, and A. V. Busch, an organ builder from Copenhagen.

It is evident that the new organ in Jesuskirken aroused attention and enthusiasm at that time. It was the only one of its kind in the country and, for that matter, in the whole of Scandinavia.*)

One of the Danish organ builders who was most enthusiastic about French romanticism was young Immanuel Starup who in 1893 took over his father-in-law Knud Olsen's organ building firm in Copenhagen. The specification of the organ in *Naturbørstikken* in Copenhagen (I. Starup 1904, 18 stops) clearly shows that French romanticism had gotten a foothold in Denmark:

<i>Manual I</i>	<i>Manual II</i>	<i>Pedal</i>
Bourdon 16'	Gedakt 8'	Sabbas 16'
Principal 8'	Viola di gambe 8'	Principal 8'
Rorfløjte 8'	Voix céleste 8'	Gedakt 8'
Flûte harmonique 8'	Fløjte 4'	Basun 16'
Salicional 8'	Clarinete 8'	
Octav 4'		
Gemshorn 4'		
Mixtur III		
Trompet 8'		

Mechanical slider chests

This development left its trace even in small village organs. Especially the Voix céleste, the undulating string stop which Cavaillé-Coll had introduced in Denmark, became extremely popular

among village organists and can be found in innumerable small instruments as e. g. in *Sommerhølle kirke* (Joh. P. Andersen & Co. Orgelfabrik, Ringkjøbing about 1905, 6 stops).

*) It is true that in 1865 the Danish organ builder Daniel Köhne was studying with Cavaillé-Coll, but this did not leave any profound trace in the tonal conception of his organs.

Musical

Bordun 16' (from F)

Principal 8'

Gedakt 8'

Salicional 8'

Celeste 8'

Flöte 4'

Oboe coupler

General crescendo (1)

Pneumatic cone chest

However, only the *sound* of the French romantic organ was imitated. The solid mechanical action was soon thought to be old-fashioned. It is true that the Nidaros organ from 1804 had a mechanical slider chest, but a year later when *Stavky Loka* was to have a new organ, Starup constructed this with a pneumatic cone chest. The era of the tubular-pneumatic action and «factory organs» had started, and the old artisan traditions did not have their comeback until the 1940s when the *Organ Reform Movement* created a renaissance for the classical organ building craft.

The understandable reaction this Movement had against the products of the previous generation nearly hit the innocent instrument in Valby. In 1947 P. S. Rung-Keller, the organ consultant of the Ministry of Ecclesiastical Affairs, wrote to Th. Glahn, the pastor of Jesuskirken: «I have known the instrument from the time when it was donated to the church (Rung-Keller was born in 1879), and I've listened to it there at services and concerts, and have found that the appearance of the Gothic factory facade does not harmonize at all with the style of the church . . . » The consultant was not without feeling for the quality and uniqueness of the organ, but it simply was not suited for a church . . . With this respect for mine, our only Cavallé-Coll organ, it ought not to be changed radically,

but the best solution would be if it could be of use in a Y.M.C.A. hall or in a modern school auditorium in Valby. The church should then have a *real* (judges by the author) church organ in the west end of the nave. If this could be carried out before the French organ has been removed, the latter might as well be encased in curtains between the columns above the altar, for the sake of appearance, and it might even be used on special musical occasions where the congregation does not participate . . . » (1) It is not difficult to imagine what the venerable instrument would have looked like today, if the scheme of donating it to a municipal school had been carried out. But it did not turn out to be so drastic. The organ remained where it was, escaping both removal and well-intentioned rebuildings. It ought to be mentioned, though, that for a number of years the Voix céleste 8' in the swell organ was replaced with a Bordun 8' for the sake of soft playing during communion.

In the past years, the firms Starup & Son, Mønstsen & Son and P.-G. Andersen have been charged with the maintenance of the organ. Some years ago the latter reconstructed the Voix céleste so that Scandinavia's only Cavallé-Coll organ — except for some smaller technical amendments — again appears in its original form.

Translation: Eileen Vandermark.

and furthermore one of the smallest: 20 stops seem insufficient in a romantic-symphonic cathedral organ. The original project was indeed considerably larger: 40 stops, 3 manuals and pedal; nevertheless, the brewer Carl Jacobsen, who financed the building and furnishing of the church, chose to reduce the number of stops by one half. Nothing suggests that this reduction was due to financial reasons; Jacobsen merely followed expert advice. Johan Henrik Nebelong, the organ consultant of the

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The organ in Jesuskirken received the following specification:

Grand Orgue
(manual I)

Bourdon 16'
Montre 8'
Bourdon 8'
Flûte harmonique 8'
Salicional 8'
Prestant 4'
Flûte douce 4'
Plein-jeu IV

Récit expressif (enclosed)
(manual II)

Flûte traversière 8'
Voie de gambe 8'
Voix céleste 8'
Flûte octaviante 4'
Octavin 2'
Trompette harmonique 8'
Basson-Hautbois 8'
Clairon 4'

Pédales

Soubasse 16'
Bourdon 8'
Basse 8'
Bombarde 16'

Couplers: II-I, I-P, II-P

Combination levers for:

1) Montre 8', Prestant 4' and Plein-jeu IV.

2) Trompette harmonique 8' and Clairon 4'.

»Effets d'orage« (thunder effect): the 12 lowest notes of the pedal are activated simultaneously.

Even in this Liliputian version we still find most of the features which are characteristic of the French romantic organ: the vast, wide-scaled diapason chorus in the great organ, the overblown stops, (there are no less than 5), the strongly voiced reeds whose magnificent effect is heightened even more when they are placed in the swell organ (an effect often utilized by César Franck), the intense strings – the Salicional, the Gamba and the expressively undulating Voix céleste – and finally the substantial foundation of the pedal.

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with professor Otto Malling, resulted in a report which rekindled the interest in this treasure, and in the summer of 1895 the historic organ was restored to its original state by Felix Reinburg with the assistance of Jean Lafon, his French helper, and A. V. Busch, an organ builder from Copenhagen.

It is evident that the new organ in Jesuskirken aroused attention and enthusiasm at that time. It was the only one of its kind in the country and, for that matter, in the whole of Scandinavia.^{*)}

One of the Danish organ builders who was most enthusiastic about French romanticism was young Immanuel Starup who in 1898 took over his father-in-law Knud Olsen's organ building firm in Copenhagen. The specification of the organ in Nazarethkirken in Copenhagen (I. Starup 1904, 18 stops) clearly shows that French romanticism had gotten a foothold in Denmark.

Manual I

Bourdon 16'
Principal 8'
Rørflojte 8'
Flûte harmonique 8'
Salicional 8'
Octav 4'
Gemshorn 4'
Mixtur III
Trompet 8'

Manual II

Gedakt 8'
Viola di gamba 8'
Voix coeleste 8'
Fløjte 4'
Clarinet 8'

Pedal

Subbas 16'
Principal 8'
Gedakt 8'
Basun 16'

Mechanical slider chests

This development left its trace even in small village organs. Especially the Voix céleste, the undulating string stop which Cavaillé-Coll had introduced in Denmark, became extremely popular

among village organists and can be found in innumerable small instruments as e. g. in *Simmerhølle kirke* (Joh. P. Andresen & Co. Orgelfabrik, Ringkjøbing about 1905, 6 stops).

^{*)} It is true that in 1863 the Danish organ builder Daniel Köhne was studying with Cavaillé-Coll, but this did not leave any profound trace in the tonal conception of his organs.

Grand Orgue: (fortsat)	C	c	c'	c''	c'''
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<i>Bourdon 8'</i>					
diameter	110x85	70	46	31	21
lab. og opsn.	84/36	50/22	34/12,5	21/7	15/5
trætykkelse	15				
fodhuldiam.	15	7	5,5	4	3,5
C - A af træ.					

<i>Flûte douce 4' (Gedaktføjte)</i>					
diameter	78	52	34	24	8/16
lab. og opsn.	57/21	39/14	24/9	16/5	11/3
fodhuldiam.	8	5,5	4,5	3,5	2,5
C - f" er dækkede piber, fs" - g''' er åbne koniske piber med ekspressionsstemmeslidser og uden sideskæg.					

<i>Prestant 4' (Principal)</i>					
diameter	92	57	37	23	14
lab. og opsn.	69/18	42/11	26/7	18/4,5	10,5/3,5
fodhuldiam.	12	6	4	4	3
C - A i facade. C - g''' med ekspressionsstemmeslidser.					

<i>Plein-jeu IV (Mixtur)</i>					
C	2' + 1' 1/3' + 1' + 2/3'				
c	2 2/3' + 2' + 1' 1/3' + 1'				
c'	4' + 2 2/3' + 2' + 1' 1/3'				
c''	8' + 4' + 2 2/3' + 2'				
diameter I	42	34	28	28	18
diameter II	33	28	22	18	11
diameter III	28	22	18	14	9
diameter IV	22	18	14	11	7

Hele stemmen er forsynet med ekspressionsstemmeslidser.

Récit expr.:	C	c	c'	c''	c'''
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<i>Flûte traversière 8' (overblæsende fløjte)</i>					
diameter	130x100	77	58	42	29
lab. og opsn.	100/30	56/21	43/12,5	31/12	21/6
kroplængde				620	303
afstand fra kerne til overblæsningshul				255	110
overblæsningshuldiam. (1 hul)				2	2
fodhuldiam.	12	9	6	6	4
C - H af træ. fs' - g''' er overblæsende. C - g''' med ekspressionsstemmeslidser.					

<i>Viola de gambe 8'</i>					
diameter	95	56	35	22	13
lab. og opsn.	70/23	40/13	25/8	16/5	9,5/3
fodhuldiam.	10	7	4	3,5	2
C - ds'' med tømme-skæg. e'' - g''' er uden skæg. C - g''' er med ekspressionsstemmeslidser.					

Récit expr.: (fortsat)	C	c	c'	c''	c'''
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<i>Voix céleste 8'</i>					
diameter	-	55	34	21	13
lab. og opsn.	-	45/15	28/9	18/5	11/3
fodhuldiam.	-	7	4,5	4	2,5
c - ds'' med tømme-skæg. e'' - g''' er uden skæg. c - g''' med ekspressionsstemmeslidser. Denne stemme er af nyere dato.					

<i>Flûte octaviante 4' (overblæsende fløjte)</i>					
diameter	73	55	41	28	19
lab. og opsn.	53/15	40/11,5	30/11,5	21/6	12/3,5
kroplængde			585	290	140
afst. fra kerne til overbl. huller			256	116	50
overblæsningshuldiam. (2 huller)			2	2	2
fodhuldiam.	6	5	5,5	4	3
c' - g''' er overblæsende og helt uden stemmeslidser. C - h' har sideskæg, c'' - g''' er uden skæg. C - h har ekspressionsstemmeslidser.					

<i>Octavin 2' (overblæsende principalstemme)</i>					
diameter	49	35	22	14	8
lab. og opsn.	35/11	25/11,5	17/6,5	9/4	6/2
kroplængde		628	315	155	69
afst. fra kerne til overbl. huller (2 huller)		268	125	66	25
overblæsningshuldiam.		2	1,5	1	1
fodhuldiam.	5	5	3	2,5	2
c - g''' er overblæsende. C - f'' har ekspressionsstemmeslidser.					
fs'' - g''' er uden stemmeslidser. C - h har sideskæg, c' - g''' er uden skæg.					

<i>Trompette harmonique 8' (overblæsende Trompet)</i>					
diameter for oven	110	92	92	73	61
diameter for neden	13	10	11	7,5	6,5
længde med kehle	2388	1200	1175	520	292
kehle indv. diameter.	10	8	8	5,5	4,5
kehle længde	124	76	57	37	25
kehleåbning bredde	4,5	3,5	4	3	2,5
tungebredde	8	6	6	5	4
tungetykkelse	0,55	0,35	0,25	0,20	0,15
fodhuldiam.	10	8,5	6	6	6,5
c' - g''' er overblæsende. C - g'' har intonationsslidser.					
Kehleform: rundkehle uden belædring.					
Kehler af nysølv og tunger af messing.					
C - H alm. hoveder, c - d''' nøddehoveder og ring-krykkestyr.					
ds''' - g''' enkelt nøddehoveder.					

Récit expr.: (fortsat)	C	c	c'	c''	c'''
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Basson-Hautbois 8' (Fagot-bas + Obo-diskant)

diam. for oven	68	51	45	34	26
diam. for oven i nederste konus			19	13	10
diam. for neden	14	11	8	6	5
længde med kehle	2175	1102	599	297	145
øverste konus længde			144	84	50
kehle indv. diam.	11/16	8/11	5	4,5	4
kehle længde	122	75	59	43	31
kehleåbning bredde	3/8	2,5/6	2,5	2	1,8
kehleåbning længde	52	33	58	42	30
tungebredde	9/11,5	6,5/8	4,2	4,0	3,0
tungetykkelse	0,50	0,35	0,25	0,20	0,10
fodhuldiam.	10	9	6,5	6	5

C – h enkelt tragtformede lydbægre i forbindelse med koniske kehlere med lille kehleåbning. c' – g''' dobbelt tragtformede lydbægre i forbindelse med rundkehlere. Hele stemmen har intonationsslidser. C – H alm. hoveder, c – g''' nøddehoveder og ring-krykkestyr. Lydbægrene c' – g''' er let indrandede for oven. Kehler af nysølv og tunger af messing. Kehlerne er ikke belædrede.

Clairon 4' (Trompet)

diam. for oven	92	74	75	61	31
diam. for neden	10	7,5	7,5	6,5	5,0
længde med kehle	1200	602	595	290	134
kehle indv. diam.	8,0	5,7	5,7	4,5	3,5
kehle længde	82	60	41	27	18
kehleåbning bredde	3,5	3,0	2,5	2,0	2,0
tungebredde	6,0	5,0	5,0	4,0	3,7
tungetykkelse	0,35	0,25	0,20	0,15	0,10
fodhuldiam.	9	8	7	6	6

c' – g''' er overblæsende. C – h' har intonationsslidser. Kehleform: rundkehle uden belædning. Kehler af nysølv og tunger af messing. Lydbægre c''' – g''' har krumhornsfacon. C – d'' nøddehoveder og ring-krykkestyr, ds'' – g''' enkelt nøddehoveder.

Récit: Detailfoto.

Pedale.	C	c	c'
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Soubasse 16'

diameter	217x173	135x102	82x59
lab. og opsn.	173/62	98/37	58/26
trætykkelse	21	15	12
fodhuldiam.	35	20	13

Hele stemmen er af træ og forsynet med underskæg i metal.

Basse 8' (åben fløjte)

diameter	178x136	105x82	64
lab. og opsn.	136/35	79/23	47/13
trætykkelse	18	13	
fodhuldiam.	21	12	7

C – f af træ og forsynet med metal-underskæg, fs – f' af metal og forsynet med sideskæg.

Bourdon 8'

diameter	134x100	85	55
lab. og opsn.	100/38	61/27	40/16
trætykkelse	16		
fodhuldiam.	16	8	6,5

C – H af træ og forsynet med metal-underskæg, c – f' af metal og forsynet med sideskæg.

Bombarde 16'

diameter for oven	200	145	103
diameter for neden	22	14	10
længde med kehle	4820	2415	1218
kehle indv. diam.	18	11	8
kehle længde	212	126	83
kehleåbning bredde	10	4,5	4,0
kehle metaltykkelse	1,6	1,2	1,0
tungebredde	16	9	6
tungetykkelse	0,70	0,50	0,40
fodhuldiam	18	14	9

Kehleform: Rundkehle med belædring i glat, rødt skind.

Kehler af nysølv og tunger af messing.

Samtlige labialpiber har kraftige, dybe kernestik som for træpibernes vedkommende er svagt skråtstillede. Træpibernes kernespalter er alle indarbejdet i forslaget.

Opmåling: Carsten Lund.

Explanations to the pipe scale tables

Erläuterungen zu den Mensurenahmen

afstand fra – til – alm. (= almindelig)	distance from – to – ordinary	Abstand von – zu – üblich
belædring	leathering	Lederfütterung
bredde	width	Breite
dækkede piber	stopped pipes	gedeckte Pfeifen
ekspressionsstemmeslidse	tuning slot	Expressionsschlitz
facade	front	Prospekt
fodhuldiam.	toe-hole	Fussöffnung
for neden	lower	unten
for oven	top	oben
forsynet med –	provided with –	mit – versehen
helt uden – men med –	entirely without – but with –	ganz ohne – aber mit –
hul, huller	hole, holes	Loch, Löcher
indrundet	contracted	eingezogen
indv. (= indvendig)	interior	einwendig
kehle	shallot	Kehle
kerne	languid	Kern
kroplængde	length of body	Körperlänge
lab. og opsn.	width of mouth and cut up	Labium und Aufschnitt
længde med –	length including –	Länge einschließlich –
messing	brass	Messing
nederste konus	shaft (of Oboe-body)	unterer Konus
nysølv	German silver	Neusilber
nøddehoveder	french nut blocks	Nussköpfe
overblæsehul	hole in the body of a harmonic pipe	Überbläsehul
overblæsende	harmonic (overblowing)	überbläsende
ring-krykkestyr	ring (upper part of french double-block)	Ring (der obere Teil des französischen Doppelkopfes)
skæg, sideskæg	ears	Bärte, Seitenbart
træ	wood	Holz
tunge	tongue	Zunge
tykkelse	thickness	Stärke
tømmeskæg	a type of <i>frein harmonique</i> , consisting of a bent metal strip soldered to the sides of the pipe	<i>frein harmonique</i> in Form eines hakenförmigen Kasten- bartes (»Hakenbart«)
uden	without	ohne
underskæg	cap-beard	Unterbart
øverste konus	bell (of Oboe-body)	oberer Konus
åbne koniske piber	open conical pipes	offene, konische Pfeifen
åbning	opening, aperture	Öffnung

A. B. Batty

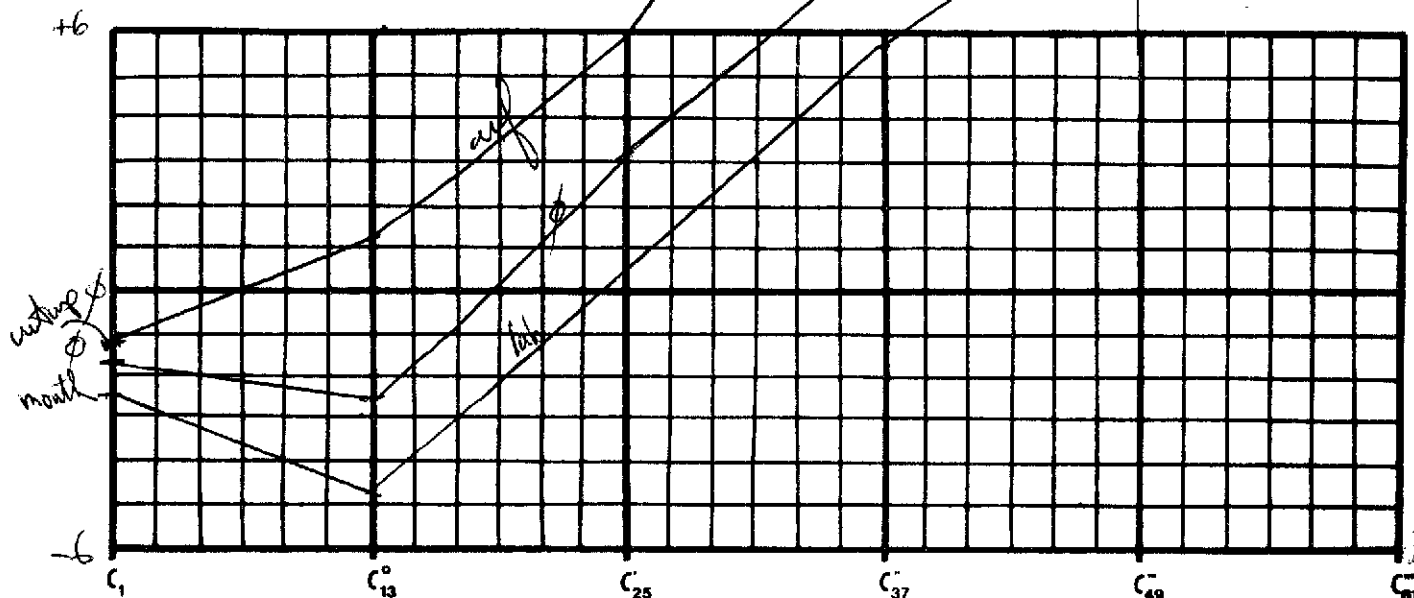
Copenhagen
Denmark

8' Harmonic Flute Div. 1st

Builder: James K. K. K. Date: _____
Church: Caville - Coll

Church: ~~LA 411/2~~ - 6011

Description of site & owner:



Minimum length:

Cutino:

ACTUAL MEASURE

depth	148						
width	110						
Distance of Mouth:	83	63	47	32			
Mouthwidth:	10	59	44	33	24		
Culm:	29	19	14	13	5.5		
Metal Thickness:		distance wing width to harmonic hole	245	108			
Windway:							
hole							
Legend:							
Body Length:							
Toe Hole:	15	8	7	6.5	5		

Source of Data:

Materials:

NOTES (eggs, bears, slots, tuners, voicing, etc)

Two holes (harmonic)

'A'

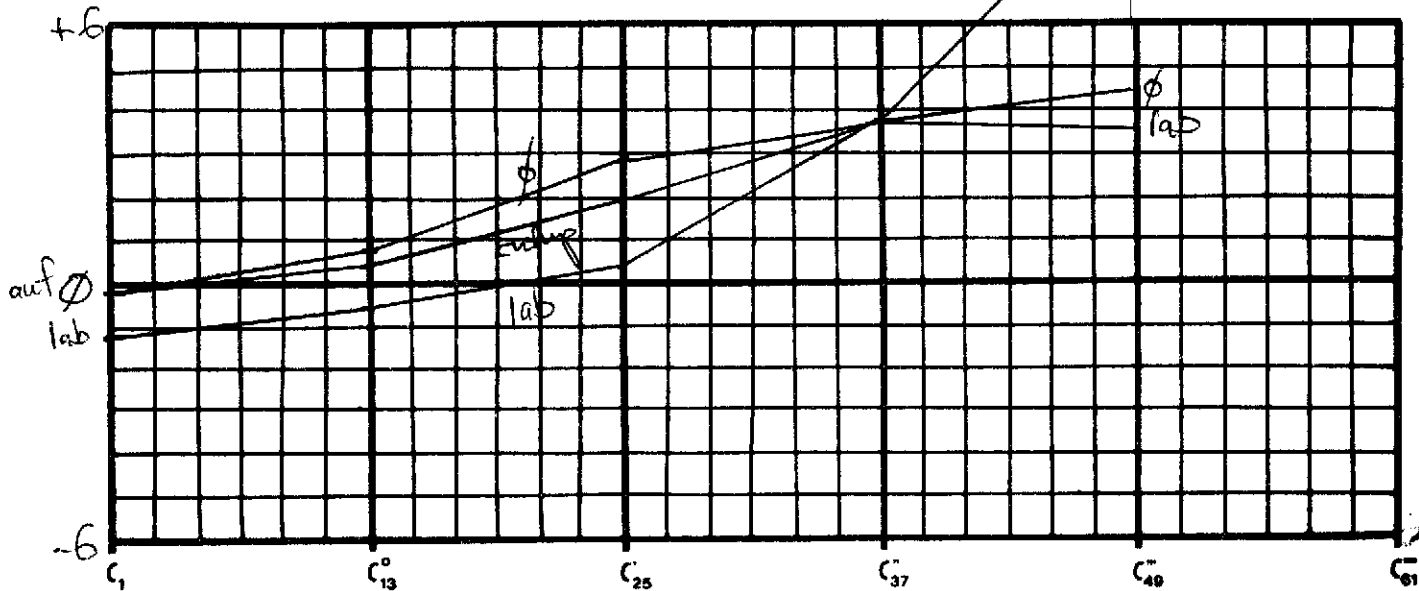
A. B. BattyStop: Prestant 4' Div. 6T

Builder: _____ Date: _____

Windings: _____ Pitch: _____

Church: _____

Description of site & organ: _____



Mouthwidth: _____

Cutup: _____

ACTUAL MEASURE

Tube Diameter:								
Diameter of Mouth:	92	57	37	23	14			
Mouthwidth:	69	42	26	18	10.5			
Cutup:	18	11	7	4.5	3.5			
Metal Thickness:								
Windway:								
Legwood:								
Body Length:								
Toe Hole:	12	6	4	4	3			

Source of Data: _____ Material: _____

NOTES (ears, bores, slots, tuners, voicing, etc.) _____

A. B. Batty

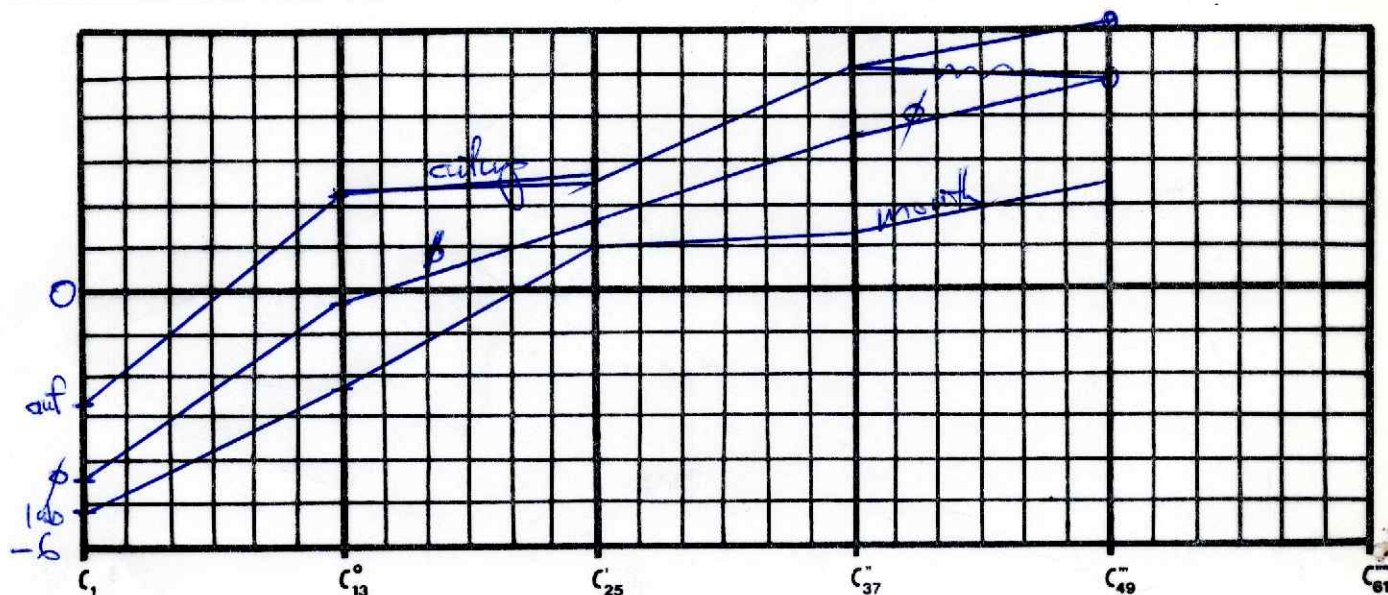
Stop: Montre 8' Div. Gt

Builder: _____ Date: _____

Wind pressure: _____ Pitch: _____

Church: _____

Description of site & organ:



Mouthwidth:

Cutup:

ACTUAL MEASURE

Top Diameter:	132	98					
Diameter at Mouth:	92	59	38	24			
Mouthwidth:	98	66	45	27	17		
Cutup:	27	20	12	8	5		
Metal Thickness:							
Windway:							
Lanquid:							
Body Length:							
Top Hole:	15	12	7	5	4		

Source of Data: _____

Material: _____

NOTES (ears, beards, slots, tuners, voicing, etc)

A. B. Batty

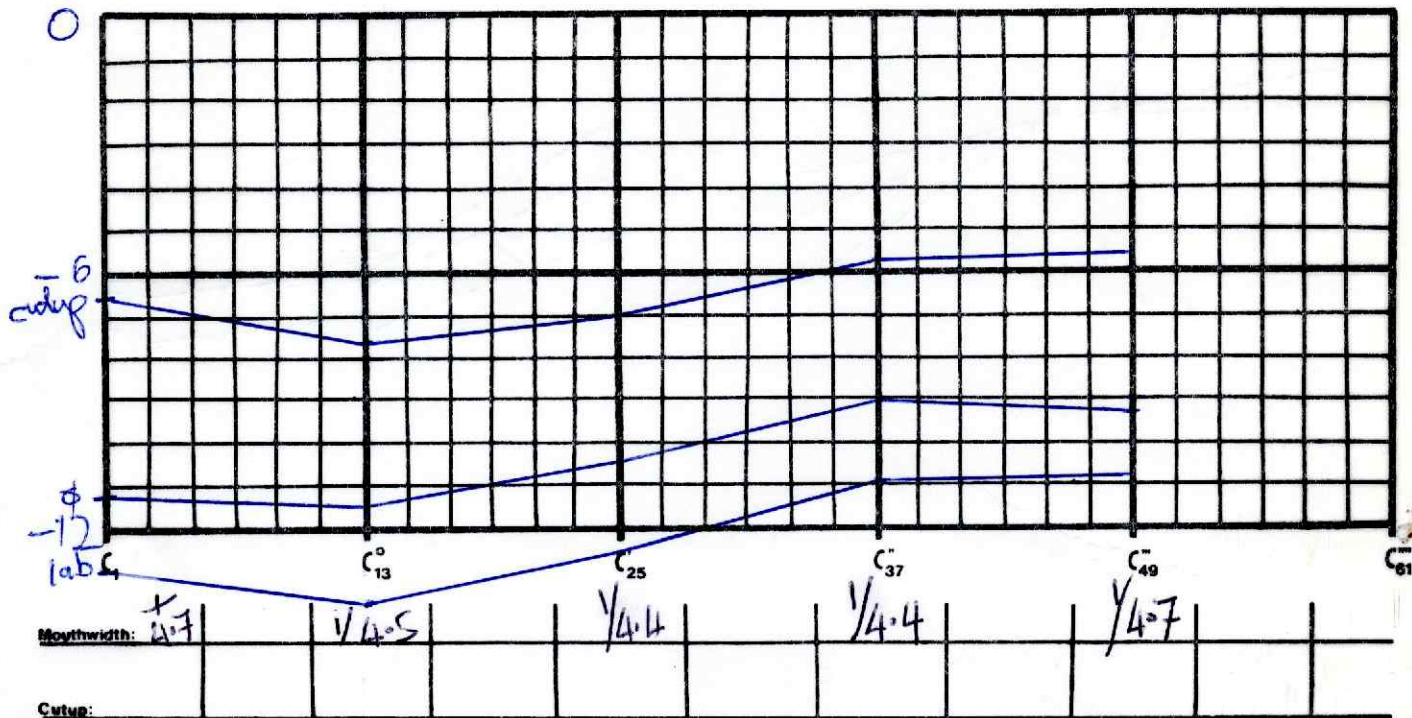
Step: Viola de gambe 8 Div.: Récor

Builder: _____ Date: _____

Windpressure: _____ Pitch: _____

Church: _____

Description of site & organ: _____



ACTUAL MEASURE

120 x 100							
Top Diameter: 95							
Diameter at Mouth: 70	56	35	22	13			
Mouthwidth: 100	40	25	16	9.5			
Cutup: 23-30	13	8	5	3			
Metal Thickness:							
Windway:							
Laneuid:							
Body Length:							
Top Hole: 10	7	4	3.5	2			

Source of Data: _____

Material: _____

NOTES (ears, bearings, slots, tuners, voicing, etc)
