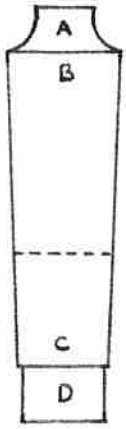


Sopraan cornamuse c'- d"

Totale lengte pijp 320 mm Boring 5 mm

A= tenon 20 mm lang / diameter 18 mm

B= kapsteun 15 mm (3x5mm) lang / diameter 22.5 mm

C- D= 210 lang / diameter bij C 15.5 mm, bij D 20 mm

E- F= 65 mm (13x5mm)/ diameter bij E 20.5 mm, bij F 21.5 mm

G= 6 mm lang / diameter 24 mm

Kap

Totale lengte 110 mm Boring bij mondstuk 4 mm, verder 18 mm

Diameter bij B 29.5 mm, bij C 23.5 mm

Versiering (vanaf messing ring) 35 mm (7x5)

Mondstuk A 15 mm lang, diameter top 14.5 mm

Messing ring (D) 15 mm lang, diameter 22 mm

vingergaten

d	1	2	3	4	5	6	7	v
51	60	77	94	115	134	153	173	209
2.7	2.5	3	3	2.7	2.7	3.2	2.5	2.5

Riet

Gootje 93 mm lang / 0.9 mm dik in het midden

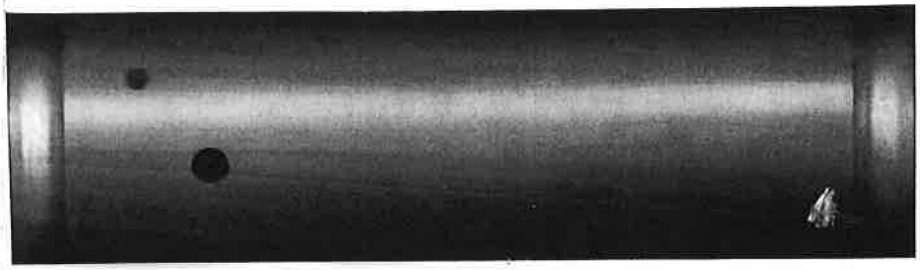
Afgewerkt: 46 mm lang, hoogste winding 20 mm van onder

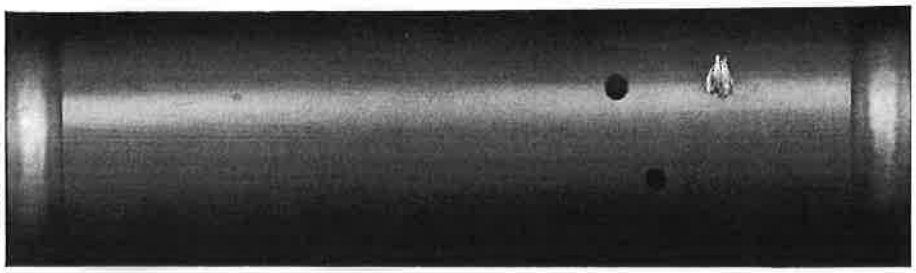
Breedte top 14.5 mm / voet (15 mm cilindrisch) 8.5 breed.

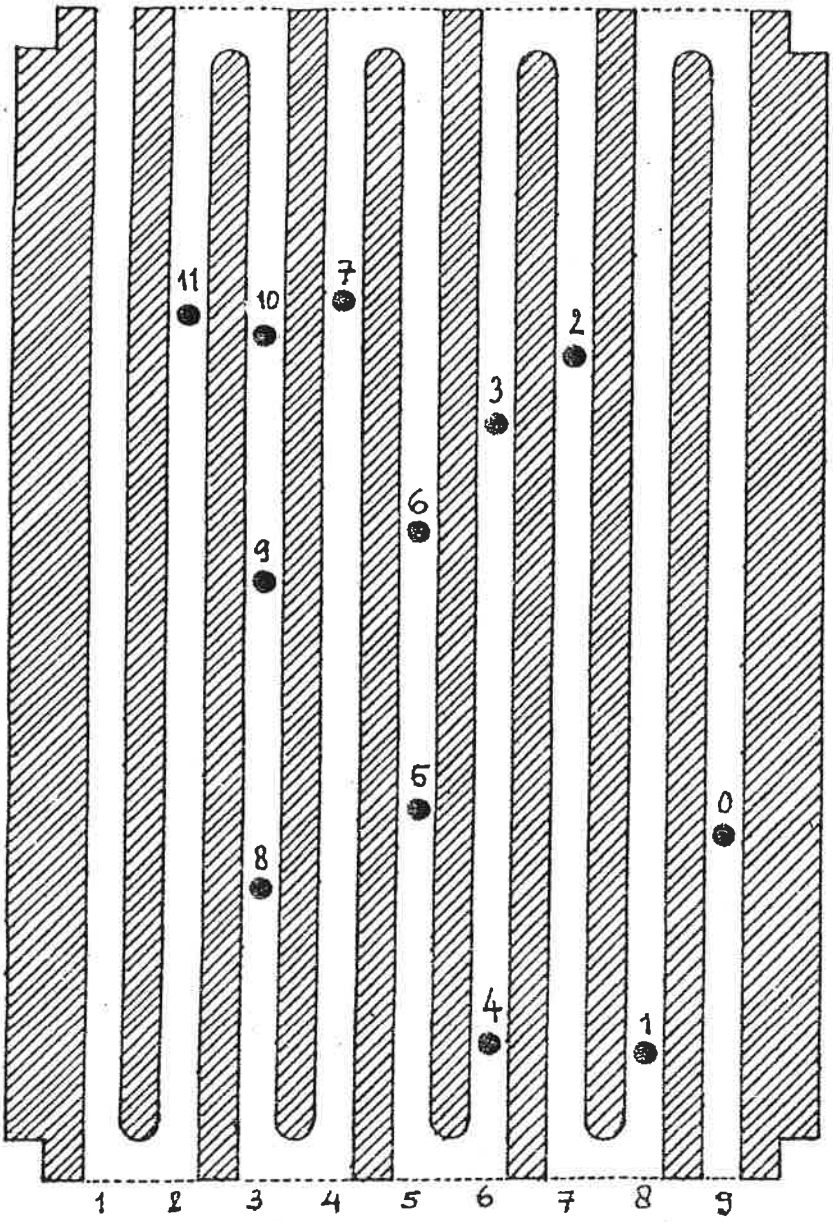
Messing stiftje 13 mm lang, buitendiameter 5 mm.

d 1 2 3 4 5 6 7

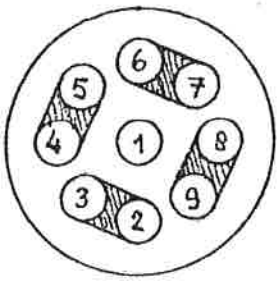
230 273

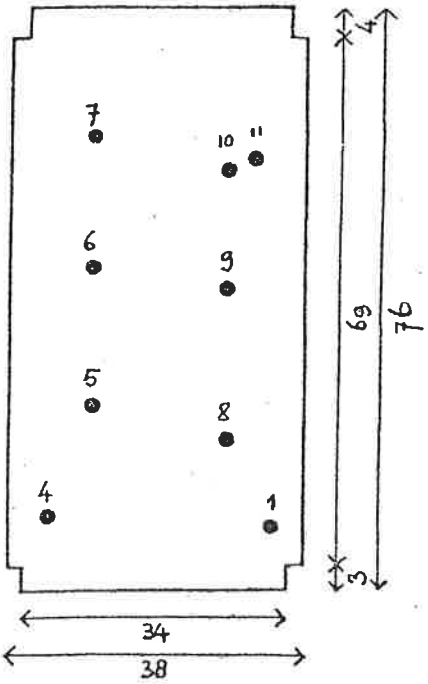


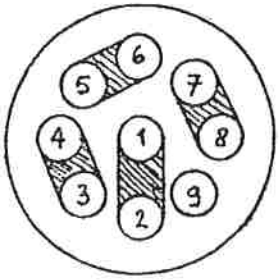




Verbindingen bovenzijde







verbindingen onderzijde

diameter boringen: 6 mm
boring 9 gestopt tot vlak onder gat 0
gaten 4,5,6 tussen boringen 4,5
gaten 8,9,10 voor boring 3

gatnummer	in boring	afstand	richting	diameter
0	9	54		4.5
1	8	68		3.2
2	7	23		3.0
3	6	27		2.+
4	6	67		3.2
5	5	52		4.+
6	5	34	omhoog	4.+
7	4	19	omlaag	4.+
8	3	57	omlaag	2.5
9	3	37		3.0
10	3	22		3.0
11	2	20		2.+

alle afstanden gemeten vanaf de kop van het corpus
+ betekent een opgeruimde boring

RACKET FINGERING

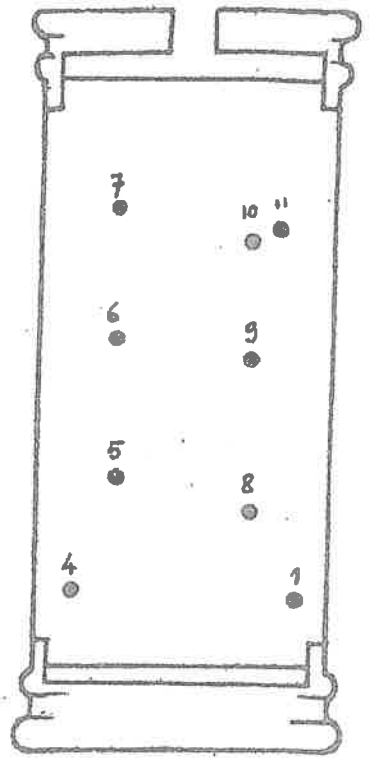
Hole zero, the big hole at the left side of the instrument, is the end of the bore.

Hole 2, at the back, is played with the left thumb.

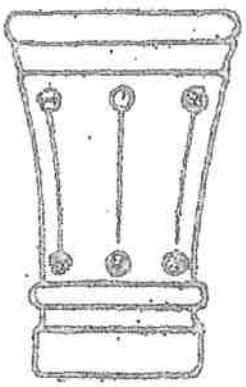
Hole 3, also at the back, is played with the right thumb.

Holes 10 and 11 are both played with the left index finger.

All holes closed give: soprano and bass	G;	tenor C
Open hole 1	A;	D
hole 2	B;	E
hole 3	c;	F
hole 4	d;	G
hole 5	e;	A
hole 6	f;	B
hole 7	g;	c
hole 8	a;	d
hole 9	b;	e
hole 10	c';	f
hole 11	d';	g

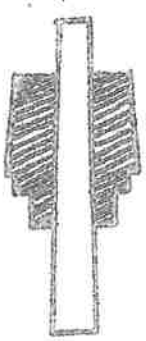


Forkfingering is possible, but must be adjusted by breath pressure.



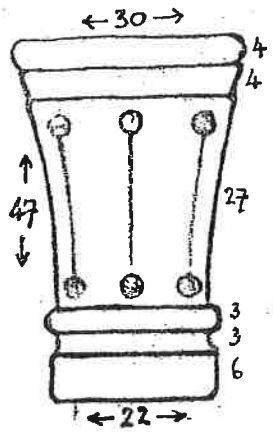
Pirouette

* Soak the reed for some minutes in cold water
* Remove the pirouette from the staple
* Shake the water out of the reed and place it it on the staple
* Replace the pirouette over the reed on the staple. Do it slowly and very carefully, the reed breaks easyily!



Staple

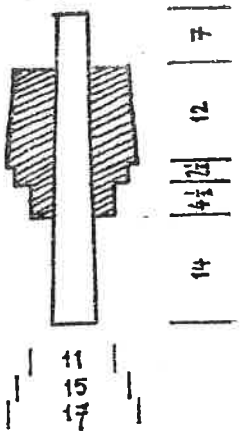
pirouette

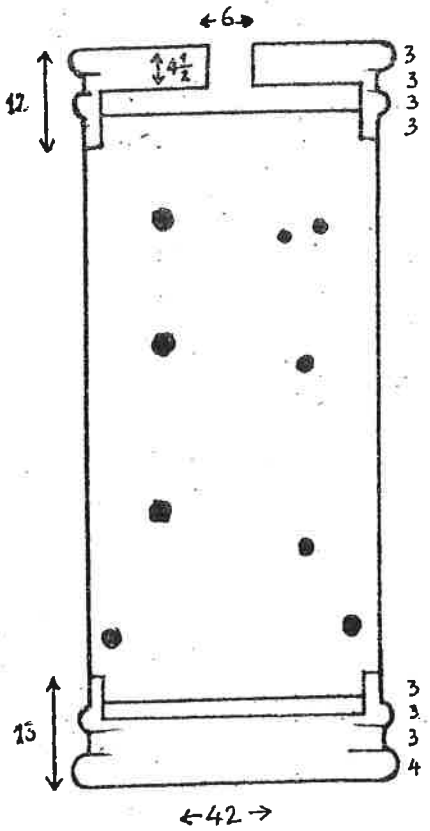


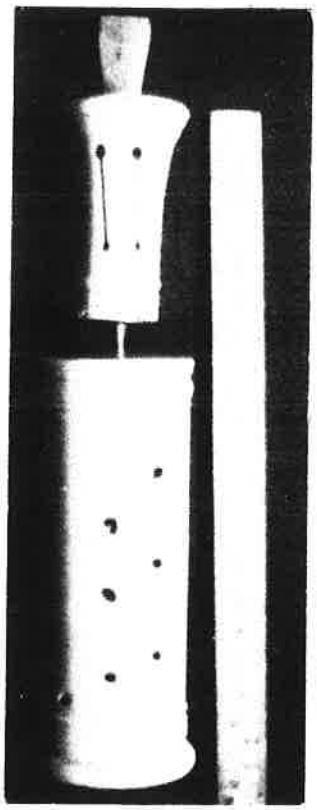
Het corpus is 10 mm langer, dus ipv 76 is het 86 mm lang. Zowel aan de boven- als aan de onderkant komen er 5 mm bij. De verbindingen tussen de boringen worden 10 mm diep gefreesd en afgesloten met een kurk stop van 5 mm dik.

Boring 9 wordt van de onderzijde gedicht met een gedraaid houten stop tot 2 mm onder gat 0. Vingergat 1 wordt door de stop in boring 9 in boring 8 geboord.

De pirouette heeft een binnendiameter van 15 mm, wordt van de bovenzijde uitgestoken (in de draaibank) naar 19 mm.







Kopie in het MIM Brussel van de Rankett in het KHM in Wenen

Diatonische conische doedelzak in G (de standaard Fat Kitchen)

Speelpijp:

Totale lengte 350 mm/ tap 20 mm lang/ doorsnee tap 15 mm.

Buiten doorsnee: smalste punt 12 mm / voet 22.5 mm.

conus: topboring 5 mm- coniciteit 1 op 35 mm

---

d	1	2	3	4	5	6	7	v
67.5	82	104	127	159	185	211	237	280
3	3	4	3.5	3.5	6	4.5	3	3.5 (2x)

Riet: zie riet voor chrom. con. speelpijp.

Alt bourdon:

Stock 110 mm lang,/ boring 13 mm / Buiten doorsnee 23>22 mm

deel a: 145 mm lang (20-95-30) Buiten doorsnee 22>21 mm/ tennons 13 mm doorsnee.

deel b: 205 mm lang (95- 110) /buitendoorsnee pijptop 25.5 mm

Hümmelchen in F

Speelpijp:

lengte:235 mm / boring: 4 mm / tap 20 mm lang, doorsnee 15 mm.
ornament 28.5 mm onder tapdoorsnee 21 mm/ doorsnee pijp 13<17 mm

d	1	2	3	4	5	6	7
59	71	89	107	125	143	161	182
2.5	2 sh	2	3.5	3	2	3	2.5

---

bourdon blok:

125 x 42 x 20 mm / 2 boringen, 80 mm diep, doorsnee 15 mm

bourdons: alle stocks en tennons doorsnee 10 mm.
alle boringen 4 mm, uitgezonderd F3: 5 mm

F1: 140 lang (20-47:43-30) grootste buitendoorsnede 21 mm

F2: 120 lang (47:43-30)

F3: 190 lang (47:43-100) top doorsnede 24.5 mm

C1: 118 lang (20-35:33-30) grootste buitendoorsnede 20 mm

C2: 141 lang (35:33-73) top doorsnede 22 mm

Middeleeuwse cylindrische d-doedelzak, chromatisch.

Speelpijp:
Lengte 310 mm/ buitendoorsnede 16.5<35 mm/tenon 20 mm lang
Daaronder 2 ornament ringen, 6mm hoog, de eerste 22, de tweede 19 mm in doorsnede.

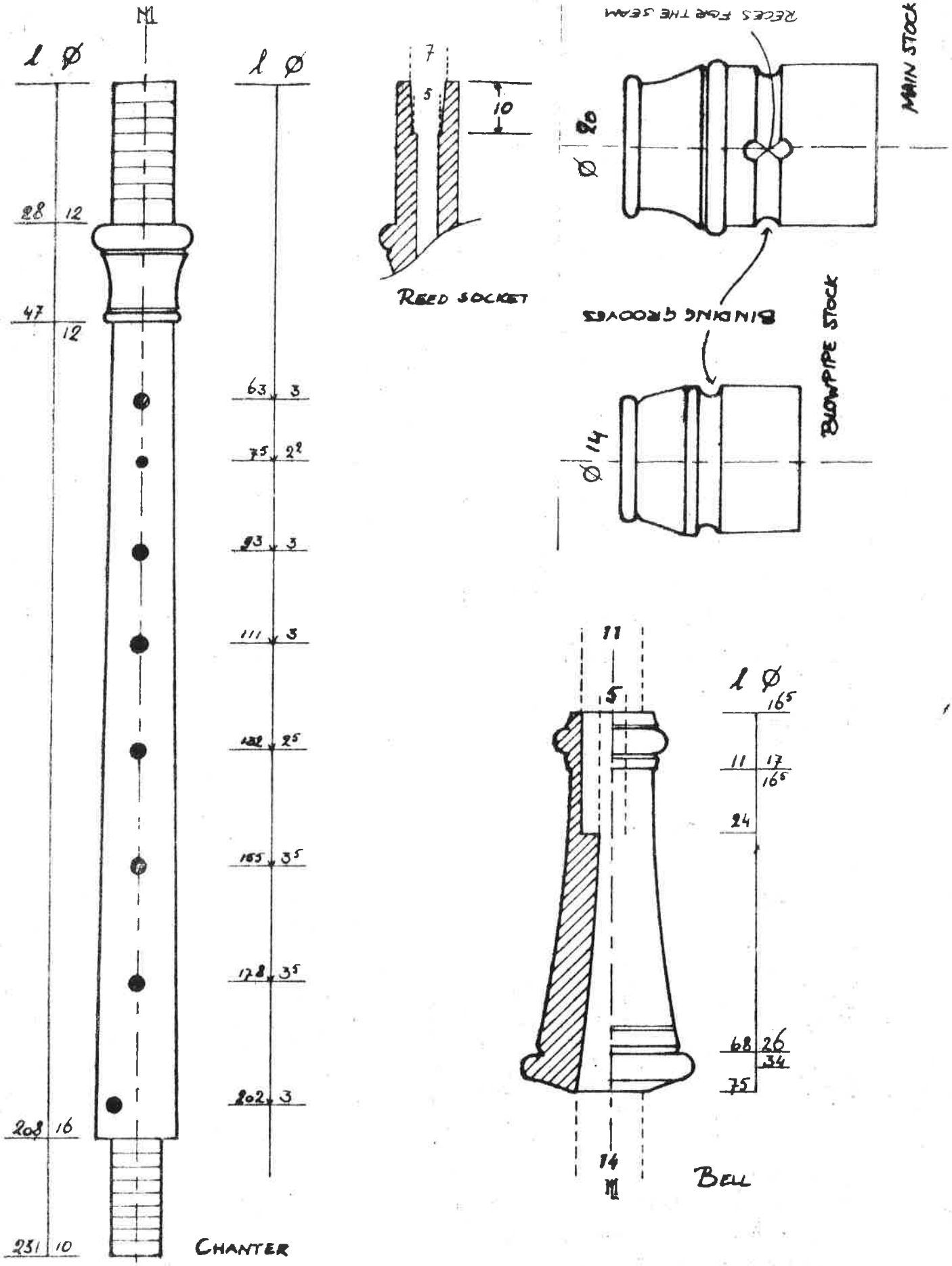
Boring 4 mm/ beker 4<30 mm over een afstand van 95 mm.

d	1	2	3	4	5	6	7	v
54	65	80	97	119	137	156	179	244
2.2	1.8	1.8s	2.2	1.7s	1.7	2.4	2	2

Riet
Totaal 43 mm /top 12.5 mm / winding 19 mm van onder.

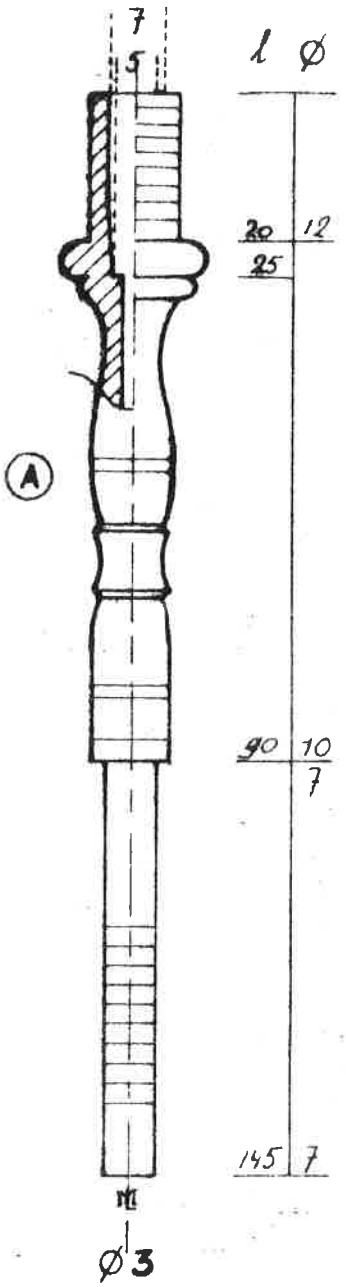
Stock voor speelpijp:
Een simpele cylinder van 80 mm lang; buitendoorsnede 26.5 mm; Boring 15 mm.

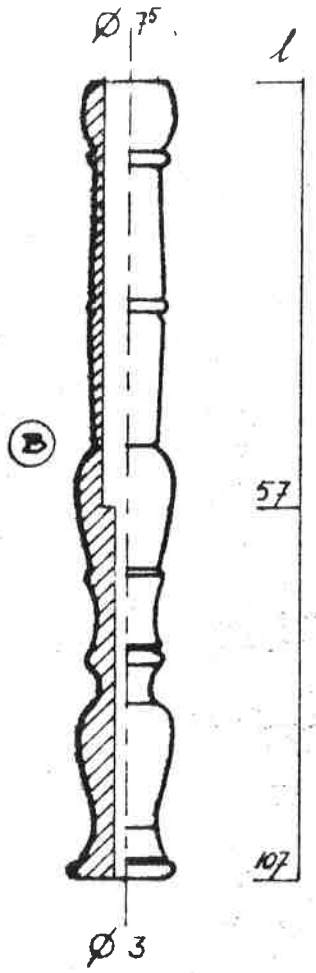
Bourdon:
Standaard F/D bourdon.



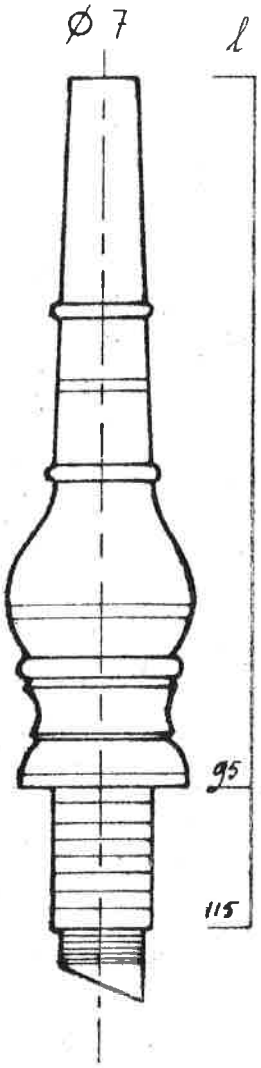
FRENCH MUSETTE (IN D)

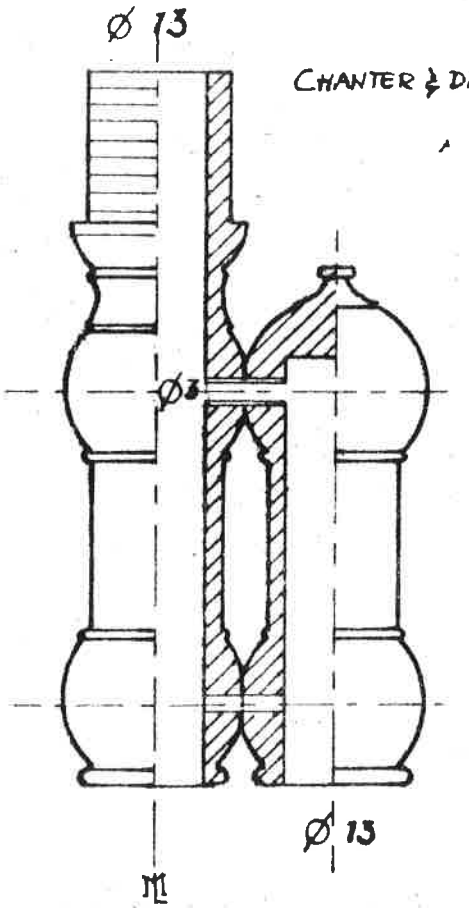
CHANTER : SCALE 1:1





BLOWPIPE





CHANTER & DRONE STOCK

DRONE

A : BUTT PIECE

B : TUNING PIECE

BOURDON RIET: ACRYL BUISJE 6 MM Ø; 48 MM LANG
TONG 0,6 DIK; 37,5 LANG; 6 MM BREED → NAAR 1,5 MM

Chromatische conische doedelzak in G

Speelpijp:

Totale lengte 405 mm -tap 20 mm lang- doorsnee tap 15 mm.

Buiten doorsnee : smalste punt 12 mm- breedste punt (voet) 25 mm.

d	1	2	3	4	5	6	7	v	v
66	82	102	126	159	185	211	235	277	350(2x)
3	3	4	3.5	4	4	4.5	3.2/2.5	4.5	4.5

Riet: Gootje 89 mm lang, in midden 0.8 mm dik. Stift 13 mm lang, buiten doorsnee 5 mm.

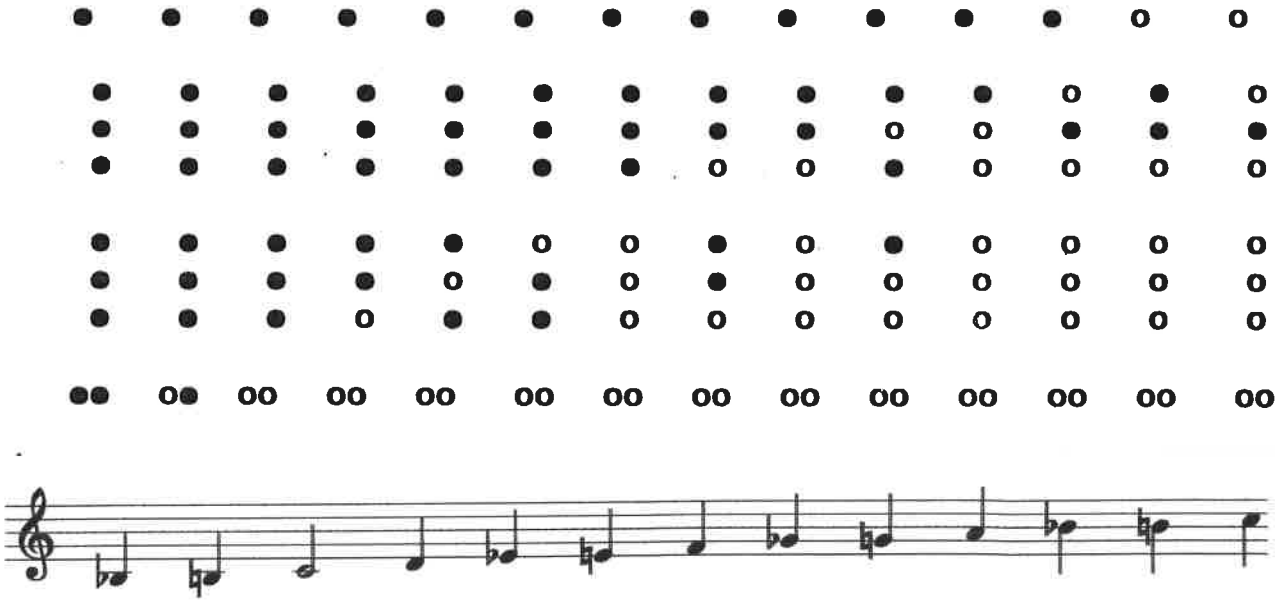
Totale lengte 44 mm /Bovenste winding 20 mm van onder /top breedte 12 mm /

taille (bij tweede winding, 16 mm van onder) 8mm

Bourdon bas G:

Stock 150 mm lang/ buiten doorsnee 25>24 mm/ boring 15 mm.
Deel a: 205 mm lang, (25-140-40 mm)/ doorsnee 24>23 mm/ boring 5 mm.
Deel b: 180 mm lang, (140-40 mm) /boring 5 mm.
Deel c: 330 mm lang, (140-190) / boring 6 mm/ buitendoorsnee top

conical pipes in C



Keep the reeds as dry as possible, that way they stay the longest time stable.

When the pipe has not been played for a longer time, the top-opening of the double reed becomes smaller, it closes because the reed-wood has dried out. This causes a soft and –in the lower register- a weak tone. With cylindrical pipes the higher tones are too high.

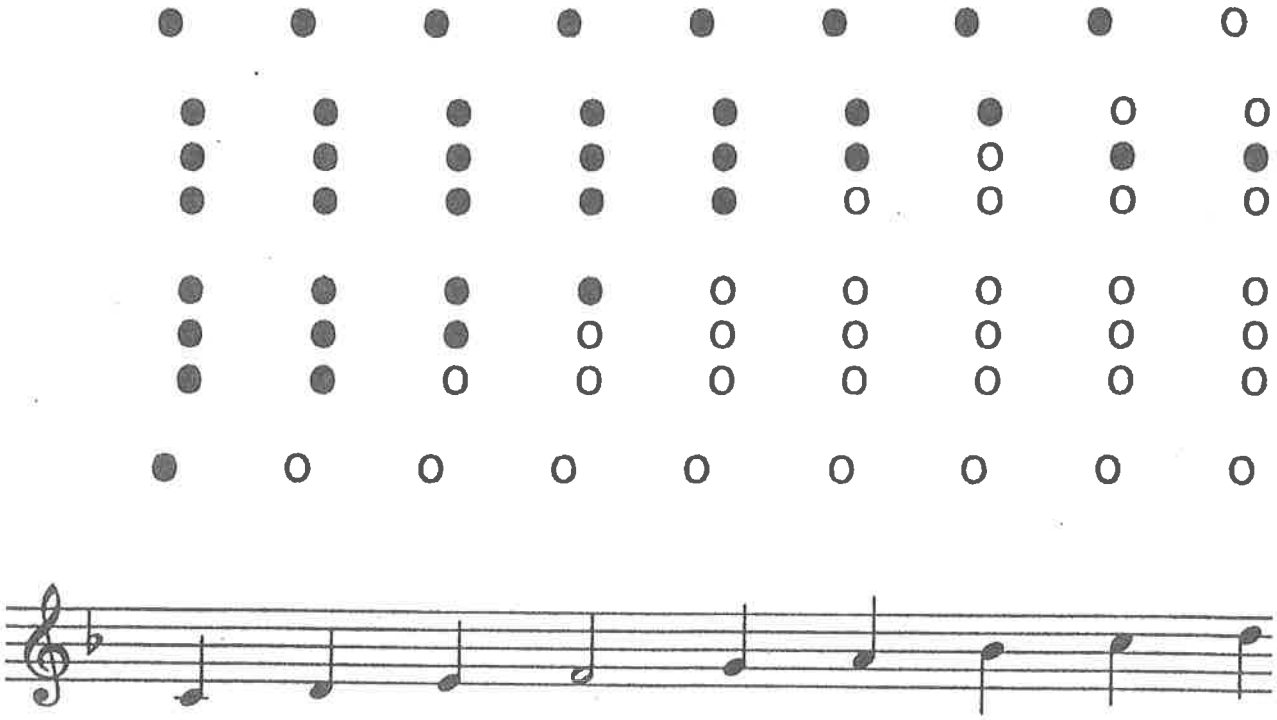
The best thing to solve this is to play the instrument for some minutes. By the moisture of the breath the reed will open again.

If this is not sufficient, take the pipe out of ist tenon and open, very carefully, the reed the upper brass winding from the sides.
In the same way one can close the top-opening by pushing the upper winding from front and back.

Single reeds (drone reeds) are made of plastic and not so sensitive. They sound (almost) always.

Paul Beekhuizen, Spaarnestraat 47, 2515 VM den Haag, Nederland. Tel.0031 70 3853213

HÜMMELCHEN



* Do not soak the reeds, let them dry. They will last longer that way.

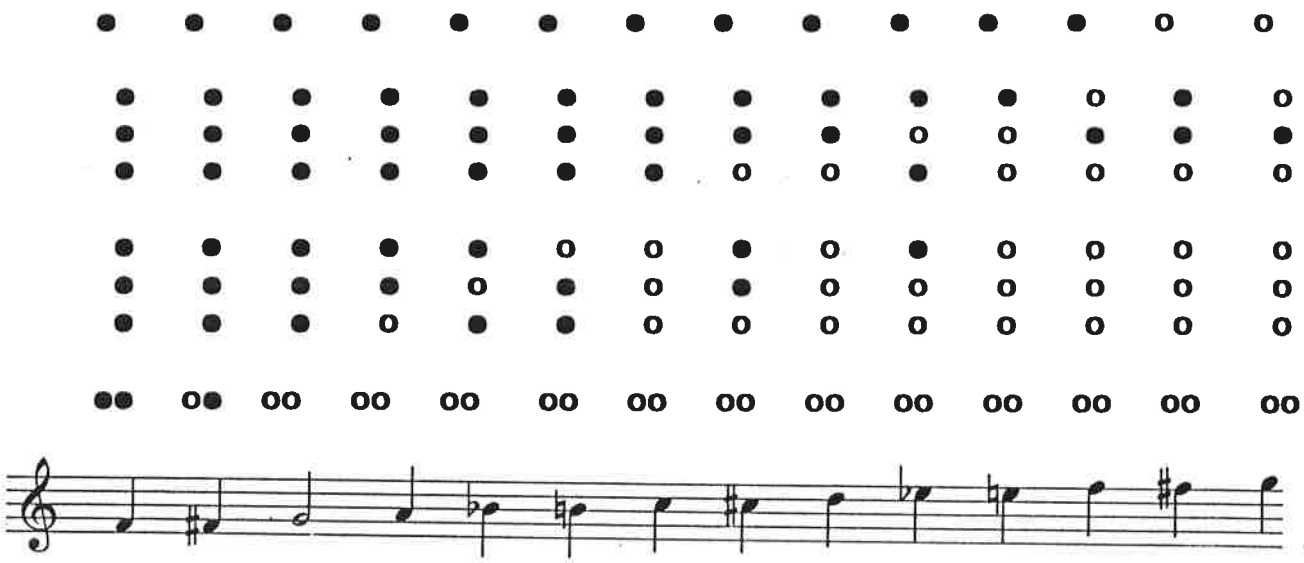
* When the pipes have not been played for a considerable time, the opening (tip) of the reeds becomes smaller -as the reeds dry out- resulting in a too soft and, for the low notes, weak tone.

* Best solution: do not pay attention to the tone quality, just play for some 5-6 minutes. The reeds will open again due to the moisture of your breath.

* If this does not work sufficiently, pull the pipe (very carefully -reeds are vulnerable-) out of its stock and open (again very carefully) the tip opening by squeezing the upper brass winding from the sides. Use small pliers.

* To make the tip opening smaller: do the same, squeezing from front- to backside.

conical pipes in G



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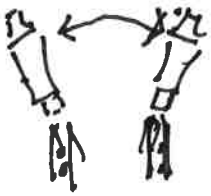
REMOVING THE CAP:

SMALL MOVEMENTS IN ONE DIRECTION UPWARDS.



TAKE CARE TO NOT MOVE LEFT-RIGHT, THEN YOU TOUCH WITH THE INNER SIDE OF THE CAP THE REED. THE REED BREAKS VERY EASYLY.

#

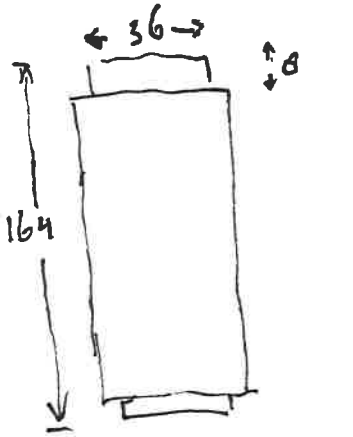
DON'T SOAK THE REED BEFORE PLAYING; IF THE REED IS TOO CLOSED, PLAY SOME MOMENTS AND BY THE MOISTURE OF YOUR BREATH THE REED WILL OPEN

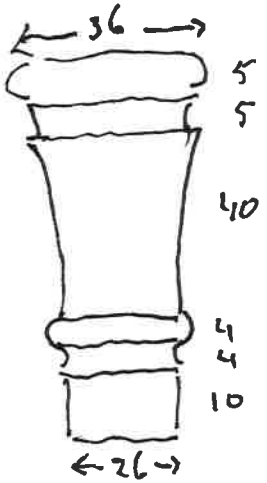
#

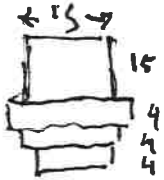
BAS RACKET 466 Hz

CORPUS 164 LANG; ø 41

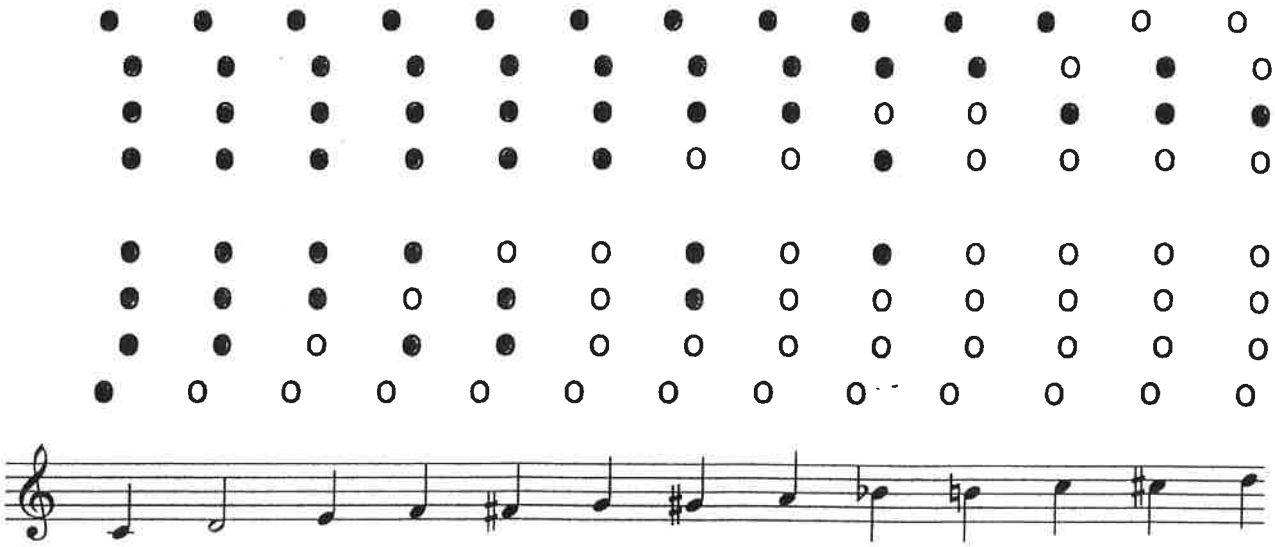
	0	1	2	3	4	5	6	7	8	9	10	11
AVSTAND:	133	143.5	57.5	43.5	137	108.5	71	43.5	127.5	52.5	55	51
	6	3.5	3.2	2.4	3.5	4	4	4	3	3	2.5	2







cylindrical pipes in D



* Do not soak the reeds, let then dry. They will last longer that way.

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* To make the tip opening smaller: do the same, squeezing from front- to backside.

Paul Beekhuizen
Historische doedelzakken- Renaissance riet instrumenten
Early bagpipes- Renaissance wind instruments

RACKET FINGERING

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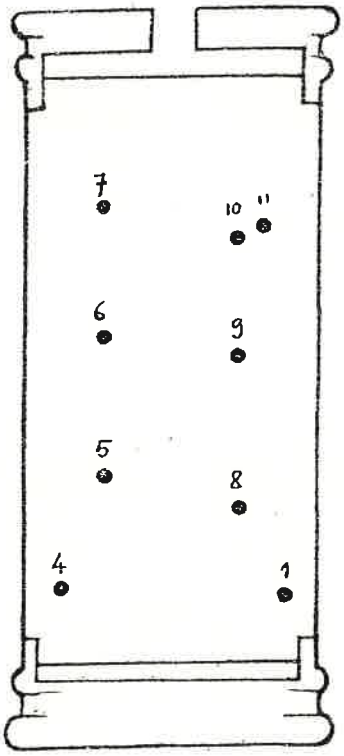
Hole 3, also at the back, is played with the right thumb.

Holes 10 and 11 are both played with the left index finger.

All holes closed give: soprano and bass	G;	tenor C
Open hole 1	A;	D
hole 2	B;	E
hole 3	c;	F
hole 4	d;	G
hole 5	e;	A
hole 6	f;	B
hole 7	g;	c
hole 8	a;	d
hole 9	b;	e
hole 10	c';	f
hole 11	d';	g



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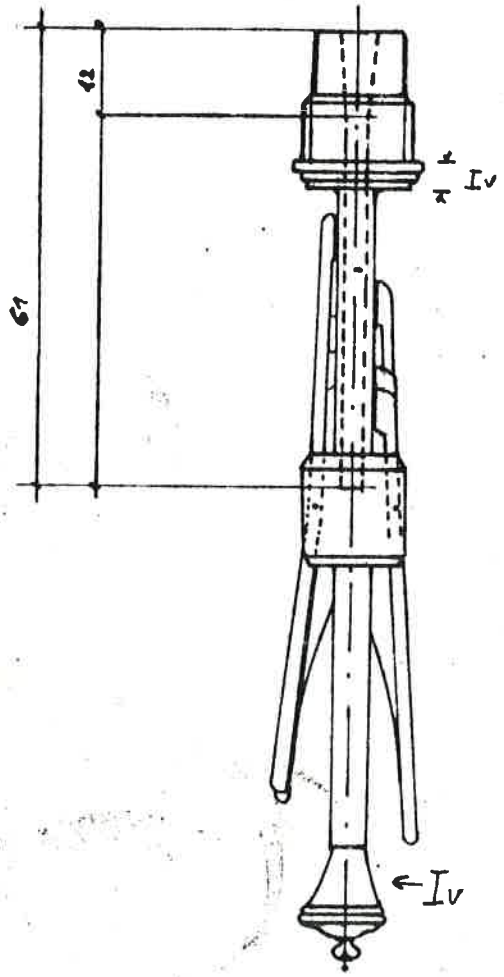
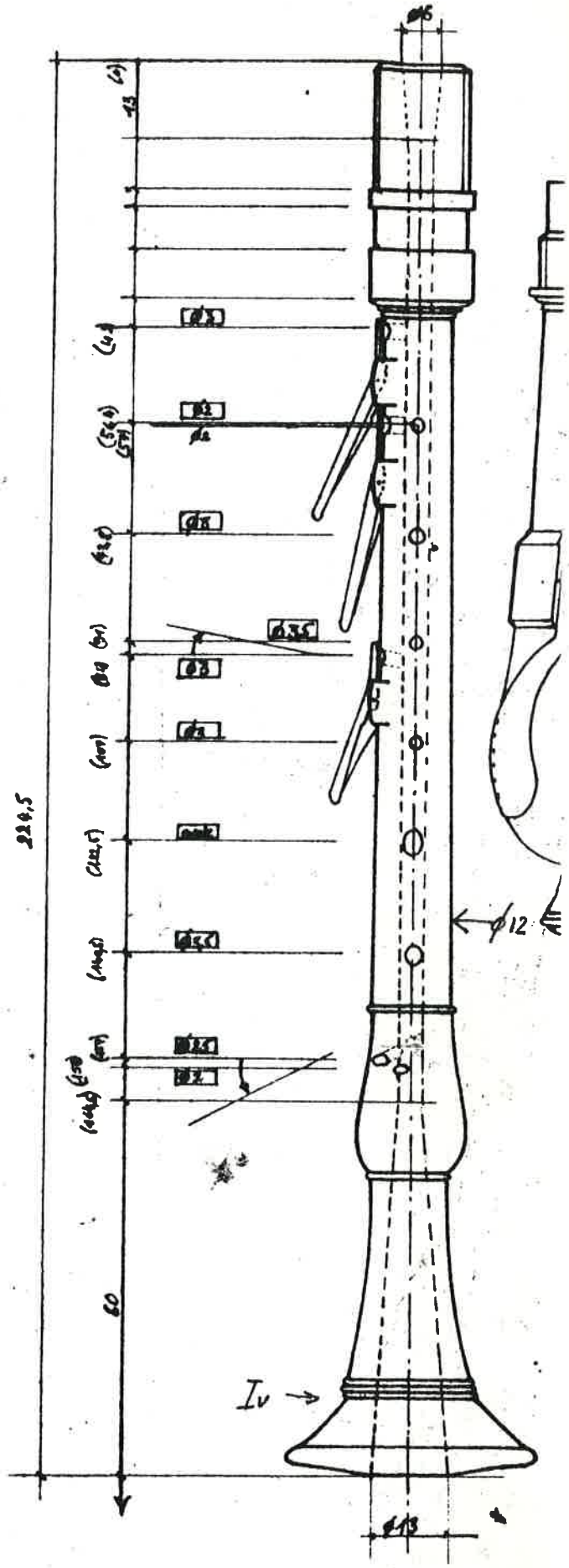
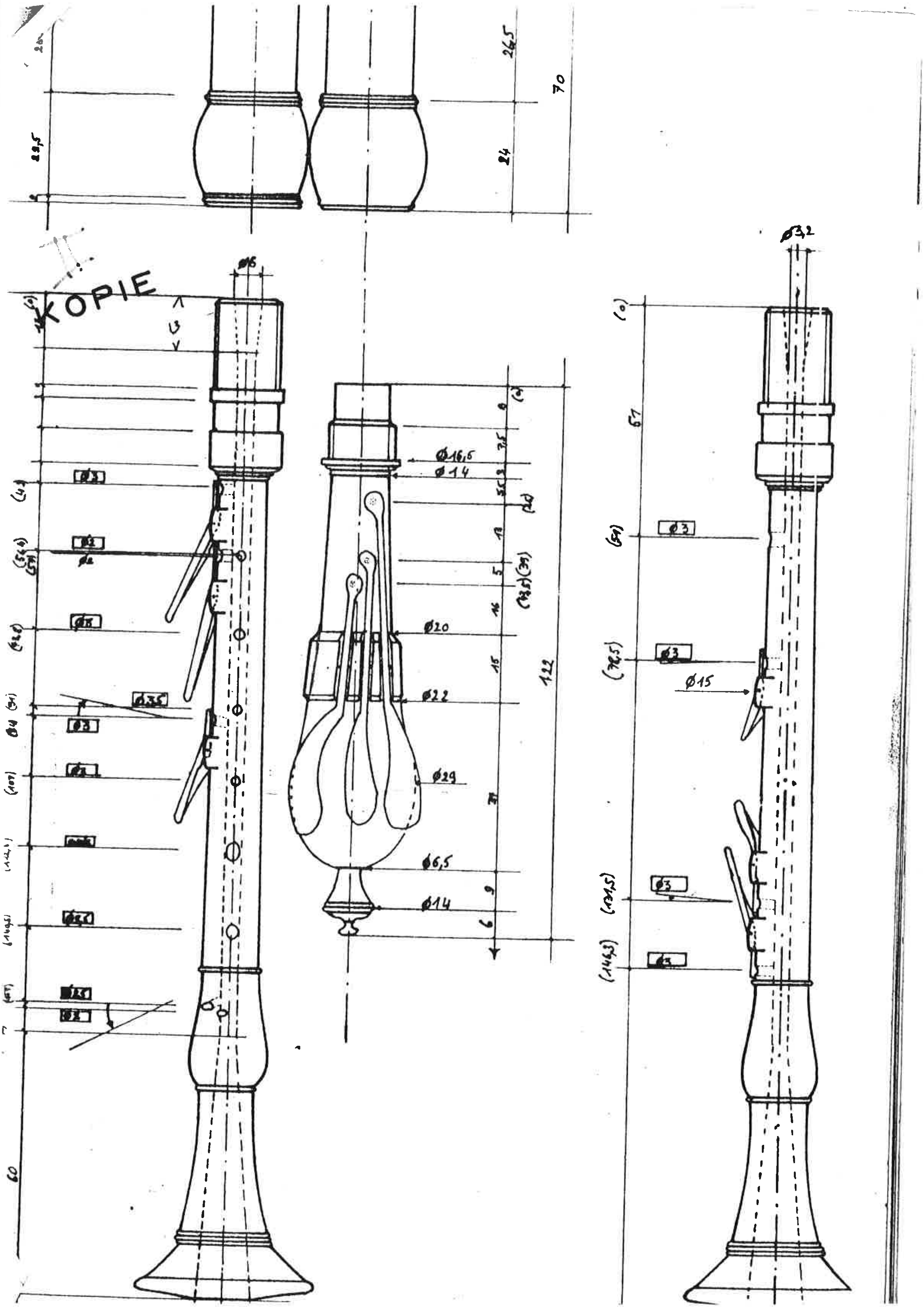
Paul Beekhuizen/ Spaarnestraat 47/ 2515 VM den Haag/ Nederland
Telefoon **31 (0)70 3853213/ ING Bank 756919
IBAN: NL75INGB0000756919/ BIC: INGBNL2A
www. paulbeekhuizen.nl paul.beekhuizen@worldonline.nl

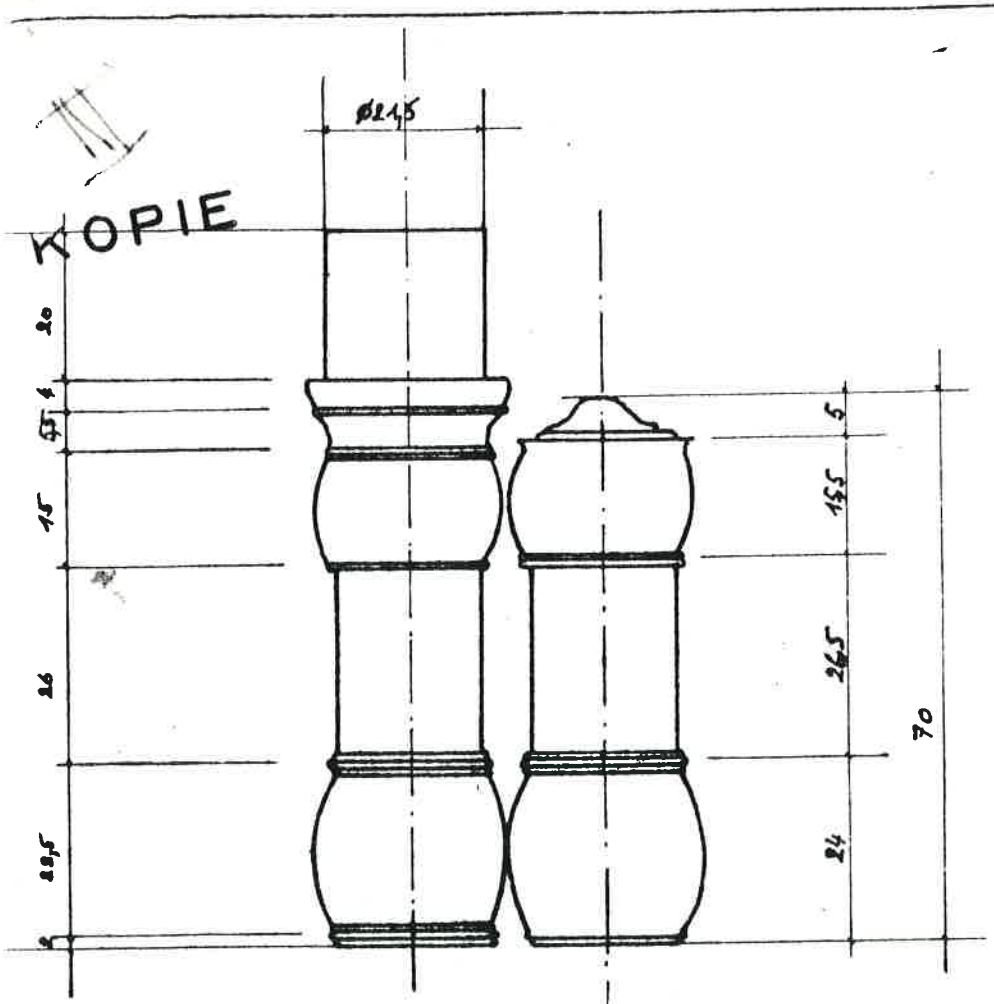
KOPIE

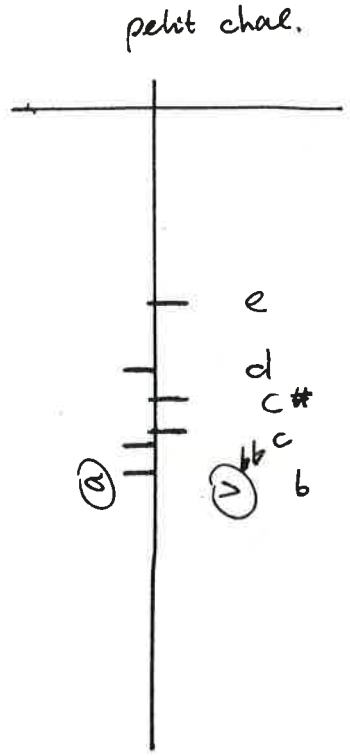


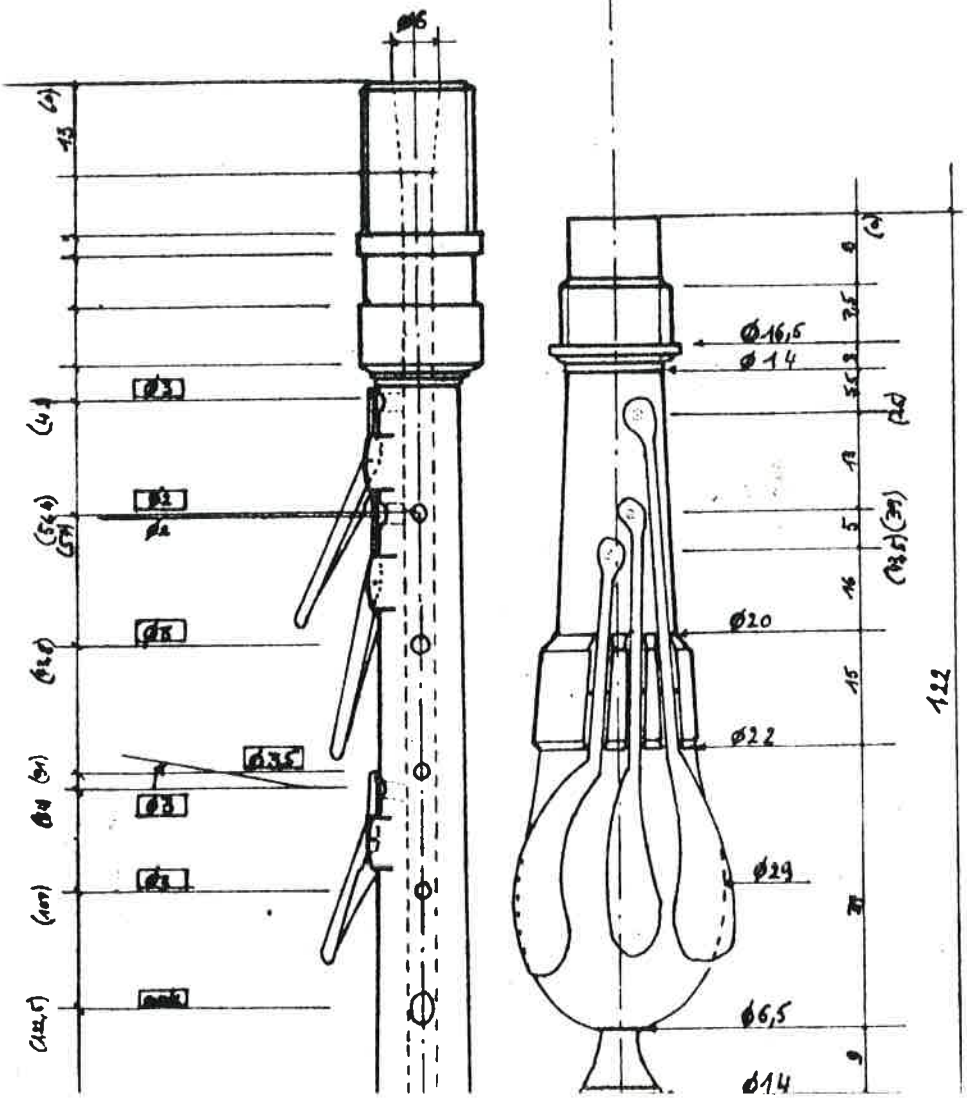


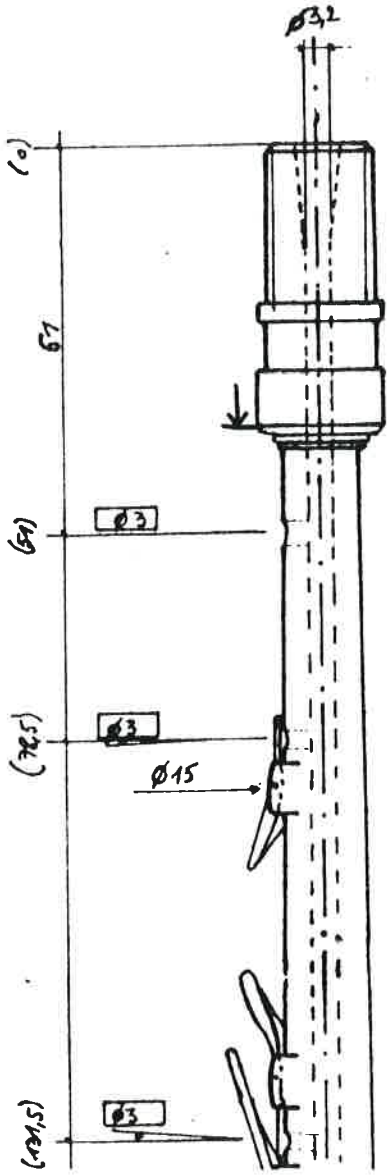

KOPIE
26,5
24
70
Ø16,5
Ø14
Ø20
Ø22
Ø29
Ø6,5
Ø14
122
Ø32
57
Ø3
Ø15
Ø3
Ø3
60

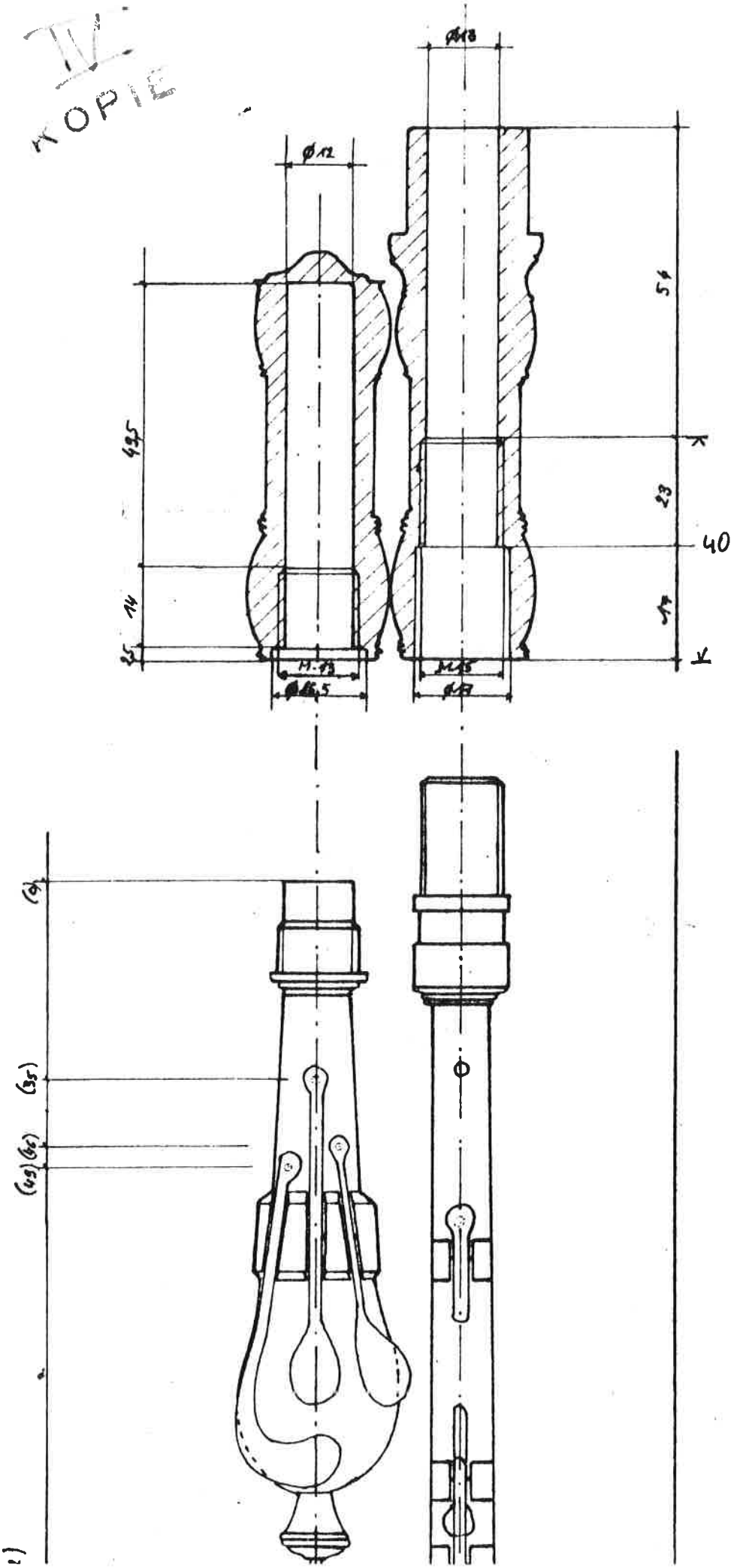
KOPIE

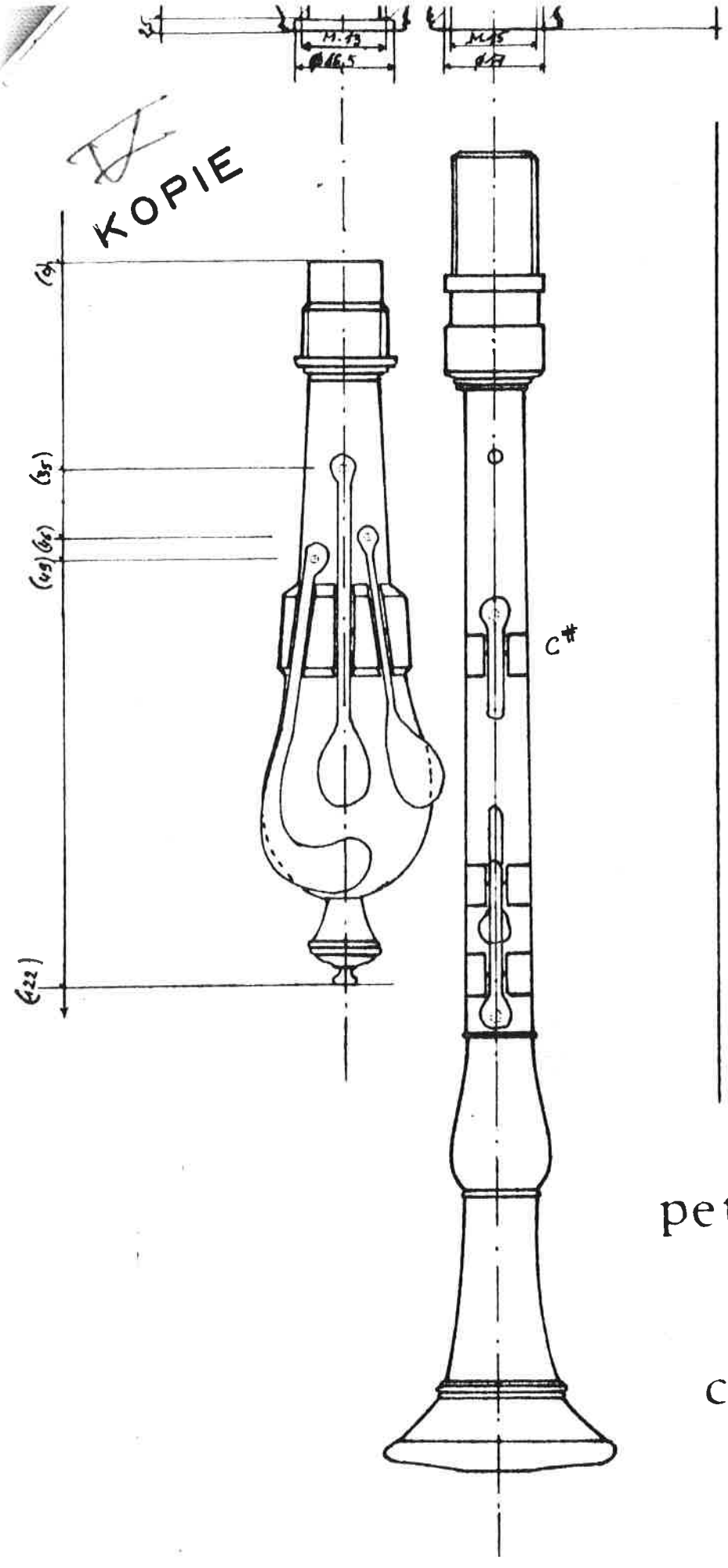

Ø21,5
20
15
26
8,5
5
155
265
24
70


petit chal.
e
d
c#
c
b


Ø6
Ø3
Ø3,5
Ø16,5
Ø14
Ø20
Ø22
Ø29
Ø6,5
Ø14
122


Ø3,2
Ø3
Ø3
Ø15
Ø3
67





MUSETTE Lo

c.n.s.mp. E.571_C

petit et grand
chalumeau

ch. laborie . paris

II

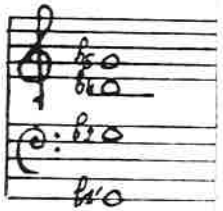
éche

↑ + Tbc + 2c ↓ = sortie Layette Sol
↑ = sortie Layette Do
♭↑ = sortie Layette Ré
ayette Sol

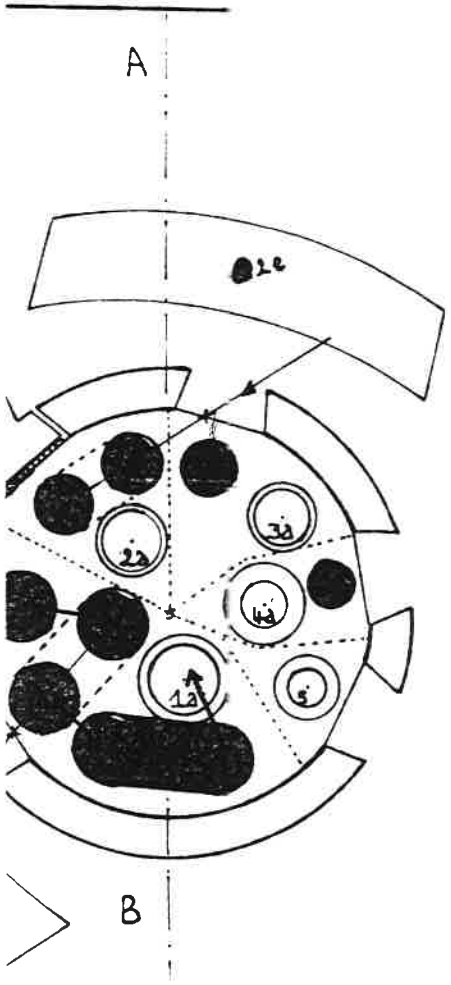
KOPIE

L = Liai
T = Liaisons
↓ et ↑ = sens de
les parties grises repré
la cire

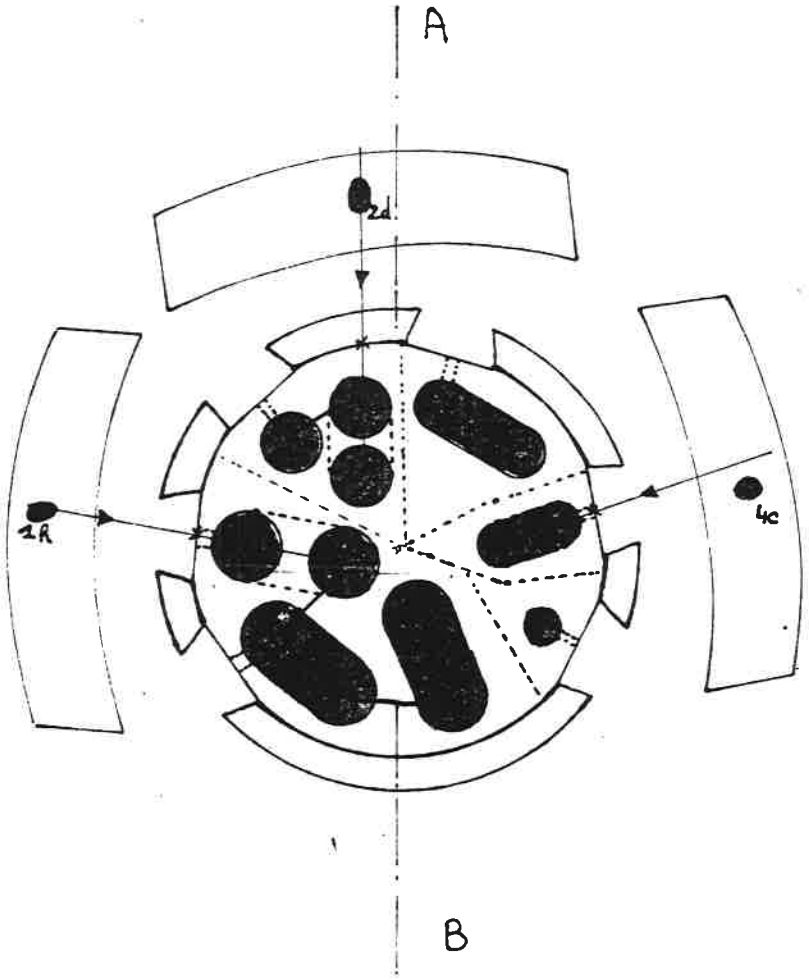
G. Ré.



ue de dessus



Schaal 1:2



vue de dessous inversée par rapport à AR

Bourdon 2 : 2a ↓ + T2ab + 2b ↑ + Tbc + 2c ↓ = sortie Layette Sol

Bourdon 3 : 3a ↓ + L3ab + 3b ↑ = sortie layette Do

Bourdon 4 : 4a ↓ + T4ab + 4b ↑ = sortie Layette Ré

Bourdon 5 : 5 ↓ = sortie Layette Sol

KOPIE

I

vue de dessus

dimensions des Canaux :

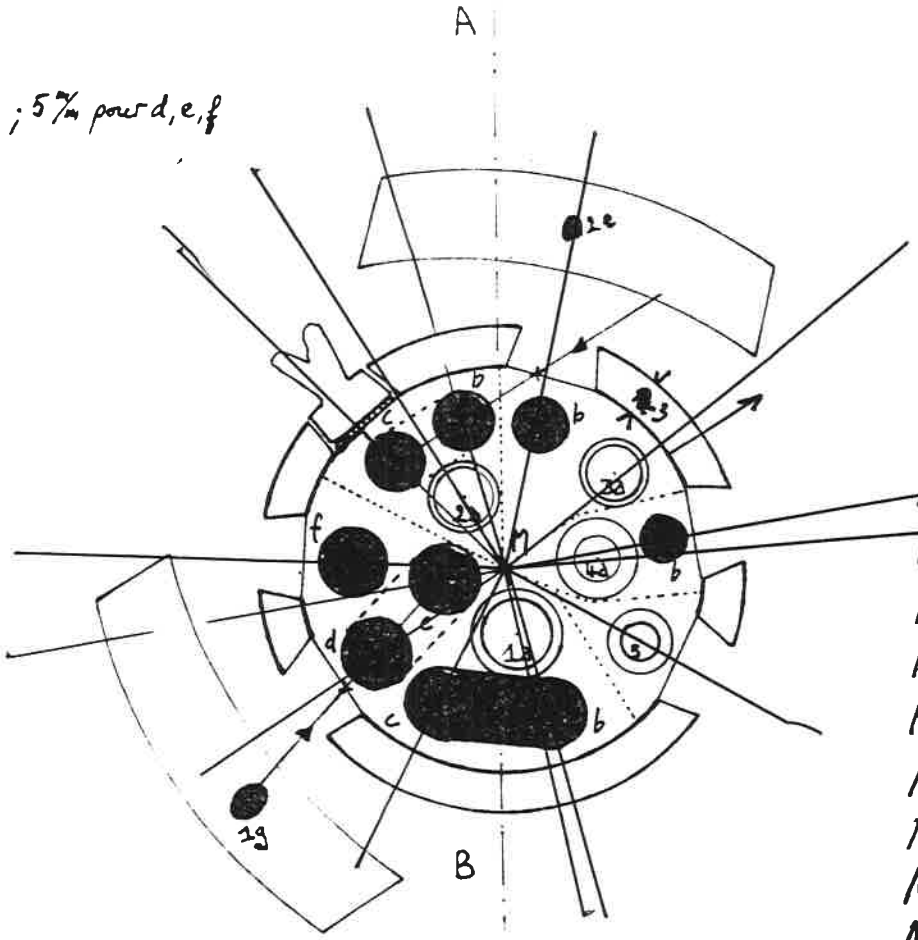
Bourdon 1 : 4,5 m/m pour a,b,c ; 5 m/m pour d,e,f

Bourdon 2 : 4 m/m

Bourdon 3 : 3,5 m/m

Bourdon 4 : 3 m/m

Bourdon 5 : 2,5 m/m



14 boring

6 layette.

M → 1a 4½ mm

M → 1b 10 mm

M → 1c 10 mm

M → 1d 10½ mm

M → 1e 4 mm

M → 1f 10 mm

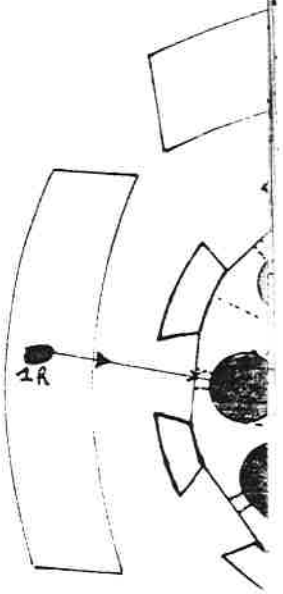
M → 2a 5½ mm

M → 2b 10½ mm

M → 2c 10 mm

M → 3a 10 mm

M → 3b 10 mm

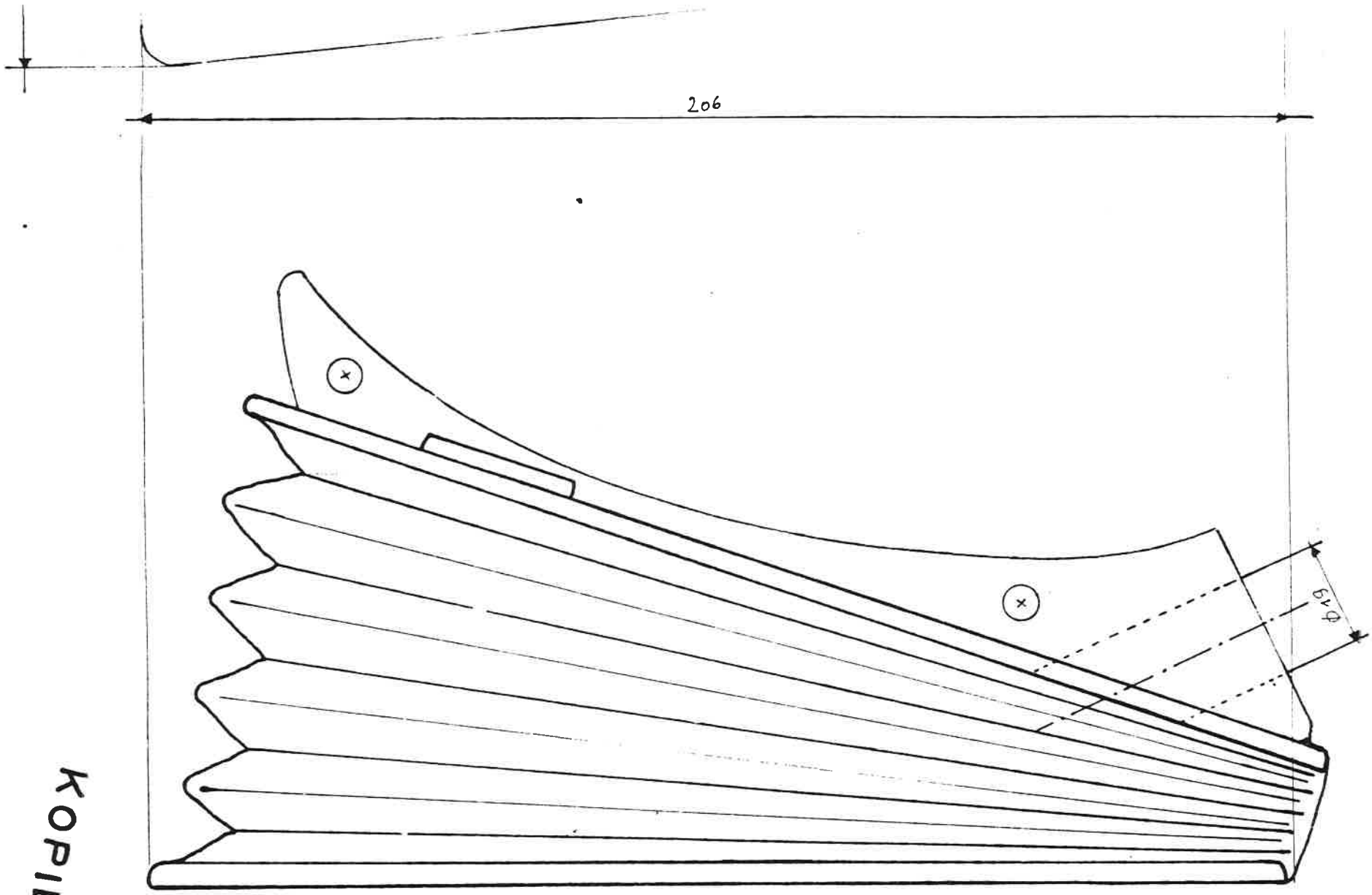


M → 4a 6½m

M → 4b 11 mm

M → 5 10½ mm

vue de



KOPIE

IV

ordon 1 : 1a ↓ + L1ab + 1b ↑ + L1bc + 1c ↓ + L1cd + 1d ↑ = sortie layette Do

proposition de

fonctionnement du bourdon

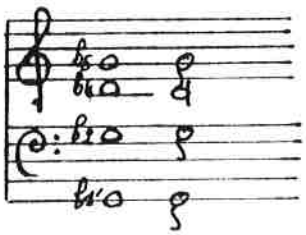
L = Liaisons par le fond ou le dessus

T = Liaisons par canal transversal

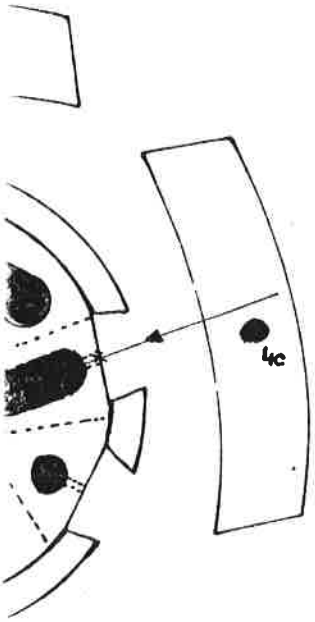
↓ et ↑ = sens du vent dans les canaux

les parties grises représentent les canaux bouchés à la cire

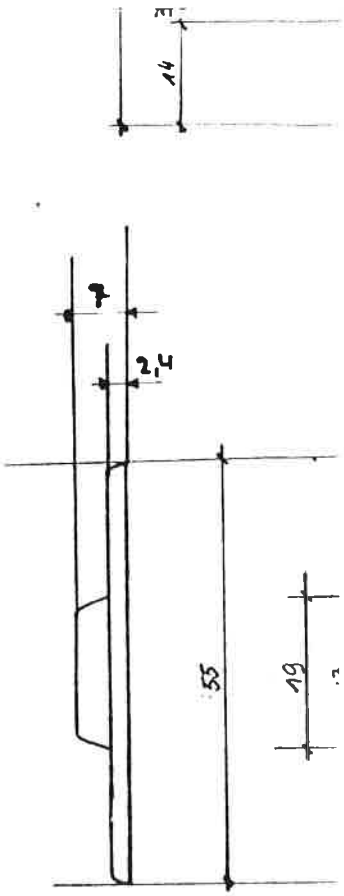
G. Ré. Sol



C. Sol. Ut



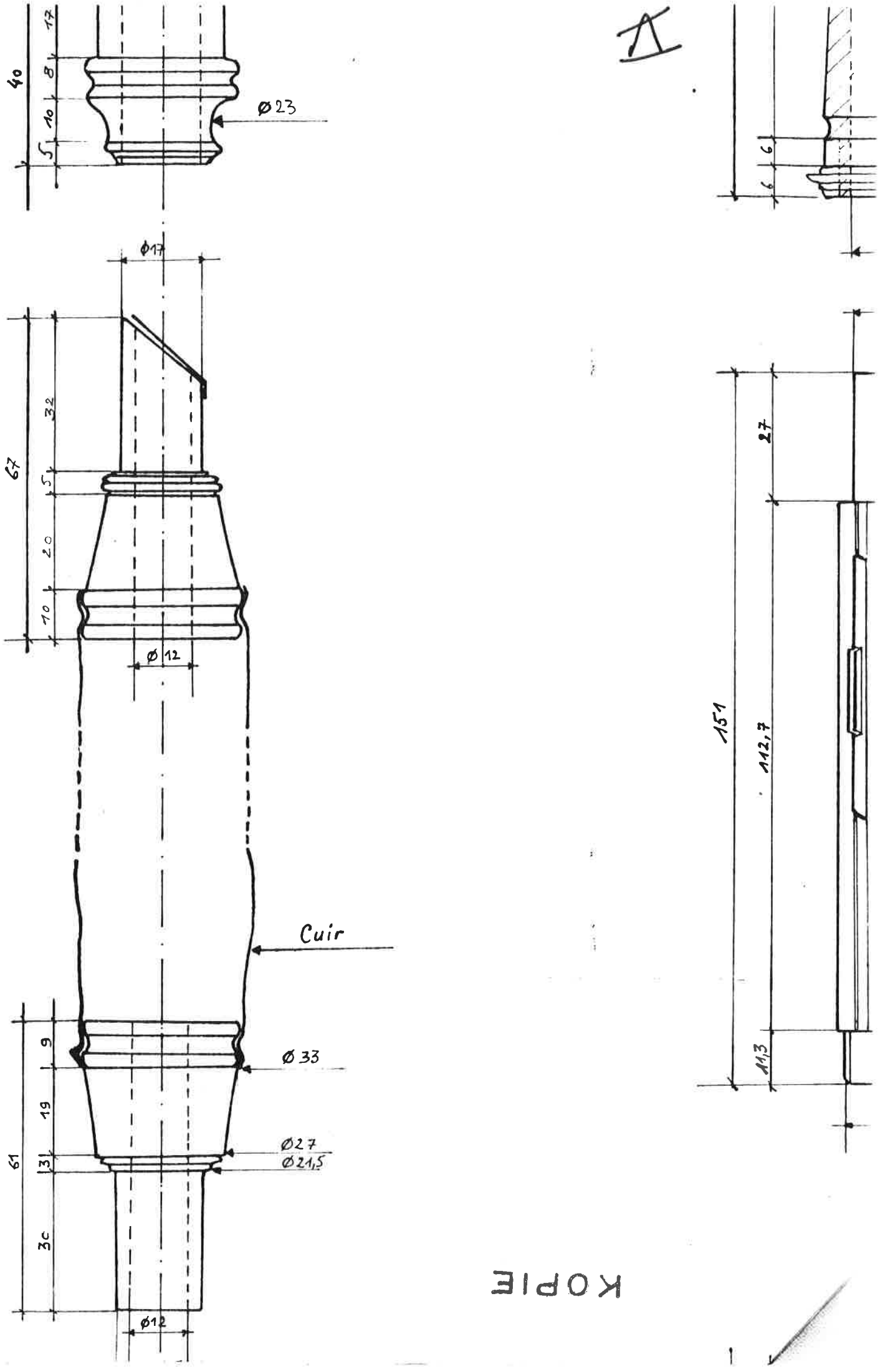
b 1	sol	un peu haut c
b 2	sol	(const.)
b 3	c	
b 4	d	
b 5	sol	(const.).



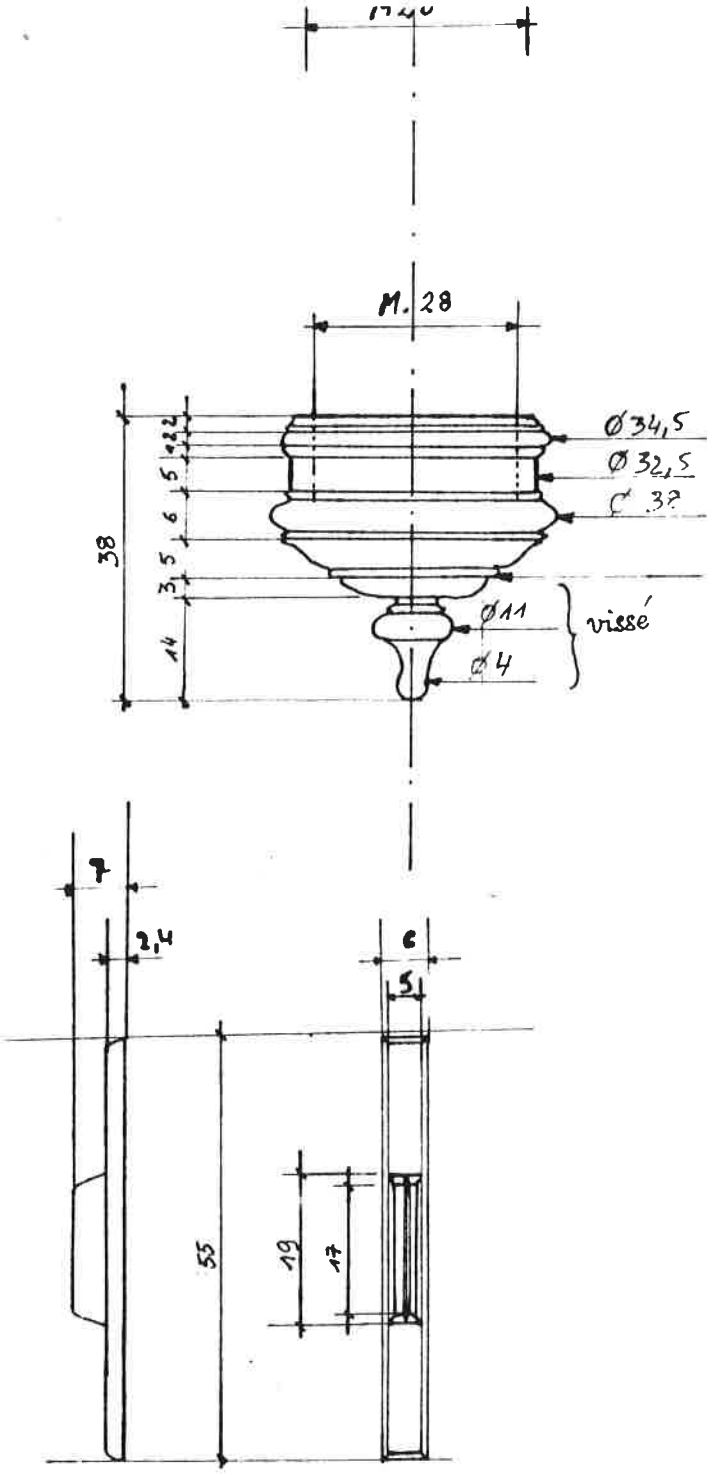
Layette

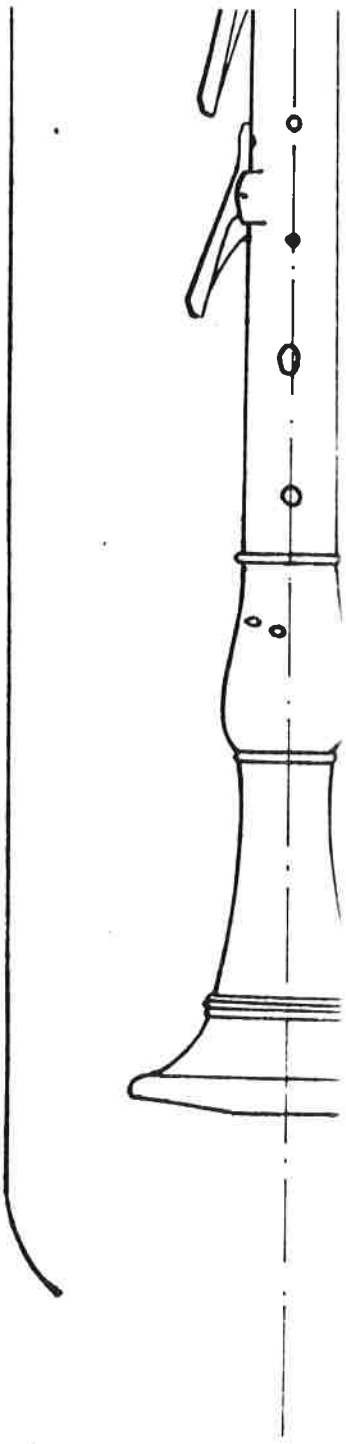
versée par rapport à AB

(échelle 2)


40
17
8
10
5
Ø23
Ø17
67
32
5
20
10
Ø12
Cuir
61
9
19
3
31
Ø33
Ø27
Ø21,5
Ø12
6
6
151
27
112,7
11,3
A

KOPIE





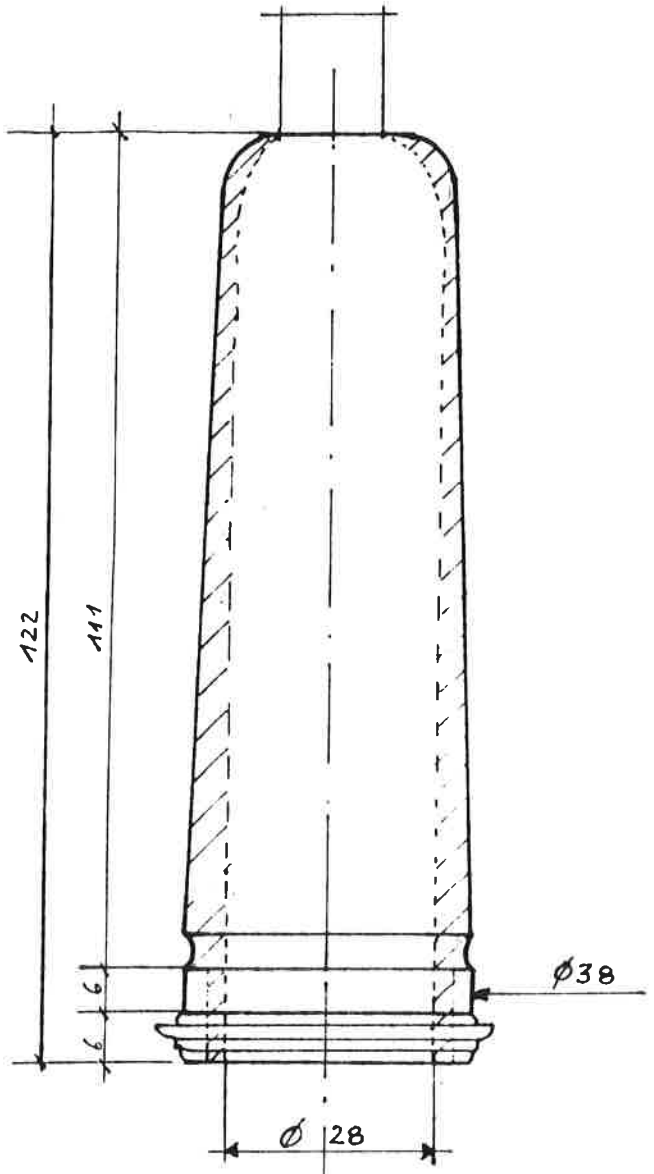
Layette

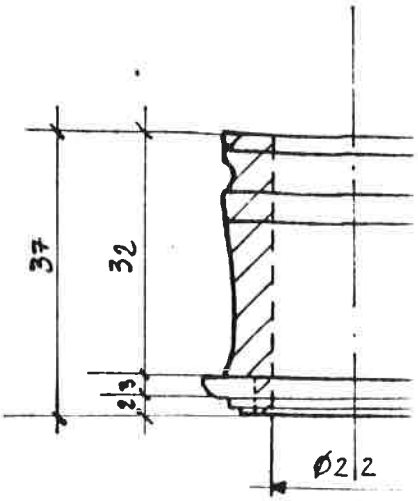
KOPIE

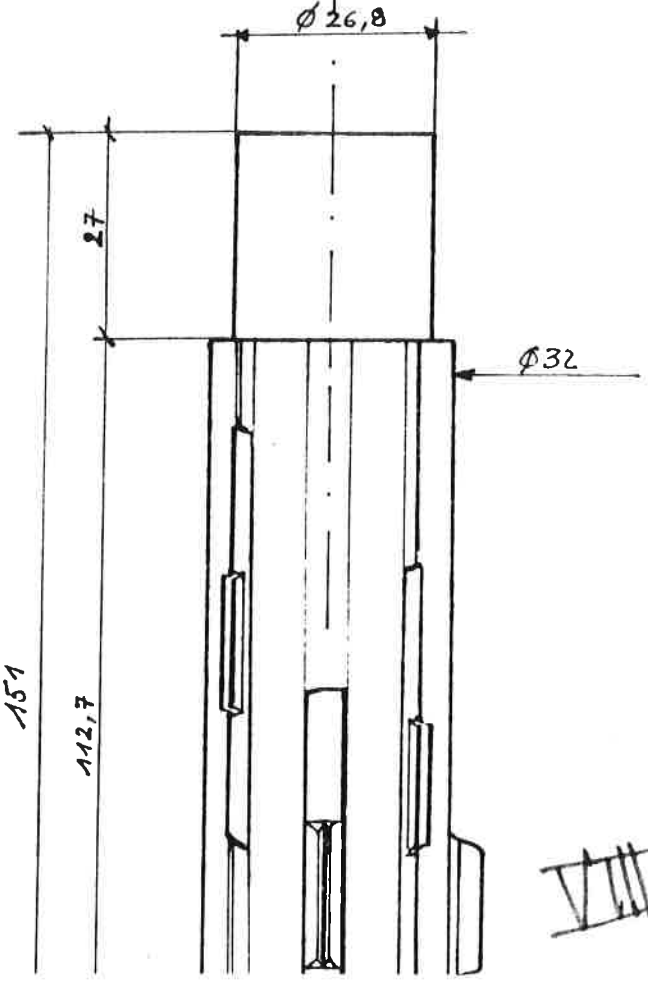
KOPIE

VI

KOPF
Longueur sifflet 55 mm.
Voir détails sur Feuille II
M28
11,3
112,7
151
27
Ø26,8
Ø32
55
M. 28
Ø34,5
Ø32,5
Ø32
Ø44
Ø4
virole
38







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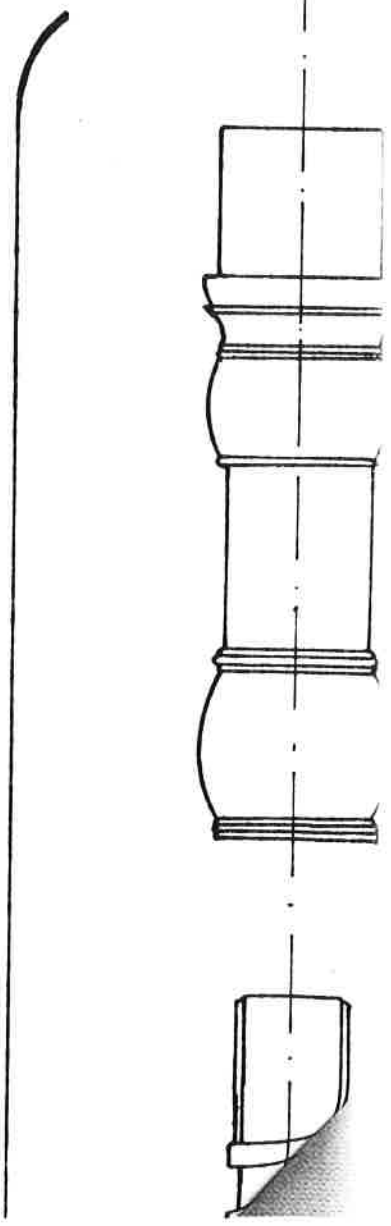

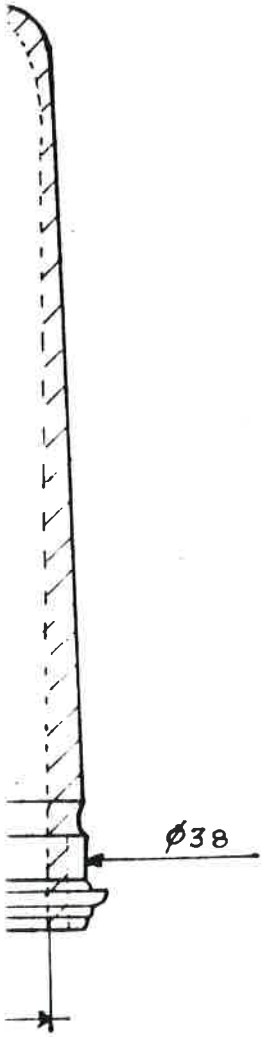

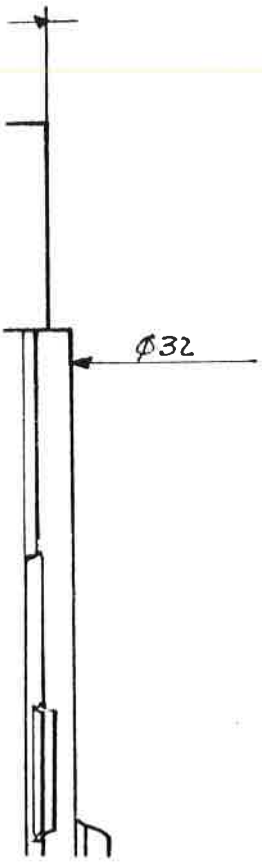

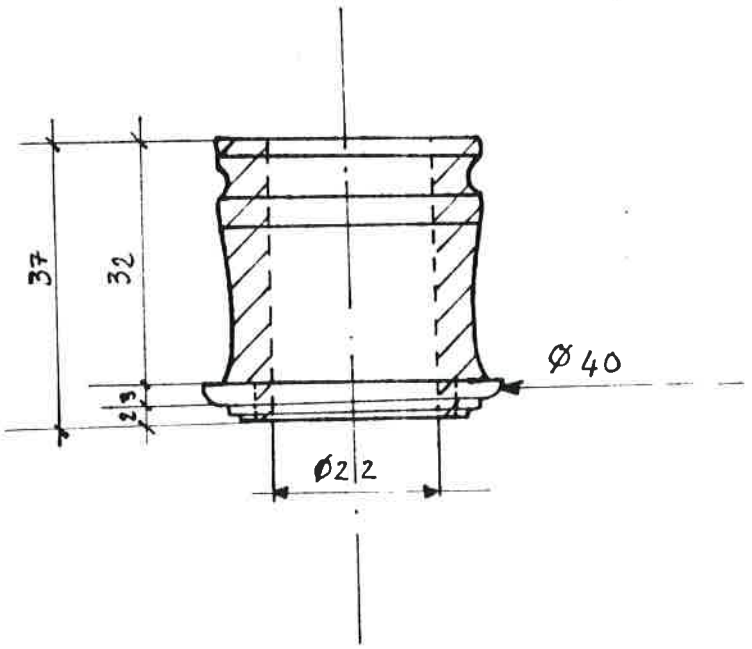

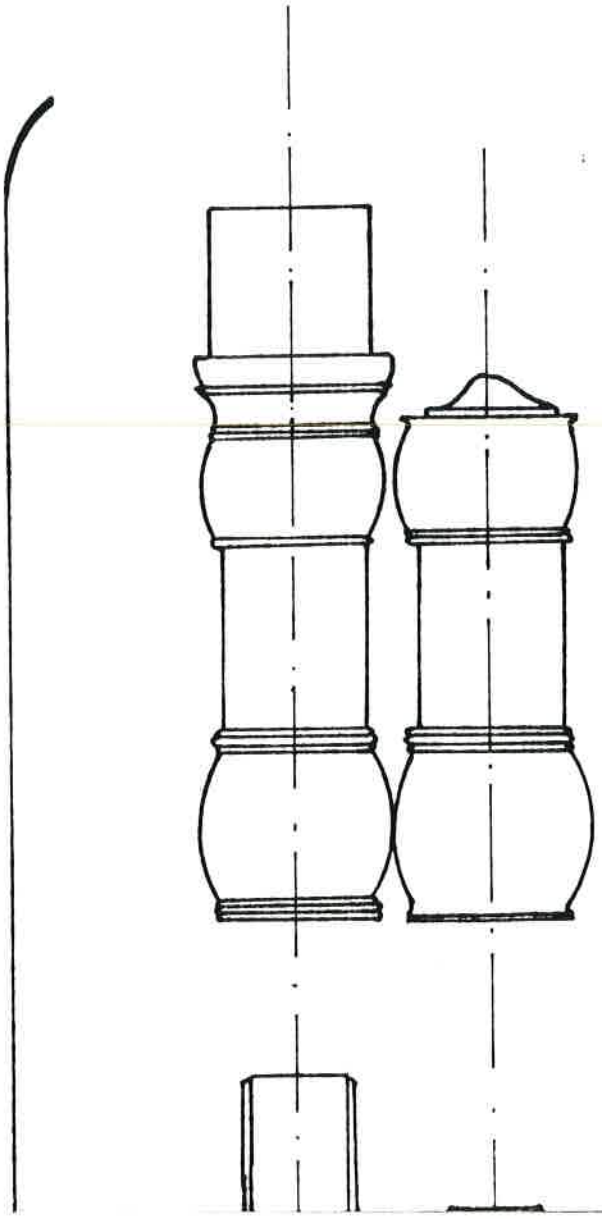

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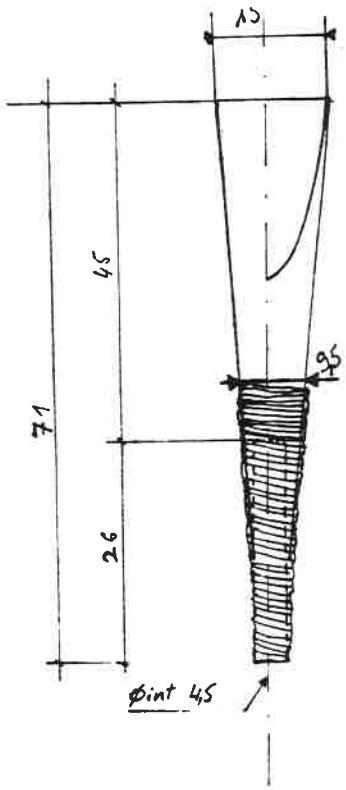
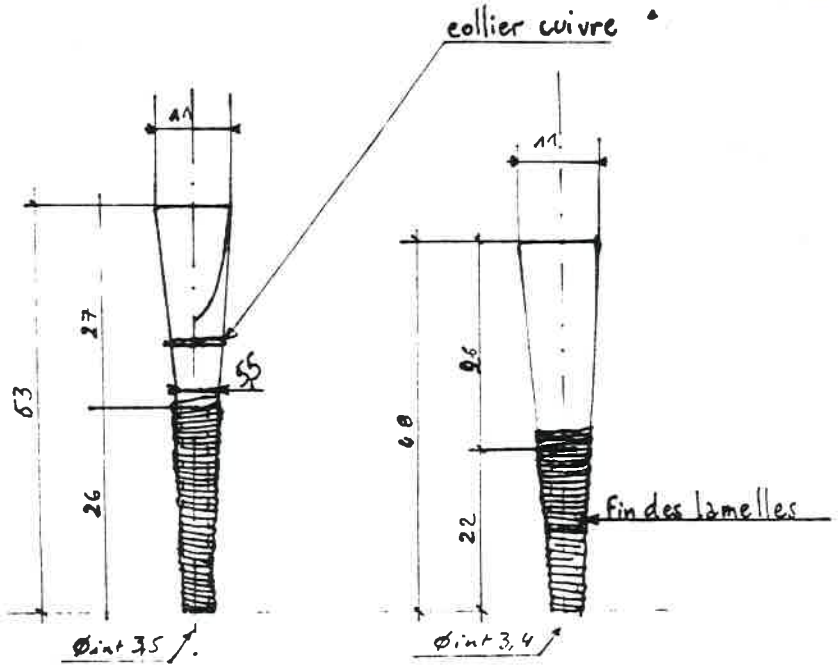
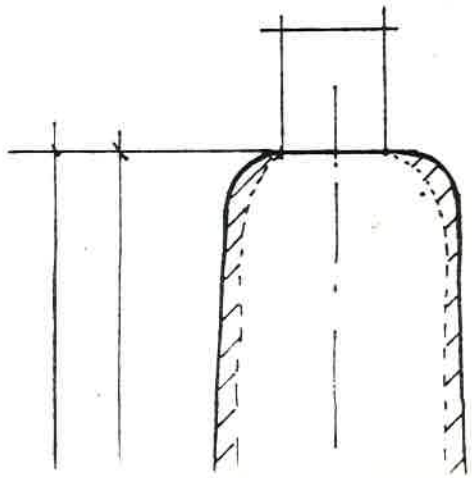
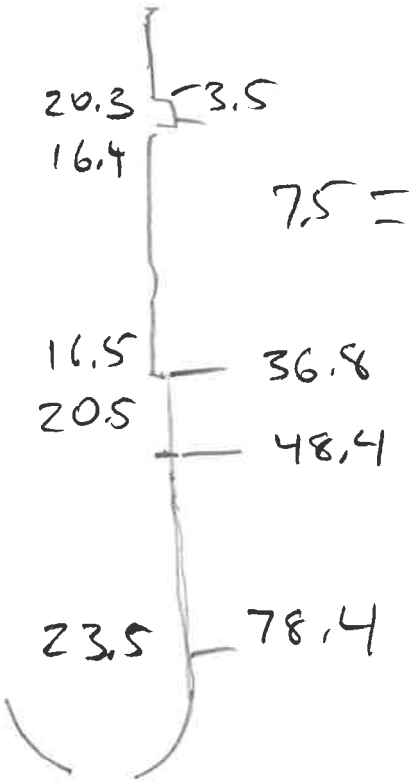




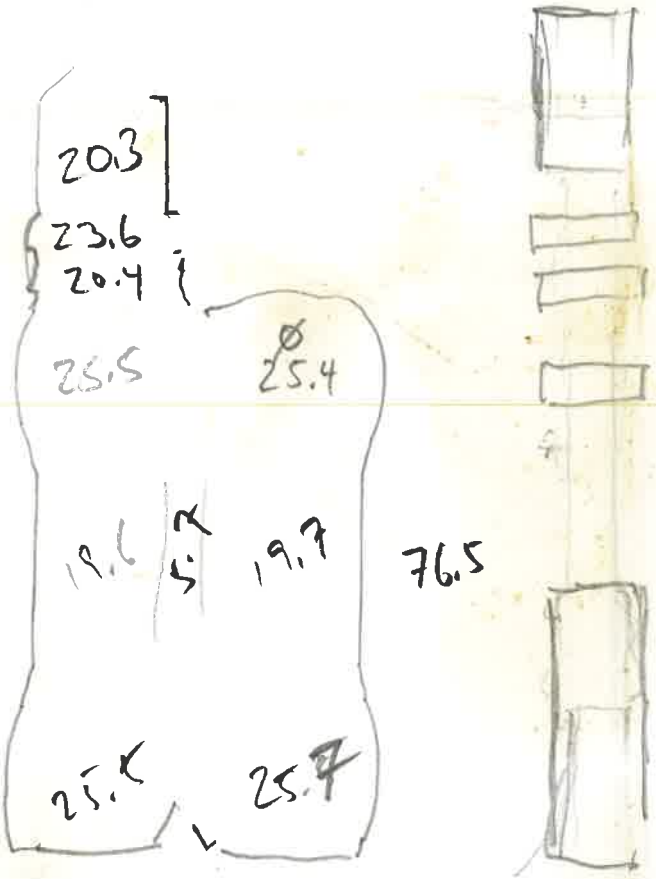
gr. cbal. ??

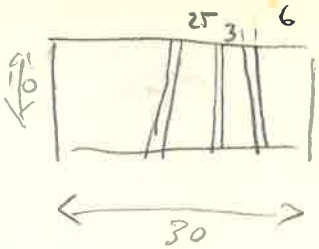


tenon 12.1
TL 101.4
SL 89.9

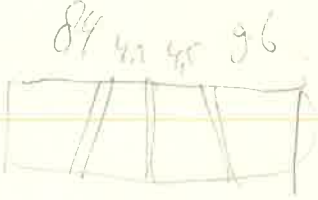


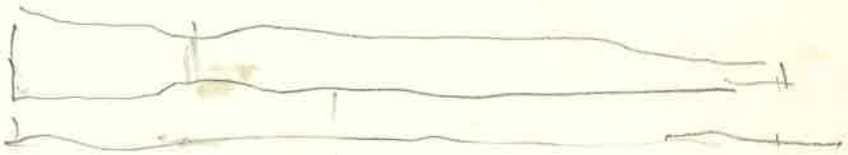
tenon 16.5
TL 101.3 / 76.3
SL 84.8




25
3.1
6
90
30

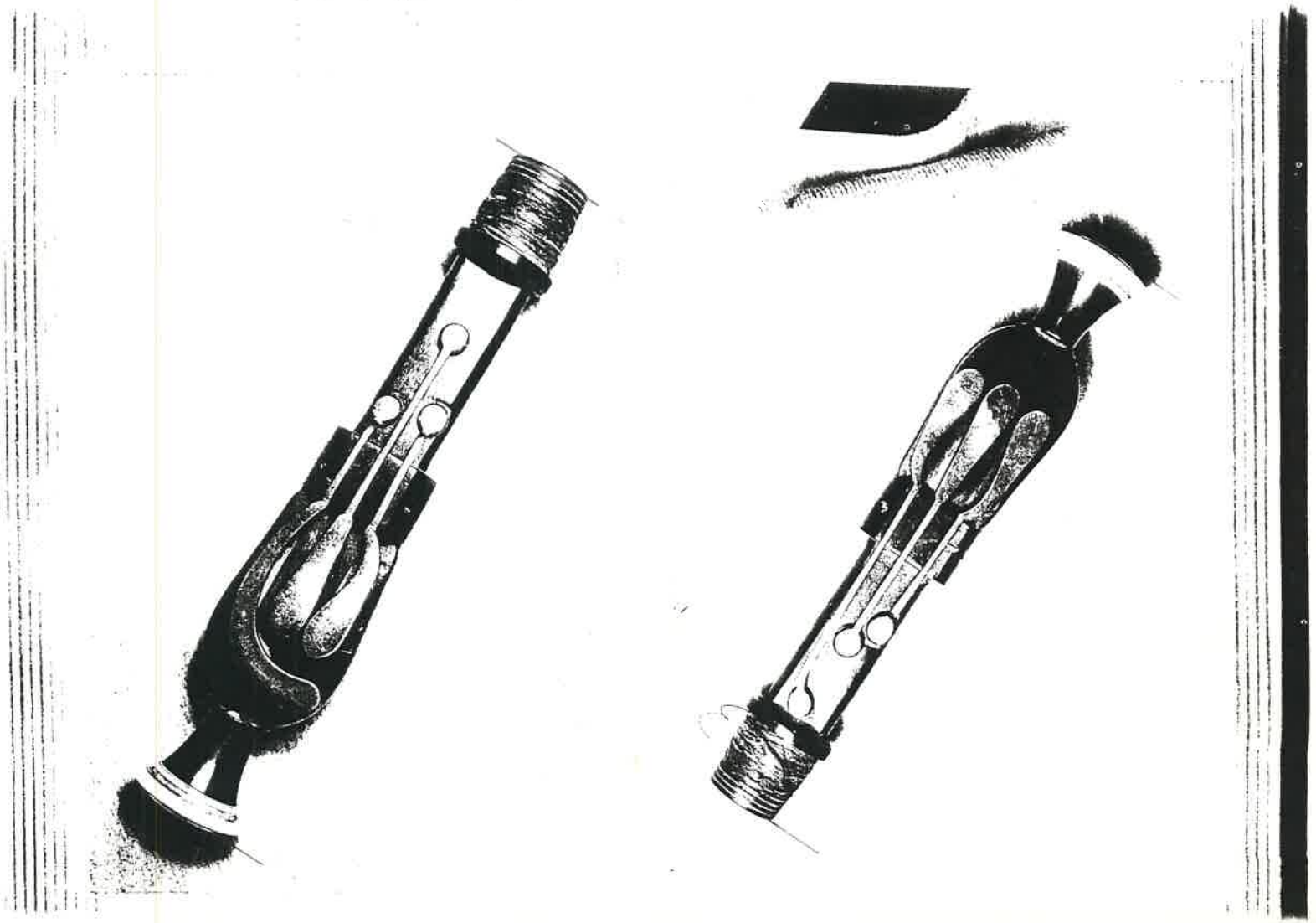
d = 86°
b=94°
b=91°


84
4.1
4.5
96



ox/ort		Mýr
d	19.5	18 / 23.5
c	32	35
b	33	38
b^b	38	42
a	46	47.5
d^b	49	50

g (a' 415) 1:1



Layettes

Viewed from drone stock end.

Black leather on tracks; on coulisses
Ivory sliders.

Length of the slots

A 108–162 → g 88.56–132 ← 59.8 →

B 43–61, 78–98 → c/d 35–50 · 64–80

C 41–91 → g' 34–~~75~~

D 41–93 → c 34–~~75~~

E 40–95 → c 33–75

Sole covered with paper or very thin skein. Similarly the stock tenon underneath lapping thereon.

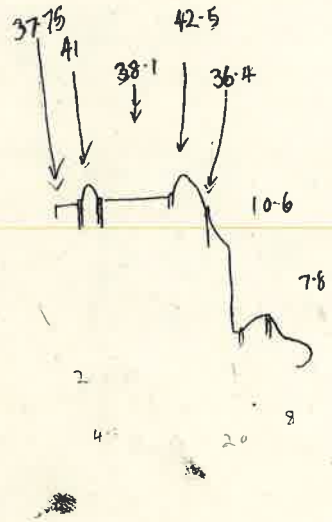
Bourdon Low 179

Stopped ~~Reed~~ Tenon Length 12 mm. ⌀ 30.9, ~~No apparent taper~~; No taper combed in mm.

Reed tenon L. 36 · 31 "

Body L 130 36.8

Drone stock depth 132



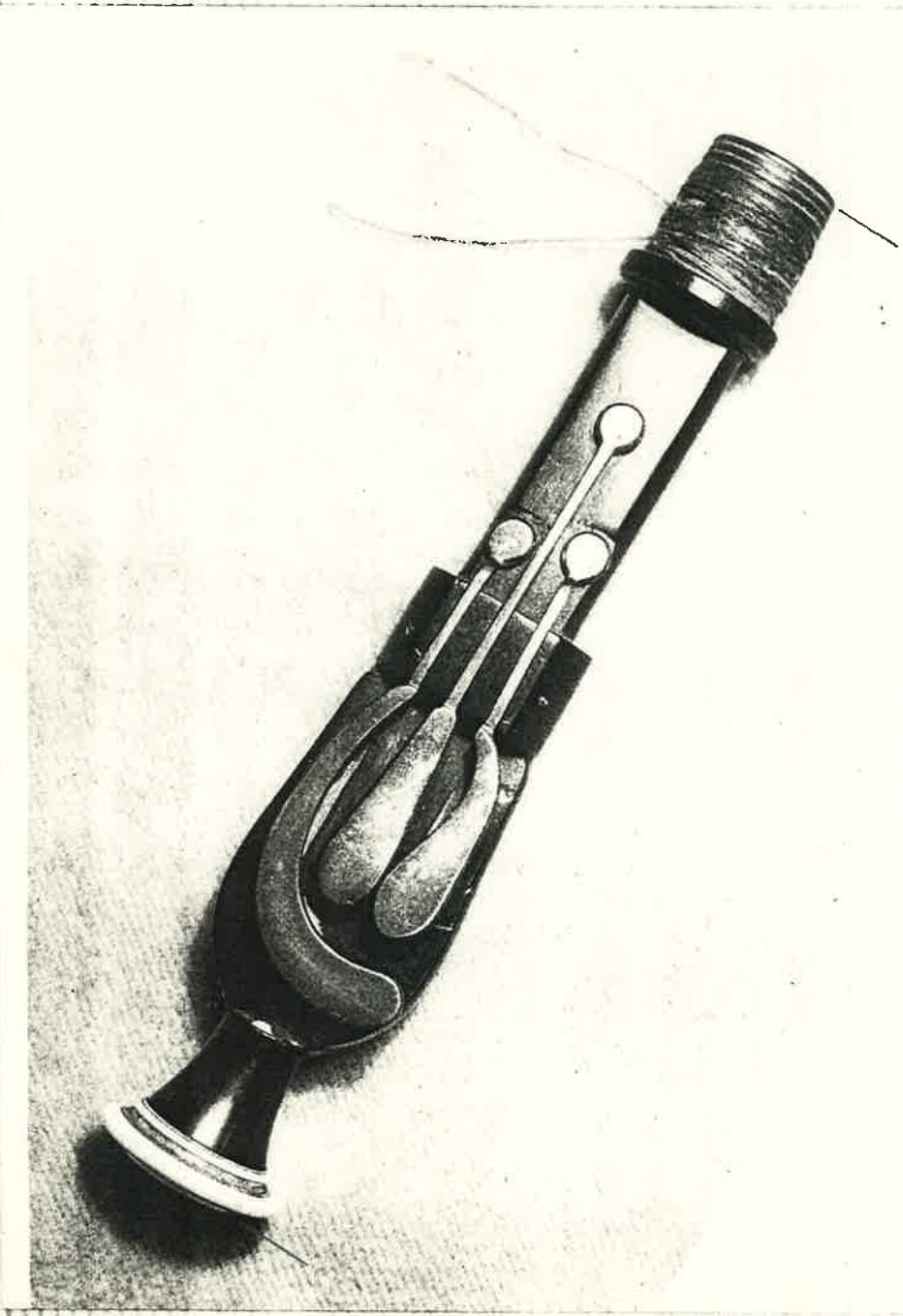
17.1

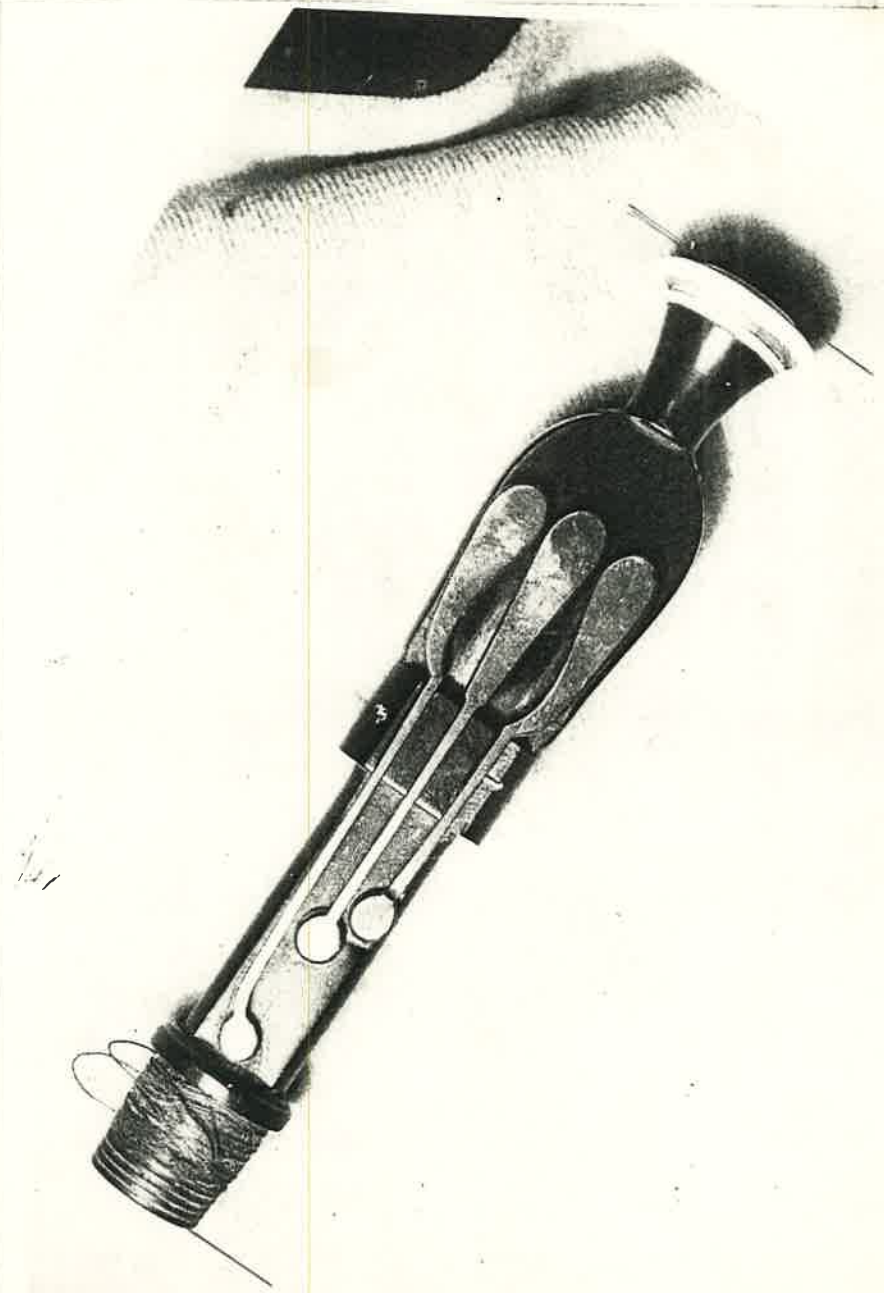
Depth of cap 13
I.D. Crests of thread 31.5.

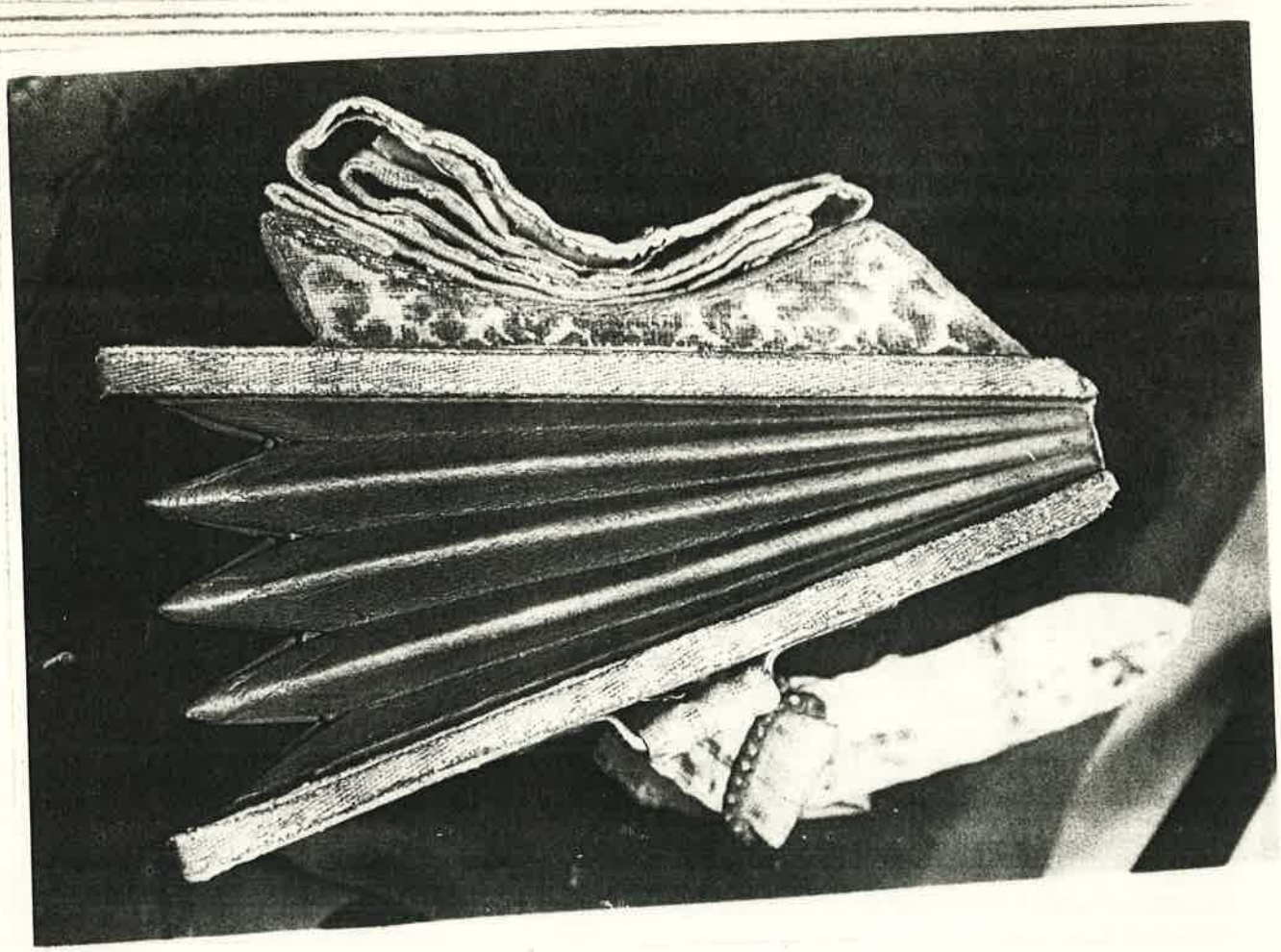
132 Depth.

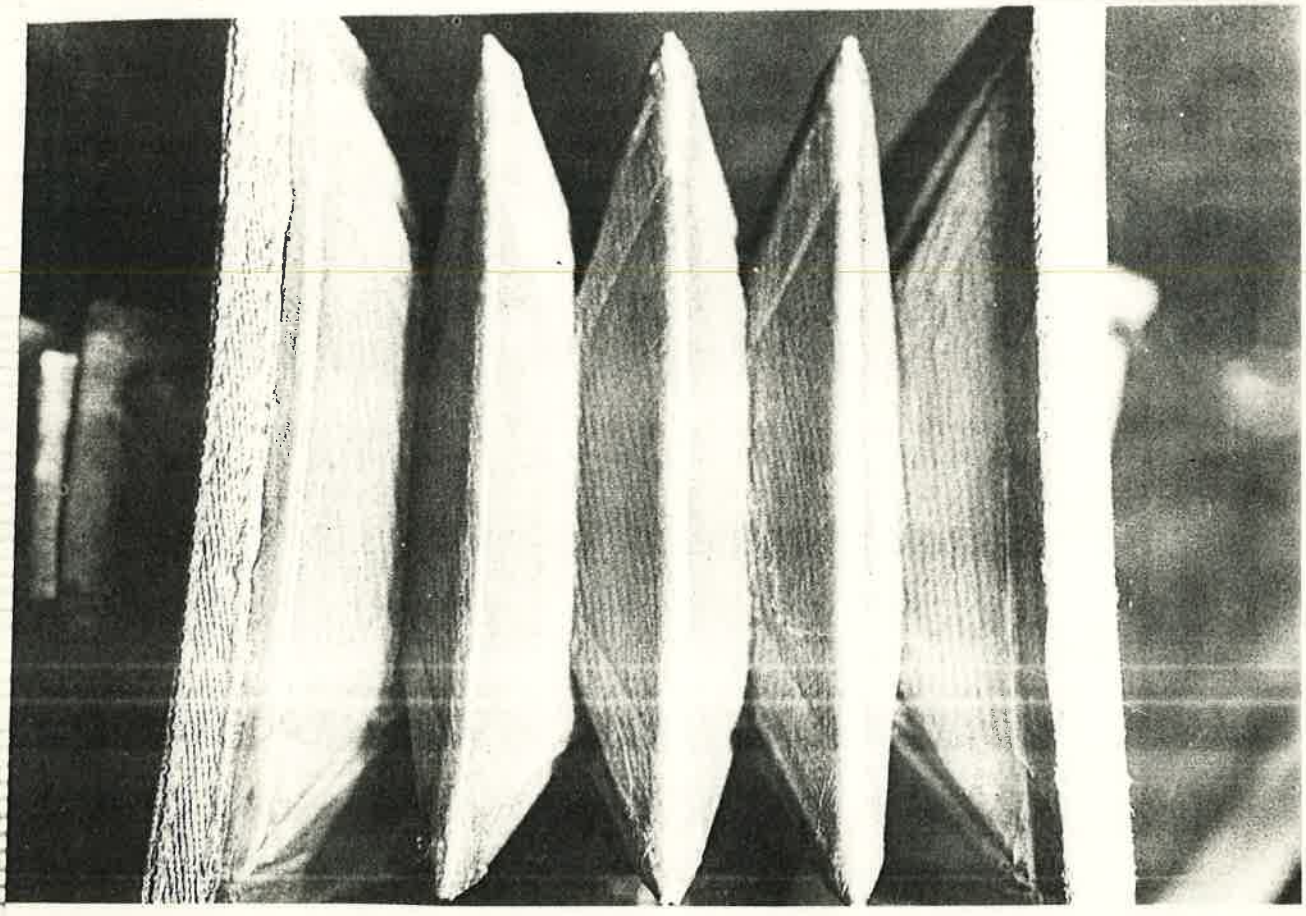
36 reed tenon.

Available reed length is 96.









BOURDONS:

G - C : EERSTE 3 BORINGEN 4.5 MM ϕ, LAATSTE 3 5.2 MM ϕ
(BASSE) VERBINDING TUSSEN BORINGEN 5 + 6 28 MM. DIEP.
RIET: 65 MM LANG, (27 + 38) TOP BREEDTE 16 MM, STIFT ϕ5

g'
(DESUS) 2 BORINGEN 3 MM ϕ, VERBINDEN OP 95 MM VAN ONDER
(STOPJE WEG WERKEN IN COULISE)
RIET: 32.5 LANG (B + 19.5) TOPBREEDTE 10 MM - STIFT 4. ϕ

g
(TAILLE) 3 BORINGEN · 3.5 ϕ. VERBINDING TUSSEN 2 + 3 OP 20 MM VAN
ONDER (LIGT ONDER DE GAREN WINDING)
RIET: 45 MM LANG (20 + 25), TOP BREEDTE 11.5 MM, STIFT ϕ 4

c/d
(HAUT-CONTRE 2 BORINGEN 3.5 MM ϕ. UITGANGEN: c VAN 30 TOT 50 VAN ONDER
d VAN 65 TOT 80 VAN ONDER
RIET 45 MM LANG - (20+25) TOP BREEDTE 12 MM - STIFT ϕ 4

ALLE LAYETTES ZIJN 50 LANG, ALLEEN LAYETTE c/d is 55 MM.

GRAND CHALUMEAU

TOTALE LENGTE 217 MM, BORING 3.5 MM ϕ
INZET IN TENNON: 23.5 MM
VERDER OP FOTOCOPIE, ALLEEN A GAT (GAT 6) MAG 1½ MM HOGER.
HET A GAT (GAT 5) HEEFT EEN ϕ VAN 3.7 MM, STERK ONDERSNEDEN EN
NAAR BOVEN TOT OVAAL GEVIJLD.
DE BEKER RUIMEN MET RUIMER 1 38 MM DIEP - MET TAPSE RUIMER
STEMMEN