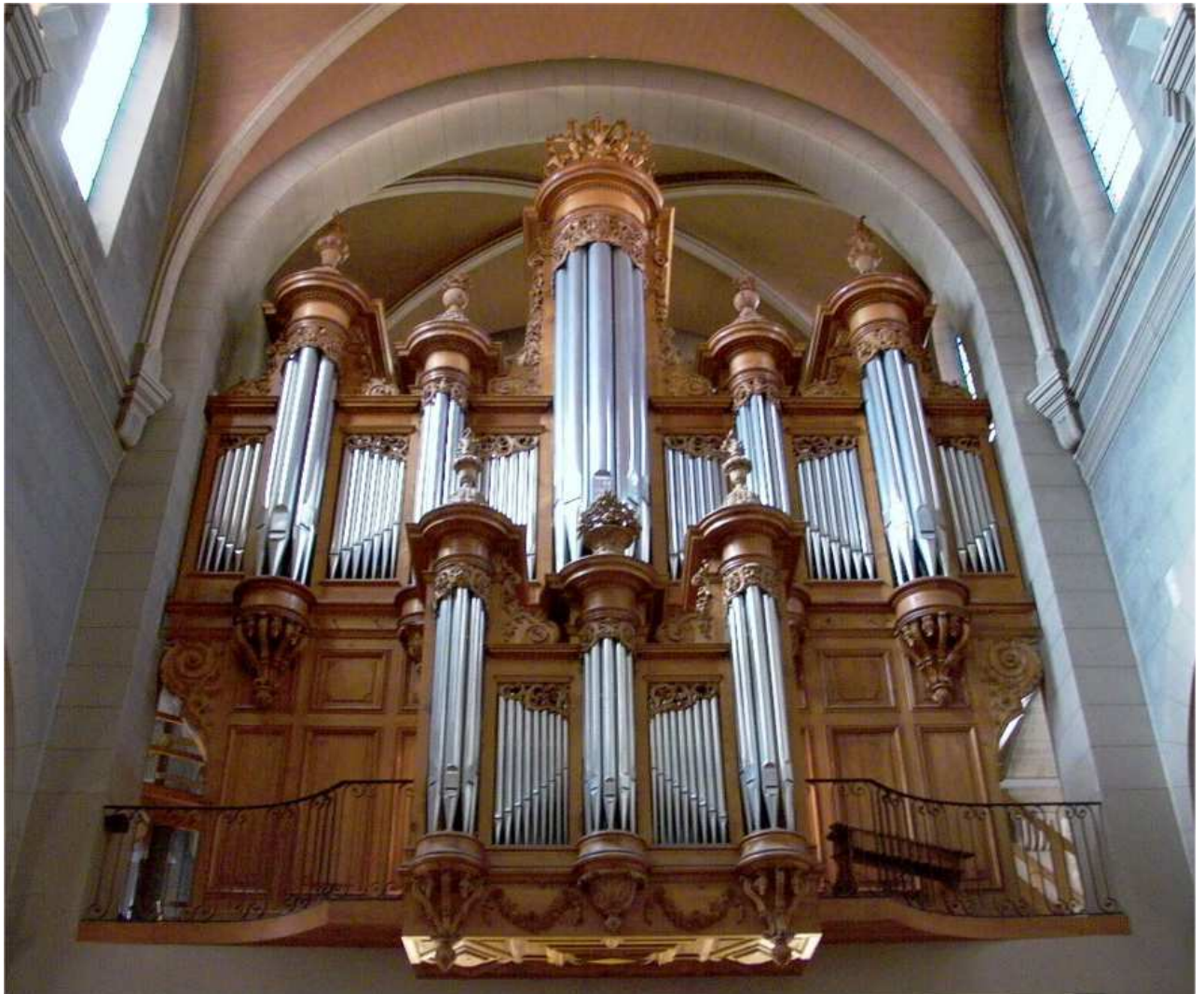


A CLASSIC FRENCH STYLE GREAT ORGAN

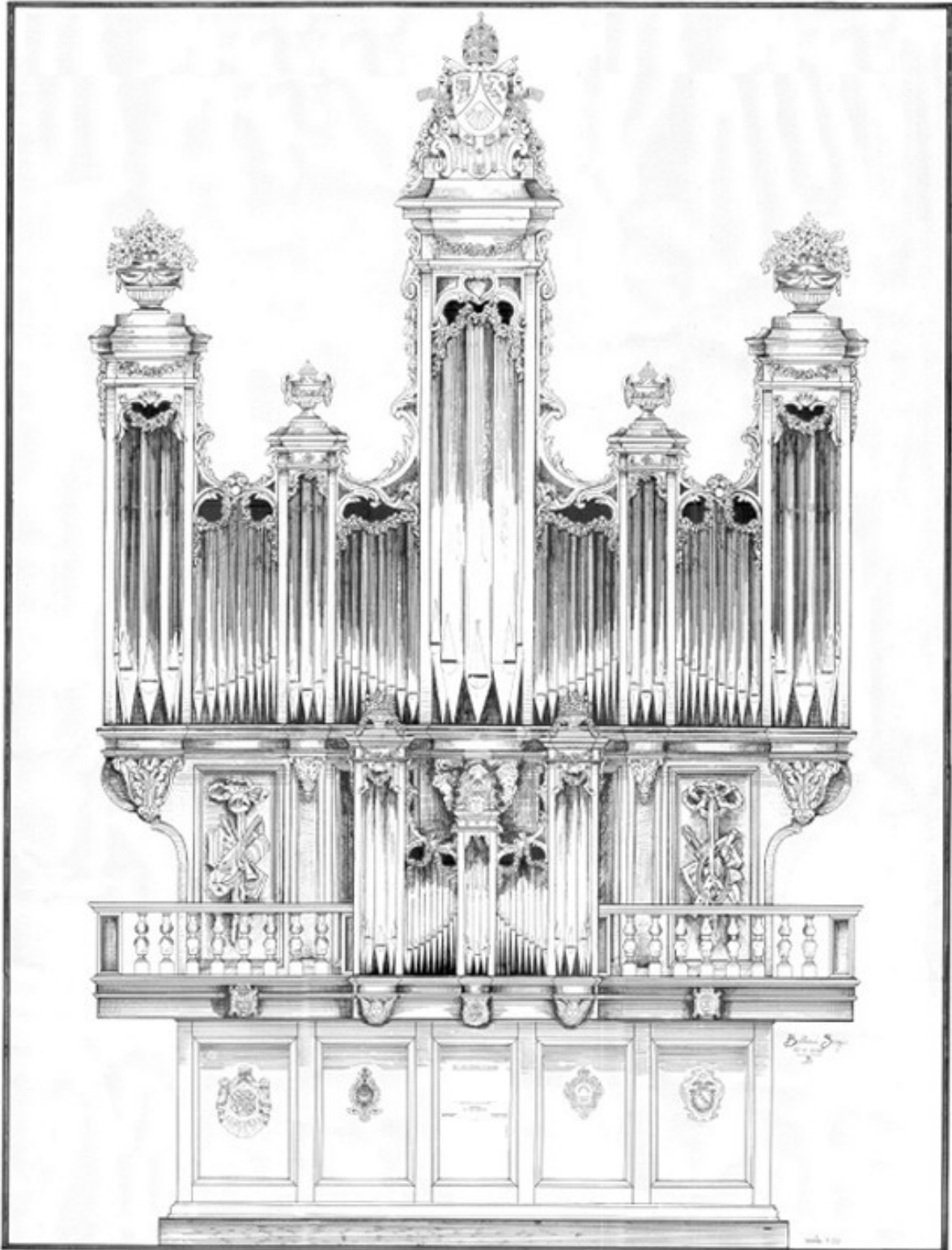
50 STOPS – 4 KEYBOARDS

*L'apothéose du goût français
selon Dom Bedos de Celles*



THE GREAT INSTRUMENT PRESENTATION

This monumental great organ has been thought and designed in the purest classical French style. The organ features and pipes sound features are strictly related to the guidelines of the



Rieti (Italy) - Buffet de Grand'Orgue, de l'ordre de 32P, Andreas Roubo: l'Art du Menuisier-Carrossier (1780) design: Barthelemy Formentelli and Sergio Bellani

XVIII century French organ building art: precisely, the instrument is based on the ancient book “L'Art du Facteur d'Orgues, Dom Bedos de Celles” (1766-1778); other references are: the great organ Dom Bedos in Ste. Croix, Bordeaux (1760), the great organ Christophe Moucherele in Ste Cécile, Albi (1735), Dom Bedos-Roubo Formentelli in San Domenico, Rieti (2009), based on the original design of Andreas Roubo, author of “l'art du Maître Menuisier Carrossier (1780) and organ Freres Isnard, St. Maximin.

This great organ is masterpiece, and it is the highest expression of handicraft manufacturing: the buffet is on red cherry Italian wood. It to be clarified that this instrument is the highest expression of ancient french craftsman; today it represents a unique piece, made according to the criteria of classic French organ school.

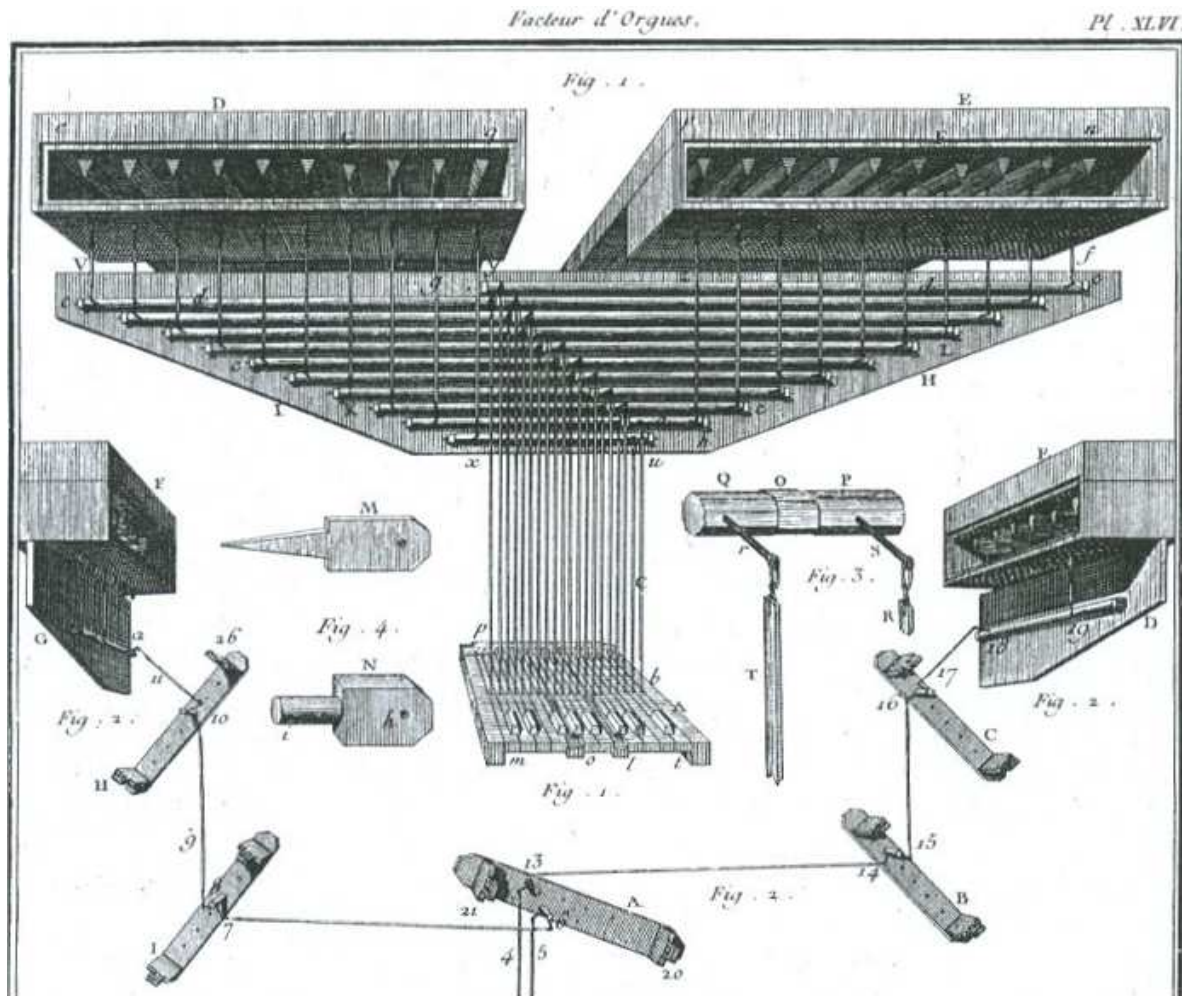


Bovolone traditional woodmakers (Courtesy of Giorgio Mantovani and Sergio Bellani, www.intagliorestaurobellani.it), Verona, Italy



All pipes have been built totally hand-made and hand-hammered; the manufacture of the wood organ body is unique, being carved entirely by hand by the best sculptors chosen by the school of carving in Bovolone (Verona Italy) .

Pipes manual process starts from pure tin plates: metal is hand-planed and hammered, belted and welded each one, for every pipe. This process is well described in the encyclopedic volume “L’Art du Facteur d’Orgue” and it was strictly followed and applied during the pipe making process of this masterpiece.



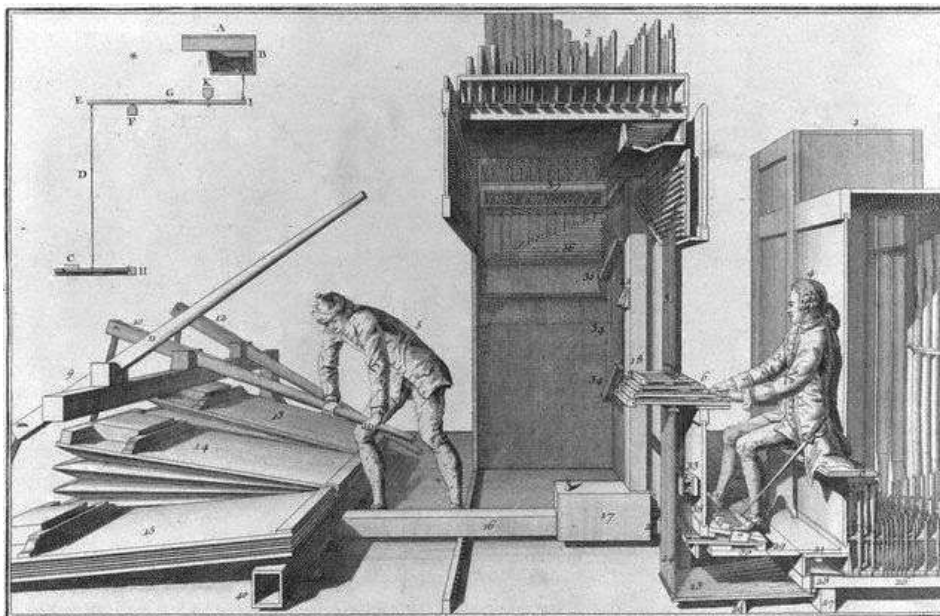
“L’Art du Facteur d’Orgue” : keyboard and pedalboard mechanic scheme

Tin plates are manual cut and folded over appropriate masks; this fine handwork is followed by a fine and totally manual tin soldering, to obtain any single pipe with the highest quality possible. The process is applied for many thousand pipes, starting from the littlest (few centimeters) to the higher one (6 meters). Manual process is applied to iron parts, too: all the mechanics, hinges and the nails are manually forged; on this organ, doesn’t exist any commercial or modern part. Temperament is the same as the reference age, an evolution of a mesotonic one; if necessary, tuning and pitch could be adjusted following the customers

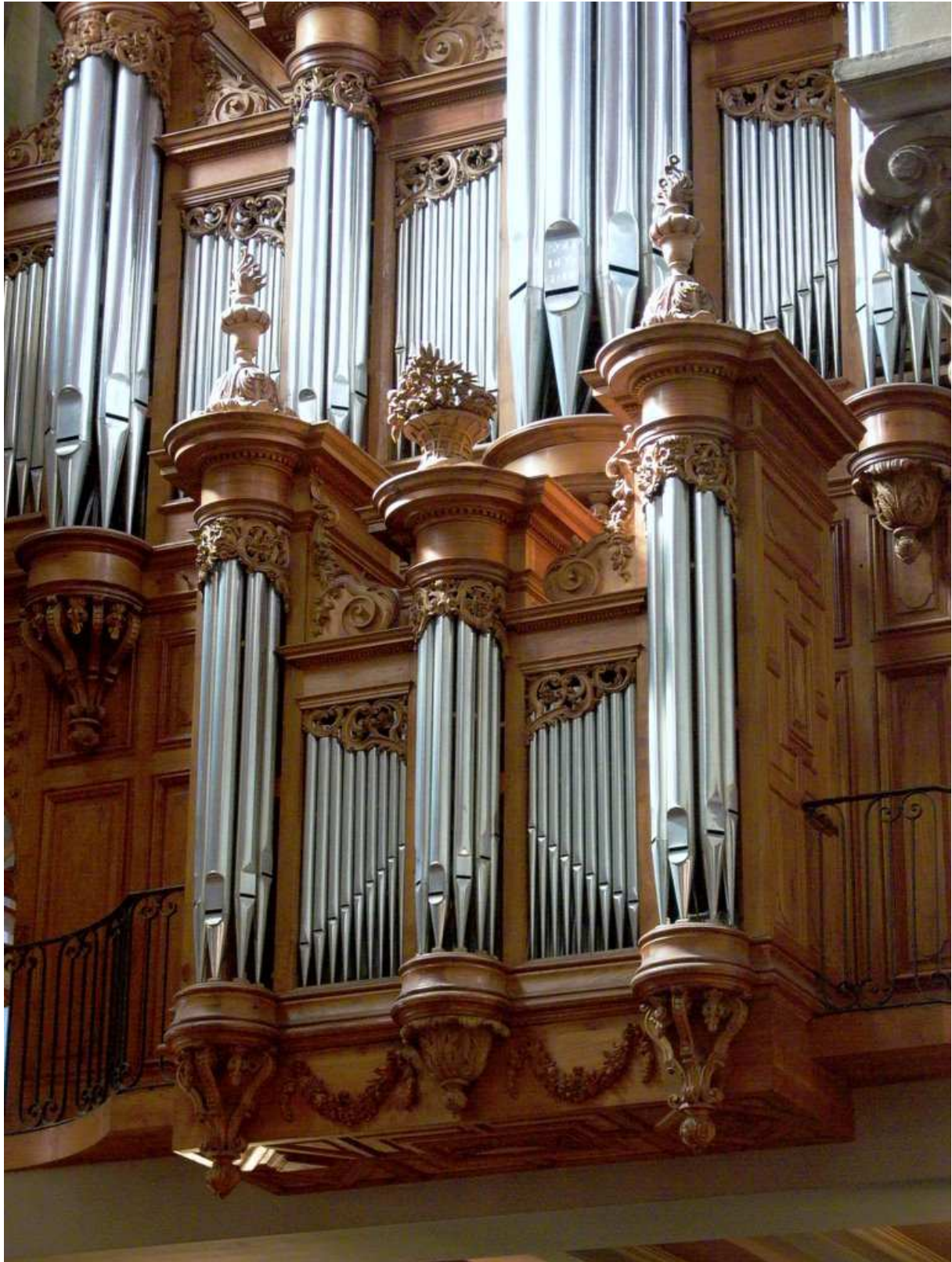
request, to obtain a better spread of organ historical music: temperament could be modified to 3, or 4, or 5 pure thirds. The original pitch is 392 Hz, really low; but it can be modified up to 415 Hz, without changing dramatically the original sound. Finally, in the modern age, we have a rare instrument, as per one built 300 years ago, without any compromise with modern materials and today commercial low cost technologies. This kind of instrument could be used for high level didactic and fine keyboard touching school. Following customer request, the organ could be optionally completed with better quality modern technology, to add:

EXPANSIONS (OPTIONAL)

- 1) Stops motors and stop memories, handled from electronic display and buttons (hidden)
- 2) German style pedalboard
- 3) Second remote consolle: in this option, live recording of played music (whole keys plus stop change), playing of the recorded data, remote playing from a new digital console with electronic transmission. In this case, organ could be dually played by 2 organists. The system will be realized using the better equipments available on the electric/electronic professional organ market. The functions can be integrated by touch-screen computer with music staff software, capable to drive the whole organ.
- 4) A new organ body could be added, to have a fifth keyboard: “Clavier de Bombarde-Resonance”; this structure must be posed in the rear of the Great Organ.
- 5) More Aesthetic: lateral 2 towers, if the final environment require more organ width.



“L’Art du Facteur d’Orgue” :manual wind pumping, organist between Great Organ body and rear Positif organ body, the mechanical path between keyboards and organ bodies.



A “Positif” Organ body view. The organist plays between the great Orgue and “Positif” Organ; this is called “rear Positif” because it is posed on the rear side of the organ player. This organ is considered as an ”response organ” to the great organ, with which mates and interacts for a music dialogues.

INSTRUMENT DESCRIPTION

The instrument layout (organ bodies) is as follows:

- **Grand Orgue:** Diatonic disposition in the main case, parallel to the "*façade*"; 5 Tourrelles, 5 pipes each one, 6 "plat" facades (5-5-7-5-7-5-7-5-7-5-5). Montre 16' in façade, starting from C1 (Real pipe length).
- **Pedal:** Diatonic disposition, 2 windchests on each side, depth sided
- **Récit**, above the Grand Orgue: little windchests is posed in front, in the center position
- **Echo:** hidden under the Grand Orgue, in front of the keyboards; it is similar to the Germany school "Ruckpositif"
- **Chromatic Positif:** 3 Tourrelles, 5 pipes each one and 2 "plat" façade, posed in the rear side related to the organist (5-7-5-7-5).

The organ architecture was designed initially for a private auditorium, as per the over a classic church "Cantoria"; but it can be easily posed on the floor, building a dedicated wood basement (about 7x4 meters, height 2.40 meters). It is recommended to leave enough free space from the floor. The basement hidden space could be used to locate the organ bellows. The overall organ weight can be estimated about 17 tons.

The organ wind is supplied by a wedge-shaped pumps located behind it; pressure is regulated by four 3-folds bellows; size of each one is 2,20 x 1,20 mt

The wind can be supplied in three different ways:

- a) Automatic bellows pumping mechanism, simulating the human manual action
- b) Electric fan motor (0,7 kWh about) type Valter Daminato, Padova
- c) Fully manual, for demonstrations, with like-ancient system: using wheels and cords.



Automatic pull-bellows (mode “a”) , simulating the human manual action



Wheels and cords for bellows control.



“Cuneiform” bellow details

These wind-supply methods provide a dynamic wind flow to the windchests, and finally to organ pipes. The pump is made of chestnut and linden wood, with an interior parchment

sheathing. The windchests are made of oak and designed to provide a stable and powerful wind in all registrations. Unlike Italian tradition, the French organ builders usually divide the great organs windchests in several parts, to obtain more reliability and more mechanical stability. The console is in a window on the organ buffet, "*en fenêtre*" : 4 (or 5) beautiful keyboards with 50 ebon plated keys (following on a 17th century harpsichords style), a French style pedal-board oak made, 30 keys; the stop knobs are made of fruit tree wood.



The "transmissions" are mechanical suspended ("*une mécanique suspendue avec abrégés verticaux*") for the Grand Orgue, the Récit and the Pedal and "*une mécanique foulante à bascules*" for the Positif and the Echo.

This feature provides a very delicate and high precision keyboards feeling. The organist touch is really high sensible; he can manage the proportional opening of the pipe valves, hearing the progression of sound raising, as only a mechanical well-made organ can does. The metal pipes are built either 95% tin, or an alloy with 30% tin ("*étouffe*"). The wooden pipes are made of oak, chestnut or Larynx pine (Flûte 16). Each reed pipe has a damask tongue in the pure 16th, 17th and 18th century style.



Internal Great Orgue detail: a part of suspended mechanical transmission



Reed pipes manual tuning operation

The organ acoustic perfectly fulfills the characteristics set out by Dom Bédos de Celles in his book *l'Art du Facteur d'Orgues*, especially about the famous seven pipe sound qualities. The tuning is *"sur le ton, avec les bourdons à calottes soudées et le tempérament est à 3 tierces justes, une 4e approchée un peu large, les anches s'élargissant"*.

AESTHETICS

Main case is on finest cherry Italian wood with five towers; the biggest is the center one; pipes in the central tower are 16 feet high. The two towers in the edges are 6 feet high and the others are 4 feet high. Positif case: three towers, the smallest in the center is 2 2/3 feet high and the two others, on the sides, are 5 feet high.



The decorations follow the northern French royal style, at the end of XVII century, between Louis XIII and Louis XIV: flowers and fruits, grotesque human faces. On the organ sides, there are another two sculptures. All the decorations are hand-carved from solid wood Cembra pine, coated with beeswax and hand-finished. The front pipes are hand-polished with "Spain White"

ORGAN TECHNICAL SHEET

- Height = 10,00 mt (including the crown)
- Width = 8,08 mt
- Depth = 5,20 mt Great organ and Positif (it is possible to reduce the depth of the instrument by reducing the size of the pump by placing the bellows on two levels)
- Overall pipes = 3209
- Fan motor power = 0,7 kWh
- 50 real stops
- 4 keyboards:
 - 1st manual C1 to D50, without C#1 (POSITIF)
 - 2nd manual C1 to D50, without C#1 (GRAND ORGUE)
 - 3rd manual G19 to D50 ,(RECIT)
 - 4th manual C12 to D50, (ECHO)
- Original French style pedalboard C1-F3 : (Optional: second pedalboard GERMAN PEDALBOARD, with more inter-pedal spacing)
- Organ façade : real 16' diapason, starting for the first C (central tower main pipe).
- Pitch (15°C) : 392 Hz , wind pressure 76/78 mm/H20



The French style pedalboard, as per l'Art du Facteur d'Orgues (1760) ; it can be easily replaced by a German stile pedalboard with more spacing between pedals. Both the pedalboards can be changed in few minutes, without tools.

Stops Disposition

II - GRAND-ORGUE (C1 to D50 without C #1) I - POSITIF (C1 to D50 without C#1)

1 - Montre 16'
2 - Montre 8'
3 - Prestant 4'
4 - Doublette 2'
5 - Fourniture V rangs
6 - Cymbale IV rangs
7 - Bourdon 16'
8 - Bourdon 8'
9 - Flûte à cheminée 4'
10-Grosse Tierce 3'1/5
11-Nazard 2'2/3
12-Quarte de Nazard 2'
13-Tierce 1'3/5
14-Grand Cornet V rangs
15-Bombarde 16'
16-Première Trompette 8'
17-Seconde Trompette 8'
18-Clairon 4'
19-Voix humaine 8' (behind the façade)

20-Montre 8'
21-Prestant 4'
22-Doublette 2'
23-Fourniture III rangs
24-Cymbale II rangs
25-Bourdon 8'
26-Flûte à cheminée 4'
27-Nazard 2'2/3
28-Tierce 1'3/5
29-Larigot 1'1/3
30-Cornet IV rangs
31-Trompette 8'
32-Cromorne 8'

III RECIT (G19 to D50)

33-Cornet V rangs
34-Trompette 8'
35-Hautbois 8'
36-Flûte 8'

IV ECHO (C12 to D50)

Closed by 2 panels, as a closet or “Brustwerk”

37-Bourdon 8'
38-Prestant 4'
39-Doublette 2'
40-Nazard 2'2/3
41-Tierce 1'3/5
42-Cymbale III rangs
43-Musette 8'

PEDALE (C1 to F3, having sub-a for reeds only on the first C# pedal) ACCESSORIES

44-Flûte 16'
45-Flûte 8'
46-Flûte 4'
47-Bombarde 16' (Rav. A°)
48-Première Trompette 8' (Rav. A°)
49-Seconde Trompette 8' (Rav. A°)
50-Clairon 4' (Rav. A°)

Tremblant dans le vent (fort)
Tremblant à vent perdu (doux)
Rossignols (10 tuyaux)
Clochettes (20)
Accouplement à tiroir G.O./POS.
Tirasse G.O.

(Note . A° means : the pipe will sound as per 24' pipe, called “sub-A”)

Total of 3920 Pipes (Tin, Wood, Reeds)



The french style pedalboard



Great Organ reed pipes



The keyboards and stops knobs details



Reeds Pipes (Great Organ and Recit)



Furniture and Cymbale pipes, Great Organ



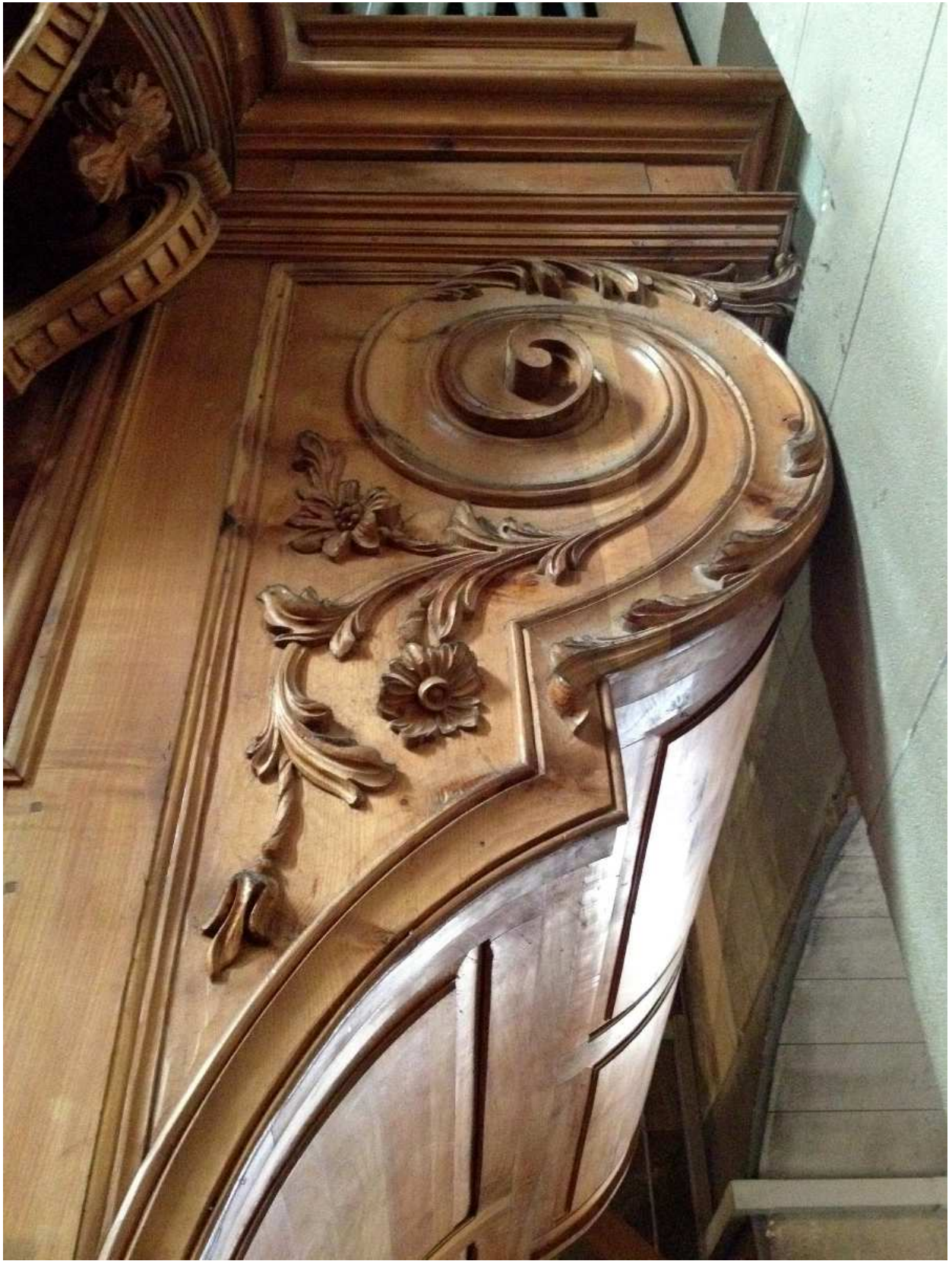
View of Recit organ body (III keyboard)



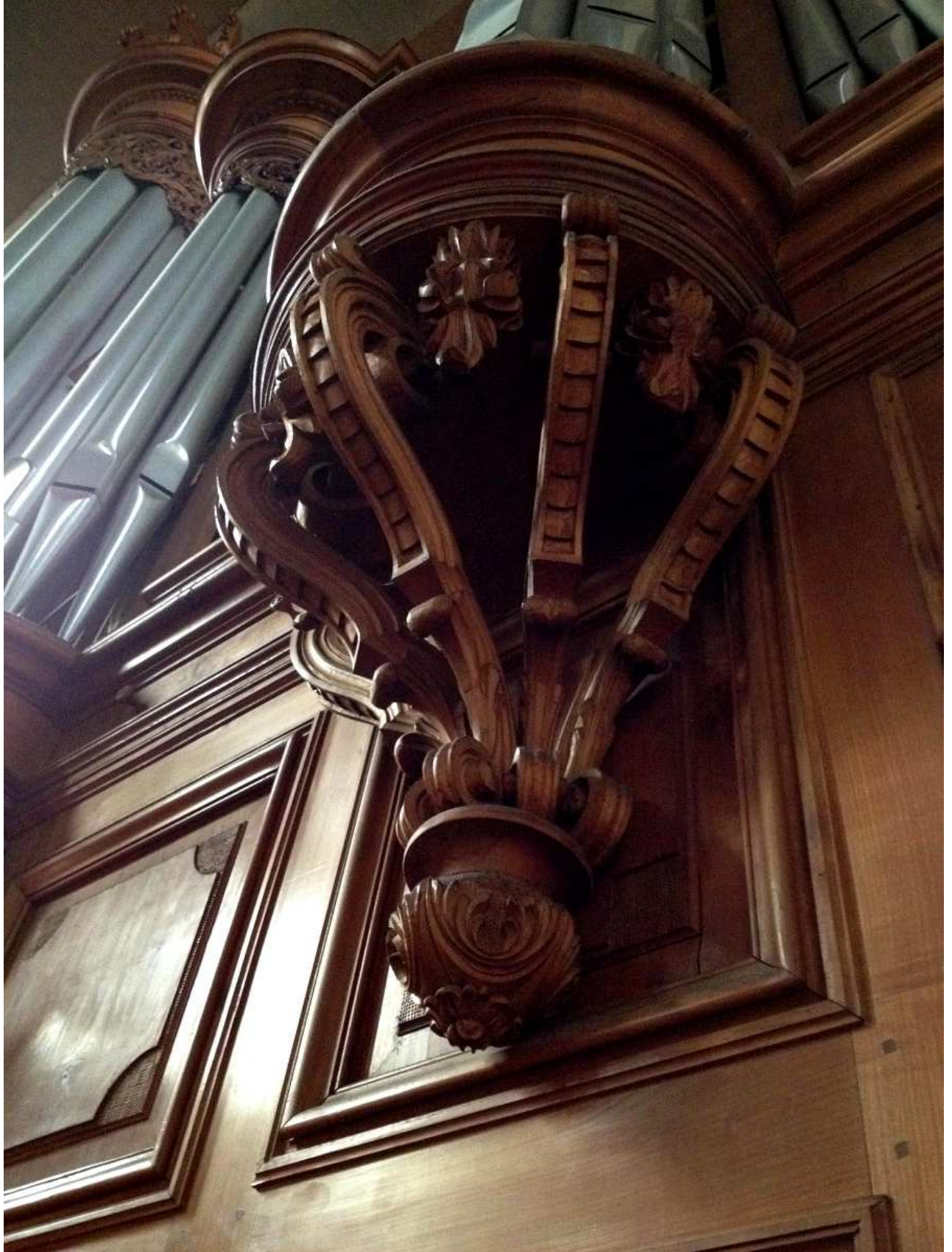
Great Reeds pipes on the Great Organ

Some Organ finest details





A beautiful phytomorphic sculptures on the Great Organ buffet right side



A complex sculpture under the Great Organ central tower