

# Aristide Cavallé-Coll

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French organ builder (*b* Montpellier, 4 Feb 1811; *d* Paris, 13 Oct 1899). His ancestors came from Gaillac on the Tarn River in the south of France, and his great-great-uncle, the Dominican Joseph Cavallé, was an organ builder in Toulouse in the 18th century. Joseph's nephew, Jean-Pierre Cavallé (1743–1809), learnt organ building from him and went to Barcelona where he married María Francesca Coll. Following Spanish custom, their son, Dominique (1771–1862), and further descendants received both parents' surnames: Cavallé-Coll. Jean-Pierre, Dominique and his sons Aristide and Vincent (1808–86) were active both in southern France (at Montréal, Gaillac, Perpignan, Albi, Toulouse) and in Spain (Barcelona, Puigcerdá and Lérida [Lleida]). Encouraged by Rossini, who had been impressed by his *poikilorgue* in Toulouse (for details and illustration, see [Reed organ, §1 and fig.2](#)), Aristide went to study in Paris in the autumn of 1833, where on extremely short notice he was the surprise winner of the design competition for a major instrument at the abbey of St Denis. The family thereupon moved operations to the capital, Dominique working on site in St Denis while Aristide, not yet 25, effectively was running the business at the Paris shop. His first organs, on which his brother collaborated, were at Notre Dame de Lorette, Paris, and in Brittany. When at the end of 1849 the father-and-sons partnership was dissolved, the firm's title became Cavallé-Coll fils instead of 'père et fils'; later partnerships yielded the name A. Cavallé-Coll et Cie (c1858), the nameplates ultimately bearing the sole inscription A. Cavallé-Coll (from about 1872). Important employees of the firm were the Reinburgs, the Glocks, Neuberger, Carloni, Veerkamp and Bonneau. Shortly before Cavallé-Coll's death the business was taken over by his former employee Charles Mutin. Numerous other pupils eventually set up independent shops in the French provinces and in other European countries.

Cavallé-Coll built nearly 500 organs, mostly in France but also throughout western Europe (excluding Germany) and South America. Many of his instruments were subsequently altered, including those in Notre Dame de Lorette, Ste Marie-Madeleine, Ste Clotilde, Notre Dame, La Trinité and the Palais du Trocadéro (all in Paris), Brussels Conservatory and the Paleis voor Volksvlijt, Amsterdam (now in the Concertgebouw, Haarlem). Representative large organs in their original or restored state are in St Denis Abbey (1833–41), Saint Briec Cathedral (1848; four manuals, 41 stops), Notre Dame, Saint Omer (1855; four manuals, 50 stops), Perpignan Cathedral (1851; four manuals, 58 stops), Bayeux Cathedral (1861; three manuals, 44 stops), S María del Coro, San Sebastián (1862; three manuals, 44 stops), Notre Dame, Epernay (1869; three manuals, 34 stops), Orléans Cathedral (1875; four manuals, 50 stops), St François-de-Sales, Lyons (1880; three manuals, 45 stops), St Etienne, Caen (1885; three manuals, 50 stops), St Sernin, Toulouse (1889; three manuals, 55 stops), S Ignacio de Loyola, Azpeitia (1889; three manuals, 36 stops), St Ouen, Rouen (1890; four manuals, 64 stops), and S María, Azcoitia (1898, three manuals, 40 stops). With 100 stops on five manuals, the organ of St Sulpice in Paris (1862) is in every way exceptional.

Depending on the room size and each instrument's musical function, Cavallé-Coll built instruments with four stops or more. Two-manual designs comprised from eight to 26 stops on *Grand orgue* (Great, usually the lowermost manual) and *Récit expressif* (Swell), beyond which a *Positif* (Choir) division (often under expression from 1865 onwards) was included. A fourth manual, when the stoplist exceeded 50, would be called *Bombarde* and essentially contain the reeds and mixtures of the main division. (In St Denis *Grand orgue* and *Bombarde* were playable from a single keyboard, while the five-manual organs of St Sulpice and Notre Dame (1868, 86 stops) in Paris have an additional *Grand chœur* manual.) Usually, the Pedal division was quite sparse thanks to the uncanny versatility of its registers. When reusing classical cases Cavallé-Coll retained a dorsal position for the *Positif* division, but in new organs there was most often a single case into which it was incorporated. Cavallé-Coll's Swell boxes have relatively thick walls, and he ostensibly preferred to keep the enclosures small, often posting the basses outside the box and avoiding 16' stops. Barring exceptional use of cone-chests for speaking pipe façades (Dreux, Perpignan, St Vincent-de-Paul, Bonsecours) or large pedal-chests (Orléans), he built only slider-chests, with separate pallet boxes for foundation stops and reeds and, when means permitted, the treble and bass divisions in the manuals. Each manual could therefore control several chests. Aside from pedal *ravalement* to *A'* or *F* in the very first instruments (as required in Franck's early organ music), compasses were *C-f''* in the manuals and *C-d'* in the pedal until about 1862, and *C-g''* and *C-f'* thereafter. 61-note manuals occurred only in a few late instruments. All couplers, the Swell box shutters and the ventil pedals for the reed/mixture pallet boxes are controlled

by the feet. From about 1872 the hitch-down, spoon-shaped *cuiller* Swell pedal to the extreme right was replaced by the modern balanced and centred pedal.

Cavaillé-Coll and his clients favoured detached and reversed consoles; but attached keyboards (*console en fenêtre*) were not uncommon, particularly in rebuilds; on two-manual organs they were readily installed at the side, a mechanically and liturgically advantageous solution. (Only rarely was the organ set up in two symmetrical cases flanking a rose window.) He remained staunchly faithful to tracker action, many larger instruments being equipped with the 'Barker lever' (see [Barker, Charles Spackman](#)). Great care was taken over the provision and distribution of the wind supply, using a large reservoir bellows which accumulated the necessary amount of air and smaller adjustable bellows for each division to regulate and stabilize the wind. Aside from extreme cases, the wind pressures were in the range of 90 to 110 mm, not greatly removed from late-classical organs in France or Germany (in Italy and Spain the figure could be as low as 40–55 mm). When feasible, wind pressures for reeds and the treble range are higher than for the foundations and bass stops.

Each department of a middle-to-large Cavaillé-Coll organ includes the tonal components of the *Grand chœur* (full tutti), with Trumpets complemented by a finely proportioned slate of Clairons, and 16' Basson or Bombarde (sometimes both). One or more ranks may have harmonic (double-length) trebles, enhancing the richness and balance of tone, and several large organs have sets of horizontal reeds crowning the ensemble. Cavaillé-Coll introduced and perfected overblowing flutes without extensive knowledge of Renaissance and Baroque models: he named these Flûte harmonique 8' (Flûte traversière in the *Récit*), Flûte octaviante 4', Octavin 2' and Piccolo 1', and they invariably formed the characteristic ensemble of the *Récit* division. The main *jeux de fonds* (foundation stops) were Montre (Principal or Diapason on the secondary divisions), Prestant, the softer, conical Octave 4' on the reed vent, Bourdon 16' and 8' (the stopped 4' being named Flûte douce), and narrow-scaled stops such as Quintaton, Viole de gambe, Salicional and Violoncelle. Other reeds used by Cavaillé-Coll were the Basson and Cor anglais 16', and the Cromorne, Vox humana and Clarinet 8' (he had a great aversion to free reeds); the treble 8' Hautbois was combined on one register with a Basson bass, and the undulating stops Voix céleste (*Récit*, with the Gamba) and Unda maris (*Positif*, with Principal or Salicional) were regular features. The *Récit* division started out with a post-classical solo-echo function and over the decades gradually took on symphonic dimensions: the *Grand orgue* and *Récit* in Caudebec-lès-Elbeuf (1891) have six and nine stops respectively, while in St Ouen, Rouen, the *Récit* contains nearly a third of the organ's 64 stops. From the early 1860s onwards, the legal French pitch of A=435 Hz was adhered to, and some instruments have been tonally maimed in recent decades by raising their pitch to 440 Hz.

Being on familiar terms with several of France's leading contemporary scientists, Cavaillé-Coll incessantly conducted experiments in the design of pipes, soon adopting the timely concept of geometrical scaling progressions. His fondness for the adjective 'harmonique' can perhaps be traced to his quest for the famous 'ascending voicing', allowing the normally weaker trebles to sing forth strongly. The disposition of Mixtures and Cornets varied considerably: broadly speaking, classical compositions prevailed except from about 1857 to about 1875, when 'progressive' *pleins jeux* (following German models), devoid of higher-pitched ranks in the bass and tenor, were favoured. One of the finest developments that Cavaillé-Coll brought to the organ was the flexibility and expressiveness of gradations in volume from soft to full organ. The 'grand crescendo' and the diminuendo became increasingly characteristic of the music of the period. In central Europe a general crescendo on the organ was produced adding in turn mutations, reeds and Mixtures to the foundation stops, inevitably bringing about arbitrary changes in tone colour. Cavaillé-Coll's solution took into better account the nature of the instrument. By disposing the essential elements of the *grand chœur* throughout every division of the organ – bringing into use the enclosed *Récit* Trumpet and Clairon first – it was possible to increase and decrease the volume while preserving the same basic timbre at each dynamic level. As the couplers, Swell boxes and reed/mixture sections were controlled by pedals, the player could effect a general crescendo with a consistent tone colour though the whole dynamic range without removing the hands from the keyboards.

Cavaillé-Coll was the true creator of the French Romantic organ, and his influence on English and German organ building was considerable. To the classical French organ he added overblowing flutes, the Swell box and *chamade* Trumpets used in Spain, and German-inspired string stops. The craftsmanship and materials of Cavaillé-Coll's organs are outstanding, and his stops were superbly voiced. Important classical elements such as mixture choruses and wide-scaled mutations were, to be sure, somewhat neglected, making his organs inappropriate to the performance of the early French repertoire. But the greatest French organ composers from Franck to Messiaen were inspired by the instruments he created. In addition to his legacy of world-famous organs, Aristide Cavaillé-Coll left behind a reputation as a devoted ally of worthy musicians and causes, the very personification of human and artistic integrity.

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