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A STUDY OF THE ORGAN IN ST. MICHAEL'S ROMAN CATHOLIC CHURCH, PINCHER CREEK, ALBERTA

by

Bruce A. Wheatcroft

A THESIS

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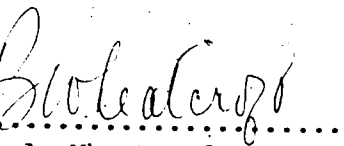

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled A Study of the Organ in St. Michael's Roman Catholic Church, Pincher Creek, Alberta submitted by Bruce A. Wheatcroft in partial fulfilment of the requirements for the degree of Master of Music in Musicology.

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ABSTRACT

The organ in St. Michael's church, Pincher Creek, has survived almost unchanged from the time of its installation in 1901 and provides interesting insights into organ construction and tonal design at the turn of the century.

The first chapter of the thesis gives a brief history of the congregation and its organ. Material was drawn from numerous sources. Church documnents were few but the organ itself provided a rich resource; a silver plaque commemorates the gift of the organ by Madame Routhier, a member of an historically important Canadian family. Surviving members of the family were contacted and many of their letters from the mid 1960's revealed a wealth of information about the organ. In addition, a history of the Pincher Creek area, compiled in 1974, served as an historical reference and framework for this study.

Chapter II deals with the history of the Pincher Creek organ from its arrival in 1901 to the present day. The archives of D. Stuart Kennedy, one of Canada's most important organ historians, revealed an enormous amount of material about this organ and its history over the past eighty-three years. Hugh D. McKellar of Toronto provided the information that established an important link with the only other organ in the west at the turn of the century. Information from contracts for the restoration of he organ, and

letters regarding the resotration, all dating from 1979 and 1980, concludes the historical overview.

Chapter III, the main body of the thesis, deals directly with the construction and tonal design of the Casavant organ. This chapter reveals the tonal concept held by the Casavant firm at the turn of the century and, together with the Historical Notes to Chapter III, provides important clues about the influence of Cavaille-Coll on the Casavant brothers.

The fourth chapter explores the relevance of the Pincher Creek organ to modern organ building and playing. It established the importance of the period in which the organ was built and emphasizes the reliability and musical integrity of such a mechanical action organ.

The Historical Notes to Chapter I provide additional information about the social, economic and political environment of the day and highlights those prominent Canadian personalities that had some direct connection with the organ or St. Michael's church.

The Historical Notes to Chapter II trace the development of the Casavant name in organ building and reveals the important developments and influences that led to the founding of one of Canada's great organ building firms, Casavant Frères Ltée.

ACKNOWLEDGMENTS

My interest in the small mechanical action organ in St. Michael's church, Pincher Creek was sparked in my youth. I had the opportunity of playing the organ on several occasions, arranged by my father, Harvey E. Wheatcroft, who maintained the pianos of the church, convent and school. His support and encouragement of my interests continued until his death in 1968.

Family ties have drawn me back to this small organ many times over the past few decades, as a performer and simply as a visitor. When I undertook the present study, my family provided continuing support and I am especially indebted to my mother, Murl M. (Wheatcroft) Gray and her husband Arthur of Pincher Creek for their countless hours of assistance over the past six years; on-the-bench assistance, gathering data, obtaining photographs and sketches. Their many errands on my behalf (via long-distance telephone requests) to check a measurement or confirm some detail or other will long be remembered.

Many other people have assisted me in this work whom I would like to thank. D. Stuart Kennedy of Calgary gave me an inside view of my topic through his extensive archival material, his writings about the Pincher Creek organ and his constant enthusiasm for the project. In addition, Mr. Kennedy has assisted by providing those photographs that fill in the gap at the time of the 1980 restoration of the organ. Mr. Hugh D. McKellar of Toronto has also been of

invaluable assistance, providing prompt responses to my inquiries and supplying me with additional information that I was not aware of to aid in the completion of the project. So too, the firm of Casavant Frères, and more especially Mr. Eugene Laplante have been most generous in supplying me with photocopies of old contracts and whatever information they could find about the Pincher Creek organ. I am indebted to Mr. William C. Hutton who carefully proofread the thesis.

I sincerely thank Professor Gerhard Krapf for his encouragement, guidance and constructive criticism throughout the preparation of this thesis.

Robertson-Wesley United Church has supported this thesis by providing financial assistance for the printing and reproduction of photographic plates and I extend to the Official Board of the church my grateful thanks.

Finally I would like to thank Father D. F. McDonald, the Parish Council and members of the congregation of St. Michael's church for their warm hospitality during my many visits to the church. Without their generosity this thesis would not have been possible.

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A BRIEF HISTORY OF ST. MICHAEL'S ROMAN CATHOLIC CHURCH AND ITS ORGAN

"Spitzee", meaning a stream with trees along its banks, was the name given by the Indians of the region to the present town of Pincher Creek, located in the southwest corner of the Province of Alberta.[1] Around the year 1868 a party of prospectors or surveyors were said to have lost a pair of pincers (or pinchers as it is sometimes spelled) in the creek. "Tools being precious in those days, this was naturally a calamity and as such was commemorated in the name given to this stream."[2]

St. Michael's was formed around 188. and was referred to as "Hermitage, St. Michael" by Father Lacombe himself.[3] Father Lacombe came to the south of what is now Alberta in 1871 and chose Pincher Creek as the site for his hermitage and eventual retirement,

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[1] For more detailed information see Historical Notes to Chapter I, No. 1, p. 64.

[2] Alberta Government Publicity Bureau Department of Industry and Tourism, Survey of Pincher Creek (n.p.: Government of the Province of Alberta, <1968>), p. 3.

[3] Prairie Grass to Mountain Pass: History of the Pioneers of Pincher Creek and District (Pincher Creek: Pincher Creek Historical Society, 1974), p. 195.

"but that day never really came."[1]

> As long as he was physically capable of doing so, he travelled a great deal, frequently on official missions, and I believe that he would have found it difficult to stay put. He had some Indian blood from his grandmother and inherited many of their traits.[2]

Part of the original building still remains, and though in bad repair, it is used today as a museum. This building served both as a chapel and residence for Father Lacombe.[3] It was not until 1889 that the mission of St. Michael's was formally established, with Father Blanchet appointed as the first official pastor.[4]

By 1901, construction of a new frame church for the Catholic congregation was begun by Father Blanchet. This structure was located across the street from the old Hermitage. Members of the congregation were asked to provide all they could to complete this new church. "Those without money were asked to donate a cow, a load of hay, or whatever they had to help raise money for the building. Many of the more affluent donated money for stained glass windows, or statues."[5] Soon the church was a reality, complete with statues and stained glass imported from France, including a window of the

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[1] Emile Tardiff O.M.I., Institute d'Histoire de l'Ouest Canadien, letter to D. Stuart Kennedy, Calgary, Alberta, 15 November, 1966.

[2] Henri Routhier O.M.I., Bishop of Naissus, Vicar Apostolic of Grouard, letter to D. Stuart Kennedy, Calgary, Alberta, 17 November, 1966.

[3] For more detailed information see Historical Notes to Chapter I, No. 2, p. 64.

[4] Tardiff, letter, 15 November, 1966.

[5] Prairie Grass, p. 196.

patron saint of music, Cecilia, depicted with a portative organ. While statues and windows helped complete the interior decoration of the new church, so a new organ, dating from 1901 fulfilled the musical needs of the congregation.

This organ was the gift of Madame Routhier, wife of Judge (later Sir) Adolphe Basile Routhier. A silver plaque on the nameboard above the top manual reads "Don Genereux de Madame Routhier." The motive for such a generous gift has for some time been a matter of considerable conjecture and debate. Judge and Madame Routhier were not residents of Pincher Creek, but their only son, Jean Charles Routhier, was. The young Routhier had come west in 1885 at the time of the Riel Rebellion, prior to completing his law degree at Laval University. When he once again returned to the west, he joined the North West Mounted Police at Fort Macleod, leaving the force three years later to homestead in the Pincher Creek area. He married Elodie Pelletier in 1894 and six children were born of the union. Of these, Henri, born in 1900, became Bishop of Naissus, Vicar Apostolic of Grouard toward the end of a distinguished career of service to his church. It is he who has provided the most complete insight into his grandmother's gift of the organ to St. Michael's church:

> The organ was in fact given by my grandmother, Madame (later Lady) Clorinde Routhier (Mondelet). I know very little about the organ itself as it as installed a little over a year after I was born. I remember my mother having told me that it had cost $1500.00 which was a respectable sum at the beginning of this century.
>
> My paternal grandmother, Lady Routhier, was a very pious woman and my father a real artist on the piano. He was not however a church goer and it may well be that his mother hoped that in making this donation to the parish, he would return to

the church. This was not to be however, although he died after having received the last rites. My grandmother Routhier was instrumental in the building of thirteen churches or chapels in the Province of Québec, paid either from her personal donations or by organizations over which she presided.[1]

A contract for an organ of nine stops distributed over two manuals and pedal, dated June 25, 1901, was signed on July 10, 1901 and delivery of the instrument was promised on or about October 15 of that same year.[2] It likely took a few months for the organ to be completed as annual production at the Casavant factory was averaging thirty instruments per year by 1901.[3] An organ of similar size (Opus 141), ordered from Casavant Frères for St. Mary's Church, Dawson, Yukon Territories on May 10, 1901 arrived in Dawson before the onset of winter, 1901.[4] Estimating that September might be a realistic pre-winter arrival time, the Dawson organ took approximately four months to build and ship. There was one more organ contracted in 1901 of equivalent size to the Pincher Creek and Dawson organs that, based on opus number, came between the two organs for the west. Using the four-month estimate as determined for the Dawson organ, which clearly included a longer period of time for shipping, the arrival time for the Pincher Creek organ may be

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[1]Henri Routhier O.M.I., Bishop of Naissus, Vicar Apostolic of Grouard, letter to D. Stuart Kennedy, Calgary, Alberta, 15 June, 1966.

[2]The original contract is given in Appendix A on p. 81.

[3]Laurent Lapointe, Casavant Frères 1879-1979, trans. H. McKellar (Saint-Hyacinthe: Societe d'Histoire regionale de Saint-Hyacinthe, 1979), p. 30.

[4]Hugh McKellar, "Go where I send thee! How shall I send thee?," unpublished article, Toronto, <1980>, p. 4.

roughly set at October or early November of 1901 as promised in the contract. Unfortunately there are no church records to confirm this, nor is there a date to be found establishing the completion of the new frame church, but if begun early enough in 1901, there is no reason to doubt that it could have been completed by late 1901 in time for the arrival of the new organ, or that it at least was far enough along for the installation of the instrument.

Madame Routhier must have known of the plans for the new church and though no reference is ever made to her travelling to Pincher Creek, her husband certainly did: "Our Grandfather . . . visited Pincher Creek on several occasions."[1] It is likely that Madame Routhier was thus well informed not only about her son Jean Charles but, being very interested in the life of the church, also about the mission in Pincher Creek. The spiritual wellbeing of her son may well have encouraged an even deeper interest in this far-away mission church. Knowing of her son's lack of interest in the church and his skill as a keyboard player, the gift of an organ to bring church and son together seems a logical motive.

The name Routhier plays an even more significant role in Canadian history. Madame Routhier's husband, Adolphe Basile Routhier is best remembered as an author, not only for his writing on early Canadiana, but for the original French text of "O Canada."[2]

The French-Canadian tradition was certainly strongly felt at

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[1]Marie C. (Katie) Farrell, in a letter to the editor, Pincher Creek Echo, 27 July, 1980.

[2]For more detailed information see Historical Notes to Chapter I, No. 3, p. 66.

the turn of the century in the Pincher Creek area. Indeed, land just ten kilometers from the town of Pincher Creek (much of which is still owned by my family) "was commonly called the 'French Flat' as the early settlers were mostly French."[1]

Thus, aside from any personal motives Madame Routhier may have had for her gift, the Casavant organ in St. Michael's church provides us with an important link in the early history of our country's western regions and in fact, relative to our national anthem which has only recently, after years of debate, been acknowledged by law.

The organ itself bespeaks its French-Canadian ancestry; all the stop knobs are engraved in French. The question of a French-Canadian tradition and its ramifications seems to have been raised on at least one other occasion at the turn of the century in an organ-related issue. The Dawson organ, Casavant Frères' Opus 141 previously cited, built in 1901 for St. Mary's church, provides some interesting insight:

> Handwritten notations on the contract suggest that the instrument was not completed exactly as planned . . . . Some consideration seems also to have been given to engraving the stop knobs in English rather than in French, although that detail would seem more important in Québec in 1980 than in Dawson in 1901.[2]

Two points should be made. First, the question of language seems to have been a contentious issue for whatever reason even at the turn of the century and second, it is quite clear that the French-

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[1] Prairie Grass, p. 294.

[2] McKellar, unpublished article, p. 4.

Canadian tradition was felt across Canada, which included the Northwest Territories as they were known at that time.

Little is known about the history of the organ from its installation until the early 1960's. During the mid 1960's the frame church built by Father Blanchet and his congregation was torn down. "The last mass to be said in the old St. Michael's church was on April 25, 1965."[1] A new building designed by Cohos-Delesalle and Associates was erected. The building, completed in 1966, boasts contemporary design "embodying a note of simplicity which is decidedly attractive."[2] The terrazzo floor and upsweeping ceiling together with an absence of carpet provide a wonderful acoustical environment for the organ. Many artifacts from the old church were preserved and incorporated in the design of the new. These included the original three bells, brought from Germany, the stained glass windows, stations of the cross and the organ. The windows are located along the north wall and the stations of the cross are inset along the choir gallery which also holds the organ. Two commissioned works of art complete the successful integration of old and new; a baptismal font by Edward D[illegible]chuk of Calgary and outside the main portal a figure of St. [illegible]el realized in "rusty iron" by Calgary sculptor Robert Oldrick.

The organ was dismantled and stored [illegible]ile awaiting its new home. Mr. Robert Blanchard, representing Ca[illegible] Fr[illegible]es, cleaned,

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[1]Mary Unilowski, "New St. Michael's Church To Retain Religious Relics," Lethbridge Herald, 10 August, 19[illegible].

[2]Prairie Grass, p. 196. [3]Ibid., p. 196.

installed and tuned the organ, making only a few repairs to a cracked windchest in the process. One pipe was damaged during the dismantling or re-installation, taken to Calgary, repaired by Mr. Blanchard, and then installed by D. Stuart Kennedy of Calgary in time for the dedication service, September 18, 1966.

There are no records of service or maintenance for the organ from the time of its installation until 1966 save for one reference in the files of Casavant Frères:

> Our file on this organ contains very little information. In fact, although the organ was installed in 1901, the only correspondence we have is dated 1930, and it pertains strictly to the installation of a new electrically operated blower which was installed during that year.[1]

Presumably the pumping handle for the feeder bellows was removed at that time.

In 1971 Mr. Blanchard was contacted to tune and repair the organ, but there is no indication as to the extent of any repairs done. The organ remained in constant service until 1979 when Mr. Alex Bernhardt, then district representative for Casavant Frères, undertook the task of putting the organ in good playing order and a contract to service the instrument on a regular basis was signed. A new winding system was ordered in late 1979 and installed in the summer of 1980. All of this work was loosely referred to as a restoration and some funding was provided by government agencies to assist in the completion of the work. Regrettably, the original stencilled pipes executed in "gold and color" were painted over in a

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[1]Eugene Laplante, letter to Bruce A. Wheatcroft, Edmonton, Alberta, 31 October, 1979.

new design at some point prior to 1966 (see Plate I, p. 10). As so much damage had been done to the façade over the years, a decision was taken to repair the speaking pipes and paint the façade a dull silver color. A small fragment of the original stencilling was found on the back of a few of the façade pipes and photographed before the façade was painted silver (see Plate II, p. 11). It is hoped that the façade of this historic organ may one day soon be restored to its original splendor. But what is important is that after eighty-three years, the Casavant Frères organ, Opus 143, continues to serve the musical needs of the St. Michael's congregation.

Plate I. The Facade of the Pincher Creek Organ, 1979.

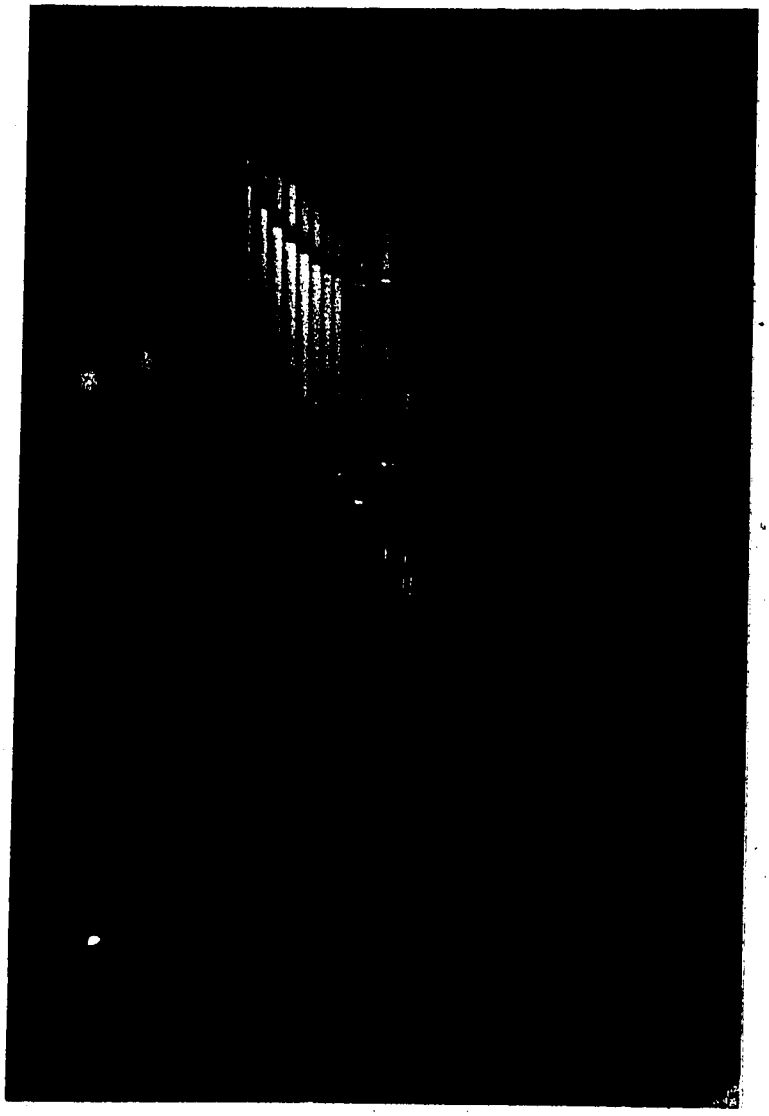
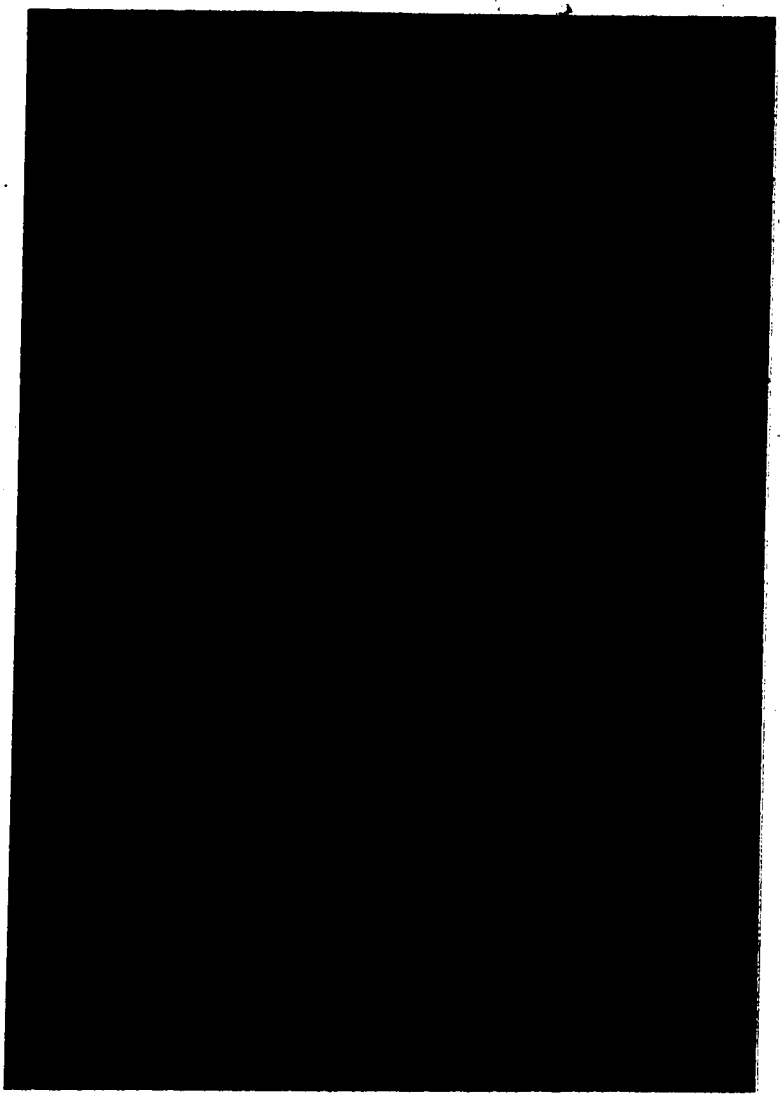


Plate II. Detail of the Original Façade Stencilling, 1901.



Chapter II

AN HISTORICAL OVERVIEW OF THE PINCHER CREEK ORGAN FROM 1901 TO 1984

The company of Casavant Frères, established in 1879 by Claver and Samuel Casavant, relied on the traditional mechanical-action method of construction for its first instruments. Yet the very existence of Casavant Frères today rests on the brothers' Claver and Samuel devotion to introducing new technology, such as electric key and stop action, to their organs.[1] While this forward looking approach was to ensure the company a secure future, it must be made clear that the early years of building were solidly based on mechanical (or tracker-action) organs, a long standing tradition that the Casavant brothers inherited from their father.[2]

The first organs to appear in Western Canada arrived in 1901, both built by Casavant Frères. A small organ of two manuals and pedal with six stops, Opus 141, was sent to St. Mary's church, Dawson, Yukon Territories. The second instrument of two manuals and pedal with nine stops, Opus 143, was for Pincher Creek and arrived

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[1] Lapointe, Casavant Frères, p. 17.

[2] For more detailed information see Historical Notes to Chapter II, p. 69.

in late 1901. Both of these organs are of considerable historic value, being amongst the last tracker-action organs built by Casavant Frères prior to the reform movement of the 1960's.

By the turn of the century, most of Casavant's production was electric key and stop action organs. Casavant's reasons for building both the Dawson and Pincher Creek organs with mechanical action are quite clear; the uncertainty of electrical power availability restricting their choices, and the vast distance between factory and the final destination of these organs making servicing nearly impossible. This latter concern also affected the tonal design of Casavant's organs:

> As was customary for organs being shipped to distant parishes far from regular tuning and maintenance, no reed stops <such> as trumpets or oboes were included, such voices being very sensitive to temperature changes and liable to go out of tune.[1]

For example, original specifications for the Dawson organ[2] contained an Hautbois 8' but construction of the organ was not completed as planned; a Salicional 8' replaced the Hautbois 8'.[3] The omission of a reed stop in the Pincher Creek organ may be directly traceable to whoever made the switch in the contract at Dawson. Perhaps it was Gédéon Pépin who suggested the substitution as he is known to have played the St. Mary's organ after its arrival in Dawson. The family name of Pépin has long been associated with the Casavant firm; two

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[1] D. Stuart Kennedy, "Church Organ of Historic Significance," Calgary Herald, 16 September 1966, Herald Magazine sec., p. 3.

[2] The original specification for the Dawson organ is given in Appendix B, p. 84.

[3] McKellar, "Go where I send thee!," p. 4.

of the Pépins appear in a 1892 group photograph of Casavant Frères employees:

> We may wonder, then, whether Gédéon's time in the Yukon antedated or merely interrupted his connection with Casavant Frères; if the changes in the original "Devis" were suggested by someone in whom the Casavants had confidence, that would explain why no one was apparently sent to Dawson to set the organ up.[1]

Perhaps M. Pépin, whether or not representing Casavant Frères at this time, went on to Pincher Creek to complete the installation of Opus 143 in late 1901. Certainly the timing appears right and, as with the St. Mary's [illegible]an, there is no record of Casavant Frères sending anyone directly from the factory to install the Pincher Creek instrument.

If the specifications of the Dawson organ were altered on the advise of a trusted employee, it seems possible that the Casavants might have thought out more carefully the specifications of Opus 143 for Pincher Creek, perhaps with some input from M. Pépin. The date on the contract for the Pincher Creek organ, June 25, 1901, compared with that for the Dawson organ, May 10, 1901, could have allowed time for such consideration. Whatever the reason, the Pincher Creek organ was contracted to be built without a reed stop.

Technical reliability was not the only area in which the Casavants excelled. From their first instruments, careful consideration was given to visual appearance:

> Ever since their apprenticeship, the Casavants had realized that an organ's appearance meant much to customers . . . . During those eight months in 1879 when Claver and Samuel were

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[1]McKellar, "Go where I send thee!," p. 5.

> examining the organs of European churches and cathedrals, they paid particular attention to how an instrument fitted in with the overall look of the building where it stood. Claver filled a whole notebook with descriptions of architectural styles, and sketched details of ornamentation which he found striking. Once they started building organs, they never lost sight of how the finished instrument would look, and lavished care on designing and decorating all the woodwork.[1]

It is unfortunate that the façade of the Pincher Creek organ, consisting of twenty speaking and fifteen dummy pipes, has been altered twice since 1901. The original beige, brown and gold stencilling was changed to a diamond-shaped decoration in blue and gold, reminiscent of a fleur-de-lis design. It has not been possible to date this first alteration except to say that it occurred prior to 1960, when I first saw the organ. At that time the organ stood in the rear gallery of the 1901 wood-frame church. I recall the ornate decoration of the wooden ceiling with a concentration of blue and gold colors and wonder if the façade was changed better to match the church color scheme. The church archives do not reveal any information about the façade change, and I have not found any local people who recall the original colors or design of the façade.

During the summer months of 1980 a restoration of the organ was undertaken.[2] Though not documented in any of the letters of correspondence or signed contracts, it was decided to alter the façade again. Many of the pipes had been damaged over the years and the blue and gold pipe decoration was in a deteriorated state. Some

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[1] Lapointe, Casavant Frères, p. 35.

[2] The restoration contracts are given in Appendix C, p. 85.

fragments of the original stencilling were found on the back of a few façade pipes and photographed before the entire façade was sprayed a dull silver (refer to Plate II, p. 11). Enquiries have been made into the proper restoration of the façade, but to date no concrete steps have been taken. From the fragments photographed, it is not possible to determine with any accuracy the overall design of the stencilling. Important clues, if not similar or identical decoration, might be found in Casavant organs dating from the same period. The Dawson organ, being so close in opus number, could provide the missing information but for its inaccessibility. Mr. D. Stuart Kennedy of Calgary may have been the first to think of this connection; he attempted to secure the Dawson organ as an historic artifact and have it placed in the Glenbow Museum, Calgary:

> By the time he caught up with it, he found that it had been sold to Parks Canada, the government department in charge of historic monuments, and shipped from Mission City to Ottawa, where it was safely lodged in an environmentally controlled warehouse.[1]

As of this dat- : further information about the façade of either organ has been uncovered. The Dawson organ remains in Ottawa with its future uncertain:

> . . . the organ is presently in one of our warehouses crated in many pieces. When it arrived from B.C. some years ago there was no indication as to what parts were to be found in the various crates and since we had no immediate use for the organ we simply placed it in dead storage. We would have to open the various crates so as to be able to find and photograph the console and, quite frankly, we are reluctant to do so. I agree with you that a photograph of the crates would not serve any purpose.
>
> You can appreciate that our collections were developed to serve all of our national historic sites in Canada. Therefore, we only restore those artifacts that will have immediate use or that are in danger of deteriorating quickly. The Casavant

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[1] McKellar, "Go where I send thee!," p. 9.

> organ, in our opinion, is better protected in its present crates until such time as it is needed. Then we will be faced with a large restoration project.[1]

In the 1980 restoration, the Pincher Creek organ suffered another drastic alteration. It was deemed necessary to repair or supplant the reservoir due to leather deterioration that would soon render it inoperable. Mr. Bernhardt, representing Casavant Frères, made his recommendations to St. Michael's church in February of 1979:

> I wish to undertake the process of restoring this instrument in two sections . . . . The second . . . will deal with the installation of a silent blower in the organ chamber as well as a new reservoir. The existing blower and reservoir work well at present but will create many problems in the future. We usually re-leather reservoirs, but as the existing one is so large (as it was once hand inflated) it would be more considerate of the future to construct a compact serviceable unit.[2]

A contract for the new blower and reservoir was signed on September 24, 1979. The reservoir has not been a satisfactory solution as the organ now suffers from a lack of wind with all registers drawn. Fortunately, the old reservoir and feeder bellows were considered too large and difficult to remove; they remain in place though not functioning. Only the pumping handle is missing but with care, a replica could be constructed and the entire winding system restored to its original condition. Happily no changes have been made to the action itself save replacing worn leather or repairing broken or damaged trackers and other small action parts.

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[1] McKellar, "Go where I send thee!," pp. 9-10.

[2] Alex Bernhardt, letter to Father Hagel, St. Michael's Church, Pincher Creek, Alberta, 28 February, 1979.

The organ retains its tonal integrity as well. In making his 1979 proposal for restoration, Mr. Bernhardt pointed out the historic value of the organ and supported a refurbishing of the original pipework rather than replacing it:

> I have not made any mention of tonal changes to this instrument as I feel that for historic purposes the instrument should retain its true content. In addition the cost of restoring the pipework is far below the cost of replacement of stops.[1]

This historic instrument in St. Michael's church exemplifies the craftsmanship of the Casavant Frères firm at its best. The action remains as it was in 1901, unaltered and functioning flawlessly. So too the case, excepting the façade, is as it was originally conceived and built. The winding system has been retained though it is not functioning. Mr. D. Stuart Kennedy, having written several articles about the historic value of this organ, continues to be actively interested and responded to the 1980 restoration by writing:

> Mechanically the organ is most comfortable, and a joy to play. Tonally, it "blooms" beautifully in the fine acoustic of Saint Michael's. It is a source of considerable satisfaction that this historic gem has been so carefully and competently restored. It is an excellent example for other projects in the province. The matter of restoring the colouring of the façade pipes is being looked into.[2]

With the information gathered to date about this organ, a complete and final restoration seems possible. It is hoped that the proper authorities will soon be convinced to declare this organ an historic site, for it clearly represents one of the finest examples

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[1] Bernhardt, letter, 28 February, 1979.

[2] D. Stuart Kennedy, letter to Alex Bernhardt, Vancouver, British Columbia, 20 April, 1980.

of tracker-action organ building by the firm of Casavant Frères at the culmination of an era. Within months of the completion of this instrument in 1901, Casavant terminated the construction of mechanical-action organs for over half a century.

Chapter III

CONSTRUCTION AND TONAL DESIGN OF THE ORGAN IN PINCHER CREEK

The Case and Console

The organ in St. Michael's church is housed in a side gallery on the south wall of the church. A recess in the back wall of the gallery was provided to receive the bulk of the organ case. This was an unfortunate decision resulting in a loss of the organ's ability to blend and project the sound forward into the nave. There is at present ample room to bring the organ forward to the front of the gallery, thus allowing it to project properly into the church. When the organ was installed in the new church, the back and C-sharp[1] side of the case were discarded.[2] A narrow passage on the C-sharp side of the organ allows access for tuning and repairs.

The case, which houses all four chests of the manual and pedal divisions, is constructed of clear pine painted in an imitation of wood grain. Each of the case panels measures approximately 1.25 cm thick and is framed with a wood moulding. Many of the front panels are removable for access to the action.

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[1] In this thesis, the terms "C" and "C-sharp sides" refer only to the façade arrangement. All chests inside the organ case are organized in a chromatic fashion.

[2] See Appendix E, pp. 96-97 for a Glossary of Terms.

The case rises 373 cm, is 345 cm wide and quite deep at 224 cm. The façade[1] is typical of turn-of-the-century Casavant organs; one large flat (i.e., façade section) of twenty zinc pipes drawn from the Montre 8' and Prestant 4' as well as fifteen dummy pipes to complete and balance the façade. These silver spray-painted façade pipes sit on a straight toe board[2] with their mouths in a horizontal line except for the large ten pipes of the bottom octave of the Montre 8' and the centre five pipes. The large Montre pipes are divided into two groups of five each and rest on semi-circular toe boards 65 cm wide, affixed to the front of the case at the extreme left and right sides, a distance of 74 cm from the floor. The central pipe flat also rests on a semi-circular toe board. The façade frames the console and provides a pleasing overall symmetry for the organ as illustrated in Plate III on p. 22. All pipes in the façade are overlength with those of the C and C-sharp sides identical in length. To compensate for their overlength, the speaking pipes have a deep slot extending to within one or two centimeters of the top of the pipe as well as the usual tuning slot. There are no façade pipe shades[3] as the organ case did not have an enclosed ceiling. This was a typical practice for organ builders at the turn of the century. The present placement, with the nave's hard side and back walls and a hard, slightly sloped ceiling, permits at least some forward projecting and focusing of the sound. The new, somewhat lower ceiling may result in a slight decrease in sound and

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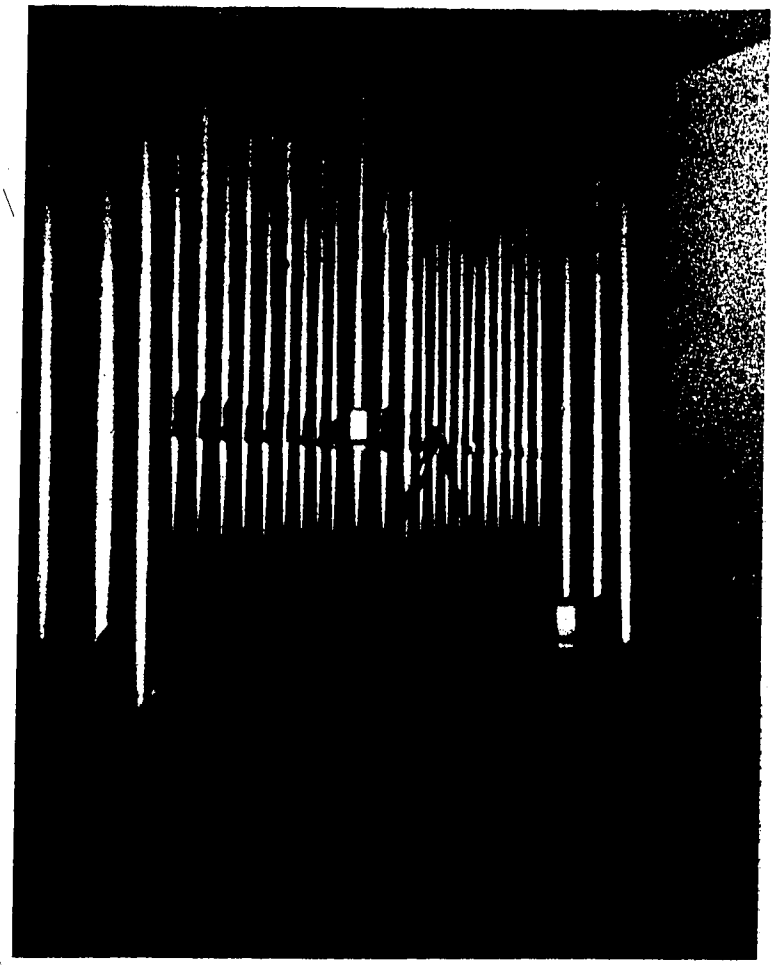
[1] See Glossary of Terms, p. 96. [2] Ibid., p. 97.

[3] Ibid., p. 96.

Plate III. Console and Façade of the Pincher Creek Organ, 1980.



reverberation but that lack of volume is offset by the hard surfaces throughout the church that add to the bloom of the sound.

The attached console remains in original condition. The outer side cheeks are constructed of oak while the interior keywell is in mahogany. The stops are arranged on both sides of the keyboards on three tiered levels in the French style of the later nineteenth century. The stop knobs are of ebony and the stop faces of ivory. The French names are engraved in an old English script style with black lettering excepting the Souffleur and the Trémolo which are lettered in red. The arrangement of the stops is shown in Figure 1 on p. 24.

The pedalboard of twenty-seven notes (C to e')[1] is original and nearly square, measuring 98 cm wide at the case, 99 cm wide at the back and 91.5 cm from front to back. There is a slight concave construction with the top and bottom sharps (19 cm long) somewhat longer than the centre sharp (14 cm). This difference in length would compensate to a degree for the non-radiating design of the pedalboard. The distance from center to center of the pedal keys is 3.2 cm.

Above the pedalboard and approximately centered are two combination pedals. To the left is a "piano" pedal which draws: on the Récit, Salicional 8' and Bourdon 8', on the Grand Orgue, Dulciane 8', and on the Pédale, Bourdon 16' and the Grand Orgue à la

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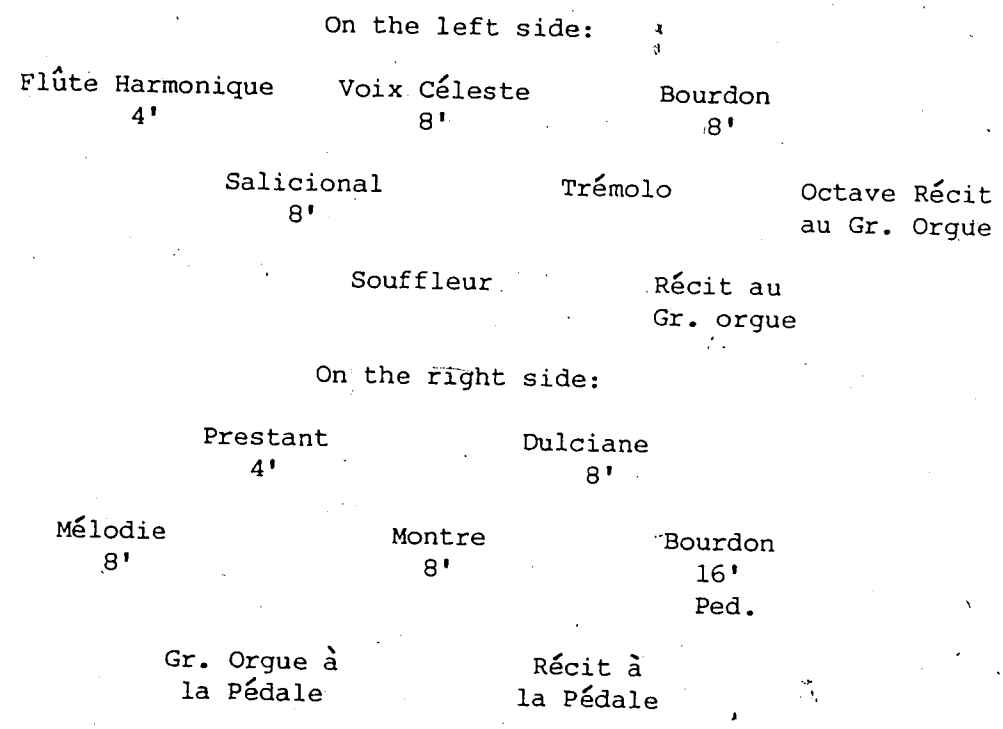
[1] In this thesis, pitches are identified according to keyboard octaves. The lowest C of the manuals and pedal are designated C; the C above this (called "tenor C" by organ builders), c; middle C, c'; the octave above, c''; etc.

Figure 1. Stop Arrangement and Specification.



Pédale coupler. The "loud" pedal retains the "piano" combination and adds: on the Récit, Flûte Harmonique 4', on the Grand Orgue, Montre 8', Prestant 4' and two couplers, Récit au Grand Orgue and Récit à la Pédale. To the right of the combination pedals is a balanced swell shoe of metal, angled somewhat to the right as can be seen in Plate IV on p. 26. The inclusion of combination pedals not only reflects the nineteenth-century proclivity for console accessories, but also the Casavants' delight in technologically innovative organ building.[1]

The fifty-eight note manual compass (C-a''') was normal for the period.[2] The action is fluid though not particularly light. Resistance of the keys produces a distinct "pluck" when depressed, with a considerable though not uncomfortable increase in weight with the manuals coupled. Above the Récit is an ivory name plate bearing the Casavant logo, place of construction, opus number and date. Just below the centre façade pipes is a silver plaque with the inscription "Don Genereux de Madame Routhier."

The original bench is quite shaky, supported on each end with perfectly perpendicular side pieces and a single cross member for bracing. Splaying the side pieces would have resulted in a more stable support for the player. In general, the case, console, keyboards and pedalboard represent a typical example of Casavant's

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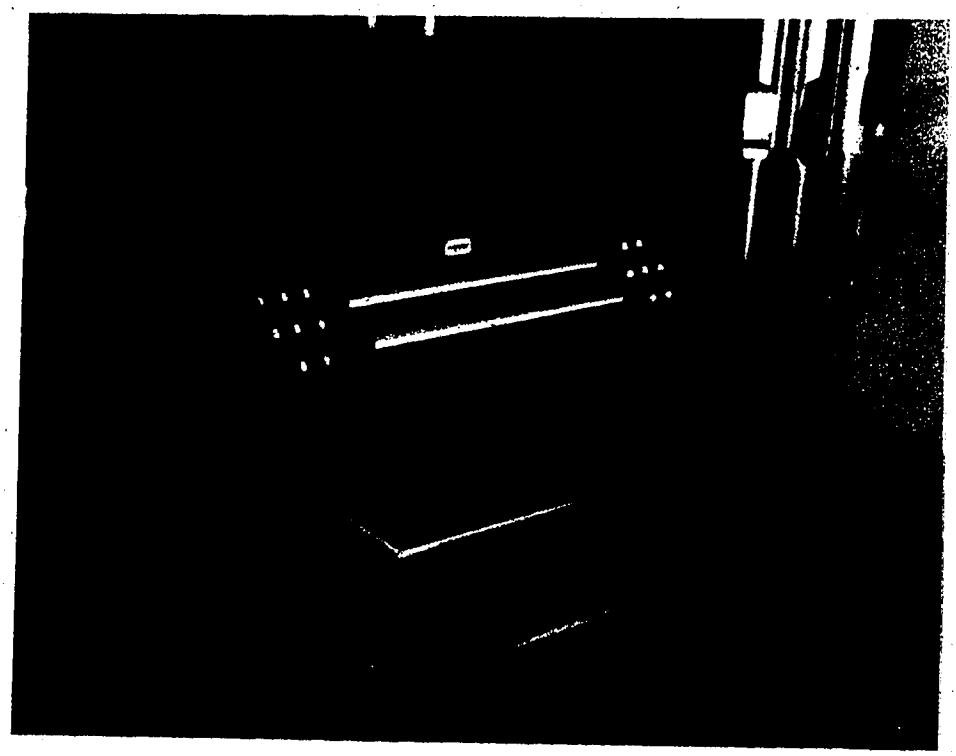
[1]For a more detailed discussion see Historical Notes to Chapter III, No. 1, p. 75.

[2]Only later did Casavant increase the keyboard range to sixty-one notes, perhaps as result of late nineteenth- and early twentieth-century compositions that gradually made use of notes beyond the normal fifty-six or fifty-eight note range.

Plate IV. Detail of the Console of the Pincher Creek Organ.



work at the turn of the century; sturdy and reliable if somewhat heavy in appearance by today's standards.

The Winding System

The original winding system remains in place but is bypassed by a new small reservoir[1] and blower. Because the back and C-sharp side of the case are missing, the exact location of the pumping handle and existence of a wind level indicator are unknown. The original hand-pumped system consisted of two wedge shaped feeder bellows attached to a large double-fold reservoir. In 1930, an electric blower did away with the need for the hand-pumped feeder bellows though they remain attached to the reservoir in a permanently closed position. The reservoir measures 231 cm wide, 135 cm deep, and up to 80 cm high inflated, and accounts for the large and deep case of this relatively small organ. The system remained in use until 1980 when a small reservoir and new blower were installed. The original reservoir which had been patched a number of times was too difficult to remove; the old system was simply bypassed with the new reservoir feeding all four chests directly. The old reservoir fits closely between the four chests and the original wind pressure, approximately 90 mm is typical of the period. The wind pressure, which still remains at approximately 90 mm, has been confirmed by checking the position of coppers in the Bourdon 16' of the pedal division, the Bourdon 8' of the Récit and the bottom range of the Mélodie 8' of the Grand Orgue. Since

[1] See Glossary of Terms, p. 96.

many of the metal flue pipes were sleeved during the 1980 restoration, they do not permit verification of the original wind pressure or pitch of the organ which is presently a'= 435. The old reservoir may have produced very minor fluctuations in pressure when the instrument was played "full organ" with pedal and couplers. The discarded system contained a large volume of wind in the reservoir, fed slowly by hand and later by an electric blower while the 1980 system uses a quickly fed, small-capacity reservoir that gives distinct jumps in pressure. There are no devices on the chest to help compensate for pressure changes, a fact which only confirms the inadequacy of the present winding system. Some new wind ducting was installed in 1980 as well. It is possible that this ducting is too small (approximately 10 cm in diameter) to provide the volume of wind required.

Chests and Action

The manual chests[1] and action[2] are supported by a frame constructed of clear pine. The frame is fastened to the front of the case and measures 254 cm wide by 203 cm deep. The Grand Orgue chest of pine and hardwood is 197 cm wide and 75 cm deep; the Récit chest, also of pine and hardwood has the same dimensions. The construction of the tone channels,[3] bearers,[4] sliders,[5] table[6] and top boards[7] are identical for both chests. Tone channels are 10 cm

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[1] See Glossary of Terms, p. 96. [2] Ibid., p. 96.

[3] Ibid., p. 97. [4] Ibid., p. 96. [5] Ibid., p. 97.

[6] Ibid., p. 97. [7] Ibid., p. 97.

high with a 5 cm width for the bottom octave, 3.8 cm for the second and third octaves and 2.5 cm for the remainder of the compass. The bearers and sliders (.85 cm), the table (1.25 cm) and the top boards (3.2 cm) all appear to be of hardwood. The tables are scored or grooved to a depth of .3 cm to help keep ciphers[1] to a minimum. Some repairs were made to seal cracks at some point prior to the organ's installation in the new church in 1966. Apart from these repairs, the chests function flawlessly after eighty-three years of continuous service, a fine testimony to the craftsmanship of the Casavant Frères company.

The hardwood sliders move easily for the most part. The Flûte Harmonique 4' and Salicional 8' of the Récit and the Montre 8' of the Grand Orgue are a bit sluggish (see Plate V, p. 30). This might be due in part to extremes in environmental conditions and does not appear to be a major problem. The stop action is constructed of hardwood arms and a rollerboard[2] and metal squares,[3] all original. The stop arms are between 150 cm and 183 cm in length. These rather long arms accommodate the action for the mechanical combination pedals. Figure 2 on p. 31 shows the layout of the stops on the manual chests and the construction of the pallet boxes.[4] Plate VI on p. 32 shows the chromatic arrangement which facilitates tuning. The resulting uneven weight distribution is easily borne by the heavy framing. The Montre 8' is placed at the front of the Grand Orgue chest to allow the best possible

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[1] See Glossary of Terms, p. 96. [2] Ibid., p. 97.

[3] Ibid., p. 97. [4] Ibid., p. 96.

Plate V. Stop Action Detail of the Grand Orgue Chest.

Figure 2. Cross Section of the Manual Chests.

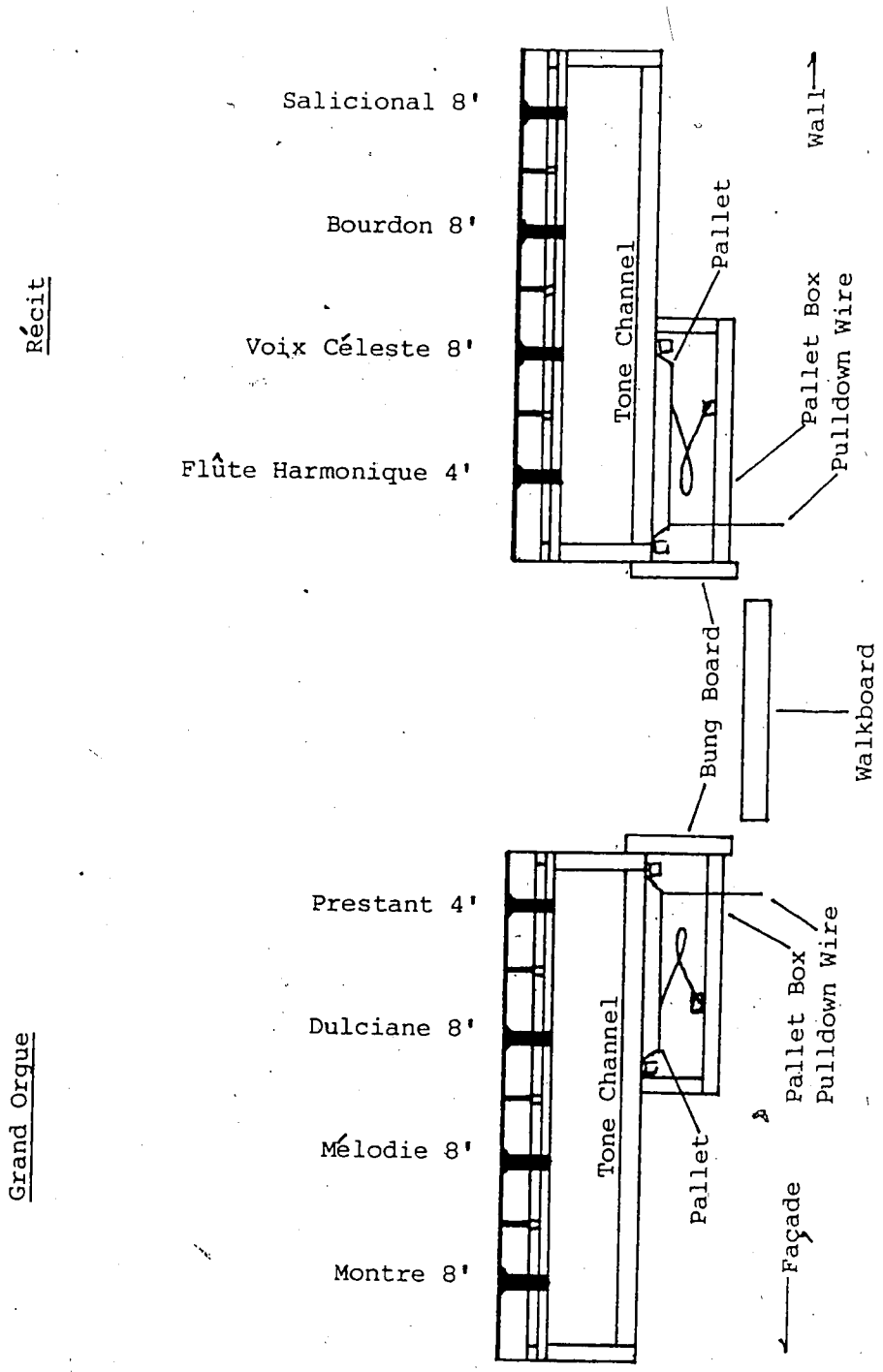


Plate VI. The Grand Orgue Pipes as Seen From the Walkboard.

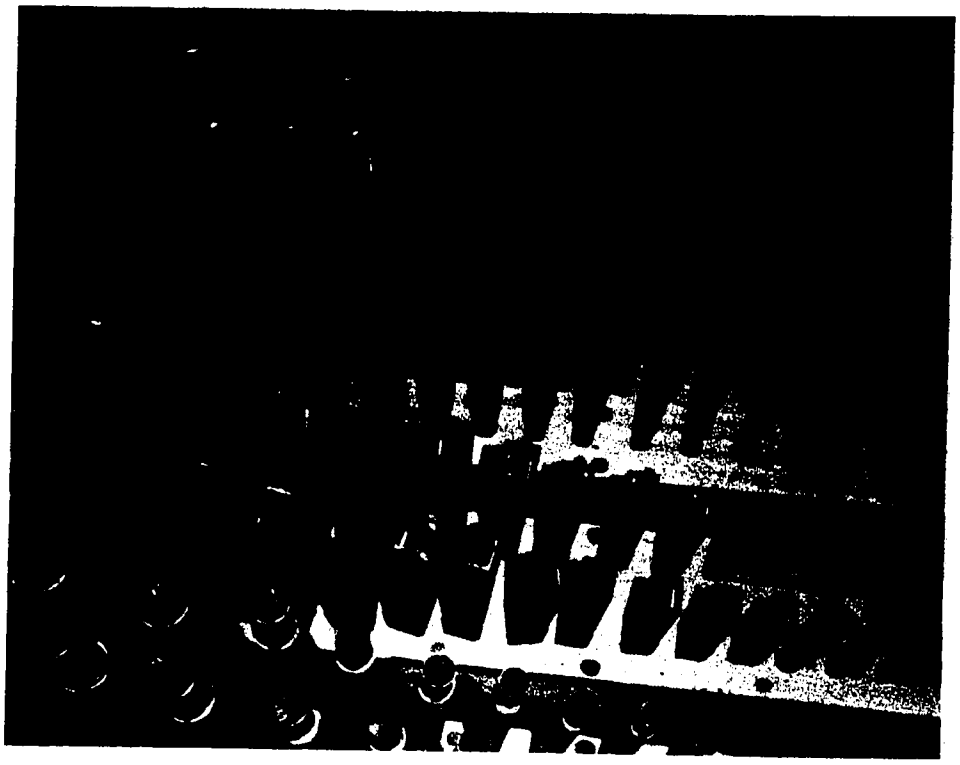
projection. This arrangement provides close proximity for the zinc tubing required for the Montre pipes contained in the façade and tuning of this rank is most easily accomplished through the façade. One might expect the Prestant 4' to be placed immediately behind the Montre 8' for blend and projection, but this is not the case. The Prestant 4' lies at the back of the chest with several of the bottom notes tubed to the façade. This layout permits easy access for tuning, though the two remaining 8' ranks and more especially the Mélodie 8', being of wood and placed compactly on the chest, tend to block some of the 4' sound. In order to conserve space, the Mélodie 8' and Dulciane 8' share a common bottom octave of stopped wooden pipes.

The Récit division is layed out in a similar chromatic fashion (see Plate VII, p. 34). Only the bottom zinc pipes of the Salicional 8' are offset at the back and below the Récit chest. The pipes are enclosed in a swell box with vertical shutters in its front. This box acts as an effective reflecting surface and aids in the projection of the sound not only of its own division but of the Grand Orgue as well.

The Grand Orgue pallet box is placed at the rear of the chest beneath the Prestant 4'. The Récit pallet box is at the front of its chest below the Flûte Harmonique 4'. This allows access to either of the pallet boxes from the walkboard.

Both pallet boxes are the same size measuring 11.5 cm high, 30.5 cm deep and 193 cm wide providing ample wind storage for the four ranks of each chest. The pallets for each manual chest are

Plate VII. The Récit Pipes as Seen Through the Swell Shutters.



also identical, being 28 cm long and ranging in width from 2.6 cm at the bass end of the chest to 1.4 cm at the treble end. The pallets are covered in a coarse felt with a soft leather surface. The pulldown wires pass through small unsealed holes in the bottom of the pallet box to the action below. In a few cases, heavy felted lead seals have been added. This appears to be an addition made to reduce air leak noises. The walkboard between the chests is only just adequate to accommodate a person tuning (40.6 cm wide) and is particularly confining and dangerous if the swell shutters are in the open position, reducing the working space considerably. There is a generous space of over 100 cm at the back of the organ which once allowed easy access to the instrument. The floor area is now taken up by the new reservoir, making it difficult and risky to get around the organ for tuning.

The two pedal chests are located on the bass and treble sides of the organ and run from front to back as shown in Figure 3 on p. 36. The chest on the bass side (measuring 42.25 cm deep, 28 cm high and 194 cm long), accommodates the first thirteen pipes; the other chest on the treble side holds the remainder of the Bourdon 16' rank and measures 34.25 cm deep, 28 cm high and 194 cm long. These chests are of simple box construction with the pallets directly under the toe holes of the pipes, channels being expendable for a single rank of pipes. The pallets are approximately 25 cm long and 3 cm wide. Plate VIII on p. 37 shows the round disc of coarse felt with a soft leather covering attached to the pallet that seals the hole of the top board.

Figure 3. Top View of the Chest Layout.

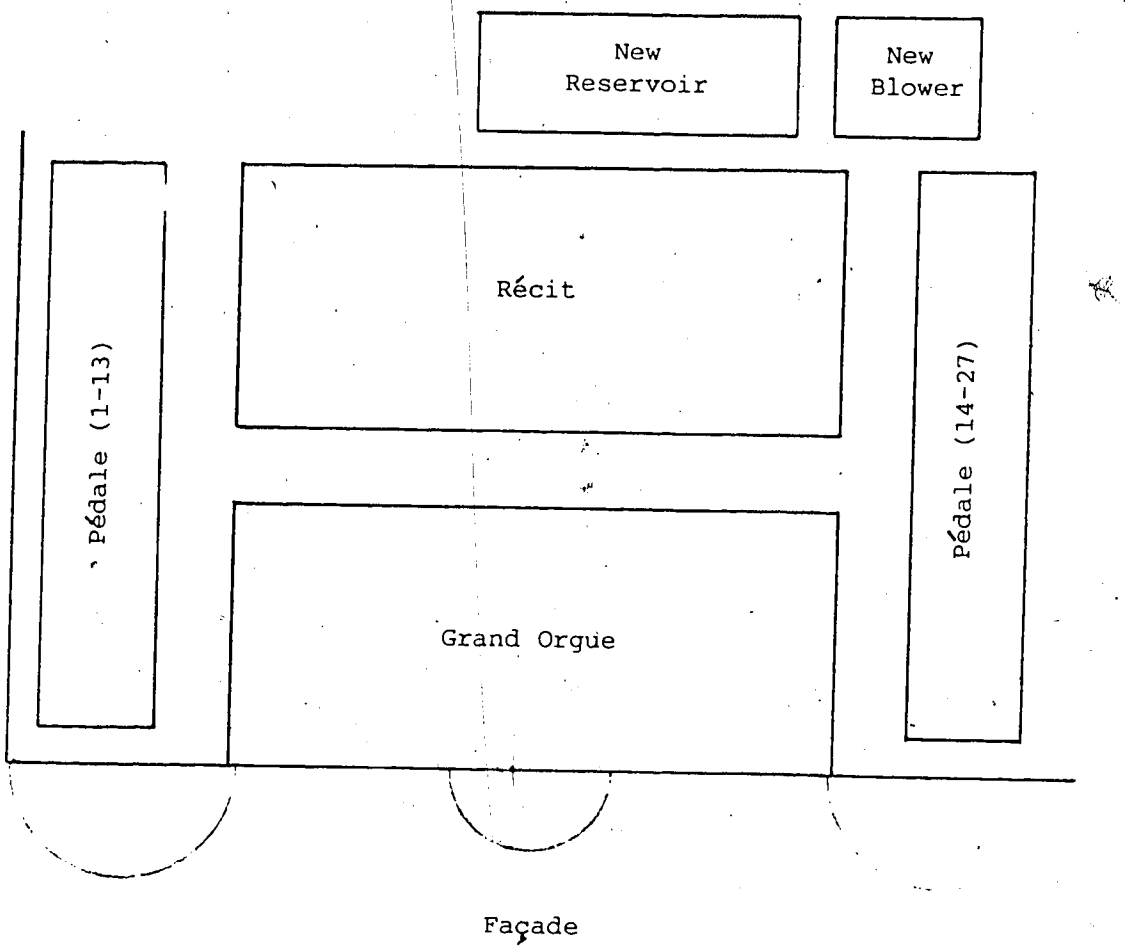
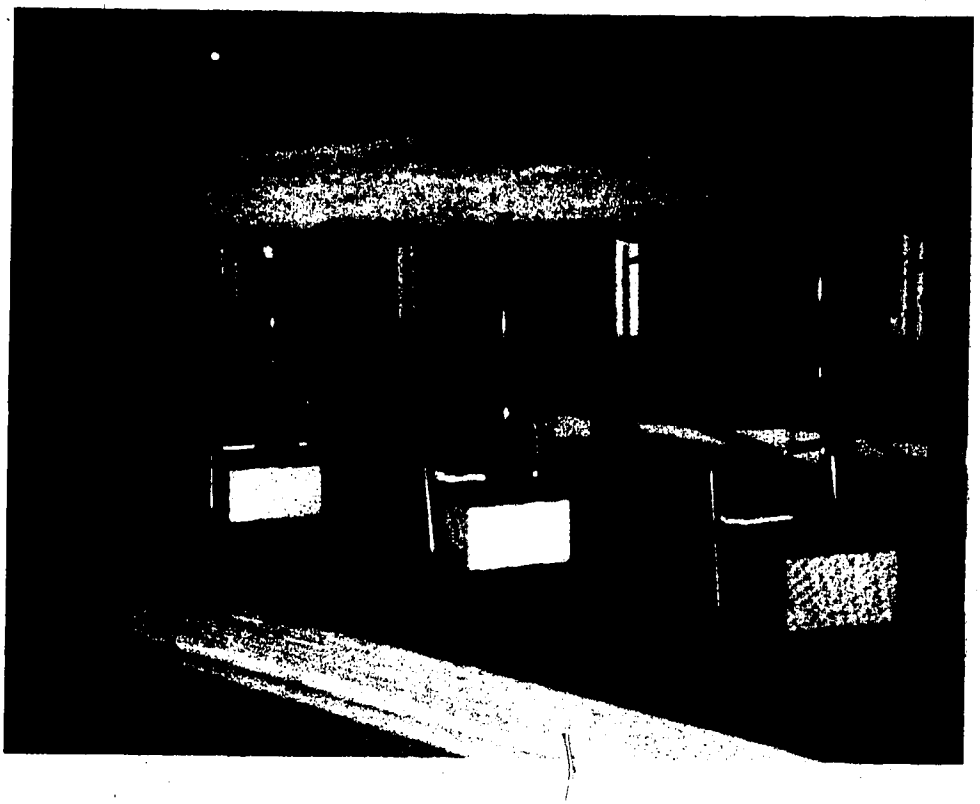


Plate VIII. Pallet Design for the Bourdon 16'.



The Grand Orgue manual utilizes a fanned backfall[1] action which sits above the Récit keyboard. Wooden squares, trackers[2] and stickers[3] comprise the Récit action as shown in Plate IX on p. 39. The Grand Orgue stickers pass through carefully milled holes in the Récit keyboard and a dog-leg coupling system is used for the Récit au Grand Orgue coupler. The longest cedar tracker of the splayed Récit action measures 122 cm. The pedal action relies entirely on a rollerboard system, transferring the motion of each key at a right angle where a cedar tracker is attached. The trackers travel the length of the pedal chests through tracker guides to the appropriate note where another roller is set in motion to pull the pallet wire (see Plate X, p. 40).

The pedal coupler operates by means of a dog-leg action attached to the back of the pedal rollers. The rollers have a double arm at the pedal tracker connection. The second arm extends through the roller board, allowing the coupling action to be engaged as illustrated in Plate XI on p. 41. Access is provided by removable panels above and below the manuals for repair and maintenance. The Octave Récit au Grand Orgue coupler uses a fanned dog-leg action to transfer the motion by an octave as can be seen in Plate XII on p. 42. There is no mechanism provided to compensate for the extremes in climate in Western Canada. This is less critical in a small organ such as Opus 143 than in a large instrument, but not a problem that can be dismissed:

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[1]See Glossary of Terms, p. 96. [2]Ibid., p. 97.

[3]Ibid., p. 97.

Plate IX. View of the Récit Action and Grand Orgue Action.

(Récit action below Grand Orgue backfall action)

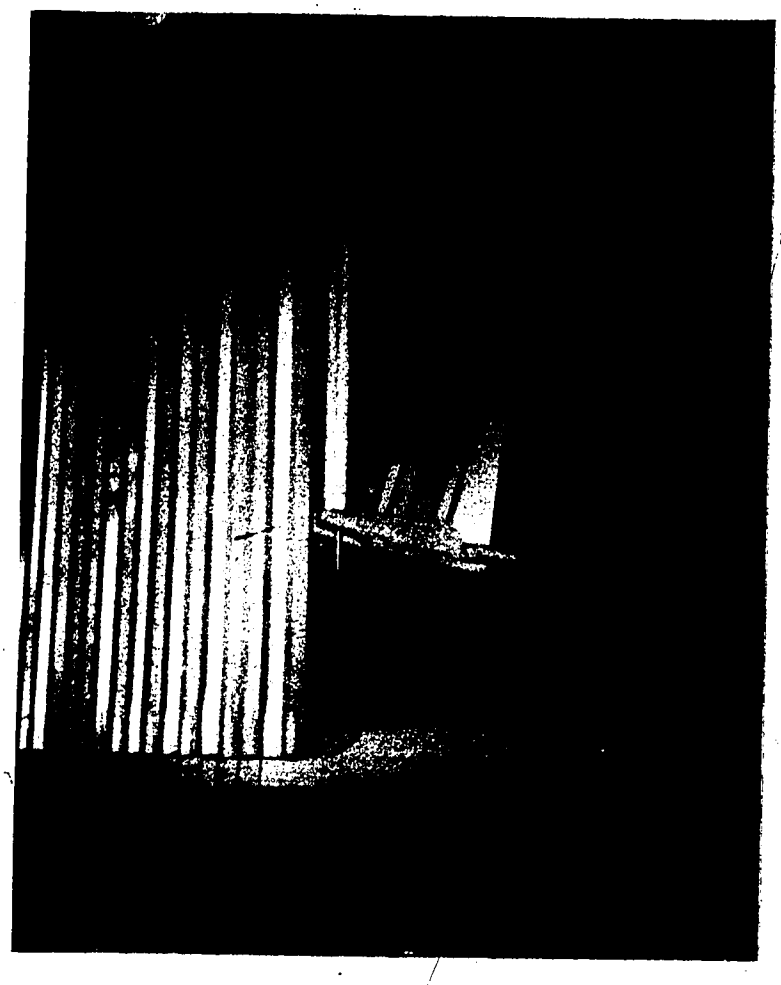


Plate X. The Tracker Action Under the Bourdon 16' Chest.

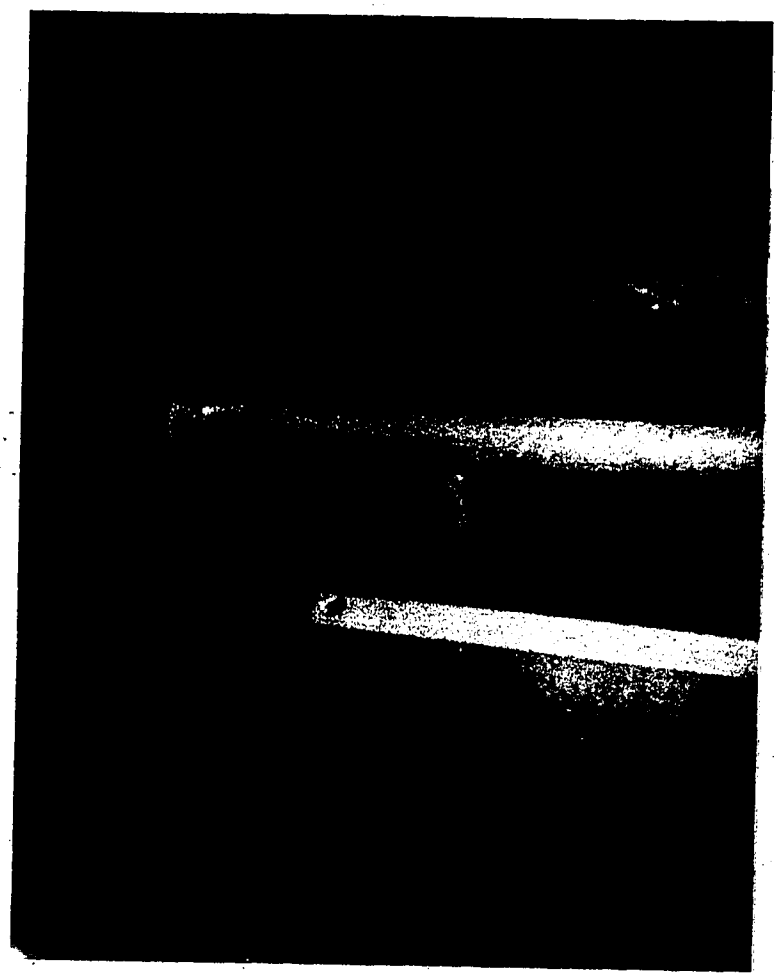
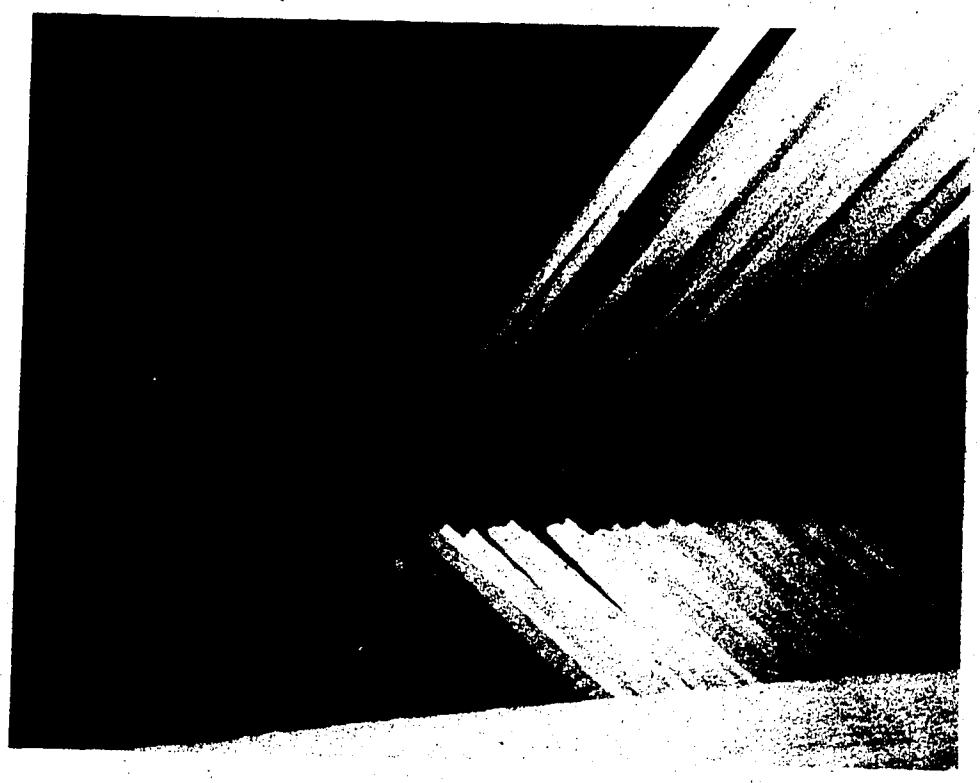


Plate XI. Interior View of the Manual to Pedal Couplers.

Plate XII. Interior View of the Octave Récit au Grand Orgue Coupler.



> According to a method book of 1908, organists were expected to be able to adjust mechanical actions, and organ repairmen were obliged to loosen or tighten top boards according to changing climate conditions.[1]

There are very few case markings in the Pincher Creek organ. Pipes are stamped with the rank and appropriate pitch name; markings elsewhere are stamped in ink. What markings there are appear to be original.

The Pipework

As was typical of Casavant Frères, all pipework for the Pincher Creek organ was built by the Casavant firm. In general, they followed the trends of the day, leaning heavily to a romantic concept of tonal design not unlike that of one of the brothers' teachers, Cavaillé-Coll.[2] The metal pipes of Opus 143 have a high lead content (perhaps seventy percent or more lead). Only the Salicional 8' and Voix Céleste 8' make use of spotted metal, while most bass pipes over 90 cm in length are of zinc. Much of the metal pipework was fitted with tuning sleeves during the 1980 restoration. Original slotting of the Salicional 8' and Voix Céleste 8' is still visible, but such is not the case for remaining ranks. Whether the treble end of these ranks was slotted or cone tuned cannot be determined, though it would seem reasonable to assume that the very small pipes of the 4' ranks were cone tuned. Sleeves extending

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[1] Richard Warren Hass, "A Comprehensive Performance Project in Organ Literature with a Study of the Organ in St. Salvator Lutheran Church in Vendy, Illinois" (D.M.A. essay, University of Iowa, 1976), p. 34.

[2] For a more detailed discussion see Historical Notes to Chapter III, No. 2, p. 76.

beyond the pipe bodies begin at different points in the 4' ranks; the top thirty-one pipes of the Prestant 4' and the top eighteen pipes of the Flûte Harmonique 4' are sleeved. This only adds confusion to the issue, making it impossible to determine how far slot tuning extended into the treble range of these ranks. All metal ranks use ears to steady the speech well into the top octave or throughout the rank, excepting the Prestant 4'. Beards are used only for the lowest pipes of the Salicional 8' and Voix Céleste 8'. Generally all of the metal ranks are moderately to heavily nicked; flues (windways) are variable and closed-toe voicing is used in all but two stops. The wooden pipes are also typical of the period, made of pine and a hardwood, probably maple, and nicking, to one degree or another, is found throughout the pipes. Aspects of pipe construction can be seen in Plate XIII on p. 45 and in Plate XIV on p. 46, and in Appendix F on p. 98.

The Grand Orgue

The Montre 8' sounds heavy and somewhat covered. The first seventeen pipes, which includes those in the façade, are of zinc. This accounts for a wider scale than the Normprincipal[1] in the bottom range. The color brightens and becomes much more dominating in the middle range as the scale narrows. The top octave and one-half, returning to Normprincipal scale does not dull or thicken

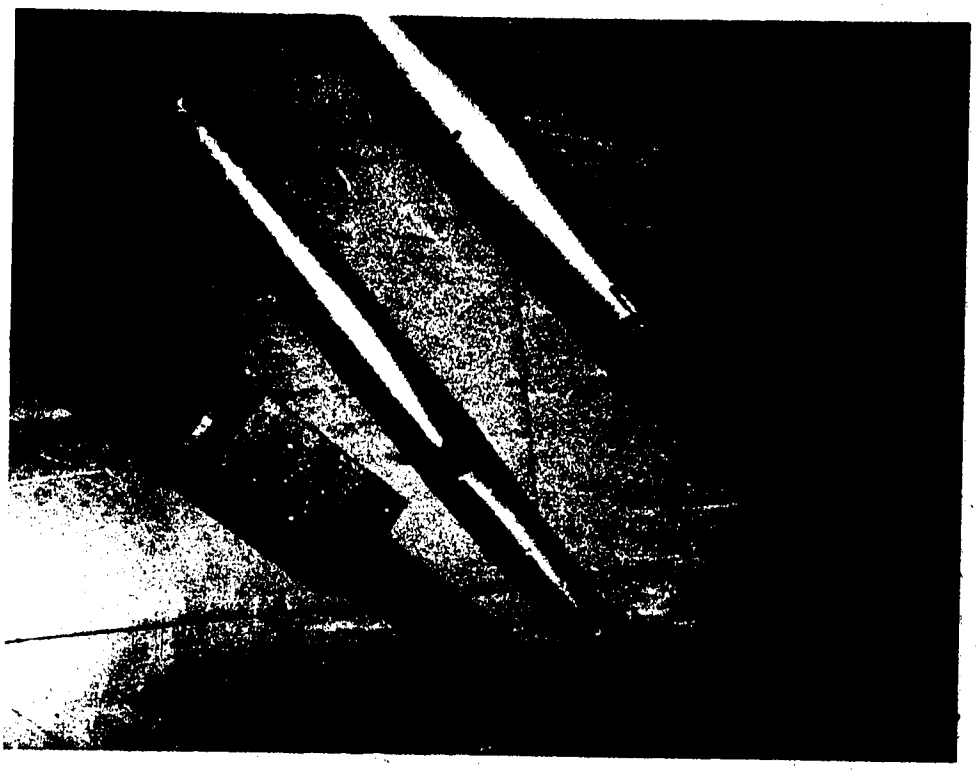
[1]The dimensions (scales) of the pipes are based upon and related to the universally accepted standard scale known as the Normprincipal. In this thesis, the Normprincipal is calculated on the diameter of C given as 155.5 mm. The octave diameter is in the ratio of 1:2.83. All calculations have been computer generated.

Plate XIII. Pipework of the Grand Orgue.

(From left to right: Montre 8', Dulciane 8' Mélodie 8', and Prestant 4')

Plate XIV. Pipework of the Récit.

(From left to right: Bourdon 8', Salicional 8', and Flûte Harmonique 4')



the sound. The scaling lies between three and one-half half-tones wider in the bass and one and one-half half-tones narrower in the middle range than the Normprincipal (see Figure 4, p. 48). Two other scaling variables must be considered: mouth width to pipe circumference ratio and mouth cut-up to mouth width ratio.[1] Mouth widths are slightly narrow and constant at .22 excepting c' which, at .24, most closely approaches the normal scale (see Figure 5, p. 49). Cut-ups are from .27 in the bass to .37 at c' and then decrease to .31 at the extreme treble (see Figure 6, p. 50). The upper lips are cut straight and the rank utilizes ears to e'''. The high lead content (from f), generally wide flues and very heavy nicking account for the wooly and ponderous tone color of this stop.

The Prestant 4' is similar to the Montre 8' in construction and tone. Pipe dimensions parallel Normprincipal scaling but at an average of three half-tones narrower. The bottom five pipes are the exceptions; they are made of zinc, located in the façade and have a scale wider than the Normprincipal. The pipes are heavily nicked resulting in a slightly covered or dull sound, yet the bottom octave is solid and clear, and from g to the treble end is much clearer and brighter than the Montre 8'. The width of the pipe mouths ranges

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[1] In this thesis, a mouth width to circumference ratio of 1:4 (.25) has been accepted as the norm. Likewise the ratio of 1:4 (.25) is considered the norm for mouth cut-up to mouth width. All references to mouth width are given as a decimal figure in relation to pipe circumference, and all references to cut-ups, also given as a decimal figure, are in relation to mouth width. For more complete information about these aspects of scaling, the reader is referred to Timothy J. Tinker's article "On a Successful Organ in a Dry Acoustic," The Diapason, January 1984, pp. 6-8.

Figure 4. Grand Orgue Pipe Scales of the Pincher Creek Organ.

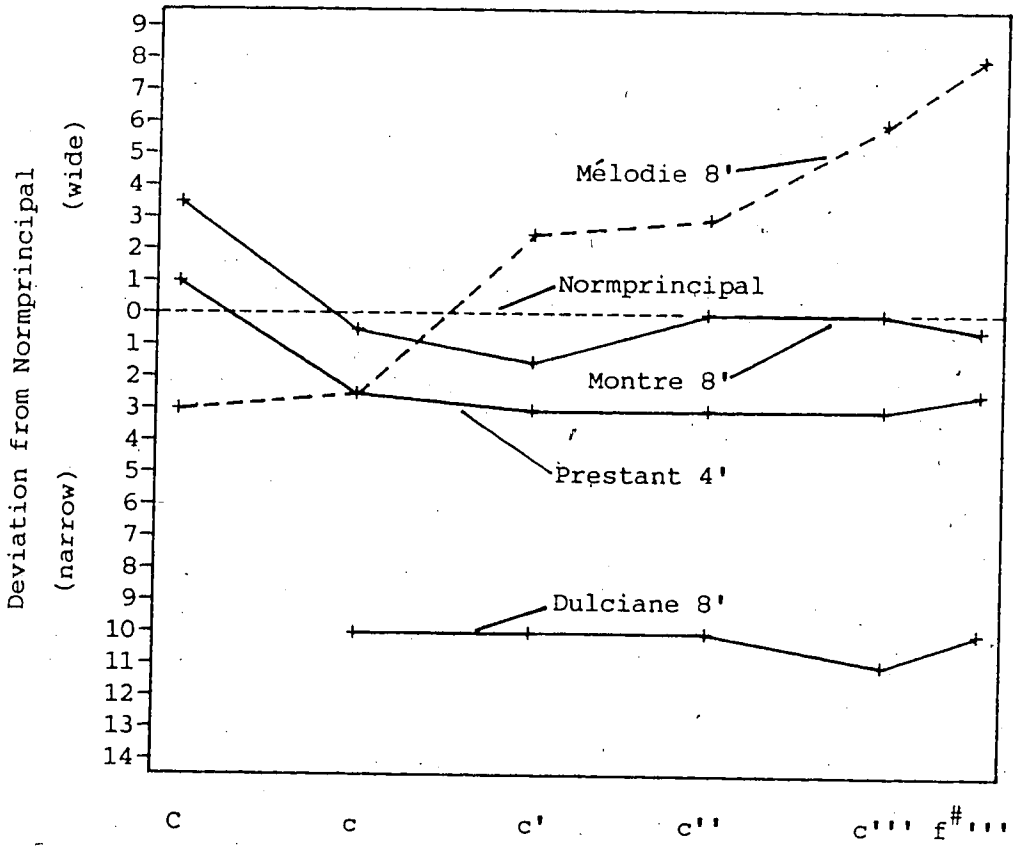


Figure 5. Grand Orgue Pipe Mouth Width to Circumference Ratios.

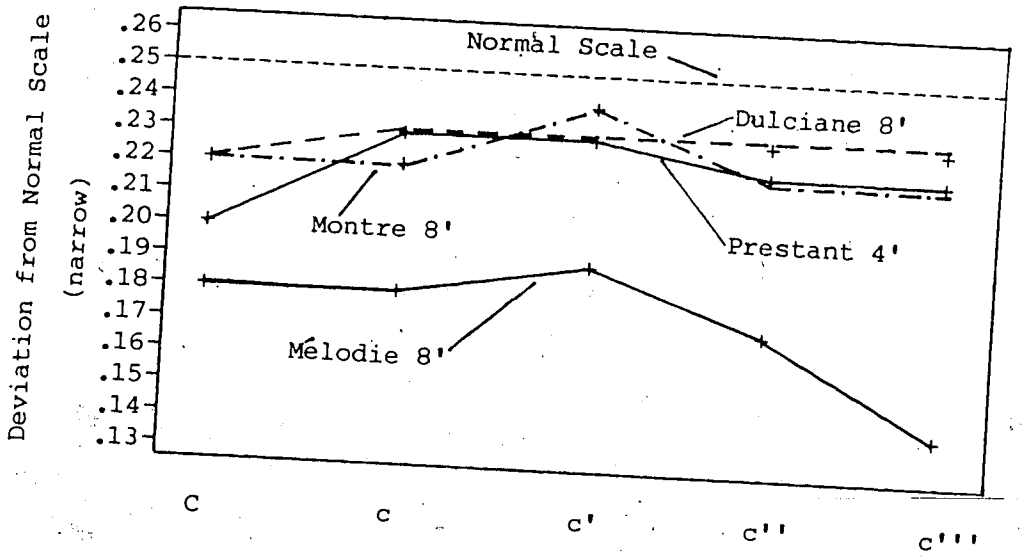
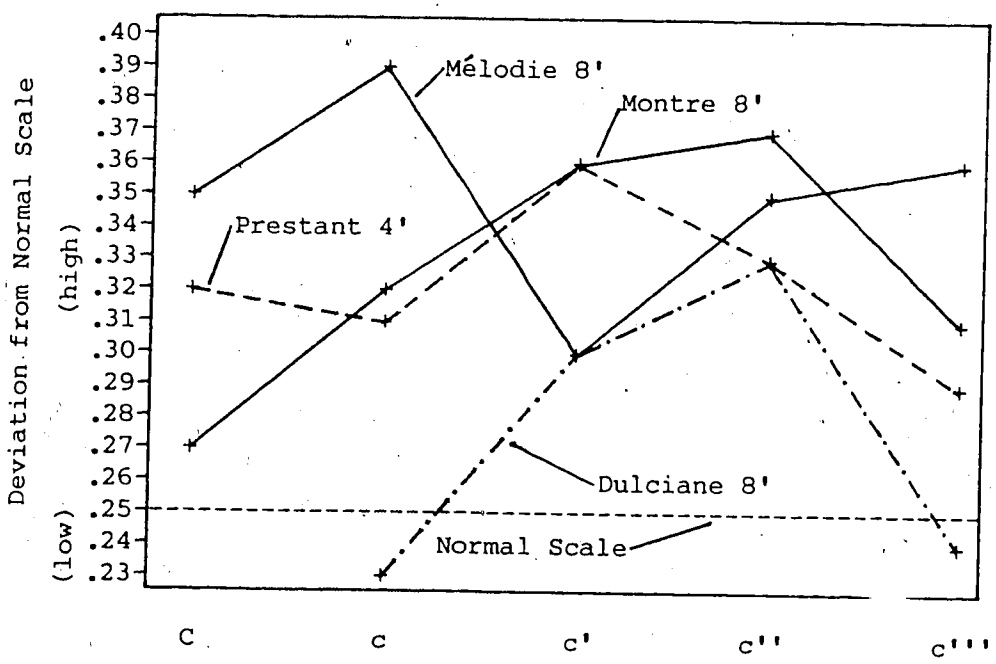


Figure 6. Grand Orgue Pipe Cut-up to Mouth Width Ratios.



from .20 to .32, the four bottom pipes of zinc having the wider mouths. The pipes have ears to e'' with cut-ups ranging from .29 to .36. Upper lips are cut straight throughout the rank. The body of the Mélodie 8' is constructed of pine with hardwood blocks and stoppers. This stop shares its bottom twelve pipes with the Dulciane 8' resulting in a scaling for these pipes far narrower than one would expect. This compromise is not totally satisfactory, the Mélodie 8' being somewhat weak in its bottom octave and the Dulciane 8' timbre simply not matched at the join - B to c. The first seventeen pipes of the Mélodie 8' are stopped. From the gentle bottom octave, the sound becomes forced and heavy in the tenor range and only the top octave and one-half provides some clarity. The deep, regular nicking would, in part, account for the heavy tone in the middle register. The upper lips are slightly curved on the stopped pipes but straight on all open pipes. The mouth widths are the narrowest of the Grand Orgue stops ranging from .14 to .19. Cut-ups vary from .30 to .39.

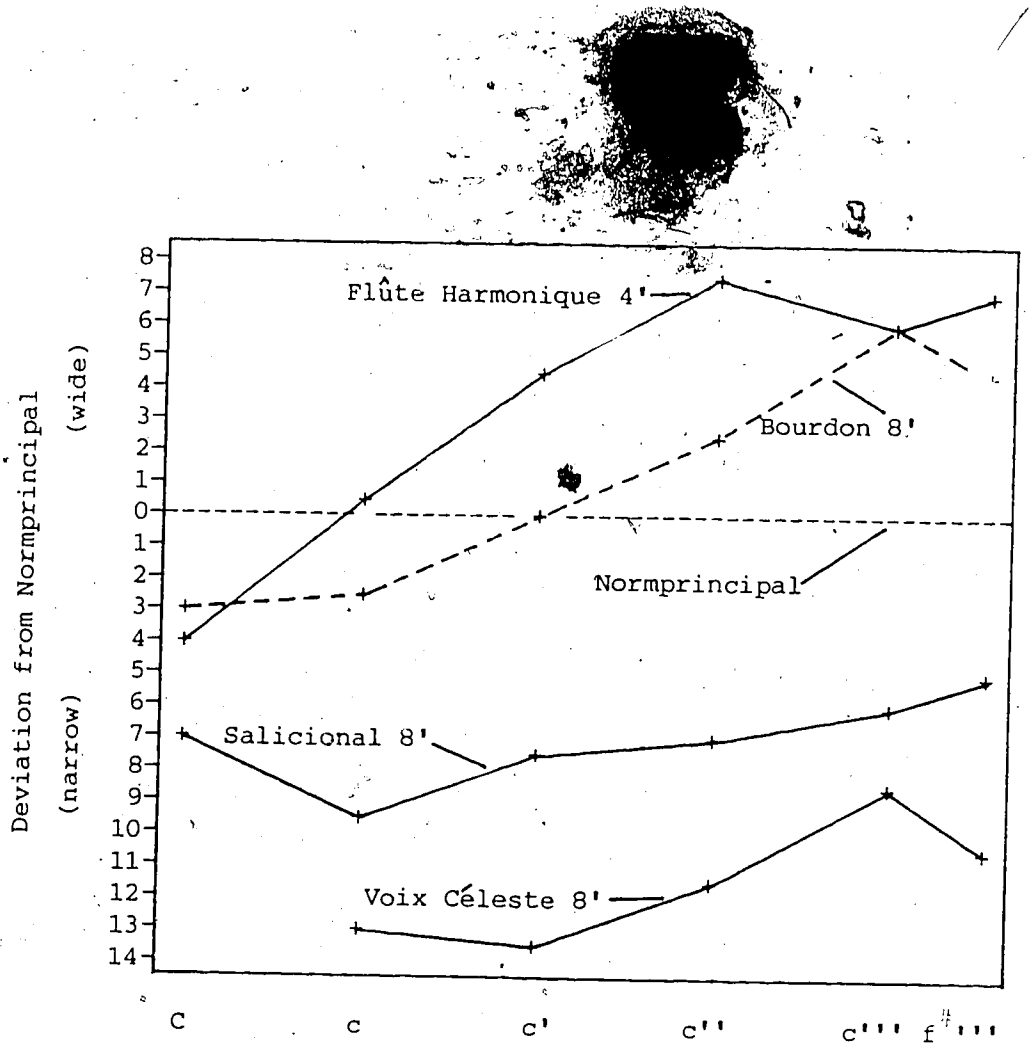
The Dulciane 8' is the most disappointing rank in the organ. Its sound never gets above a whimper due to the closed flues and toes and the thorough but light nicking. Its sound was probably conceived to blend with the Mélodie 8'. When so combined, the heavy sound of the Mélodie 8' warms, with the upper harmonics of the Dulciane 8' blending superbly to create a new color of considerable richness. The sound of the Dulciane 8', soft as it is, retains something of the heaviness of the other 8' ranks of the Grand Orgue. Mouth widths range from .22 to .23; the upper lips are slightly

curved with cut-ups from .23 (approximately that of a principal rank) to .33.

The Récit

Ranging between five and nine and one-half half-tones narrower than Normprincipal, the Salicional 8' provides a thin principal-like foundation for the Swell division (see Figure 7, p. 53). Solid zinc tubing feeds the twelve offset pipes. From tenor C to the treble end, pipes are of spotted metal. Wooden roller beards attached to large ears steady the speech. Beards extend to g-sharp and ears to e'''. This rank is quite aggressive with a clear and warm sound. Close examination of the pipework was not possible as it is placed at the back of the swell box, impossible to reach from the walkboard. Only the offset bottom octave, which extends below the Récit chest and action, was accessible. Here the nicking was regular but not excessively deep and flues were quite open. Toes were relatively closed as with most of the ranks but I wonder if they may be a bit more open from tenor C and up. I assume that the nicking continues in the same manner as for the first octave. Measurements for scales were difficult to obtain; calipers were used at arm's length and several adjustments had to be made to obtain an accurate reading for each pipe measured. The swell shutters in an open position provided sufficient space to reach through, but in this position, space on the walkboard was reduced to a dangerous minimum, making the task of measuring pipes even more difficult. Since it was not possible to reach all of the pipes, mouth widths and cut-ups were not always available. Only one pipe of the

Figure 7. Récit Pipe Scales of the Pincher Creek Organ.



Salicional rank could be so measured revealing a mouth width ratio of .20 and a cut-up ratio of .30 at C (see Figure 8, p. 55 and Figure 9, p. 56). These lie closer to the ratios expected in a principal rank, and are not surprising considering the tone color of this register. Upper lips appeared to be straight cut throughout the rank.

The Bourdon 8' is perhaps the most pleasing of all wood tops. Its scaling, from three half-tones narrower than Normprincipal in the bass to six half-tones wider at the treble (excepting the top nine metal pipes) provides a delicate yet well balanced gradation throughout the stop. Exact cut-ups were unobtainable; the Bourdon 8' lies next to the Salicional 8' toward the back of the swell box. The one pipe measured (c-sharp') revealed a mouth width ratio of .20 and a cut-up ratio of .31; upper lips appeared to be straight cut throughout. The sound might be best described as round, gentle, full and most satisfying, blending beautifully with the Flûte Harmonique 4'.

The Voix Céleste 8' (from c) is of spotted metal with ears to the top but for the last two pipes. Beards in the form of wooden rollers extend from c to a-sharp'. As might be expected, mouth widths are on the narrow side, between .20 and .23 and the cut-ups are between .24 and .29 (where measurable). All upper lips are slightly curved and skived. The scaling is quite narrow, falling thirteen and one-half half-tones to eight and one-half half-tones narrower than Normprincipal. Only the Dulciane 8' of the Grand Orgue is narrower in the treble end. The Voix Céleste 8' is placed

Figure 8. Récit Pipe Mouth Width to Circumference Ratios.

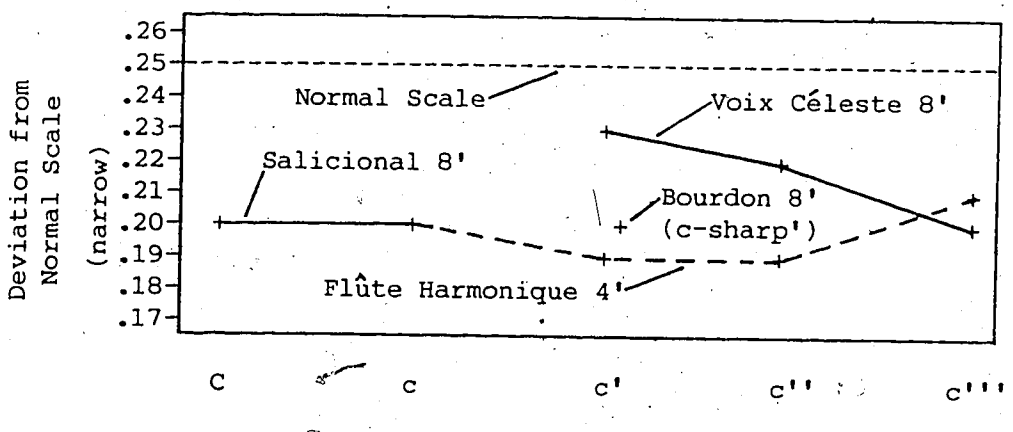
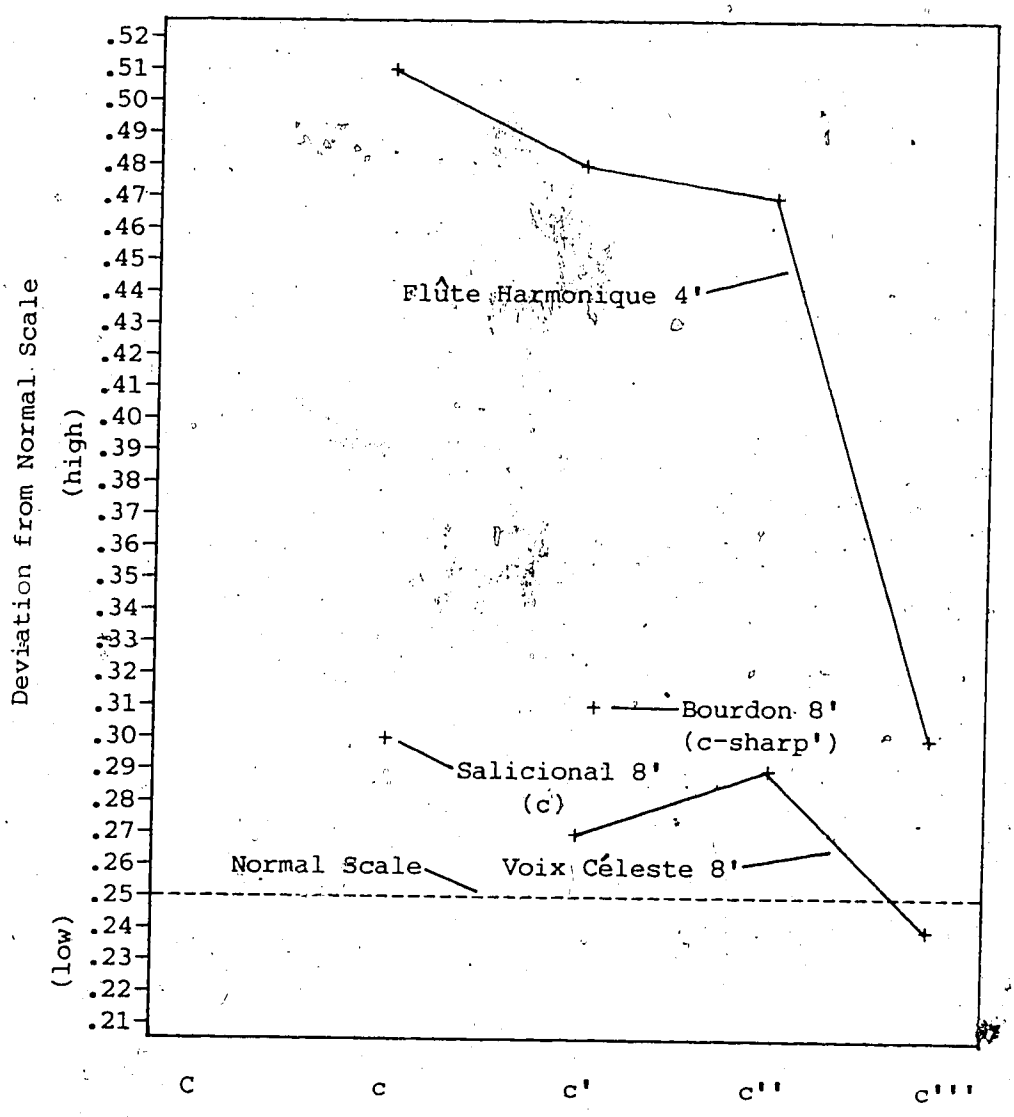


Figure 9. Récit Cut-up to Mouth Width Ratios.



far enough away from the Salicional 8' so that "pulling"[1] is not a problem. The pipes are regularly but lightly nicked with relatively closed toes and flues; the sound produced is clear and keen and very rich in harmonics. Its blend with the Salicional 8' is superb and well illustrates the proclivity for rich undulating colors in organ building at the turn of the century.

The Flûte Harmonique 4' is a truly romantic organ color. The first twenty-four pipes are of normal speaking length (the first five are of zinc) but thereafter are double length (harmonic) with the pipes sounding the octave. The harmonic pipes have holes at approximately the midway point on the right side of the body. Ears to e'''' steady the speech and cut-ups are high as might be expected from .30 to .51. Mouth widths are on the narrow side, between .19 and .21. All upper lips are curved, flues quite open, nicking is heavy and toes are very open by comparison with all other ranks. The scaling lies from four half-tones narrower to seven and one-half half-tones wider than Normprincipal. The sound is a bit more forced than other ranks, perhaps because of the open toes and flues, yet the stop blends exceptionally well with the Bourdon 8'. Less successful is its combination with the Salicional 8', though not unpleasant. This stop works well as a solo color, even against itself as the scaling permits a gradual crescendo throughout the register, tapering only at the extreme treble.

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[1] Pulling is a term used to describe the effect resulting from two string ranks placed in close proximity. The unisons tend to "pull" together, defeating the purpose of one rank being tuned sharper than the other. The desired gentle undulation is best achieved when the string ranks are separated by one or more ranks.

The Pédale

The pedal division consists of the single Bourdon 16' stop. Its rather large scale, between two and five half-tones wider than Normprincipal is not surprising (see Figure 10, p. 59). The Casavants modelled much after the work of European builders, most especially Cavaillé-Coll. Foundation stops of 16' and 8' pitches of large scale in the pedal seemed the norm.[1] The small size of the Pincher Creek organ limited the pedal division. One might have expected an 8' flute to complement the Bourdon 16' but as this is not the case (perhaps finances or space restrictions dictated) the Bourdon 16' is given a generous scale to provide a solid foundation to the tonal scheme. Mouth widths lie between .18 and .20; cut-ups range from .42 in the bass to .32 in the top few pipes (see Figure 11, p. 60 and Figure 12, p. 61). The upper lips have a slight curve, not unexpected in wooden flue pipes of this size and period, and the flues are quite open. A fan valve affixed to the foot of each pipe is used to control the amount of wind entering the pipe. The sound is amazingly round and full without being overbearing and does support the entire organ, with some coupling. A few notes "cough" at the moment, appearing to require only an adjustment of the fan valve. I believe the fan valves were opened more in 1980 than previously. Perhaps the technician felt the need of a slightly bigger sound. There is no regular nicking of the pipes.

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[1] For more detailed information see Historical Notes to Chapter III, No. 2, p. 76.

Figure 10. Pipe Scale of the Bourdon 16'.

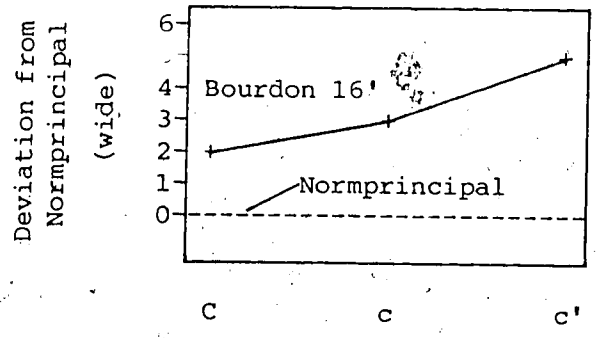


Figure 11. Pipe Mouth Width to Circumference Ratios of the Bourdon 16'.

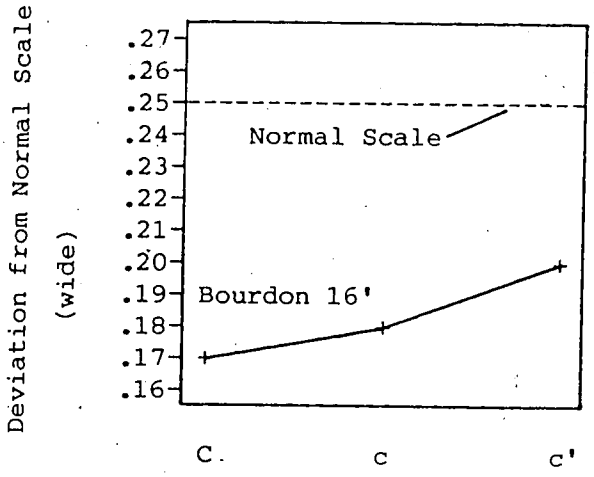
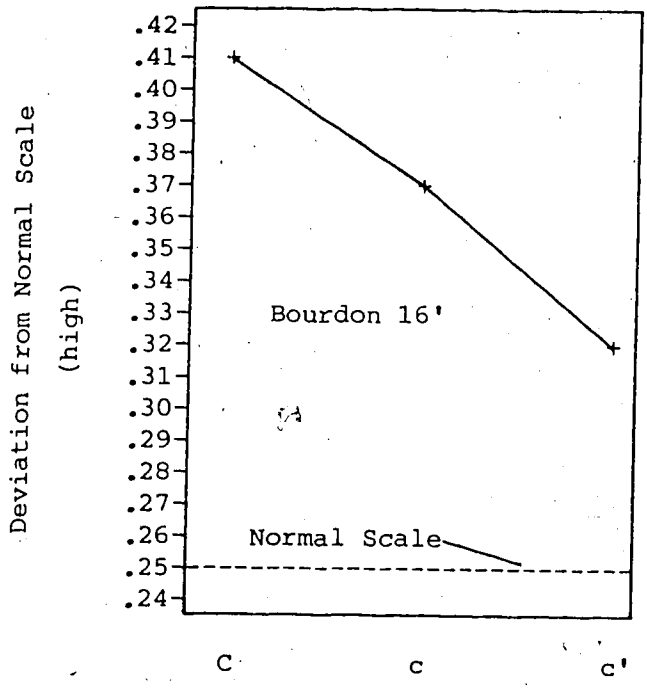


Figure 12. Bourdon 16' Cut-up to Mouth Width Ratios.



Chapter IV

CONCLUSION

In the preceding chapters I have traced the history of the Pincher Creek organ and discussed various aspects of its design and construction. While of considerable interest to some, these discussions do not answer the fundamental question: Does this organ have any relevance to modern organ building and playing, and what historic value does it represent? First, it shows how viable the mechanical action and slider chest design is after eighty-three years of continuous use. Second, the organ represents a romantic concept of tonal design strongly influenced by the work of the great French organ builder, Cavaillé-Coll. Third, the Casavants' ability to build conservatively when the situation demanded is reflected in the design and construction of the Pincher Creek organ. They well knew the importance of a product that was free from mechanical problems and would serve with minimal maintenance . Therefore they took great care to avoid any experimental elements in organs that were sent long distances from St. Hyacinthe, Québec. Fourth, the organ is one of the last built with mechanical action and therefore represents the culmination of an era for Casavant Frères.

The organ in Pincher Creek is historically important because it gives so many clues about turn-of-the-century organ building and provides an insight into the philosophy of the Casavant firm:

> So the typical organ which Claver and Samuel delivered to a customer was apt to please him on several grounds. The woodwork of its case and console was carefully finished in a style consonant with the surrounding architecture. Its mechanism was sturdy but flexible enough to place little strain on a player's physical strength, thanks to numerous built-in technical devices.[1]

While many will find the sound of the Pincher Creek organ dated, it unashamedly reflects the tastes of its own period. Music from the late nineteenth and early twentieth century is most satisfying on this organ. In this regard it has much to teach us about performing the literature of that period. Many modern builders, including the Casavant firm, have returned to mechanical action and slider chest instruments; the intrinsic value of this method of organ building can hardly be questioned today. From the player's point of view, the experience gained by performing late Romantic literature on such an organ will aid in more authentically reproducing the music on a modern instrument.

Only the changes to the façade and the altered winding system mar the significance of this organ as an historic monument. If these alterations are properly restored, the Pincher Creek organ will indeed be a national treasure.

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[1] Lapointe, Casavant Frères, pp. 43-44.

HISTORICAL NOTES TO CHAPTER ONE

1. The Naming of the Town of Pincher Creek

The Rev. Father Emile Tardif O.M.I., for some time historian and archivist for the Institute d'Histoire de l'Ouest Canadien at Maison St. Vital in Edmonton, and twice pastor of St. Michael's church (1945 to 1955 and 1961 to 1964), discusses at some length the naming of the town of Pincher Creek:

> The name was given to the place because a blacksmith with the surveying party who made the map of Pincher Creek had lost his big plyers, pinchers, in the Creek. As they were looking for a name for the place he took a board and set it up saying that the place would be called Pincher Creek in commemoration of the event.
>
> The blacksmith's name was Harnois who was the husband of the sister of Father Lacombe. I think that her name was Celine. She had come West at the insistence of Father Lacombe to be a teacher.[1]

2. Father Lacombe and St. Michael's Church

As for Father Lacombe's affiliation with St. Michael's, it continued for some time, for church records show that he was resident in Pincher Creek from 1884 to 1885 and again from 1889 to 1898. In addition, reference is made to Father Lacombe after the turn of the century in connection with the Pincher Creek Mission:

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[1] Emile Tardiff O.M.I., Institute d'Histoire de l'Ouest Canadien, letter to D. Stuart Kennedy, Calgary, Alberta, 28 November, 1966.

> Already the great missionary of the North-West, the zealous Father Lacombe, had requested Sisters for Pincher Creek. His Excellency, Bishop Legal, granted him his permission as early as 1902. However it was not until January 4th, 1904 that three Filles de Jesus left Three Rivers in Québec, destined for Pincher Creek. . . .
>
> . . . On January 12th, 1904, Rev. Father Blanchet, Oblate of Mary Immaculate, received the Filles de Jesus in Pincher Creek. Accommodation was provided for them in the old church formerly inhabited by the first missionary Fathers.[1]

This intermittent association between Father Lacombe and the Pincher Creek church is understandable since St. Michael's was still a mission church and was not officially created a parish until February 16, 1911.[2]

But if the Roman Catholic Church appeared to have a strong hold on this young and thriving community, it was not the only active denomination. The Baptists held services in a private home prior to 1905 and together with the Presbyterians and Methodists, organized a Sunday School in 1884. In that same year a Presbyterian church was built followed by the completion of a Methodist church in 1887.[3] A number of pioneer families who settled in the region, brought with them their Lutheran faith and in December of 1901, they adopted a constitution and by-laws.[4]

The life of the Anglican community is well documented and boasts not only being the first to hold regular services commencing

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[1]Father LaBonte, "Les Filles de Jesus in Retrospect," Pincher Creek Echo, 10 June, 1954.

[2]Most Rev. P.J.O'Byrne, telephone interview, Calgary, Alberta, January 1983.

[3]Alberta Government Publicity Bureau, Survey of Pincher Creek, p. 5.

[4]Prairie Grass, p. 196.

on Easter Sunday, 1883, but also of being the oldest Anglican church in continuous use in the Province of Alberta. St. John's church building itself was completed in 1884.[1]

3. The Routhier Name in Canadian History

Madame Routhier's husband, Adolphe Basile Routhier was born at St. Placide, Québec in 1839. In 1873 he became a judge of the Superior Court of Lower Canada and its Chief Justice in 1904. He became president of the Royal Society of Canada (1915 to 1916) and was knighted in 1911 at the coronation of George V.[2]

Judge Routhier served Canada not only as a judge but as a statesman and writer:

> His writings on early Canadiana give a fascinating picture of the times. For one, who reads French, his book, De Québec à Victoria, published in 1893, and dedicated to A.M. Van Horne, president of the CPR, is most interesting as he recounts the story of the opening of the West with the advent of the railroad. A central figure in this chronicle is, of course, Father Lacombe.[3]

Of Judge Routhier's patriotic poem which became the text of "O Canada," Toronto music historian Hugh McKeller writes:

> The song was planned as a highlight of the Fête Nationale at Québec city's 1880 St. Jean-Baptiste celebration. There was to have been an open-air performance before a crowd late on June 23, to be repeated the next day at a banquet attended by many dignitaries, including the Governor General, the Marquis de Lorne. Already a respected writer, he was doing his best to foster the arts in Canada.

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[1] Prairie Grass, p. 20.

[2] D. Stuart Kennedy, "Church Organ of Historic Significance," p. 3.

[3] Ibid., p. 3.

> Therefore the fête's organizers aimed high. They requested lyrics from Adolphe-Basile Routhier, a judge known for his French verse, and music from Calixa Lavallée, a Montreal-born musician who had won some success in both the United States and Canada. Lavallée hoped that the song would gain him backing for the conservatory of music he dreamed of founding in Montreal, for which Lorne could be the ideal champion.[1]

Some claim that Judge Routhier was never very active in politics and that his main goal in life was "the stimulation of the traditions of the French-Canadian people, . . ."[2] Yet Mr. McKellar presents strong evidence that suggests an active political inclination:

> For an intensely French-Canadian occasion he had put into verse an intensely French-Canadian concept of what Canada ought to be. He expected English Canadians to ignore it as completely as they had ignored the poems he had previously published -- in French, of course.
>
> Those English Canadians who had heard of him knew him not as a writer, but as a judge out to confirm every dark suspicion they held about Québec. For he was legal advisor to the Castors, a group of Québec intellectuals whose brand of nationalism makes Levesque's look tame and pale. Nor could he keep his views out of his courtroom.[3]

As for the family Routhier, Judge (Sir) Adolphe Basile Routhier was honored together with Calixa Lavallée, composer of the music for "O Canada" and Robert Stanley Weir, translator of the popularly accepted English translation of the French text, by an official postage stamp on June 6, 1980. Of this honor, and the remaining members of the Routhier family, Mrs. Marie C. (Katie) Farrell of Calgary, and granddaughter of Lady and Sir Adolphe

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[1] Hugh McKellar, "O Canada - what a checkered history," Toronto Star, 15 June, 1980, sec. B, p. 1.

[2] Prairie Grass, p. 238.

[3] McKellar, "O Canada," p. 1.

Routhier writes:

> There are 15 descendants living in Québec and Ontario and 32 living in Alberta.
>
> My sister Jeanette of Edmonton, my daughter-in-law Florence and two of my daughters flew to Ottawa for the ceremony on Parliament Hill July 1st 1980.
>
> We are all proud being Canadians, Albertans, and sons and daughters to dear old Pincher Creek.[1]

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[1] Marie C. (Katie) Farrell, in a letter to the editor, Pincher Creek Echo, 27 July, 1980.

HISTORICAL NOTES TO CHAPTER TWO

Joseph Casavant, born January 23, 1807, was the father of Claver and Samuel Casavant. His name has often been associated with the firm of Casavant Frères, but erroneously so:

> The father's example may have influenced the two sons' choice of a career, and the money he left them certainly enabled them to start up in business. But the company as we know it was their own brain child, and its technological foundations was laid by their own apprenticeship and research.[1]

Joseph was a blacksmith, apprenticed at the age of sixteen, whose interest in music eventually led him to his second career as an amateur organ builder. Many around him were surprised at his decision in 1834 to enter the college of St. Thérèse near Montreal where he hoped to study music. In exchange for tuition, he was made responsible for completing an organ that was on the college premises. This was all the incentive he needed, for by 1840 he had completed the first instrument built entirely by himself. His organ building career lasted some twenty-six years over which period of time he constructed sixteen instruments:

> . . . evidence indicates that Joseph perceived himself as a small-scale craftsman. With the help of only an apprentice or occasionally an employee, he personally fashioned all the pipes he needed. At St. Thérèse, when he was starting out, he even

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[1] Lapointe, Casavant Frères, p. 9.

> cut down trees on the college grounds with the help of Augustin Lavallée (whose son would one day compose the music of "O Canada").[1]

The association with Augustin Lavallée is a remarkable coincidence, for many years later the Routhier family, donors of the Casavant organ for St. Michael's church in Pincher Creek, were also associated with the Lavallée family.[2]

Joseph Casavant retired in 1866, having provided himself with an annual income from the organs he built. Knowing that he was ill, he had his will drawn up on June 9, 1871, providing well for his sons. He died at St. Hyacinthe in 1874:

> Over the years, he had taken on several apprentices; Eusèbe Brodeur, who had come to him in 1860, took over the business, on terms which included his promise to receive as apprentices his employer's two sons. At fifty-nine, Joseph could not count on living long enough to train eleven-year-old Claver and seven-year-old Samuel; thus he made the most dependable arrangement open to him for ensuring their chance to learn a trade.[3]

By the time of their father's death, the brothers had already spent time as apprentices with Brodeur in addition to their formal education at a private school for boys. But the vision of the two brothers was to go beyond the skills taught them by Brodeur. They soon realized that, while a competent and conscientious teacher, his knowledge was restricted to that which he had acquired from his own teacher, Joseph Casavant. Claver and Samuel knew that they must travel farther afield, to learn new skills and to see what

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[1] Lapointe, Casavant Frères, p. 12.

[2] For more detailed information see Historical Notes to Char[illegible] I, No. 3, p. 66.

[3] Lapointe, Casavant Frères, p. 12.

organ builders were doing in other parts of the world if they hoped to be successful in their chosen careers as organ builders.

In March 1878 Claver Casavant set out for Paris where his brother joined him in 1879. From there they travelled, studying and generally absorbing all that they could about the art of organ building. When they returned in October of 1879, it was only a few weeks before they decided to establish their own firm, "and mailed out a circular letter to every prospective client they could think of."[1]

In December of 1879 they bought property, began fixing up the building as a shop, and hired their first employee. Samuel was later to recall in a short speech given on the twenty-fifth anniversary of the company in 1905: "Our stock of tools consisted of a little circular saw and a lathe, two small machines set in motion by a great vertical wheel . . . long since deceased."[2]

The firm's first contract was signed at New Year's 1880. It was for a two-manual mechanical-action organ of thirteen stops. This was an important transaction for the Casavant brothers as it penetrated the important and prestigious Montreal market. The organ was completed in record time, by April of that same year, partly because the Casavants bought some ready-made pipes, something they likely never did again. Shortly thereafter, they signed a second contract, again for a Montreal church. This second contract introduced them to Dr. Salluste Duval, a long-time friend and

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[1] Lapointe, Casavant Frères, p. 15.

[2] Ibid., p. 16.

an organ enthusiast, who was to provide encouragement and support for many innovative techniques introduced by the Casavant firm. Most notable of these was a combination action and an electro-magnet stop action:

> One of Joseph Casavant's undeveloped dreams had featured an adjustable stop, which the organist could add to or withdraw from a combination as he played. Duval succeeded in obtaining the desired result through groups of pre-selected stops which the organist, after using each group in turn, could pull together by touching with his foot a pedal called the "combination adjuster." In 1882 this invention was tried out in the organ installed in the crypt of Notre-Dame-de-Lourdes chapel.
>
> Another unfulfilled dream, this time belonging to Albert Peschard, involved the use of electro-magnets to open up stops; with Dr. Duval's help, Casavant Frères partially solved this problem by 1885.[1] By 1892, when a completely electro-pneumatic organ was inaugurated in Ottawa cathedral, the experimental stage of this work with electricity was obviously past. These two contributions by Duval, to say nothing of the improvements which he suggested over a forty-year association, not only ensured survival of Casavant Frères, but propelled the firm well ahead of its competitors technologically, . . .[2]

By 1892 the reputation of Casavant Frères was firmly established, the firm having completed three important organs for St. Hyacinthe cathedral (1885), the church of Notre-Dame de Montréal (1890) and Ottawa cathedral (1892). Every technological advance the Casavant brothers had made, particularly relating to the use of electricity, was incorporated in one or the other of these instruments. Yet they knew that it was tradition that formed the basis of their organ building skills and whenever in doubt about reliability, they reverted to proven methods:

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[1] I believe that the reference to electro-magnets here refers to the electro-pneumatic action of the chest and not to the combination action at the console.

[2] Lapointe, Casavant Frères, p. 17.

> The organ completed by the Casavant brothers in 1890 for Notre-Dame had tracker action; only such accessories as the crescendo pedal and the combination pistons and pedals relied on electricity. While planning the organ, the Casavants had conducted very promising experiments with electricity to see how extensive use they could make of it: Samuel had even made a trip to Paris to see what he could learn there. In the end, they decided that the older system was more dependable -- as indeed it was, given the frequency of power failures at that time -- and confined electricity to those parts of the instruments which they understood better than anyone else.[1]

Thirty-six organs had been completed by 1892 and with the three prominent instruments already mentioned, the reputation of Casavant Frères was firmly established. The size of the shop had grown from one employee in 1880 to twenty-one in 1892. There can be no doubt that the technical innovations of Casavant Frères helped propel the firm to the forefront of organ building in Canada:

> The mighty organs of Notre-Dame and of Ottawa cathedral bore witness to the firm's technical competence, as well as giving it enviable publicity. All the same, 80% of its sales involved two-manual tracker instruments with twenty stops at most.[2]

One can easily argue that it was this percentage of Casavant's production that formed the backbone of the company, for customers were not likely to risk the purchase of an unreliable instrument. On the other hand, it must be conceded that it was the technical innovations that were to carry the company forward into the twentieth century.

From 1893 on, the Casavant brothers devoted themselves to the development of an electro-pneumatic chest design. So successful was their work that by 1900, "the electro-pneumatic wind-chest with

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[1] Lapointe, Casavant Frères, pp. 22-23.

[2] Ibid., p. 26.

membranes had become the norm in organ construction."[1] Between the years 1893 to 1905 the company built two hundred and eight organs of which seventy-one (thirty-four percent) were tracker action. The new direction was clear; organs that made use of electric action in one way or another were soon to take over in the market place. The last mechanical-action instrument built during this first important and illustrious period of development for the company of Casavant Frères was Opus 164 of 1902.[2]

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[1] Lapointe, Casavant Frères, p. 35.

[2] D. Stuart Kennedy, unpublished archival material, Calgary, Alberta, January, 1967, p. 3.

HISTORICAL NOTES TO CHAPTER THREE

1. The Casavant Brothers and Cavaillé-Coll

The Casavant brothers had realized early on that they needed to be thoroughly grounded in their art. Perhaps the most important influence in their career was the work of Aristide Cavaillé-Coll. This important organ builder had taught the Casavants the need for making technical improvements, but his influence extended beyond the mechanical aspects of organ building:

> Cavaillé-Coll, not content with mechanical innovations, displayed equal creativity in his concept of what an organ ought to sound like. This great French organ builder of the nineteenth century was recognized as the leading exponent of the "Romantic" organ hence the Casavant brothers would base the sound of their instruments directly on his ideas.[1]

There can be no question that an enclosed division is an important aspect of the Romantic organ design. The expressiveness offered by the shuttered division is enhanced by "stops like the voix céleste, whose quivering works directly on the hearer's emotions."[2] The Casavants used a swell box and string colors in even the smallest of their two manual organs.

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[1] Lapointe, Casavant Frères, p. 41.

[2] Ibid., p. 43.

2. Romantic Tonal Concept

Until the middle of the nineteenth century, organs in North America exhibited all the traits of a "classical" organ sound. The Romantic trend in organ building did not really take hold until after the 1850's on this continent.[1] When it did, some obvious and drastic changes in tonal design took place:

> Fundamental stops of 8' and 16' pitch increasingly dominated the tonal pallette during this time. Such deep color favored the largely homophonic organ music of the period, which depended heavily on dynamics and nuance.[2]

It is quite clear that the Casavants followed this trend. Earlier builders such as Dom Bedos favored a complete complement of upperwork. "The Romantic builders care to go no further in that direction than to place on each manual a 4-foot harmonic (octave) flute."[3]

All of the specifications for Casavant organs of this period bear out this approach to tonal design of the Romantic organ.[4]

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[1] Orpha Ochse, The History of the Organ in the United States (Bloomington, Indiana: Indiana University Press, 1975), p. 209.

[2] Haas, "Comprehensive Performance Project," pp. 20-21.

[3] Lapointe, Casavant Frères, p. 43.

[4] See Appendix D, p. 89 for sample specifications of Casavant organs at the turn of the century.

BIBLIOGRAPHY

Alberta Government Publicity Bureau Department of Industry and Tourism. Survey of Pincher Creek. n.p., Alberta: Government of the Province of Alberta, <1968>.

Anderson, Paul [redacted] Organ Building and Design, trans. Joanne Curnu[redacted]: George Allen and Unwin, Ltd., 1969.

Armstrong, Wi[redacted] Organs for America: the Life and Works of David T[redacted]enberg. Philadelphia: University of Pennsylvania Press, 1968.

Audsley, George Ashdown. The Art of Organ-Building, 2 vols. New York: Dodd, Mead, and Company, 1905; reprint ed., New York: Dover Publications, Inc., 1965.

Barnes, William Harrison, and Edward B. Gammons. Two Centuries of American Organ Building. Melville, New York: Belwin Mills Publishing Corporation, 1970.

Barnes, William Harrison. The Contemporary American Organ: Its Evolution, Design and Construction. Melville, New York: Belwin Mills Publishing Corporation, 1971.

Beasley, William Joseph. "The Organ in America, as Portrayed in Dwight's Journal of Music." Ph.D. dissertation, University of Southern California, 1971.

Blanton, Joseph Edwin. The Organ in Church Design. Albany, Texas: Venture Press, 1957.

_____. The Revival of the Organ Case. Albany, Texas: Venture Press, 1965.

Bleyle, Carl Otto. "George Andreas Sorge's Influence on David Tannenberg and Organ Building in America During the Eighteenth Century." Ph.D. dissertation, University of Minnesota, 1969.

Bonavia-Hunt, Noel Audrey, and H.W. Homer. The Organ Reed. New York: J. Fischer and Co., 1950.

Bernhardt, Alex. Letter to Father Hagel, St. Michael's Church, 28 February 1979.

Bouchard, A., "Quelques Instruments Canadiens," L'Orgue (April-June 1966): 80-88.

Bunjes, Paul George. The Praetorius Organ. St. Louis: Concordia Publishing House, 1966.

Church, John. Organ Voicing and Tuning (London: J. Church and Co., 1881), facsimile reprint. Vestal, New York: Vestal Press, n.d.

Douglass, Fenner. Cavaillé-Coll and the Musicians, 2 vols. Raleigh: The Sunbury Press, 1980.

Downward, Brock Wakefield. "G. Donald Harrison and the American Classic Organ." Ph.D. dissertation, University of Rochester, Eastman School of Music, [illegible].

Farrell, Marie C. (Katie). Letter to the editor, Pincher Creek Echo, 27 July 1980.

Ferguson, John Allen. "Walter Holtkamp: American Organ Builder." Ph. D. dissertation, University of Rochester, Eastman School of Music, 1976.

Fesperman, John T. A Snetzler Chamber Organ of 1761. Washington, D.C.: United States Government Printing Office, 1970.

_____. The Organ as Musical Medium. New York: Coleman-Ross Co., 1962.

Haas, Richard Warren. "A Comprehensive Performance Project in Organ Literature with a Study of the Organ in St. Salvator Lutheran Church in Vendy, Illinois." D.M.A. essay, University of Iowa, 1976.

Kennedy, D. Stuart. Archival material, 1967, p.3. (Typewritten)

_____. "Church Organ of Historic Significance." Calgary Herald, 16 September 1966, Herald Magazine sec., p. 3.

_____. Letter to Alex Bernhardt, 20 April 1980.

_____. Letter to the writer, 5 November 1979.

_____. "Tale of Three Canadian Organs," Music (May 1972): 22.

_____. "You the Reader: More on the Tracker," American Organist (December 1968): 3-4.

Klotz, Hans. The Organ Handbook, trans. Gerhard Krapf. St. Louis: Concordia Publishing House, 1969.

Krapf, Gerhard. "The Return of Tracker Action: An Organist's View of Contemporary Organ Building in North America," International Society of Organ-Builders' Information (August 1970): 179-182.

LaBonte, Father. "Les Filles de Jesus in Retrospect." Pincher Creek Echo, 10 June 1954.

Lagacé, Bernard. "La renaissance de l'orgue au Québec," The Canada Music Book (Spring-Summer 1970): 55-58.

Laplante, Eugene. Letter to the writer, 31 October 1979.

Lapointe, Laurent. Casavant Frères 1879-1979. Saint-Hyacinthe: Society d'Histoire regionale de Saint-Hyacinthe, 1979.

Lindberg, William Edward. "The Pipe Organs of A.B. Felgemeaker, Late Nineteenth-Century American Organ Builder." Ph.D. dissertation, University of Pittsburgh, 1976.

McKellar, Hugh D. "Canadians and Their Organs 1660-1815," Music (November 1978): 44.

_____. "Casavant Frerès 100th Anniversary," The American Organist (January 1980): 57-59.

_____. "Casavant Frères 1879-1979." Translation in handwritten manuscript of Laurent Lapointe's Casavant Frères 1879-1979, Toronto, 1980.

_____. "Go where I send thee! How shall I send thee?" Toronto, <1980>.

_____. "O Canada - what a checkered history." Toronto Star, 15 June 1980, sec. B, p. 1.

Miller, George L. The Recent Revolution in Organ Building. New York: The Charles Francis Press, 1909.

Milne, Herbert F. How to Build a Small Two-Manual Chamber Organ (London: Office of Musical Opinion, 1925), facsimile reprint. Braintree, Massachusetts: The Organ Literature Foundation, n.d.

Ochse, Orpha. The History of the Organ in the United States. Bloomington, Indiana: Indiana University Press, 1975.

Ogasapian, John. Organ Building in New York City: 1700-1900. Braintree, Massachusetts: The Organ Literature Foundation, 1977.

Owen, Barbara J. "Organ Building in New England in the Eighteenth and Nineteenth Centuries." Thesis, Boston University, 1962.

Prairie Grass to Mountain Pass: History of the Pioneers of Pincher Creek and District. Pincher Creek, Alberta: Pincher Creek Historical Society, 1974.

Robinson, Albert F. "Historic American Organ Builders," Music (January-July 1976).

_____. ed. The Bicentennial Tracker. Wilmington, Ohio: The Organ Historical Society, Inc., 1976.

Routhier, Henri, O.M.I. Letter to D. Stuart Kennedy, 15 June 1966.

_____. Letter to D. Stuart Kennedy, 17 November 1966.

Sharp, James Raymond. "Tonal Design of the American Organ." Ph.D. dissertation, Michigan State University, 1970.

Skinner, E.M. The Modern Organ. New York: The H.W. Gray Co., Inc., 1945.

Tardiff, Emile, O.M.I. Letter to D. Stuart Kennedy, 15 November 1966.

_____. Letter to D. Stuart Kennedy, 28 November 1966.

Tinker, Timothy J. "On a Successful Organ in a Dry Acoustic." The Diapason (January 1984): 6-8.

Un Orgue Canadien à Paris. St. Hyacinthe, Québec: Casavant Frères Ltée., 1924.

Unilowski, Mary. "New St. Michael's Church To Retain Religious Relics." Lethbridge Herald, 10 August 1966.

Wicks, Mark. Organ Building for Amateurs (London, 1887), modern reprint. Braintree, Massachusetts: The Organ Literature Foundation, n.d.

Williams, Peter. A New History of the Organ From the Greeks to the Present Day. Bloomington: Indiana University Press, 1980.

_____. The European Organ 1450-1858. London: B.T. Batsford Ltd., 1966.

APPENDIX A

ORIGINAL CONTRACT FOR THE PINCHER CREEK ORGAN

L'Eglise de Pincher Creek
Territoire du Nord-Ouest
Opus 143, 1901

Grand Orgue

1.	8'	Montre	58
2.	8'	Mélodie	58
3.	8'	Dulciane	46 (Basse Transmise)
4.	4'	Prestant	58

Récit

5.	8'	Bourdon	58
6.	8'	Salicional	58
7.	8'	Voix Céleste	46
8.	4'	Flûte Harmonique	58

Pédale[1]

9.	16'	Bourdon	27 (15 du No. 2)

Accouplements & Accessoires

Grand Orgue à la Pédale
Récit à la Pédale
Récit au Grand Orgue
Octave Récit au Grand Orgue
Trémolo
Signal du Souffleur
Deux Pédales de Combinaisons
Une Pédale d'Expression (à bascule)
Buffet en imitation de Chêne
Tuyaux de façade décorés en or et couleur

---

[1] In the contract the 16' Bourdon is shown as borrowing fifteen pipes from the 8' Mélodie, but in fact the Bourdon was built as an independent stop.

Details de Construction

1. Le soufflet sera assez grand pour donner aux jeux de l'orgue une alimentation parfaite en tout temps; les charnières des éclisses auront une double garniture de cuir afin qu'elles soient aussi imperméables que possible.

2. Tous les tuyaux de métal plus grands que 3 pieds seront en zinc de Belgique de première qualité avec lèvres et entailles en étain. Ils seront recouverts d'un vernis spécial pour les préserver de l'oxidation.

3. Les layes et les gravures seront assez grandes pour qu'il ne se produise aucune altération.

4. Les soupapes seront "brisées" afin de rendre l'action des claviers aussi facile que possible.

5. Les claviers seront en pin de première qualité avec touches naturelles en ivoire.

6. Les boutons de registres seront obliques et les inscriptions gravées sur ivoire.

7. Le pédalier sera concave et sa disposition relativement aux claviers sera d'après les mesures adoptées par le dernier congrès du Collège des Organistes de Londres.

8. Le pédale d'expression sers à "bascule."

9. Les différentes pièces réunissant le levier du soufflet aux pompes seront en fer et construites de façon à ce qu'il n'y ait aucune friction.

10. Le mécanisme sera couvert de drap ou de cuir dans tous les endroits susceptibles de faire du bruit. Des vis de réglage seront placées dans tous les endroits où il sera nécessaire.

11. Tous les tuyaux de bois et les différentes pièces du mécanisme seront enduits de gomme laque ou de peinture afin de les préserver autant que possible de l'humidité.

12. Tous les matériaux employés à la construction de cet orgue seront de première qualité.

13. Aucun bois ne sera employé sans avoir passé au séchoir.

14. L'orgue, bien que non encore accepté par les acquéreurs, sera assuré contre le feu par ces derniers, dès son entrée dans l'église.

Conclusion of the Pincher Creek Contract[1]
Handwritten Annotations by the Firm of
Casavant Frères and Madame Routhier

Nous soussignés, nous engageons par les présentes, à coustruire et livrer en bon état de fonctionnement, le ou vers le 15 Octobre dans l'église de Pincher Creek Monsieur Routhier un orgue conforme aux devis et détails susmentionnés pour le prix de quinze cent quatre vingt deux piastres payables cinq cents piastres comptant lorsque l'orgue sera reçu et accepté à Pincher Creek, et la balance tel que ci-après pouvoir —

Casavant Frères

St Hyacinthe 10 Juillet 1901

Je soussigné autorise Mess. CASAVANT FRÈRES à construire un Orgue conformément aux devis et détails ci-dessus mentionnés et je me engage à leur payer pour tel Orgue la somme susdite de quinze cent quatre vingt deux piastres ~~aux termes et conditions plus haut stipulés.~~ cinq cents comptant lorsque l'orgue sera reçu et accepté à Pincher Creek et la balance par deux billets portant interet à 5 par cent avec endossement responsable de trois mois en trois mois

L. Routhier

---

[1] This photo mechanical transfer has been slightly reduced and copied from a copy of the original contract. The remainder of the photocopied contract was of poor quality and did not permit reproduction using the PMT process.

APPENDIX B[1]

ORIGINAL SPECIFICATIONS OF THE ORGAN FOR ST. MARY'S CHURCH, DAWSON CASAVANT FRERES, OPUS 141

Great

1. 8' Mélodie
2. 8' Dulciane (12 from No. 1)

Swell

3. 8' Principal (stopped bass)
4. 4' Flûte Harmonique
5. 8' Hautbois (46 notes, against 58 for each of the other manual stops)

Pedal

6. 16' Bourdon (27 notes; 15 borrowed from No. 1)

Couplers

Great to Pedal
Swell to Pedal
Swell to Great
Swell Super to Great

Accessories

Tremolo
Bellows signal
Two combination pedals
Swell pedal

The case was to be made in "imitation oak", and the pipes of the façade decorated in "gold and colours".

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[1] McKellar, "Go where I send thee!," p. 4.

APPENDIX C

CONTRACTS FOR THE 1980 RESTORATION OF THE CASAVANT ORGAN, OPUS 143, PINCHER CREEK

MEMO OF AGREEMENT

This agreement made this 1st day of March, 1979 by and between Alex Bernhardt of Vancouver, British Columbia, hereinafter called the Builder, and St. Michael's Church of Pincher Creek, Alberta, hereinafter called the Purchaser.

THE BUILDER AGREES:

1. To remove, as necessary, all pipework from the organ chamber for the purpose of cleaning both the pipes and their respective positions in the organ chamber.

2. To clean with a vacuum and damp cloths, all chests, rackboards, pipe supports, shutters, reservoirs, floor areas, and in general all surrounding supports and structure of the chestwork.

3. To completely restore and sleeve as necessary nine ranks of pipework. The eight manual ranks, being in very poor shape at present, shall be returned to near original condition. Badly mutilated pipe tops, due to excessive cone tuning, shall be fitted with new sleeve tuners.

4. To re-leather chest pallets as well as replace ALL leather buttons that hold members of the mechanical action together (the above will amount to several hundred pieces).

5. To re-fabricate and install any trackers that are in need of replacement. This can be said of any of the mechanical parts that are damaged or worn.

6. To dismantle chests to attempt to correct bleeding between notes and to adjust and clean sliders. Any major repairs required within the chests will be contracted under separate cover.

7. To fabricate (if possible) a new gasket to minimize whispers from pallet box pull-down channels.

8. To regulate throughout the entire action to ensure as felicitous a touch as possible.

9. To complete one FULL tuning of the instrument after the above has been completed.

10. To complete all of the above items within as short a period of time as possible with a minimum of disruption of the use of the church (as is feasible). I suggest a working time of two to three weeks including overtime and assisting technician.

THE PURCHASER AGREES:

1. To provide the Builder with access to the building as required during the entire project with the exception of such times as weddings, funerals, and other services occur with which the Builder's work would interfere. The times of such services are to be made known to the Builder by the Purchaser well in advance so that conflict may be avoided.

2. To provide space, reasonably easy to the access of the organ chambers, for the storage of pipes before and during the cleaning process. The Purchaser will assume all responsibility for said pipes and all other materials, covering loss or damage by whatever means beyond the control of the Builder, so long as the work is in progress.

3. To provide LOCKED storage space for tools and access thereto for the duration of the work.

4. To keep the building at such temperatures as are normally in effect during regular church services for the final tuning of the organ and to give UNDISTURBED possession of the building for same, except during weddings, funerals, etc.

5. To pay to the Builder the sum of $6,984.00 (Six Thousand, Nine Hundred and Eighty Four Dollars) as follows:

(a)	Upon signing of this agreement.....(30%)	$2,095.20
(b)	Upon commencing the work.....(20%)	$1,396.80
(c)	Upon completion of the work.....(50%)	$3,492.00

All sums due thereafter shall bear interest at the rate of 1.5% per month.

IN WITNESS WHEREOF THE PARTIES SET THEIR HANDS:-

Signed for the Builder

at Vancouver, B.C., Canada

this 1st day of March 1979

Alex Bernhardt

<Alex Bernhardt>
Witness <illegible>

Signed for the Purchaser

at Pincher Creek

this 9 day of March, 1979

St. Michael's Church

<illegible>
Witness <illegible>

MEMO OF AGREEMENT

This Agreement made this twenty fourth day of September 1979 by and between CASAVANT FRERES Limitee, of St. Hyacinthe, Que., Canada, herinafter called the Builder, and ST. MICHAEL'S CHURCH of the city of PINCHER CREEK, Province of ALBERTA Canada, hereinafter called the Purchaser.

Witnesseth (Opus 143)

That the Builder for the consideration hereinafter mentioned agrees to supply the following organ parts to the Purchaser:

One organ blower, Ventus 8/120 #10825 (single phase)
One reservoir, 16 square feet

In consideration thereof the Purchaser agrees to pay to the Builder the sum of TWO THOUSAND FOUR HUNDRED AND FORTY SEVEN DOLLARS AND TWENTY ONE CENTS ($2,447.21) including delivery and Federal tax, but not including installation, in the following manner:

a) In cash on signing this agreement.....$ 447.21
b) In cash on delivery of the parts.....$2,000.00

All sums due thereafter shall bear interest at the rate of 1.5% per month.

DELIVERY of the parts shall take place about one month after the Builder receives the order.

In witness whereof the parties have hereunto set their hands and seals.

Signed for the Builder

at St. Hyacinthe, Québec, Canada

this 24th day of September, 1979

CASAVANT FRERES LIMITEE

<Eugene Laplante>
<D.V. Corbett>

Signed for the Purchaser

at Pincher Creek, Alberta

this 26 day of October, 1979

ST. MICHAEL'S CHURCH

<D.F. McDonald>

APPENDIX D

SAMPLE SPECIFICATIONS OF CASAVANT ORGANS FROM 1892 TO 1902

Le Révérend Mr. F. Towner
St. Eugene, Ontario
Opus 38, 1892

Grand Orgue

1.	16'	Bourdon	46
2.	8'	Montre	58
3.	8'	Mélodie	58
4.	8'	Dulciane	46 (Basse Transmise)
5.	4'	Prestant	58
6.	2'	Doublette	58
7.	III	Mixture	174
8.	8'	Trompette	58

Récit Expressif

9.	8'	Principal	46 (Basse Transmise)
10.	8'	Bourdon	58
11.	8'	Gambe	58
12.	8'	Voix Céleste	46
13.	4'	Flûte Harmonique	58
14.	8'	Hautbois	58 (12 du No. 11)

Pédale

15.	16'	Bourdon	27
16.	8'	Flûte	27

Accouplements et Accessoires

Récit au Grand Orgue
Récit à la Pédale
Grand Orgue à la Pédale
Copula Octave
Trémolo
Souffleur
Trois pédales de combinaison
Une pédale d'expression
Buffet en imitation de chêne avec tuyaux décorés

Eglise St. Anne
Woonsocket, R.I.
Opus 74, 1896

Grand Orgue

1.	8'	Montre	58
2.	8'	Mélodie	58
3.	8'	Dulciane	46 (Basse Transmise)
4.	4'	Prestant	58

Récit

5.	8'	Principal	58
6.	8'	Bourdon	58
7.	8'	Gambe	58
8.	8'	Voix Céleste	46
9.	4'	Flûte Harmonique	58
10.	2'	Flautino	58
11.	II	Mixture	116
12.	8'	Trompette	58
13.	8'	Hautbois	46 (12 du No. 7)

Pédale

14.	16'	Bourdon	27

Accouplements & Accessoires

Récit au Grand Orgue
Récit à la Pédale
Grand Orgue à la Pédale
Octave Grave
Trémolo
Souffleur
Trois Pédales de combinaisons
Une Pédale d'expression
Buffet en imitation de chêne avec tuyaux décorés

Eglise Paroissiale, Saint Samuel de Gayhurst
Frontenac, Québec
Opus 106, 1899

Grand Orgue

16'	Bourdon	TC
8'	Montre	58
8'	Dulciane	46
8'	Mélodie	58
4'	Prestant	58
2'	Doublette	58
III	Mixture	174
8'	Trompette	58

Récit

8'	Principal	58
8'	Gambe	58
8'	Voix Céleste	TC
8'	Bourdon	58
4'	Flûte	58
8'	Hautbois	46
	Trémolo	

Pédale

16'	Bourdon	27
8'	Flûte	27

Récit au Grand Orgue
Copula Octave (Récit au Grand Orgue 4')
Grand Orgue à la Pédale
Récit à la Pédale
Souffleur (bell attached)
Three reversible general pistons

The Dulciane is grooved to the bass octave of the Mélodie and the Hautbois is similarly attached to the Gambe!

An unusually good organ for the period, typical of Casavant's fine early tracker work, ... The case front is of good design for the "pipe fence" era, and contains five flats of Montre pipes; the woodwork is grained to imitate oak. The projecting console has oblique knobs lettered in Old English; a concave and radiating Pedal clavier; and the pistons operate stops throughout the organ, and will, when pressed again, subtract any stops added to the original preset combination. The manual chests are on the same level, with a passage board between; the swell shades are vertical; all rollerboards are immediately behind the console; and the organ is in good

condition. The pipework is mostly of common metal, but the Céleste is spotted.

The Grand Orgue Bourdon is not weak and the Montre is full-bodied but not harsh or fuzzy; the chorus is pleasant but the upperwork is somewhat light in body. The Trompette needs cleaning and regulating, but is quite stunning. The Récit is feeble and of a type favored by Casavant at the time, but the stops are well-voiced. The Principal has a stopped metal bass, and the strings are quite bold but not harsh -- the Céleste effect is very audible, quite unlike the puny sound heard too often. The Flûte is of open metal pipes, mostly harmonic. Both reed stops have reed pipes to the top. The Pédale is quite strong, the open wood Flûte being of Sub Bass strength.[1]

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[1] D. Stuart Kennedy, unpublished archival material, p. 3.

Le Couvent du Bon Pasteur
Québec
Opus 117, 1900

Grand Orgue

1.	8'	Montre	58	
2.	8'	Flûte Double	58	
3.	8'	Dulciane	51	(7 du No. 2)
4.	4'	Prestant	58	
5.	2 2/3'	Quinte	58	
6.	2'	Doublette	58	
7.	8'	Keraulophone	58	

Récit

8.	8'	Mélodie	58
9.	8'	Salicional	58
10.	8'	Gambe	58
11.	8'	Voix Céleste	46
12.	4'	Flûte Harmonique	58
13.	8'	Hautbois	58

Pédale

14.	16'	Bourdon	27
15.	8'	Flute	27

Registres mechaniques
Récit au Grand Orgue
Grand Orgue à la Pédale
Octave Récit au Grand Orgue
Trémolo
Souffleur

Pédales

Cinq Pédales de Combinaison
Une Pédale d'expression (à bascule)

L'Eglise de Caraquet, N.B.
Opus 127, 1901

Grand Orgue

1.	8'	Montre	58	
2.	8'	Flûte Double	58	
3.	8'	Dulciane	46	(12 du No. 2)
4.	4'	Prestant	58	
5.	2'	Doublette	58	
6.	IV	Mixture	232	

Récit

7.	8'	Mélodie	58	
8.	8'	Salicional	58	
9.	8'	Voix Céleste	46	
10.	4'	Flûte Harmonique	58	
11.	4'	Violon	58	
12.	8'	Hautbois	46	(12 du No. 8)

Pédale

13.	16'	Bourdon	27	

Accouplements

Grand Orgue à la Pédale
Récit à la Pédale
Récit au Grand Orgue
Octave Grave Récit au Grand Orgue
Trémolo
Signal du Souffleur
Trois Pédales de Combinaisons (Double Action)
Une Pédale d'Expression à bascule
BUFFET en bois mou imité en chêne avec tuyaux décorés

The Lutheran Church
Lunenburg, N.S.
Opus 178, 1902

Great Organ

1.	8'	Open Diapason	65
2.	8'	Melodia	65
3.	8'	Dulciana	53 (12 from No. 2)
4.	4'	Octave	65
5.	2'	Fifteenth	65
6.	8'	Trumpet	65

Swell Organ

7.	8'	Open Diapason	51 (7 from No. 8)
8.	8'	Stopped Diapason	58
9.	8'	Viola di Gamba	58
10.	8'	Voix Céleste	46
11.	4'	Harmonic Flute	58
12.	8'	Oboe & Bassoon	58

Pedal Organ

13.	16'	Bourdon	30
14.	8'	Flute	30

Mechanical registers
Swell to Great
Great to Pedal
Swell to Pedal
Swell Sub-Octave to Great
Great at Octaves
Tremulant
Bellows Signal

Pedal Movements

Three Double Acting Combination Pedals to Great
Three Double Acting Combination Pedals to Swell
One Balanced Swell Pedal
One Balanced Crescendo Pedal

Action will be tubular-pneumatic
Case of oak with front pipes decorated in gold and colors

Organ to be blown by a water motor attached direct on the square acting feeders of the organ bellows, water pipes to be at the charge of the church. The above is figured on 45 lbs water pressure.

APPENDIX E

GLOSSARY OF TERMS

action: refers to all the moving parts of the organ set in motion by the keys or stop levers

backfall: those portions of the tracker action that convey a motion over a relatively short distance and reverse its direction

bearers: rest on the table and support the top board(s) at the proper distance above the surface of the table and act as guides for the sliders

chest: that part of the organ which supports the pipework over the appropriate tone channels and which is connected to the keys by means of the action

cipher: the sounding of a pipe that is not supposed to sound

façade: pipes that are visibly mounted in the front of the organ case form the façade

pallet:[1] is that part of a mechanical action -- a long piece of wood basically rectangular in plan and triangular in cross-section -- that acts as a valve, closing and opening the long mortice running below part of the pipe-channel

pallet box: that part of the chest that contains the pallets for each tone channel and a ready supply of wind from the reservoir

pipe shades:[2] are those decorative panels, usually carved and often gilded, set above the tops of façade pipes . . . so filling in spaces left by the stepwise line produced by the tops of those pipes

reservoir: a large storage magazine for the wind which it delivers to the pallet box and tone channels on demand

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[1]Peter Williams, A New History of the Organ From the Greeks to the Present Day (Bloomington: Indiana University Press, 1980), p. 217.

[2]Ibid., p. 217.

roller:[1] is that part of a mechanical action -- usually a cylindrical or eight-sided wooden rod -- that transfers motion from one vertical plane to another

rollerboard:[2] is that part of a mechanical action, usually a flat rectangular board of wood with its unused corners sawn off, onto which the set of rollers is fixed by means of the bearing shafts at their ends rotating in a short block of wood glued to the rollerboard

slider: a long strip of wood with as many holes as the stop has pipes, corresponding to the holes in the top board and table; fits airtightly, but moves easily between the top board and table

square:[3] a bent lever used where an immediate change of direction is required in a tracker movement

sticker: an action part that is used to push rather than pull, in concert with a backfall mechanism

table: the surface above the tone channels that supports the bearers and sliders

tone channel: a long narrow channel above which stand all the pipes belonging to one key, provided with wind by the opening of the pallet

toe board: a plank or board which receives the toes of pipes that do not sit directly on the chest

top board: that portion of the chest which receives the pipe toes and which rests on the bearers

tracker:[4] part of a mechanical action -- usually a thin strip of pine or similar wood -- conveying the movement from key to pallet by "pulling" down the pallet above when the finger presses the key and by returning the key action when the pallet-spring is allowed to draw it back

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[1]Williams, A New History of the Organ, p. 219.

[2]Ibid., p. 219.

[3]George Ashdown Audsley, The Art of Organ-Building, 2 vols. (New York: Dodd, Mead, and Company, 1905; reprint ed., New York: Dover Publications, Inc., 1965), 2:175.

[4]Williams, A New History of the Organ, p. 220.

APPENDIX F

CONSTRUCTION OF LABIAL PIPES