REED ORGAN SOCIETY QUARTERLY

A Publication of the Reed Organ Society

Vol. XXXIII, No. 4, 2014

About the Cover...

The history of these two Mustel harmoniums is featured in "Ralph Downes and Mustel Harmoniums" on page 4, where ROS member Pam Fluke interviews English (pipe) organist Ralph Downes. Also involved are Jerrold Northrop Moore, John Scott Whiteley, and John Durham.

Front cover: Mustel #549, circa August, 1893, two-manual *(photo by Tim Clayton)*.
Inside cover: Mustel #489, circa March, 1890, one-manual *(photo by John Scott Whiteley)*.

THE REED ORGAN SOCIETY, INC.

ANNUAL MEMBERSHIP DUES (includes subscription to the ROS Quarterly, the ROS Directory, and special publications): USA (1st Class) $35; CANADA (1st Class) $40; Outside North America $50. Membership is from January 1 to December 31. Make check or money order payable to: The Reed Organ Society (U.S. funds only). PayPal and credit cards are also accepted via our website <www.reedsoc.org>.

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www.reedsoc.org

President's Message

by Nancy Varner

Greetings! As you read this we will be into another year and I hope it will be a great one for all of us. This is an election year and a nominating committee will be appointed soon. I hope those who are asked to serve on that committee will be willing to do so. We vote on all positions except the *Quarterly* Editor, Webmaster, and Database Manager. Each position is held for two years after voting and with re-elections can be held for a maximum of six years, except for the Treasurer who may serve without limit. So those having served for six years will need to be replaced by a new council member, and those with shorter terms could serve again. The following is a list of the years served by each council member.

President	Nancy Varner	4 years
Vice-President	Nelson Pease	4 years
Secretary	Allen Myers	4 years
Treasurer	Charlie Robison	no limit
Region I	Reed Fennell	2 years
Region II	Jerry Taylor	6 years
Region III	Brian Ebie	2 years
Region IV	Michael Hendron	6 years
Region V	Tony Newnham	2 years
Region VI	Louis Huivenaar	6 years
Region VII	Rosalie Wainwright	2 years

If you are asked to serve on the council, I'm hoping you will consider doing so. All positions do need to have Internet access as that is the best means of communication in this digital age. The council jobs are not extremely time-consuming, but we do need dedicated members to serve. The positions to be voted on will begin January 1, 2016.

Don't forget the biennial gathering in Independence, Missouri, October 1–4, 2015. I hope to see many of you there.

As always, if you are not receiving our email newsletter *The Free Reed*, contact me at <nj.varner@yahoo.com> to subscribe for free. We try to send one out every month. While the *Quarterly* is the permanent repository for extended articles and technical information, the newsletter provides a venue for contact between members and up-to-date news and events.

Ralph Downes and Mustel Harmoniums

by Pam Fluke

The harmoniums in this article are featured in color on the front cover.

We first heard of the happy relationship between Mustel harmoniums and the English organist Ralph Downes (1904–1993) when a friend sent us a reference to a book written by Downes in which the harmonium was mentioned. In *Baroque Tricks: Adventures with the Organ Builders* (1983), Downes wrote:

> *Two other arrivals in Derby had a permanent influence on my thinking. The first was a magnificent Orgue Mustel, installed about 1913–1914 in a local "super cinema;" with a highly proficient player this provided an exciting foretaste of French organ sonorities. It was an instrument of great versatility and power (even though literally a "glorified harmonium"). Little did I dream that in a few years I should be playing it professionally myself!*

This of course set us off on a hunt for the instrument in question and—indeed—any other information on Downes or Mustels!

Ralph Downes has a long and outstanding association with the pipe organ, both as a performer and as an adviser in Britain and the USA. He was an organ advisor for the new Royal Festival Hall, built specially for the 1951 Festival of Great Britain, and consultant at Gloucester Cathedral in the late 1960s, bringing a wonderful and radical re-thinking of that instrument. He also advised on and then inaugurated the new organ in St. David's Concert Hall in Cardiff on November 6, 1982. He was a man much-respected for his knowledge of the organ.

When we got this fascinating book, Downes was still alive. It was 1990 and he was 86 years old at the time. I thought it would be wonderful to speak with the man himself, so I phoned Directory Enquiries and got his phone number!

His first words were most encouraging and enthusiastic. He had heard Graham Barber (organist on Schultz organ in Armley Leeds) play our Mustel harmonium during a special radio program on Karg-Elert, and he was also very keen to hear Anne Page—he had heard of her work on the harmonium.

In 1922 at the age of 18, Downes got the job of playing the Mustel harmonium in a Cinema where he "mastered the difficult blowing technique and became a star performer" (*Baroque Tricks*). Much-impressed with the sounds from this "mere harmonium," he went off to London and visited the Mustel showrooms in Wigmore Street. They gave him a catalogue, and he saw many instruments—although, he said, not a three-manual, which he was most interested to see and hear. He played both pressure and suction reed organs

throughout his career, particularly in his jobs as a young man and also because of his interest in the sounds.

In his book, Downes describes playing on a suction organ:

> *I became "Pianist-Organist" (solo) at the Trent Bridge Pavilion Nottingham, which was running as a cinema theatre. The "Organist" part consisted of an Interval Piece, billed "by request," to be played on a miserable "American Organ" (reeds, suction operated) which has pedals and a fake array of pipes. Wind was supplied manually by the Manager! I even attempted to skate through the then-popular* Overture to Raymond *by Ambroise Thomas and other light Classics.*

During our phone conversation Downes talked fondly of playing the Mustel harmonium. He said that in 1966 he performed in Britten's *War Requiem* in Les Invalides Paris with John Pritchard conducting. He played the big chorus on the pipe organ and accompanied the heavenly choir on the Mustel. He also visited the USA and went to the Aeolian Hall where he saw a two-manual Mustel.

He told me that around 1940 he started at Brompton Oratory in London. They had a little Positive organ but wanted something bigger (the Oratory is a very large, domed church). Ralph Downes had no hesitation in recommending they get a Mustel harmonium. They agreed, so Downes contacted a man called Edwin Malkin, a devotee of Mustels who restored, sold, and wrote about playing them, and got a lovely two-manual Mustel for the church. Malkin advised him to "put it with its back against the marble pilasters—the sound will carry better—and put it on castors so you can move it around for singing."

Eventually the Oratory got a big pipe organ which—said Downes—occasionally packed up. It once did this in the middle of a processional, so Downes rushed to the two-manual Mustel and continued the ceremony on it! He said that after the service he was chatting to a friend of his who had come in late and thought it was the big organ anyway! "Mustels often surprised people like that," reflected Downes.

In 1950 the Brompton Oratory had a fire which completely destroyed the pipe organ. The Mustel was on castors and had been pushed under the pipe work. Someone pulled it out just as the pipes began to melt, and it escaped with only a couple of drops of lead on the lid! "Of course," said Downes, "we got a new pipe organ with the insurance and the Oratory was all cleaned up. The poor old Mustel was in disgrace—outlawed to a corner." This obviously disturbed him.

Downes went on to say:

> *Jerrold Northrop Moore (Elgar's biographer) spoke to Felix Aprahamian about getting an Alexandre harmonium for himself. Felix discussed it with me, and I said, does he want it for the furniture?—if not, a Mustel is better. I thought of the two-manual in the corner in the Oratory and also about a one-manual in the round church on Landsbury Estate in the East End, which was never quite right in there. In the end, Moore wanted the two-manual and so I had the one-manual. Moore paid £750 for the two-manual Mustel, then took it to Broadway in Worcestershire.*

In later years when his Mustel was no longer in first class order, Downes used to work on it himself, opening the reed pan, seeing to the reeds, replacing pallets, and so forth—

> *Although, if anything went wrong with the Double Expression we sent for the chaps who knew about that. It's very complicated—a work of art you know.*

Downes continued reminiscing on playing his Mustels:

> *One time we took a Mustel to Aldeburgh with us for the Rossini* Petite Messe. *Malkin played it on the platform of Liverpool Street Station and amused everyone. It arrived in Aldeburgh in poor state. I had to work on it. It had leather patches, held on with drawing pins! Letting air terribly, not sounding at all good in solo. I found an upholsterer in Aldeburgh and got bigger pieces of leather and lots more drawing pins—it sounded good. It was a great success—I got a mention in the* Daily Telegraph *with that. We also used it in Britten's* War Requiem *at Aldeburgh. Britten came in once when I was playing—he said it was a most heavenly sound.*

High praise indeed.

It was such a pleasure and privilege to hear a man with his skills talk about the Mustels—a wonderful and indeed rare experience. The two-manual Mustel from Brompton Oratory went to Moore's home in Broadway where it was in the music room. Organist John Durham now owns that two-manual Mustel, and it has been completely restored by Cambridge Reed Organs. Durham reports that he really enjoys playing it. It seems he likes and plays it as much as Ralph Downes did, particularly the French repertoire. Durham says:

> *Nothing gives me greater pleasure than the Vierne* Pièces en Style Libre, Messe Basse *and Tournemire's harmonium works such as* Petites Fleurs. *I hope Ralph Downes would approve, and having read of his propensity for the French repertoire I think he would. Moore told me that Ralph Downes visited him shortly after he acquired the two-manual Mustel. Downes played it for him: "Marche Funébre" from Vierne's* Style Libre. *Moore always wondered what his neighbors must have thought—a new crematorium in the neighborhood perhaps!*

The one-manual that was in Downes' home went to York and is in The Coffee House in Everingham. It was presented to John Scott Whiteley, a highly-respected organist who studied at the Royal College of Music with Ralph Downes, by Kerry Downes, son of Ralph and Agnes.

This is an accurate account—from notes taken as we spoke—of a wonderful conversation I had with Ralph Downes on May 29, 1990, when he was 86 years old. Grateful thanks are also due to the following for their support and guidance during the writing of this article: John Durham, organist; John Scott Whiteley, organist.

Search and Discoveries on the Emerald Isle

by Darragh Connolly

When I first heard the male voice choir Cór Cúil Aodh accompanied by what I then thought to be a harmonium, I loved the sound and was drawn into it like no other. The choir was established by renowned Irish musician and composer Sean O'Riada and had the earthiest and most grounded sound I had ever heard. I was in my late teens at the time, and then at the age of 18 I started my studies for the priesthood in St. Patrick's College, Maynooth, Ireland. During my time there I grew in appreciation of Church music, becoming more acquainted with the music of Sean O'Riada and Cór Cúil Aodh and the sound of what I then learned was a reed organ.

I always wanted to own a reed organ, but where could I find one in usable condition in Ireland? The only ones I saw were languishing in churches, used only occasionally by older church organists who knew well the ways of their wheezy, hard-to-pedal old friends. They were the only ones prepared to pedal so hard on the disreputable, leaky bellows instrument that the process of making music became a physical workout. Younger organists used electric keyboards or electric organs and looked down their noses at the dusty old reed organ. Given the condition these instruments were usually in, this was an understandable perspective.

Most other reed organs I saw were beyond use—pedal straps broken, pallet valves stuck open, coupler mechanisms clogged with detritus, reeds ciphering, stop faces or entire stop knobs missing, and all the other problems which are wont to plague these neglected hundred-year-old instruments. They have served many congregations very well with minimal servicing in spite of terribly botched repairs using everything from wire coat hangers to the old reliable duct tape. It is a remarkable testament to the quality of workmanship of their original builders that reed organs can function for so many years in such poor conditions.

Estey Organ Number 1

After ordination, as I began my first parish placement, I also began my search for a reed organ. My director of sacred music from seminary, John O'Keeffe, put me in contact with an enthusiast he knew for advice as to the best makers to look out for. One of these makers was Estey, and the first reed organ I found was a chapel style Estey in a small parish church. It had not been used for years, and missing exhauster valves meant no sound was forthcoming. I snatched it up, but now who was going to restore it for me? The man who advised me on makers said he would take a look for me some time, but when? He was busy and lived far away. Discussing this with John O'Keeffe, who had inspired me to many musical endeavors in seminary, he asked me, "Why don't you do it yourself?" And so it began—I decided I was going to restore the reed organ myself.

First restoration: chapel-style Estey.

I researched restoration online and came across a book written by Horton Presley. I found it to be a wonderful book which clearly described all that was entailed in the work, and I read it twice before beginning. Of course I now know that many of the methods and techniques described in the book are less than ideal. Yes, I restored my first reed organ bellows with upholstery leatherette affixed with impact adhesive, but it remains extremely staunch to this day and will eventually have this disastrous state of affairs rectified with the proper rubber cloth and hide glue.

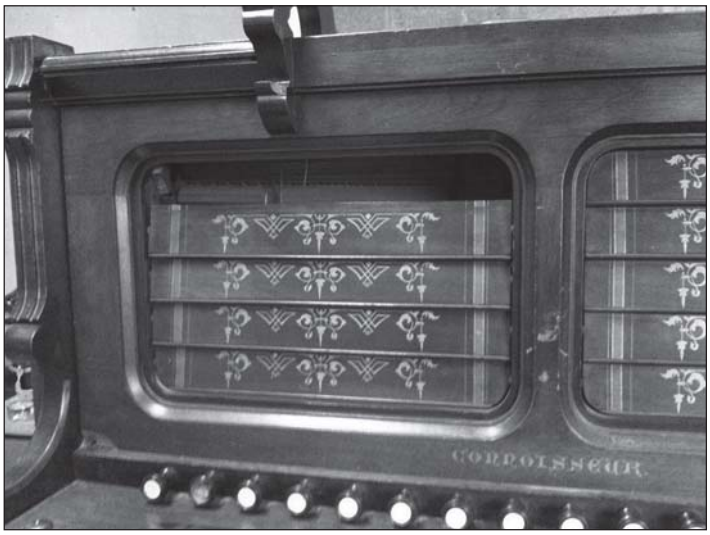
Estey Organ Number 2

The satisfaction of having restored my first reed organ to working condition was immense. Could I stop at doing just one? No, of course not!—but I couldn't collect dozens of these large instruments either, so I offered to restore a reed organ for a friend who had one which looked good on the outside but needed work inside. Functionally it was in much worse condition than my first organ and needed work I hadn't done before. I can only say that during the few years it took me to finish this restoration, my heart was nearly broken; at times I left the organ for months before trying again. One of many jobs that went wrong was the pallet valves. I covered the entire set with neoprene foam using a strong glue, all of which was recommended by one who "knew better." The result ciphered so badly that I might as well have used tissue paper, and everything had to be stripped and then redone

using the correct method of felt and leather. I was very close to solemnly swearing never to look at another reed organ, but eventually I did finish the restoration. Although there are some techniques and materials that I would change in that job now, I learned a lot from doing and redoing the work—so much in fact that it would be a shame not to restore another!

Smith American Connoisseur Organ

I took a break for a couple of years after the second Estey restoration before getting itchy feet again. I had seen a Smith American Connoisseur reed organ languishing in a local chapel for many years, and when I was eventually assigned to that parish I asked the parish priest if I could have it—ambitious, I know! He preferred that it remain in the parish church but was keen to have it restored, so my third reed organ restoration began.



Smith American Connoisseur as found.

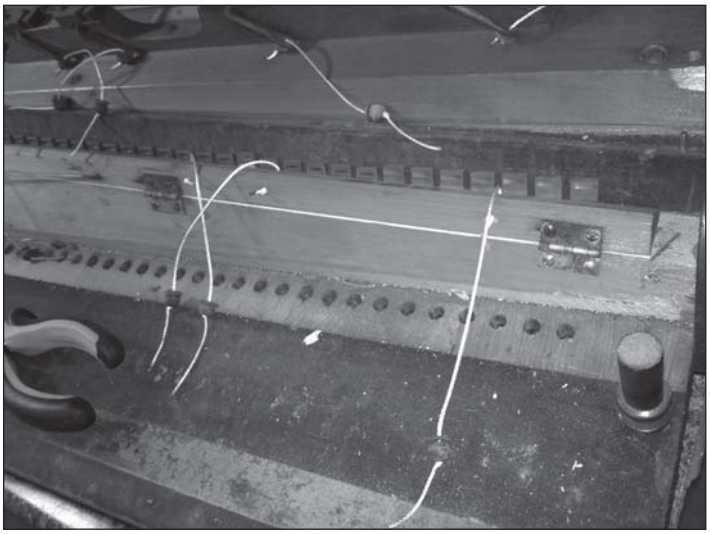
The music desk was missing from the Connoisseur, so I looked online and found an example in an Australian museum. The missing piece looked beautiful but how could I ever reproduce it at a reasonable price? Now that I knew what

Missing music desk found and reunited with organ.

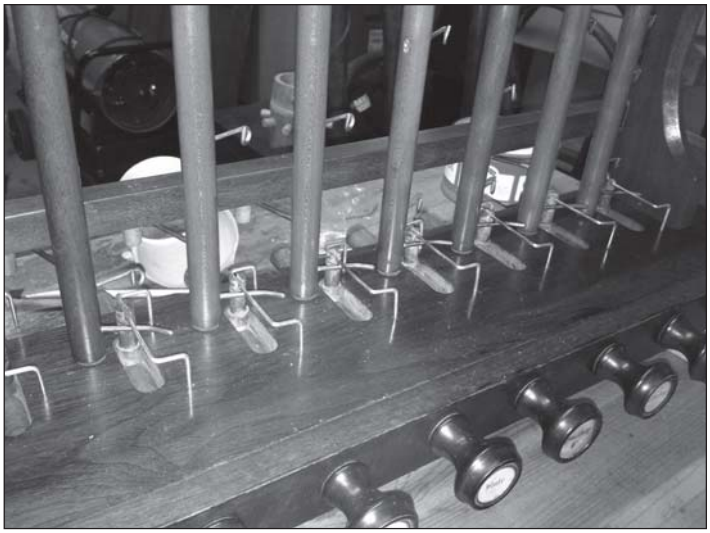
Finish as found, in bad condition.

I was looking for, I thoroughly searched the sacristy and with great excitement found the missing music desk. The only pieces of the case still missing were then the oil lamp stands and some decorative carvings off the top, and unfortunately these will remain missing unless someone out there has some in a box of spares and is willing to part with them. I had the rest of the elaborate case restored by a professional because it was in poor condition beyond my skills, and it turned out beautifully.

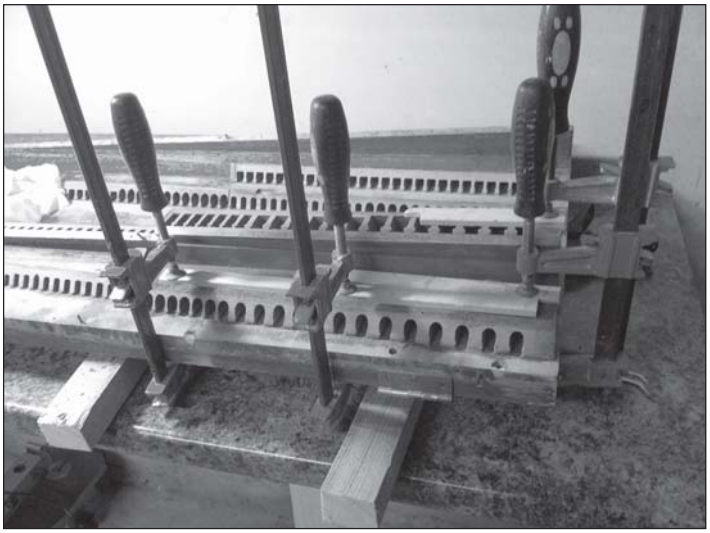
Dismantling this organ from the very beginning I could see that I was going to enjoy restoring it. Its vertical reed pan was totally different from the usual horizontal reed pan of the Estey and other reed organs with which I was familiar, and I think it is a fantastic arrangement. The mutes were originally controlled by attachment to the stop action with cat gut, but this had been replaced in times past by a more modern nylon string quite adequate for the job. Used as shims under the iron keyboard frame brace, presumably to prevent rattling, were entry tickets to a Grand Cosmic Fete at the Balls Bridge Grounds in Dublin on 5 September 1893, ten years after the organ was built in 1883. The history old organs can give up is amazing!



Reed board before restoration.



Stop action transfers to vertical windchest by rotating dowels.



Loose reed cell section cleaned and glued back in place.

This organ had clearly spent much of its life near an open coal fire. It was filled with coal soot and much work was needed to clean all the parts that had become caked in soot. During restoration it also became clear that the sub-bass reed cell section was partly detached from the reed pan. Fortunately with a little easing it came away cleanly with minimal damage, and it was cleaned and glued back in position. Since soot had even accumulated under the wood which normally divides the reed cells, this section must have been partly detached for a long time and perhaps even since manufacture.

Windchest after removal of loose reed cell section. Note dark coal soot buildup in between pallet holes where the reel cell normally would have been glued down.

Using much information available on the Yahoo Reed Organ Restoration Group website and taking particular inspiration from Rodney Jantzi's website, I have now completely restored the Smith Connoisseur using all traditional materials and methods. There are not many reed organ enthusiasts in Ireland, and I wish there were more. I have to say that it is the most wonderful and satisfying hobby. This beautiful Connoisseur is now back in its original home of St. Clare's Chapel in Cavan Town, Ireland, ready to make more beautiful music for years to come.

Smith American Connoisseur after restoration.

The author has since restored a Bell reed organ for a church in County Mayo, Ireland, and an R.F. Steven's child's reed organ which he bought at auction. His current project is an Estey Model N parlor organ. Interested readers can find more information on all his restorations at his new website <www.reedorgansireland.com>, and how-to videos on his YouTube channel "Darragh Connolly."

Richard Ruddle and the Reed Organs of Pendleton County

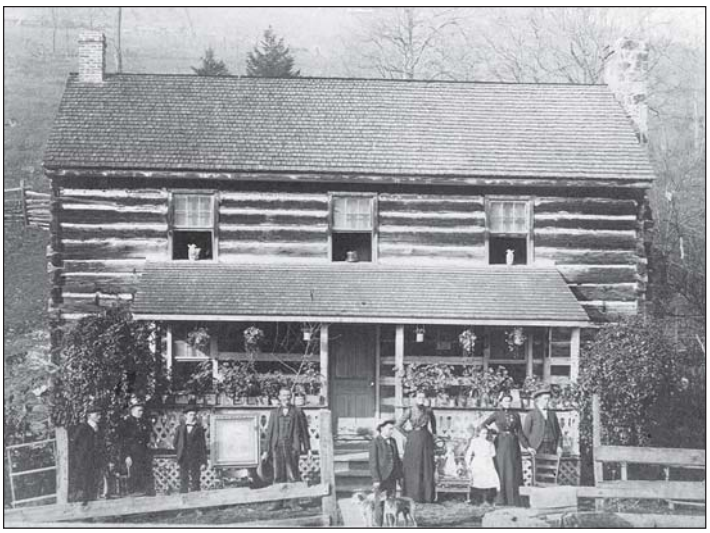
by Lawton W. Posey

Reprinted with permission from Goldenseal *magazine, Spring 2008, Volume 34, Number 1.*

EACH Sunday morning, Richard Ruddle leaves his 19th-century log home in Ruddle, Pendleton County, to attend 8:30 services at a lovely Presbyterian church in the Upper Tract community. When services are over there, he goes a short distance to the church that bears his family name—Ruddle—for services and stays to teach the adult Sunday school class.

Richard is the organist for these churches, and the organs he plays are historic instruments of a type now rarely seen, except in unspoiled rural and small-town churches. These foot-pumped reed organs were at one time popular instruments, perhaps as frequently found in the mountains as the dulcimer or the banjo.

Richard Ruddle is a repository of much Pendleton County history. When I ask Richard about his family background, he gives a compact history of the Ruddle area of Pendleton County, going back to the 1700s. Ruddle did not become the official name of the community until after the War Between the States, Richard says, when a post office was established in his great-great-uncle Edmund Ruddle's grist mill in 1881.



1905 photograph of the Ruddle log home.

Upper Tract Presbyterian Church (top) and Ruddle Church (bottom), both in Pendleton County. Photographs by Michael Keller.

Today, Richard lives in an 1871 log home built by John Matthew Ruddle, a veteran of the Civil War. As president of the Pendleton County Historical Society, Richard is deeply involved in research and promotion of the study of his county's history. Interested particularly in Civil War history, he is a charter member of the Brigadier General James Boggs camp of the Sons of Confederate Veterans. For the past 13 years, a reunion of this camp has been held at the historic Ruddle home, with people from West Virginia and surrounding states attending. He is also a member of the George Rogers Clark camp of the Sons of the American Revolution. In 1998, he received a West Virginia History Hero award.

Richard, 55 and a bachelor, teaches history and art at Pendleton County High School. He is retiring soon, after 33 years of teaching.

The instruments Richard plays, sometimes called pump organs or harmoniums, supplied music faithfully for rural congregations that did not have electricity for mechanical blowers or for electrical amplification. Now and then, a young person would operate a hand lever or a crank, which provided the necessary wind so that the organ could sound, but usually, the instrument was powered by foot pedals or pumps manned by the organist.

Reed organs were widely used in churches, parlors, and lodge halls in West Virginia and elsewhere for a century

Richard Ruddle with a 1901 Weaver reed organ. Photograph by Michael Keller.

and more. In the 19th century, there was a desire on the part of musical instrument makers to produce an instrument that would have some of the characteristics of the traditional church organ, without the great cost. Instruments producing sound from reeds had been common for a long time. The clarinet, oboe, English horn, and other wind instruments had reached nearly modern form by the mid-19th century. The piano had taken its present shape, as well.

The reed organ was born about this time and began to appear in homes and churches. A standard keyboard, similar to that of a piano or an organ, was mated to an action consisting of a wind source and sets of tuned brass reeds, not unlike those in the harmonica or the accordion. When the keys were pressed, the sound was rather like that of a church organ, but not quite. Sometimes the sound seemed quite harsh to those whose ears were used to the mellow, flute-like tones of the church organs of the day, but the sound of the reed organ was well-loved by many rural congregations in West Virginia and elsewhere.

And what was that tone like? If you have heard an accordion or a harmonica, you might have a faint notion of the sound of the reed organ. Skilled builders could change the shapes of the reeds to vary their tone, so that a simulation of the sound of the flute, the trumpet, or even shimmering strings could be produced.

This new instrument could be played like an organ and had the defining characteristic that sets the organ (and its modern electronic substitutes) apart from the piano: When one holds a note, it never decreases in sound. It often looked like an organ and had knobs, called "stops," which, when pulled or pushed, allowed the player some control over the tone of the instrument. The names on the knobs imitated pipe-organ terminology, such as "flute," "diapason," "trumpet," and "violina."

Churches in my youth that used reed organs often did not have electricity. Many private homes had reed organs, and fraternal lodges used them in their ceremonies. These organs could be produced with many sets of reeds and additional keyboards, each offering some variation in sound. Played at full strength, even a small reed organ could support the singing of a large congregation. In the early days, traveling evangelists, like Dwight L. Moody and Billy Sunday, used these organs to great effect.

None are produced today, but many survive. The Estey Organ Company of Brattleboro, Vermont, built over a half million of them. Other companies, including Sears Roebuck, were sources for these intriguing instruments. None were made in West Virginia.

To a great extent, the reed organ is seen today as an antique, but many are still being used in churches all over the world and in private homes. Richard Ruddle plays several in Pendleton County, each with its own unique features. The small Estey organ in Ruddle Church operates on the suction principle, with air being drawn through the reeds by a vacuum. The much more complex Upper Tract organ is built rather like a mechanical-action pipe organ,

Richard Ruddle playing his first reed organ, a Cornish.

with the sound being produced by air pressure. The reeds are installed in special wooden appliances that mellow the tone, take some of the harshness out, and cause the organ to sound rather like a small pipe organ. As Richard Ruddle plays this organ, one can almost imagine being in a ritzy downtown church with a real pipe organ, costing a fortune.

When Richard was in the seventh grade, his mother purchased a piano, which came with some music lessons. He made weekly trips over Shenandoah Mountain to Harrisonburg, Virginia, to take the lessons, which ended after a few months since he had little interest in learning the piano. The reed organ fascinated him. His great-aunt Jessie Ruddle had his great-grandfather's organ in her parlor, and the church had an Estey chapel organ.

In February of his freshman year in high school, things changed for Richard. He discovered an unused Cornish reed organ, built about 1890, in Hartman's furniture store. Since he did not have the asking price of $30, he began to sell greeting cards to raise the money. By early summer, he was helping his father paint houses, and by June of that year he had enough to buy the organ and to have Mr. Amos Burkholder of Harrisonburg, Virginia, repair it and set it right. Richard was on his way as an organist. That was 1966. Sadly, that organ was almost totally destroyed by the devastating 1985 flood.

At Ruddle Church—built in 1881 and the oldest standing Presbyterian church in Pendleton County—he plays an Estey chapel organ, Model H, built around 1914. Money for this organ was raised by Mrs. Frank Hohman, who came to Ruddle as a new bride. She missed having an organ in her church. It was bought from the Estey company for $49.10, shipped to Harrisonburg, Virginia, and brought over Shenandoah Mountain by horse and wagon. This is a small organ. Richard comments, however, that it is adequate for the small church and the tiny congregation.

The Vocalion in Upper Tract Presbyterian Church.

The Estey reed organ in Ruddle Church. Photograph by Richard Ruddle.

The Upper Tract church has a very rare organ, only two others of which I have discovered in my explorations of reed organs in West Virginia. This magnificent and expensive organ bears the name Vocalion and dates from the turn of the 20th century. It appears to have pipes, like a traditional church pipe organ. The pipes are dummies, added for appearance, but are themselves works of art. For 100 years, this organ has made beautiful music for the Franklin Presbyterian Church and then for the Upper Tract church.

The Vocalion, also pumped with the feet, has a rich sound, resembling that of a pipe organ. Playing a large pressure-type instrument can be daunting, and a bit of strength is required. Since I myself have owned and played reed organs, I know that one can work up a sweat playing for a service or sing-along.

Richard mentions that he has also played other reed organs that still exist in historic churches in Pendleton County. One is the fine organ in the old log building called St. George's (Episcopal) Chapel at Smoke Hole.

Sadly, Richard Ruddle notes, few young people are interested in playing the reed organ these days. Like the accordion, it has fallen into disuse. There are those, however, including the Reed Organ Society, Inc., who vigorously promote the restoration and use of this part of America's past. Compact discs of reed organ music are still being made and sold.

Richard Ruddle, Pendleton County teacher, historian, and musician, is a person who values West Virginia's old ways. Even though modern substitutes, such as electronic keyboards, can offer a faint imitation of the sound of the reed organ, there is nothing like a country congregation in full voice, singing with an authentic wind instrument, pumped by foot power, and played by a person with real devotion to the faith. Such a one is Richard Ruddle.

Richard Ruddle playing the Vocalion in Upper Tract Presbyterian Church. Photograph by Michael Keller.

Reed Organ Society member and long-time Quarterly *contributor Lawton W. Posey is a retired Presbyterian minister living in Charleston. A graduate of Union Theological Seminary in Richmond, Virginia, he is a freelance writer published in* Christian Century, American Organist, *and* The Charleston Gazette, *among others.*

South Dakota Reed Organ Crawl

by Marilyn Swett

This past summer we took a trip through South Dakota, stopping along the way at several historical museums to see if we could locate any reed organs. Since Don is the ROS Database Manager, he likes to photograph and register any reed organs that he finds. We use our visits as an opportunity to educate museum operators about these organs and the ROS. In addition, if the organs are in a playable condition, I try to get permission to play them so I can demonstrate to the museums how wonderful these instruments can sound. We never know what organs we will come across, although many are in poor condition and labeled with signs that say "Do Not Touch."

The chapel car "Emmanuel."

Our first stop was at Prairie Village in Madison, South Dakota. This complex sits on 120 acres and is filled with over 50 antique buildings, including an opera house, a working railroad with depot and turn-table, a steam-powered carousel, country schools, multiple churches, homes, hotels, a jail, and various types of businesses.

The highlight of our visit was a tour of one of the last remaining railroad chapel cars, the "Emmanuel." An article by Lawton Posey about the use of reed organs in chapel cars can be found in the *Quarterly*, Vol. XXVI (2007), No. 4. Starting in 1891 with the chapel car "Evangel," the American Baptist Publication Society had six more cars built, including the "Emmanuel" (which was #2). The last car to be built was the "Grace" in 1915. This car was the one discussed in the previously mentioned ROS article.

The cars were essentially mobile churches used to transport a minister and often his wife serving as his assistant (organ player!) to small towns all across the country, mostly west of the Appalachian Mountains. The main portion of the car was taken up with pews, a reed organ, and pulpit, while the rear section behind the organ consisted of tiny living quarters with sleeping berths, an office, galley style kitchen, and washroom. The Baptists

Front and back of the Estey reed organ at the front of the chapel car.

weren't the only ones utilizing this unique method of ministry; chapel cars were also operated by the Catholic and Episcopal churches.

Dedication of the "Emmanuel" took place on May 26, 1893, during a Baptist Convention held in Denver, Colorado. It was 76 feet long and built with a catalpa wood exterior. The car served in Arizona, California, Colorado, Idaho, Montana, Missouri, Nevada, Oregon, South Dakota, and Washington before it was retired in 1942. In 1972 it was rescued from a storage yard in Sioux Falls, South Dakota, where it had been slowly deteriorating for nearly 20 years, and moved to the Prairie Village Museum. Restoration efforts on the car began in 1975 and continue today, including the building of new pews and the purchase of an Estey reed organ similar to one originally installed in the car.

I had recently read about the "Emmanuel" car in the book *Gospel Tracks through Texas* by Wilma Rugh Taylor, and Don and I were both looking forward to checking it out. Normally the interior of the car is kept locked and is not open to the public except during special events, but

Lyon & Healy at Prairie Village.

luckily a museum worker was willing to open it up and let us inside when she heard about our interest in reed organs.

Upon entering the car we could tell that this was clearly a work in progress. While much of the exterior and chapel section of the car has been completed, the living quarters were mostly empty, awaiting restoration funds. There was an Estey reed organ in the car, but it was not playable, and had missing, broken, and incorrect stop knobs. From the case design we could tell that it was not an Estey Model H, but could possibly be an Estey Model Z. We weren't able to open the back of the organ to investigate further. In the museum's gift shop I bought a booklet entitled "If That Don't Beat the Devil," the story of the American Baptist Chapel Cars, by Jacquie McKeon. There is a picture of the interior of the "Emmanuel" taken in 1893 that shows the back of a reed organ. It doesn't appear to be an Estey H, but still was most likely some type of Estey since Col. J.J. Estey donated reed organs to all of the Baptist chapel cars.

After touring the chapel car we continued to wander about the expansive grounds of the museum, searching out

A Prince melodeon at the Dakotaland Museum.

more reed organs in the various buildings (bring your walking shoes here!). We found eight more reed organs, only a couple of which were playable: a Kimball parlor, an Estey chapel, a gaudily painted Lyon & Healy chapel, an Estey Model O, a Hamilton parlor, an Estey two-manual-and-pedal, a Clough & Warren parlor, and a 1950s Estey folder.

From Prairie Village we continued our drive north to Huron, South Dakota, where we stopped by the Dakotaland Museum. Here we found six more reed organs: a Geo. Bent piano-cased organ, an Estey parlor, a Prince melodeon, a Kimball parlor, an Estey two-manual-and-pedal, and a Farrand parlor. Unfortunately the volunteer working at the museum would not allow us to touch any of the instruments, but it didn't look like any were in playable condition. At least she let us take pictures.

The last museum we visited was the Pioneer Auto Show in Murdo, South Dakota. We weren't sure whether we would find any reed organs at this museum as it specializes in classic and antique vehicles, but we needed a break from driving and decided to investigate. The man working the ticket desk was very nice, and once he heard that we were interested in reed organs and not old cars, not only did he let us in for free, but he helped unlock some displays that had organs so Don could take some pictures. We actually found six reed organs scattered around the facility: an Estey Model JJ folder, a Netzow parlor, an Austin & Newhorn lap organ, a Farrand parlor, a Beckwith chapel, and an Estey two-manual-and-pedal with a nice pipe top and treadles but missing the foot pedals. Unfortunately, none of these organs were playable. As we did with the other museums, we left our ROS business card with the ticket taker and explained that Don would be registering the organs in the ROS database.

While our tour of South Dakota museums was disappointing in not finding many *playable* reed organs, we did find quite a few instruments from a wide variety of manufacturers. It seems that Estey two-manual-and-pedals were a very popular style in this area! It is also unfortunate that we have no ROS members in South Dakota, especially anyone that could help restore the organ located in the chapel car "Emmanuel." It would be interesting to do further research on the exact organ that was originally found in the car, then try to find and install a working instrument of that model in order to be more historically correct.

Estey two-manual-and-pedal at the Pioneer Auto Show.

We always enjoy our museum visits when we travel and have come across a number of interesting organs. Don would like to encourage all our members to register any reed organs they encounter in public places such as museums or churches. Clear pictures of the organs including the front with name board, stops, and treadles (as well as the back if it is a chapel model) are important, and as much information as possible can be filled out on the ROS registration form. Happy hunting!

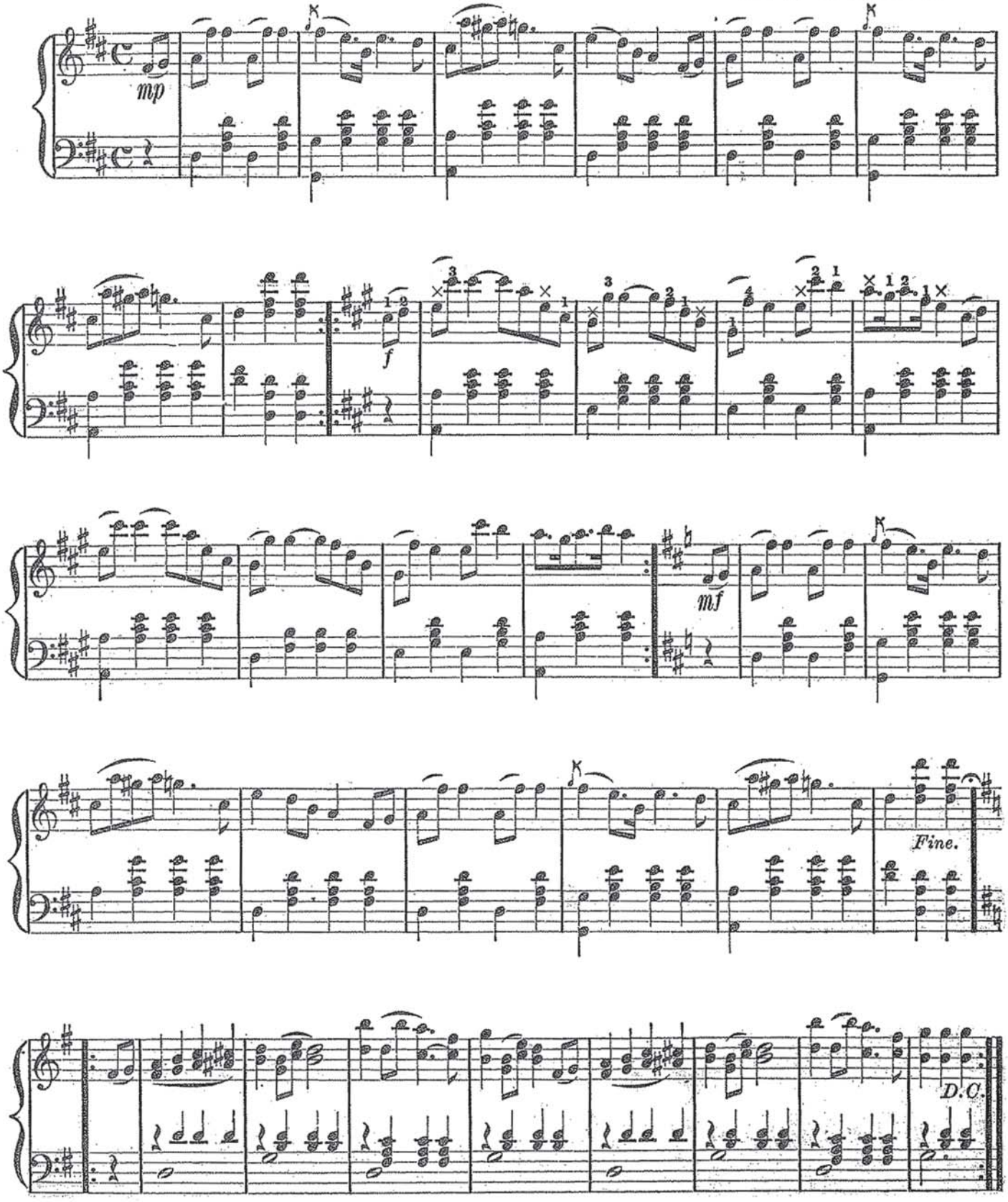
Notes on the Music

by Michael Hendron

The following two pieces were published circa 1886 in *The Parlor Organ Galaxy*, a collection of reed organ music edited by William F. Sudds. Sudds composed a good deal of music himself and owned a music shop in Gouverneur, New York. He arranged many pieces for reed organ, such as the otherwise-uncredited "Bird Schottische." The composer of "Gen'l Persifor F. Smith's March" was Thomas J. Martin, a free black man active in New Orleans in the 1850s and 1860s. This march was first published for piano in 1848, celebrating Persifor Frazer Smith (1798–1858), a U.S. Army officer during the Seminole Wars and the Mexican-American War. Gen. Smith was also one of the last governors of California before it became a state in 1850.

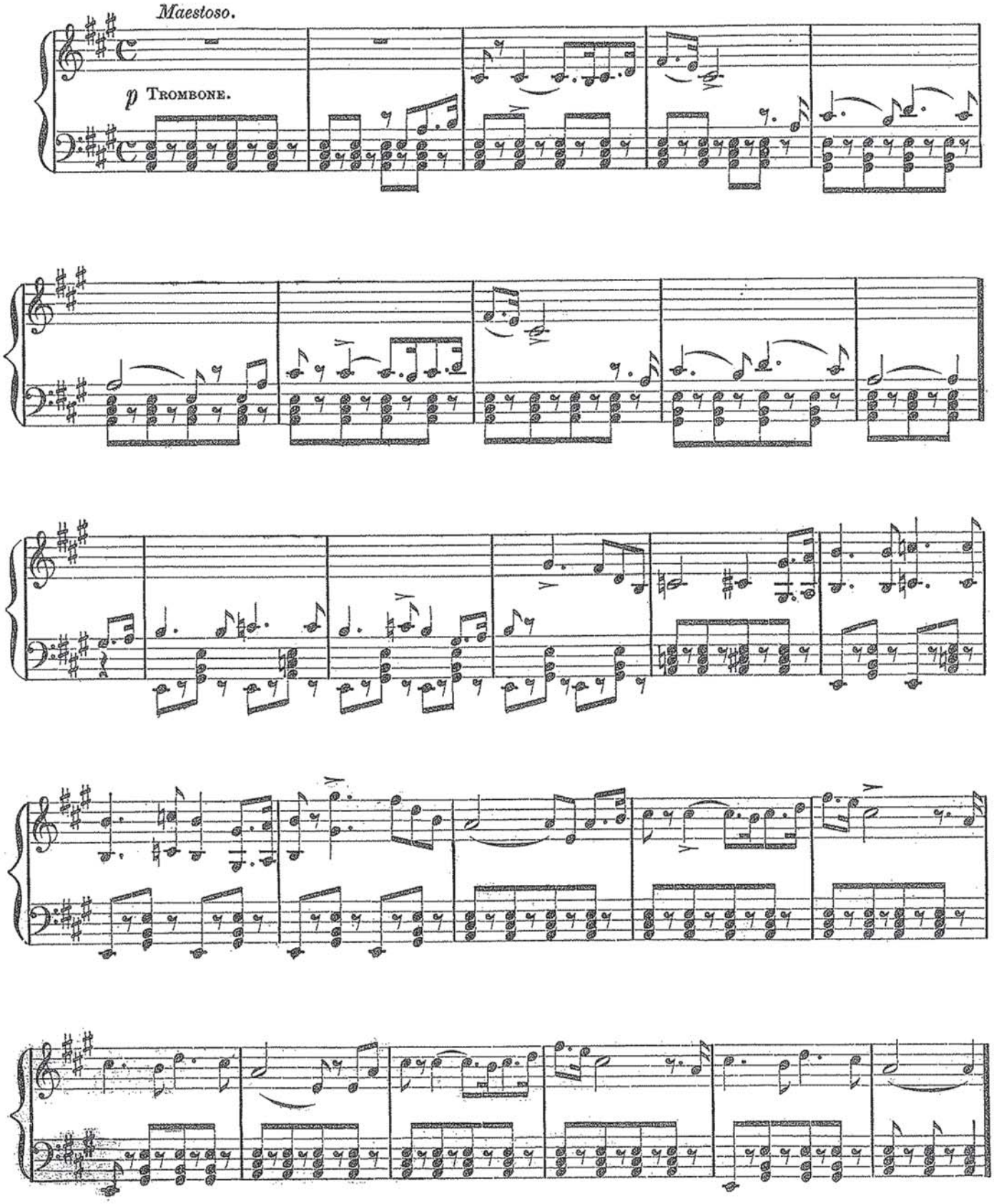
BIRD SCHOTTISCHE.

Arr. by W. F. SUDDS.

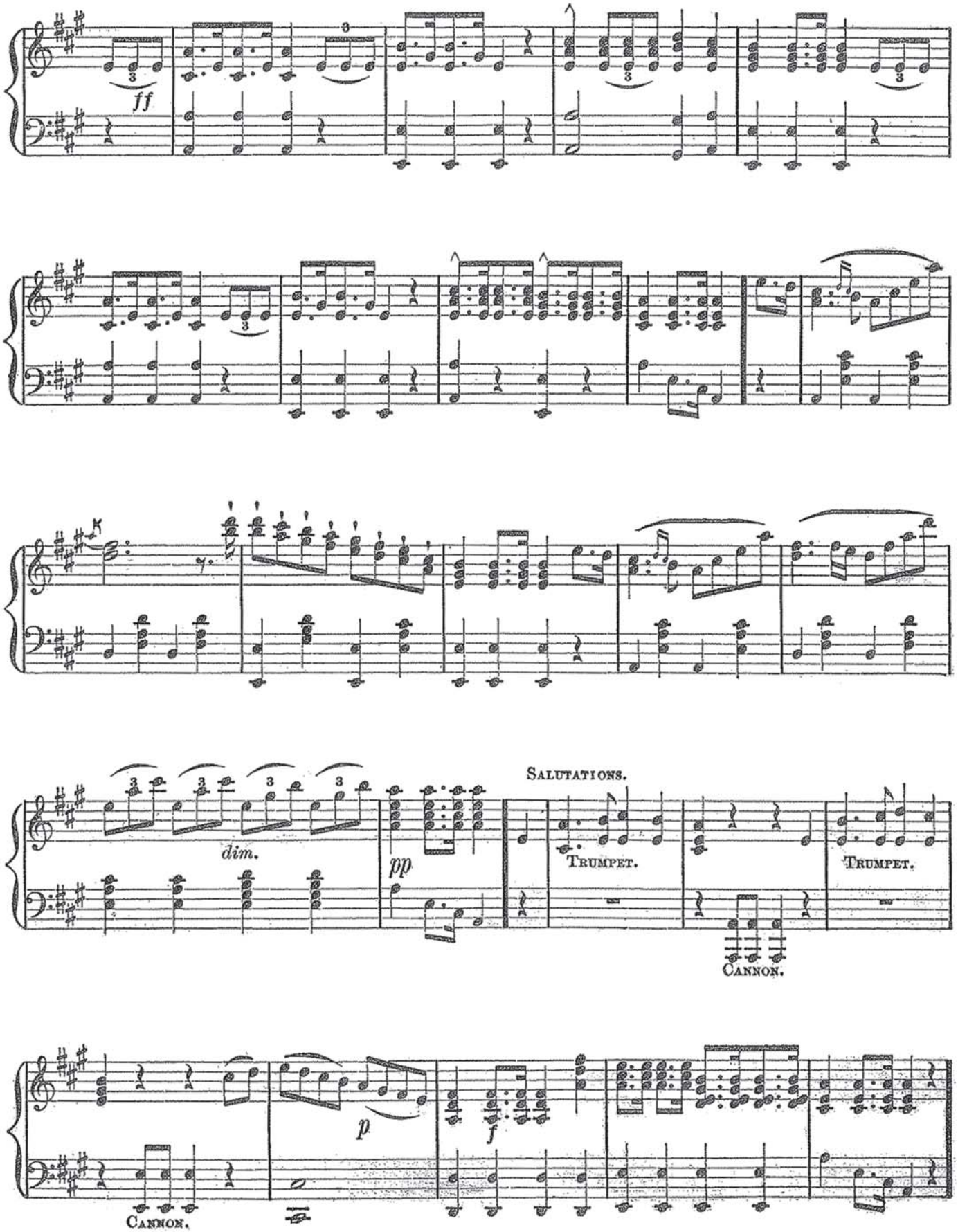


GEN'L PERSIFOR F. SMITH'S MARCH.

T. J. MARTIN.



GEN. PERSIFOR F. SMITH'S MARCH.



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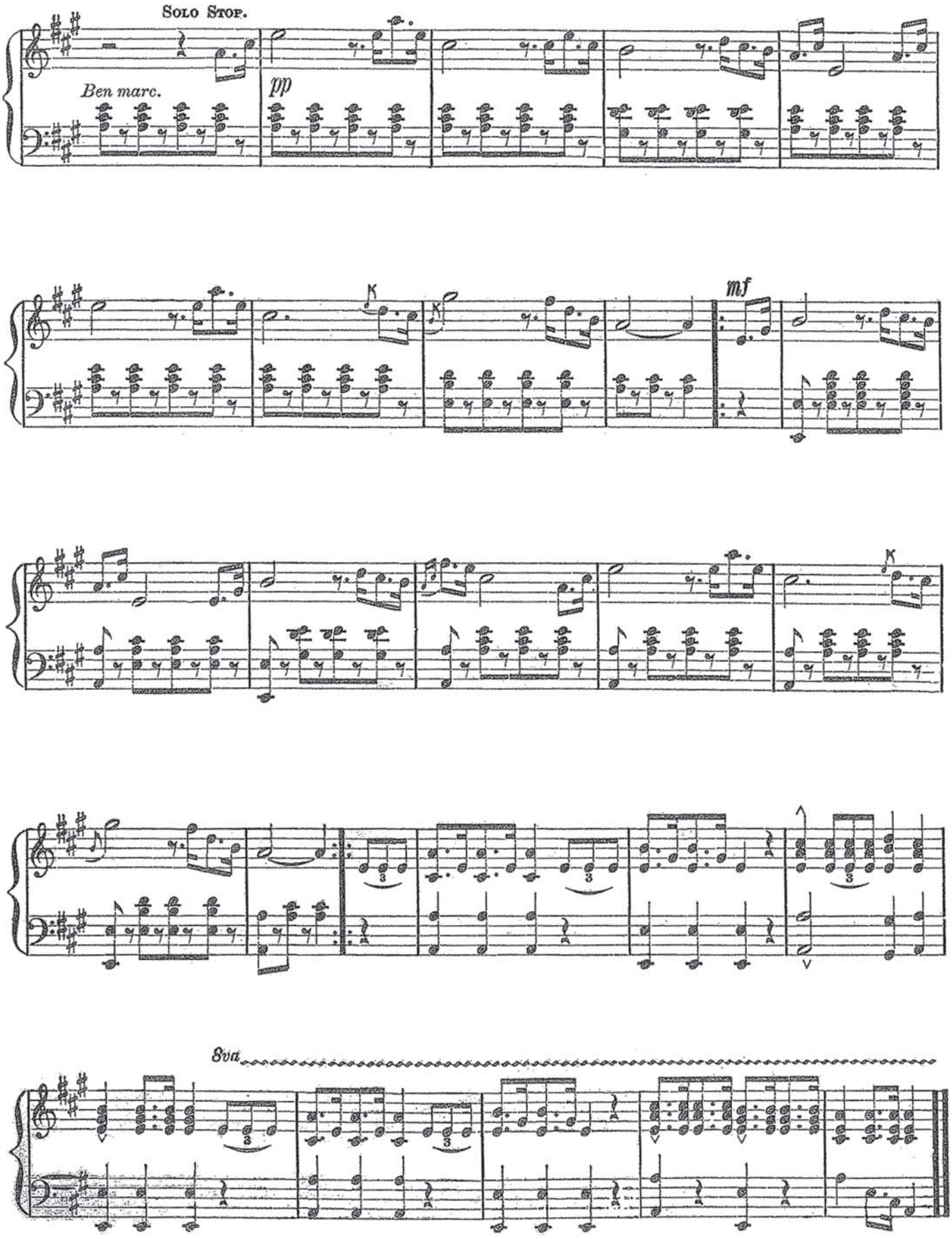


A Practical Treatise on the Harmonium;

How to Build, and How to Use It.

by Hermann Smith

Hermann Smith's Practical Treatise on the Harmonium *was published serially in the* English Mechanic *Nos. 90–295 in the years 1867–1870. Excerpts from a few chapters with standalone interest will be republished in the* Quarterly, *and the editor hopes to make the complete text available in the future as a book. The selections below follow the topic "reed cells."*

The term of "soundboard," used in connection with the harmonium, has not the same signification as in the organ, where it is given to a part of the structure containing the grooves conveying the wind to the pipes, and has no relation to the sound, being simply a wind conductor; nor as applied to the pianoforte, where the soundboard is the most important agent in reinforcing and augmenting the sound by the vibration of its surface.

In the harmonium the soundboard plays a different part, and augments the sound, not by surface, but by the interior capacities of its numerous channels containing air; the air and not the wood is the true resonant body, and these channels are actually so many pipes which, instead of having a separate formation, are here built up in a block for convenience sake, and for the saving of cost in work. The channels are, to all intents and purposes, *pipes*, each channel having relation to the pitch of the sound it is intended to augment, and the length and form should therefore receive as much attention and be determined as strictly as in organ pipes. Many writers, in referring to the harmonium, speak of it as different from the organ in having no pipes to reinforce and purify the tone; either they do not understand the principle of "multiple resonance," on which its construction is founded, or they are not aware that it possesses a soundboard of channelled structure. Probably they have never troubled themselves to inquire, and are ignorant of both, else so many mis-statements would not be so continually repeated, and arguments be founded on them which, being at variance with fact, are valueless.

The terms "soundboard" and "pan" are used indiscriminately, yet it would be well to keep them distinct, and to speak of the interior portions as the "pan," and of the completed combination as the "soundboard;" thus we should have five pans in this frame, and a greater number of separate pans in the frame of any larger size of instrument.

[. . . . .]

It is of the first consideration that every channel should be perfectly air tight against the inroad of wind from a neighbouring channel, any defect in this particular will be very troublesome to remedy afterwards, and great attention must be paid to fixing the reed veneer, that every part is held firmly by the glue. If any one channel proves imperfect at this stage of the work, the veneer need not be taken off again, it will be sufficient to cover over one aperture and into the other to pour a thin solution of hot glue to fill the channel, turning the pan over by hand and pouring the solution out quickly. If the solution is hot, and the operation rapidly performed, only a thin coating of glue will be left over the channel, usually quite sufficient to cure the faulty part. There is likewise another consideration in which we hold that glue is beneficial, and that is in its leaving a perfectly smooth surface. It is a matter rarely attended to, yet any amateur can by experiment prove that a smooth surface aids the clearness of sound given from pipe or channel, and *vice versa*, a ragged or spongy interior sensibly influences the tone emitted, makes it dingy and foggy. An American once noticed that a violin accidentally injured was greatly improved after repair, and better than in its original condition. He attributed this in great measure to the amount of surface covered with glue, and acting on the impulse of the moment, he determined on making an instrument entirely of glue. The violin thus fashioned proved of marvellously fine tone, and showed the sonorous properties of the material to be no way inferior to wood. It was too costly a fancy probably to be repeated, and too fragile a mode of construction to be adopted for manufacture. Hard gutta percha and vulcanite make flutes of the purest quality of tone. Numerous scientific experiments unmistakably indicate the value of a smooth surface in aiding the production of clear free tone.

Inquirers frequently ask whether the *grain* of the wood forming these partitions should run horizontally or vertically. Take a small cube of pine wood and test its conducting power by placing it on a table and resting upon it a vibrating tuning fork, the power of the resonance will vary with the three different positions in which you place the cube, showing that there are three different velocities of sound through the wood; most rapidly along the fibre; less rapidly across the fibre and across the layers which mark the growth of the tree; and least rapidly across the fibre and along the layers. If a sympathy of vibration is desirable between the upper and under sides of the sound-board, then the grain of the partitions should run vertical, as the sound-post of the violin does, for there is a law in "sound" of the transmission of vibrations at right angles, analogous may be to that law of the crossing of magnetic currents at right angles to the currents of electricity, or of the undulations of the waves by which light is produced, and which are so constituted that the vibrations happen at right angles to the rays. Whether the vibrations should be operative in the substance of the sound-board of the harmonium or not—that is exactly the doubtful point. The conditions are not conformable to those of the violin, in which there is a large resonant cavity; the belly and the back are *toned* in the violin, one a note lower than the other, and purposely, that by means of the sound-post they may be brought into sympathy, and the instrument thereby vibrates as a system. The harmonium seems rather to be allied to solo wind instruments in this particular, each channel being a tube not participating in the

vibrations of neighbouring tubes. Clarionets, oboes, and the like are formed of hard wood; soft wood would be fatal to true pitch, for the hand would be constantly interfering with the vibrations. The influence of the hand is shown in the fact that by grasping the scroll-head firmly you may mute the violin. Another fact may be mentioned from which we might draw the opposite inference, that a sympathy of vibration is highly undesirable in the sound-board. If two pendulums of different lengths are suspended from a frame common to both, and made to oscillate, one will force the other into sympathy and alter its times of vibration till it synchronises with its own. Professor Leslie says that this sympathy is communicated by the point of suspension, not by the external impulses of air; and that if the suspension is on different frames, however near, the same sympathy is not manifested. Further he states that the harmonics of strings are communicated in this manner through the points of attachments. Possibly, therefore, we might get rid of the worst harmonies of the harmonium, the plague of the instrument, and prevent their commingling, by not permitting attachment of two reeds to one board, although to mitigate the evil on such a plan would need the devising an entirely new construction. Some German manufacturers bed their reeds in a plastic composition of a resinous nature; others fix them on leather seats; but whatever value either method may have is difficult to determine, because the final result, a good harmonium, depends on the skill of the maker in other matters, and we should need a wider range of comparison and keener investigation than are at present available.

FIG. 31.

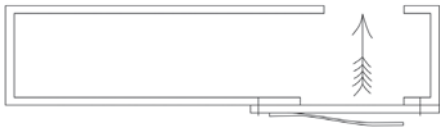
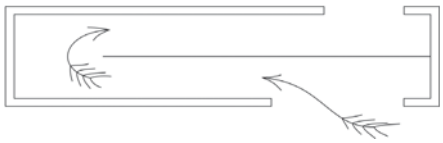


FIG. 32.



The channel is in relation to the reed reciprocative, and does not necessarily need a current of air through its length; if a reed is affixed to a tube or channel as at Fig. 31 the current passing out through the aperture immediately above, there will still be a resonance from the confined column of air. We can also make the channel as at Fig. 32 after the pattern of the bassoon, the current passing round the division, and thereby gaining length and giving its resonance the same as if the channel had been straight. The form of channel, it will be obvious, may be varied without any departure from the principle of its action. It may be square or triangular, cylindrical or conical, and each form will have its peculiar influence on the quality of tone produced.

[. . . . .]

The slope of the sound-board, it will be observed, causes the bass end to have narrowest space for wind under the bass reeds, and the fullest space at the treble end, exactly the contrary of the natural demands of the reeds. The bass reeds require a full flush of wind and of moderate force; the treble reeds require but little amount of wind, and that little with energy of current. All modes of production of sounds from wind instruments teach us this: the flute player contracts his cheeks to confine the yielding air when he produces high notes and blows with greater energy. Ancient flute players wore straps round their cheeks for this end. On all wind instruments the high notes are difficult to produce and occasion more fatigue to the player than those lower in the scale. Bass notes in the lower region are difficult to attain if the bore of the instrument is narrow, or the player is scant of wind. The evil here pointed out is unavoidable on the present build of harmonium. You may by contrivance effect some change in the relation of the parts for personal satisfaction on these hints. The tendency of bass notes to borrow wind is exaggerated by the lack of a sufficient body of wind directly under them to draw from. A speaking reed draws the current across its neighbours. The treble reeds have the effects of their blows lessened when there is a large body of air below, absorbing the energy instead of rebounding it. Nothing in the way of arrangement can be worse than this, whereby the greatest draw of wind is to the narrowest end of the cone, like blowing into the bell of a trumpet. You may remark, We blow into the conical mouthpiece after that fashion; true, but that is that the vibration may be thrown back to the wide end to reciprocate the vibration of the lips.

The plan of the harmonium, as previously stated, is, throughout, a compromise between art and finance. The amateur inventor and patentee should remember this; an invention, however valuable, very rarely meets with success if its adoption increases, even in small degree, the expenses of the manufacturer; the money value of a patent generally depends on the ability of the inventor to carry out his own invention, and, by his personal energies, to command a market for his speciality of manufacture. In disregard of these considerations, many inventors waste their ingenuity and their money, and hosts of harmonium patents are taken out, then die, and make no sign.

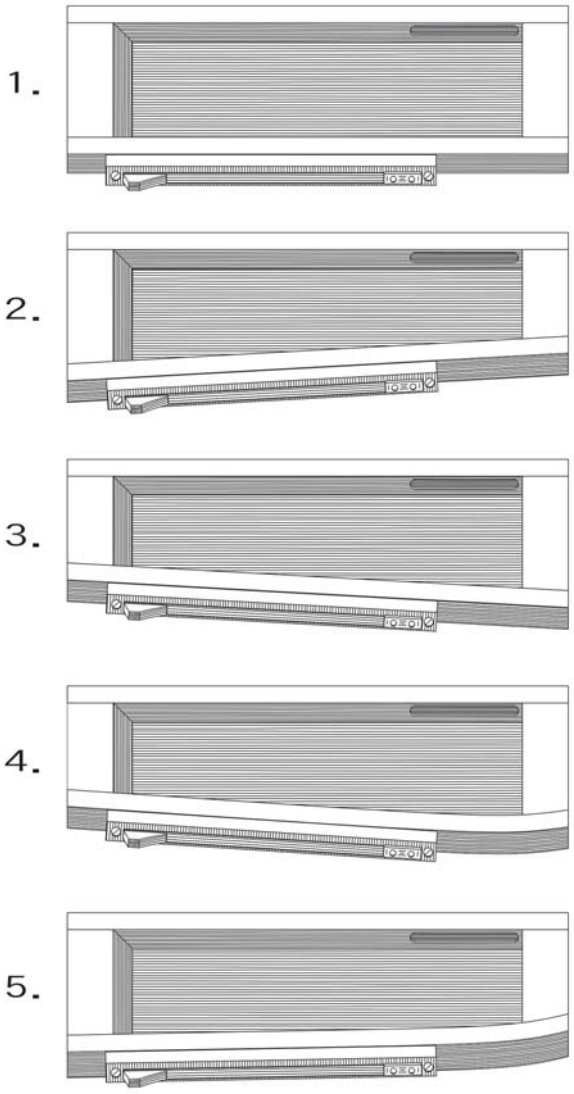
[. . . . .]

"The difficulty of understanding vibratory action consists in this, that the movement of the parts of air, in which sound consists, travels along, but that the parts of air themselves do not travel, but are anchored like standing corn." –Dr. Whewell.

The scales or dimensions of the channels of each register will be but one part of the calculation; the style or shape to be adopted is another; and these styles or shapes are interchangeable with the several scales; hence it will readily be understood that out of the combinations many varieties of character may be obtained, even if no other influences are taken into consideration.

There are five orders of channels. 1. The channel having the reed-veneer and the pallet-veneer parallel to each other. 2. Having them convergent. 3. Divergent. 4. Curved reed-veneer expanded toward pallet aperture. 5. Curved reed-veneer, with depth under reed aperture and contracted under pallet aperture.

Each shape of channel having a different power over the reed,



and on the composition of the waves surging to and fro in the interior, we should endeavour to estimate in our minds what would be the physical effects of whatever variations we arbitrarily determine. The visible aspect of nature will be our best guide; of the weight and impact of air we are fully conscious, and between air and water a very close analogy of movement exists. You who have wandered by the wondrous ocean, who have watched the advancing undulations, have heard them breaking on long lengths of sandy shore, rolling up steep pebbly beaches, or dashing with wild recoil on cliffs precipitous; or, in nature's calmer mood, seen the bright waves careering in graceful forms, prancing among boulders, and curvetting as if for their own delight in quiet coombes; you will have noted and remembered the ever-varied form and the ever-varied music. Wind and wave are the same, but every locality has its special features of elevation, depression, and environment, which shape the course of wind and wave, compel them to assume distinctive character, force, and form, and determine the quality of the sounds they give life to; each woodland and each shore is musical with harmonies which are its own and none others.

If we should place the same reed on each of these differently-shaped channels, and in imagination view the interiors, we should unquestionably find that in the "squeezes" not one would mould the same record as another, each would give a different history of the forms impressed by the tonal forces active within its bounds.

Professor Tyndall in his last lecture on electricity showed how hard it was to cut through the magneto-electric current, how the pure space seemed to be occupied by a solid viscous substance resisting passage through it; the impalpable put on solidity and demonstrated an existence which was invisible. Although air is shapeless and intangible, yet whenever the particles of air are excited to vibration there is a residential force within capable of taking form and of impressing whatever opposes the free involution of its waves. It seems to possess more substance. Opposition changes the contour of the aërial undulations, and if your active interposition is sufficiently near the source of sound it will in some degree transform the quality of the sound; and even as you may change the colour of a beam of light by refracting or reflecting media interposed in its path, so the quality of musical tones already defined may be changed by the media through which the sounds are transmitted before they affect the ear. Some modern lamps have large opal glass shades which, like bells, produce musical tones. A series of these milk-white gongs, chosen according to the pitch of the notes they give, would ring a fine elfin peal, for they throw off tones of lovely quality; if you strike one of these and whilst it is sounding place your hand within the bell, waving your hand to and fro you will sensibly alter the tone then resounding, both in pitch and quality, and will feel as it were the tingling shock of modulated form and rebounded undulations; your fingers are as breakers amid the mimic ocean, raising the foam of the white sea-horses, breaking the waves into new forms crested with harmonics. In association with this experiment we remember that Professor Airy considers that the hissing scream sometimes heard when the long Atlantic wave rolls up to the shore is due to the harmonics arising from the breaking of the wave into surf. Ole Bull possesses a famous old violin, one that has a history and is worth more than its weight in gold, and it is said to have been for so many generations in the companionship of gifted artists that its interior has become marked—"Ribbed as the brown sea sand"—by the incessant surging of its musical waves. The human larynx is formed of a number of cartilaginous rings connected by membranous bands. In reference to our subject it may be worth the thought whether these be not aids to the nodal division of the vibrating column of air; the purpose usually recognized in these elastic intersecting bands is for the elongation of the pipe. We seem to perceive another value in them, our experience in harmoniums favouring the hint. Frequently we find that the true vibration of certain reeds is blurred, the intonation imperfect, and by no manipulation of the reed or channel can we overcome the defect; yet if we insert a flexible band of leather at the side or bottom of the register chamber, the correct articulation is gained in a moment—a simple remedy for a serious fault and discovered by accident. How are we to understand the cause and cure? When the body of air under the reeds confined by the rigid walls of the chamber is set in strong vibration by one of the bass reeds, there appears to be so great a contention of opposing motions at one particular place that the free disposition of the waves into their natural division is prevented,—the crowd and the returning crowd meet in a walled-in passage, and neither will give way;

under some reed or other they come to a deadlock, and the reed is unable to force its way out of channel or get room to strike. By allowing some degree of expansion at this tight place we ease the crowd, help the waves over their difficulty, and let them pass again freely. The speech of all the series of reeds is benefited by it, and it is noticeable also that one opening out to the leather band is not satisfactory, whether it is large or small; two apertures are requisite for obtaining the full advantage, a fact which suggests that the bifurcation of the windpipe into the two bronchial tubes may play a not unimportant part in the acoustical relations of the vocal organs; and so, further, we incline to believe that these intersecting bands, elastic themselves, and allowing a yielding movement in the rings may tend to fix the places at which the nodal divisions shall strike, indifferent to theoretical precision but securing a perfect sympathy between the pitch of each note in the varied scale of the voice, and the vibrations of the windpipe, which, however supple, never changes to any corresponding extent; indeed, for all theoretical calculation, it may be said to remain practically at one length. When we consider the human organ of voice and music in the light of our experience with free reeds, and in the constant study of the peculiarities they manifest, the whole conformation of the larynx, and, indeed, every detail of the structure of the vocal organs, seem to acquire new meaning and design, and we perceive more and more its wondrous beauty and perfection as a vocal instrument. All the allusions we have made are intended to render you conscious that in the invisible world of sound which we seek to explore, form is potent.

[. . . . .]

As the swan comes up the lake, sailing in placid dignity, how broad a furrow her white bosom cleaves! As she advances, the waters part, and the waves as they rise deploy on either side in long lanes of light, hurrying in fanlike array to dash themselves upon the resisting banks of the lake. Onward the beautiful creature comes with moon-white plumage raised, approaching the bridge she slackens speed, lowers her sails, and serenely floats at ease beneath our gaze. When she moves she ploughs the deep water. Her dusky cygnets around her paddle and splash, and make a host of little surface-waves, which die almost as soon as made, absorbed into the larger mass of water. When the stately swan moves you can see the swell in the depths below, and trace its influence in far-spreading undulations. It is only swans that can so stir and give motion to the deep water: cygnets agitate only shallower circles. The waves which are deployed in the track of the swan accumulate power from the support of the underswell, and spread with energy to great distances until checked in their career by opposing banks. Let us go to the margin and see how they behave themselves, not forgetting by the way one lesson we would impress, that it is of little use having deep channels in our sound-boards unless we have swans to stir the depths.

There are few things more difficult to convince amateurs of than this, they hold tenaciously to the notion that increased depth of channel will give them a bolder tone, and a similar error is very prevalent respecting organs, that pipes of extreme or large scale secure powerful tone. The truth is that size is not necessarily a guarantee of strength, on the contrary it is often a source of weakness. Proportion rules all, proportion not alone of dimensions of pipe or channel, but of the relation of all details having any influence or share in producing results.

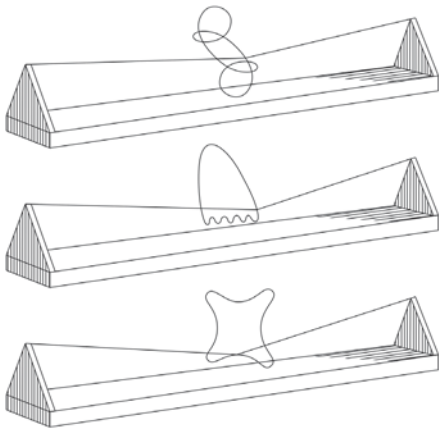
Reeds giving the note of the pitch C C C 16ft., may be from one to four inches long, or of any diversity of lengths between these, and yet they would not each be equally effective on the same channel. A light reed would probably scarcely speak at all, except at strong pressure, on a channel that gave powerful resonance to a stouter reed, it would be ineffective to stir the depth with the requisite fullness and uniformity of sway; and in the reverse instance, the stout reed on a shallow channel would yield a harsh or rattling tone. So it is as regards the compass of the scale from bass to treble: the treble reeds will not speak at all if the channels are too deep, for, unable to attain an amplitude of vibration sufficient to act uniformly upon the mass of air, they are checked at the initiatory impulse; like ill-trained horses the reed and channel do not pull together, some discrepancy in the timeing of efforts renders the intended assistance nugatory. When reed and channel are assorted in true affinity not only is there a difference in quality of tone but the union is characterized by an alacrity of articulation, the moment they are called upon to speak at a touch they yield, the tone is started smoothly and sustained equably, and if the reed is of pliant nature the crescendo and diminuendo will be of admirable gradation. The depth of channel is, therefore, valuable only as it is proportioned to the strength and active display of the reed conjoined to it. In passing we may likewise remark that the commonly accepted opinion that broad reeds must be loudest in tone is equally wrong, they require a stronger flush of wind to elicit their power, and, all other things being equal, a narrower reed would develop a greater strength of tone. Strength resides in length,—power is determined by range.

Resuming our observation of the waves, we notice that the abutment of the bridge runs down perpendicularly, and the embankment presents itself at right angles to the level of the water. Watch the sinuous line of waves whilst the swan is returning to her island rest. As the waves strike on the face of the stone embankment they break in perfect semi-circles, one within the other, an interlinked lace-work pattern, so even and regular—they represent the half-wave. In the end of a stopped organ-pipe a similar half-wave is formed. If now we look further along and find the smooth stonework shelving or slanting downward we may note that from the same roll of waves, not uniform semi-circles, but segments of circles or forms more or less oblate are obtained, and beyond this shelving station, and where the margin changes to rough, rugged, agglomerated stones, the pattern made by the breaking waves becomes irregular, a variety of confused forms, contentiously aiming to obliterate each other. Whatever shape is given to the embankment or shore for the waves to break upon, we shall find correspondingly a difference in the behaviour of the waves. Every form is the expression of a definite force, every difference of form betrays the difference in the composition of forces direct and reflected. You can therefore imagine the process going on in these sounding cavities, and estimate how differently the waves of sound must be affected by the shapes of channels; the channel perfectly parallel on all sides, would bear analogy to the right-angled embankment, the half-

waves we may consider to be as complete in the interior mould of the channel as to the eye is the enchaining of the semi-annular pattern fringing the borders of the lake; and in similar relation of cause and effect the sloping sides of channels would produce different introversions of the sound-waves. If three reeds are taken exactly alike in pitch, and in their scale each the counterpart of the other, if these are placed on three different channels, each of different shape but as nearly as may be similar in capacity, what will be the result on sounding them—three notes in unison? No; the shape of channel will have exercised its influence on the pitch of each, and coincidently have given a varied flush of colour to the quality. The reed upon the channel whose shape spreads in the direction of the pallet aperture, will have risen in pitch as compared to the reed upon the channel having parallel surfaces, whilst the reed upon the channel which contracts towards the orifice will have become flatter in pitch. Cone-shape allows most freedom to the stroke of the reed. The reed is its own ruler only when it is left to itself. Whatever its natural pitch, every pipe channel or cavity with which it is associated will lower that pitch. The degree of flattening dependent primarily on the configuration of such channels simple or complex, and subsequently on the nature of orifice, pallet, and other adjuncts. In organ pipes, and in all musical instruments of the wind species, we know that the most marked distinction exists in the quality of tone elicited from those which have cylindrical and those which have a conical bore. An open pipe if conical is sharper in pitch, a stopped pipe if conical is flatter in pitch, as compared with pipes of parallel sides. The curved shape, again, must exercise some peculiarity of influence through the varied modes of impingement of waves upon each other, occasioned by the amount of difference between the inner and outer circles of convergence and divergence.

[. . . . .]

Many of you have no doubt seen those unique examples of Chinese ingenuity, white ivory globes, curiously carved and perforated, and strangely wrought one within the other, in graduated series. Whilst we have been contemplating undulating waters and waving cornfields there is one thing we should not remain unconscious of—that we have had under view only a profile of wave motion; that interior and subtle motion, the vibration of air, creeps forth uniformly on all sides, its impulses insinuate themselves to the fullest bounds their energy will carry them; the waves of sound will penetrate every outlet, pass through minutest cracks and fissures, and then disperse themselves again like light above and around, for, as Peschel states, "In an equal resisting medium all vibration would be in spheres." These hollow ivory balls we introduce for similitude to vivify the conception of the wave-spheres of air. The water exhibits to us rings of ridge and furrow—circles of elevation and depression; the air would propagate its undulations in all directions at once around the point of vibration—would present zones of condensations and rarefactions—spheres around spheres—density and rarity alternating, as in rude illustration these ivory spheres encircle each other with intervening spaces, representing rarer matter between the denser. The infinitesimal sphere-motion within the channel—imagine how it must be influenced by the contour that limits its capacity for expansion, uniform expansion, each variation of enlargement, contraction, or curvature of the channel or cavity causing different impingement of waves, different relations of involution, introversion, and aggregation, and then remember that out of this complexity of form there comes forth the blended effluence of tone which we call quality.



We account for the individualism of tones by the modifications given to the forms of waves by the surrounding walls of the cavities in which the tones are produced. The qualitative resonance is an accretive compound of harmonics upon the fundamental note, or, in other words, it is literally a growth of form upon form, these forms being clustering, successive, and transitory, as soap-bubbles blown in clusters. It is generally admitted that "quality" is due to the mixture of harmonics, and to the comparative strength and the diversity of the grouping of these overtones. We have drawn your attention first to the lineal undulations breaking up into divisional parts and inducing the manifestation of harmonic tone, and then to that equally or more important kind of form arising through the impulsions and counter-impulsions breaking in upon these from the walls, and according to their configuration still further modifying the relations of the harmonics. The lineal and the inflected impulse bear analogy to the peculiar coexistent conditions of a vibrating violin string, its periodicity or constancy of pitch, and its diversity of quality-giving power, according to the individuality of the performer. Dr. Young has exemplified this in a remarkable manner. He examined the string of a violin when vibrating, and by throwing a beam of light upon it, and marking the motion of the bright spot which it made, he found it to describe various and complicated curves according to the different manner of drawing the bow, and he gives the following graphical examples to show how much the vibration produced by one player may differ from another, although the pitch of the note given is in each instance precisely the same. In the violin and other solo instruments the player commands the quality by his personal skill in intonation; in the harmonium, on the contrary, the player determines very little, there is an abiding quality given by the configuration of the channels.

The apertures and pallets are comprised under the configuration, for they are indispensable to its completeness, and we shall see how important is the part they bear in the quality of the resonance.

ORGUE CÉLESTA MUSTEL

TROIS CLAVIERS

N° 6

CÉLESTA. — Le Clavier supérieur est à l'usage exclusif du Célesta (5 octaves).
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Das obere Manual ist für den ausschliesslichen Gebrauch der Celesta (5 oct.).
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DOUBLE-EXPRESSION

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2 Prolongements — Metaphones
Coupler between the three Keyboards
Heel-pedal for Full organ
DOUBLE-EXPRESSION

11 SPIELE ZUNGEN

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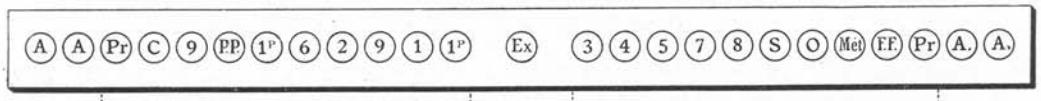
Manualkoppel — Fusshebel für Grand Jeu
DOPPELEXPRESSION

1 Octave 1/2			3 Octaves 1/2							5 Octaves											
		Pieds									Pieds										
Accouplement (1er et 2e)																					*Accouplement* (1er et 2e)
Accouplement (2e et 3e)																					*Accouplement* (1er et 3e)
Prolongement (17 Notes)																					*Prolongement* (3 Octaves 1/2)
Contrebasse (17 Notes)	16																				
Basse de Flûte	4																				
Pianissimo (Percussion)	8																				
Cor Anglais (Percussion)	8																				
Voix Céleste (Anche double)	8																				
Bourdon-Clarinette	16																				
Flûte douce	4																				
Cor Angl. Flûte	8																				
Cor Angl. Flûte (Percussion)	8																				
Expression																					
Clairon-Fifre											4										
Basson-Hautbois											8										
Contrebasson											16										
Cromorne *											32										
Harpe Eolienne (Anche double) *											8										
Soubasse (17 Notes)											16										
Forte Expressif																					
Métaphone																					
Forte Fixe																					



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Dimensions — Poids — Renseignements divers *(voir pages 70 à 75)*

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From the catalog, Mustel of Paris, 1911.

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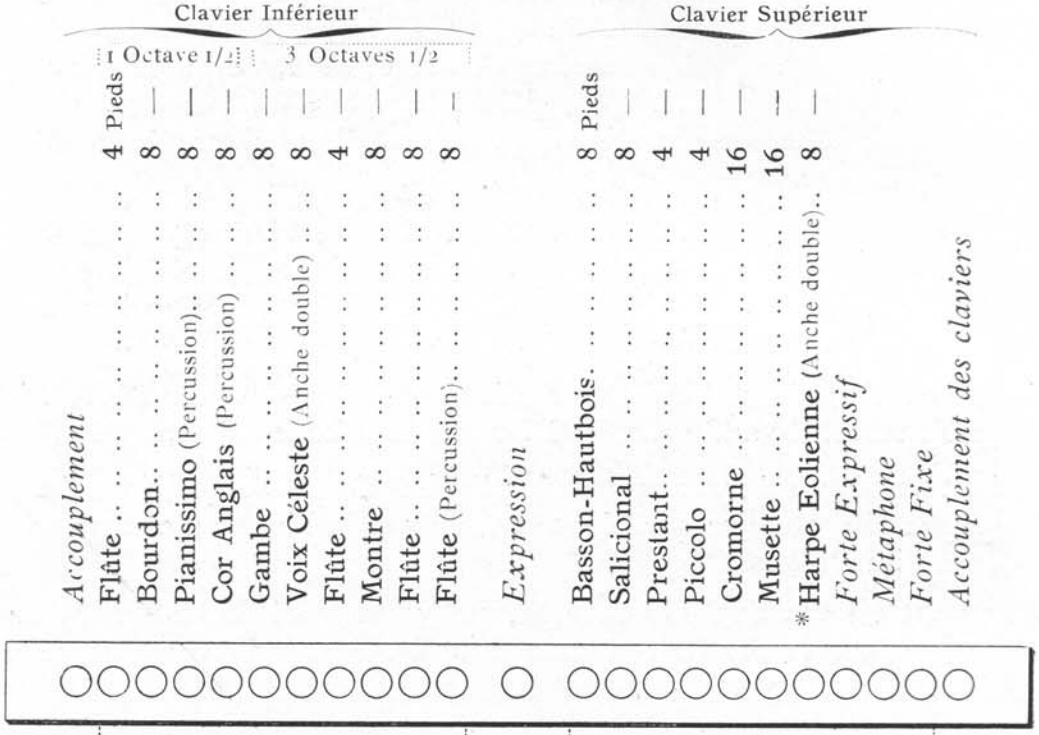

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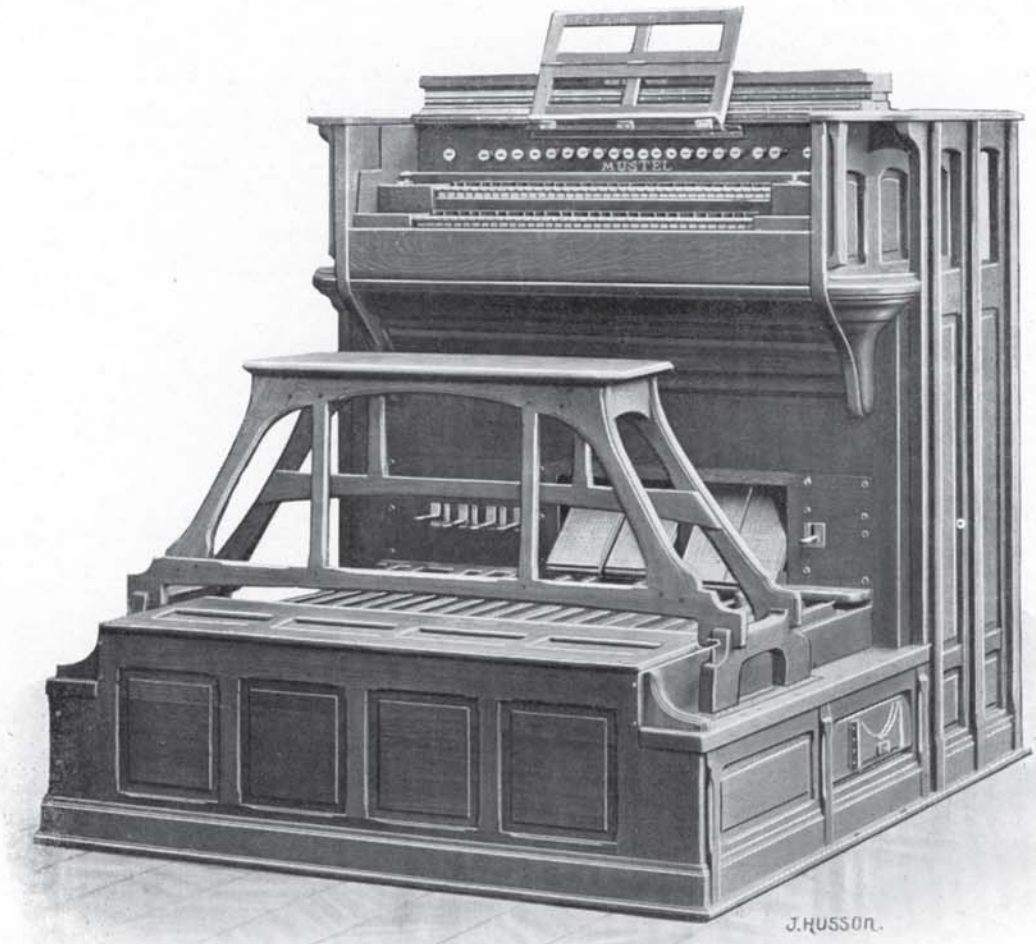
Modèle N° 7



Auguste REINHARD

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August REINHARD

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Fayette Opera House Hosts Reed Organ Concert Series

by Jim Germann

On a crisp Sunday afternoon in October, over fifty reed organ music enthusiasts gathered in Fayette, Ohio, to hear organist Kerwin Leader perform on the large 1890 Mason & Hamlin reed organ in the Ginnivan Theater of the Fayette Opera House. Attendees included local Ohioans as well as individuals who had traveled from Michigan, Illinois, Indiana, and North Carolina for the concert.

The Fayette Opera House.

The concert was the latest installment of the Don Glasgow Reed Organ Concert Series, which over the years has featured such organists as Michael Hendron, Brian Ebie, and Rodney Jantzi. The featured organ was the Opera House's three-manual-and-pedal Mason & Hamlin, one of the most significant reed organs made by that firm. Until its restoration a few years ago, the magnificent organ had been silent for decades, having been stored in a carriage house in the Toledo Old West End where it was in pieces with many parts missing. Don Glasgow rescued the organ and assumed the enormous task of restoration. Two years of work were required just to make the organ playable. When the organ was donated to the Fayette Opera House several years ago, it took six men to carry it up the stairway to the second floor auditorium. The organ was featured at the Reed Organ Society International Gathering in Fayette in 2004.

It is interesting to note that this Mason & Hamlin reed organ was built in Boston at almost the same time that the Fayette Opera House was being constructed in Ohio. The Fayette Opera House is a historic structure built in 1889 and after its dedication was used as a community arts venue for many decades. After World War II, the facility was seldom used and eventually was sold for commercial purposes, gradually falling into disrepair. In 1978 the Fayette Community Fine Arts Council acquired the

More than fifty in the audience.

structure and returned it to its original purpose and usage. Over the past three decades, a core of dedicated volunteers have maintained the structure as a community cultural center. The first floor of the building has meeting rooms and offices, with the concert auditorium on the second floor.

Don Glasgow welcomed the attendees to the concert and introduced the program and organist. The organist was Kerwin Leader of Blissfield, Michigan, an adjunct professor of music at Adrian College and organist for area churches. Mr. Leader began the concert with a rousing rendition of "Toccata in G Major" by Théodore Dubois, followed by "Boléro de Concert in G Minor, Opus 166" by Louis James Alfred Lefébure-Wély. The latter piece was originally written for harmonium, so a brief selection was

Three-manual-and-pedal Mason & Hamlin used for performance.

also demonstrated on an 1866 Alexandre harmonium currently on loan to the museum. In keeping with a Halloween theme, several selections from Andrew Lloyd Webber's *Phantom of the Opera* were performed, including "The Music of the Night," "Think of Me," and "Wishing You Were Somehow Here Again." These selections concluded with the closing theme of *Phantom of the Opera* played on the Mason & Hamlin. The final performance was a spirited interpretation of "Toccata and Fugue in D Minor" by Johann Sebastian Bach, which received a standing ovation.

For more information on the opera house, the reed organ concert series, or a schedule of future concerts, please visit the Fayette Opera House website at <www.operahouse-fayette.org> or contact Don Glasgow at (419) 237-7048. The next concert is scheduled for 3:00 p.m. Sunday, April 19, 2015, featuring organist Steven Ball.

Organist Kerwin Leader (left) and Don Glasgow (right).

Two by Two: A Review of Reed Organ Duets

by Marilyn Swett

Last spring, inspired by Michael Hendron's organ and bassoon duet on YouTube, I was able to participate in several duets of my own. I had wanted to use my 1940 Estey folding military organ, ROS registration #3452, for some type of performance ever since we restored it several years ago. In hopes of possibly playing the organ with other instruments, I had tuned it to A440 at that time.

Work on the organ involved the usual issues: replacing worn-out bellows and felt, cleaning reeds, and so forth. The only part we struggled with was how to replace the material on the outside of the case. Originally it had been Army green cloth, but at some point someone had "antiqued" it with a white/gray paint. There was no way to strip this paint off of the cloth, and completely replacing the cloth wasn't a job we wanted to tackle, even if we could find a modern day substitute. In addition, the wood underneath was the cheap plywood that Estey often used for construction in these organs, which wouldn't look very nice if left exposed. Ultimately we opted to leave the cloth alone and sprayed the entire case with black paint. It's functional, looks fairly nice, and can be redone very easily. Plus, I don't have to worry about damage when using the organ outside.

My friend Amy Cole, who plays the bassoon, was enthusiastic about trying out some duets with my reed organ. We started practicing in January, 2014, with our goal of performing in April at an open house held at Fairmount and Riverside Cemeteries in conjunction with Doors Open Denver. These are two of Denver's historic cemeteries where I work as a volunteer with the Fairmount Heritage Foundation, mostly helping with various tours and open houses. This work also includes playing a small pipe organ designed by former ROS President Jim Bratton, located in a small 1890s Gothic chapel at Fairmount Cemetery. Doors Open Denver is an annual event held to celebrate the unique architecture of Denver, Colorado. Many historic buildings are open to the public during this weekend and it's always fun to be a part of the tours.

The author's 1940 Estey folder.

Between January and April, Amy and I also decided that we would perform a duet at one of the Colorado Chamber Music Society's recitals. These are held once a month at a local library and are free to attendees. Performers are amateur musicians who play a variety of instruments—from strings to horns, either solo or in ensembles.

Amy talked to the recital coordinator, Don Perkins, and he was excited to have us perform. The only keyboard instrument they had used in the past had been the piano, so a reed organ would be something new to everyone. In addition, Don asked me if I would be willing to perform a cello/organ duet with him. Wow—when it rains, it pours! Before I knew it, I was rehearsing separately with Amy and Don in preparation for a Colorado Chamber Music Society recital the week after Doors Open Denver.

Marilyn Swett (left) and Amy Cole (right).

April soon arrived, and my performances with Amy at both Fairmount and Riverside Cemeteries for Doors Open Denver went off without a hitch. The organ blended well with the bassoon, and our music was well-received by the audiences. Our program was as follows:

- Three selections from *Twenty Sacred & Spiritual Solos*, arr. for cello or bassoon with keyboard
  - "Jesu, Joy of Man's Desiring" by Johann Sebastian Bach
  - "On Wings of Song" by Felix Mendelssohn
  - "Ave Maria" by Johann Sebastian Bach
- "Romanze" by Ferdinand Hummel
- "Sarabande" from "Concerto in F Major" by Antonio Vivaldi
- "Largo" from "Concerto in G Minor" by Antonio Vivaldi

The following week at the Colorado Chamber Music Society's recital, Amy and I played Bach's "Ave Maria" and Vivaldi's "Sarabande." Then Don and I performed Camille Saint-Saëns' "Prayer" for cello and keyboard. This was a piece that Don had suggested, and it happened to be the very one that Michael Hendron had recorded earlier with organ and bassoon on YouTube. Again, I thought that the cello blended quite well with the organ. The audience enjoyed both duets and was very interested in the reed organ and its history. I even brought a spare reed with me to both of these events so that I could better show people what a reed looked like.

I hope that I will be able to participate in more of these recitals with my little Estey reed organ. It would be nice if I had a portable organ with a variety of stops to use, but for the time being this one will have to do with its two sets of reeds: 8 ft. and 4 ft. The only drawbacks I encountered while playing duets were with some of the keyboard music that was arranged for a piano and not for a 4-octave organ! So I did have to modify some sections to accommodate my lack of range. Also, while my portable reed organ had just enough volume when played with another single instrument, it could have been a little louder. We're looking at ways to adjust the case to bring out more sound in the future. Overall, I was pleased with how well the reed organ sounded when played with other stringed or reed instruments. I would encourage everyone that has a portable reed organ to consider trying your own duets.

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- And much more!

Articles, **tips**, **news**, or **comments** are invited addressed to the editor at:

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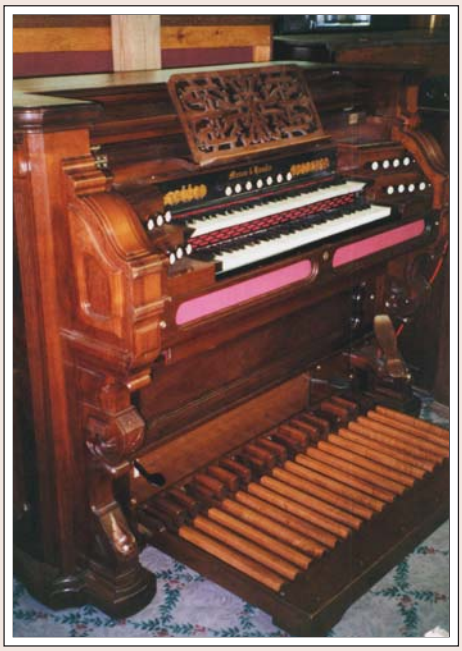

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