CAROUSEL Organ

Issue #53
October, 2012

www.COAA.us

CAROUSEL ORGAN ASSOCIATION OF AMERICA

The Journal of the Carousel Organ Association of America

CAROUSEL ORGAN

The Official Journal of the

Carousel Organ Association of America (COAA)

Devoted to enjoying, preserving and sharing knowledge of all outdoor mechanical musical instruments, including band, fair and street organs, calliopes, and hand-cranked organs of all sizes.

Inside this issue:

Check this out!

A totally revised and updated COAA web page at

www.COAA.US

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Assistant Editor: Angelo Rulli Proofreader: Mary Jo Bopp
Printing: 4-State Printing, Anderson, Missouri

President's Message. . .

It's that glorious season in America; as the season passes from raucous organ rallies to the quiet of winter and one's thoughts go from convening with friends to celebrate the sounds of autumn outdoors and passes to what tasks are required to make the sounds of next summer ever better. Of course our lives don't center just around mechanical organs; and so much of lives involve family, colleagues, workmates and all those who make life worthwhile, if not interesting. When this magazine arrives in early to mid-October, thoughts of cooler weather and snow flakes will replace sun tans and heat for most of us. Then comes the wonder of the holidays and the thoughts of...yup, the COAA winter meeting!

One of the major concerns I have for COAA members is that to date, in our 13th year, it is an organization with enthusiasts coast to coast and many points overseas. A primary goal for 2013 (13 can be a good thing) is that of allowing those west of the Missouri River to enjoy COAA rallies and activities. As our name implies, we represent enthusiasts from coast to coast, which can be interpreted as North to South Poles. For the moment, let's concentrate on going West. For decades California was a leader in the world of mechanical organs; it's time we allow our left coast affianodos to host a COAA Rally! We now have our first COAA Board member in the person of Charlie Wasson, Treasurer. And a good one he is, not just that he's a competent number cruncher, but after a gallant career in the U.S. Navy, Captain Wasson is able to spin yarns with the best of them; and I don't mean lambs wool...

Next year COAA will be unveiling its first Education Platform for children and adults alike. This will be under the tutledge of Board Member Roger Weigand. Your input on this and other matters of concern to each and all of you is invited and welcome.

On the inside back cover you'll find a page which celebrates one of the joyous seasons of the year. Regardless how each of us may celebrate, the COAA Board members extends our kindest and most celebratory greetings to each of you and yours as well. Onward to another great year of music and comrardery.

Stay in Tune, For COAA, Angelo

Front cover: A wonderful 92-key Decap dance organ in the collection of Ed and Carol Kraus. Enjoy Maarten van der Vlugt's thorough discussion of Belgian dance organs beginning on page four of this issue. Photo: Ed Kraus

Centerfold: An interesting situation where a German organ (Ruth Model 38) was converted to play Wurlitzer Style 180 rolls and then converted again, in a restoration effort, back to the orignal Ruth book music. Read more on page 16. Photo: Fred Dahlinger

Back cover: *Trudy* is a concert band organ built by David Wasson. There are 468 pipes divided into four divisions controlled by 16 registers. 24 notes in the melody, 20 counter melody, 12 accompaniment and 12 bass. It plays a custom 98-key paper roll on a 6 roll automatic changer. Photo: David Wasson

COAA *Happenings*

Permanent Member Name Badge:
Permanent COAA name badges ($10 each postpaid) are available from "Mr. Ken" Badges 'N Signs. Contact Ken at 800-398-8307 or email mrkenbadges@aol.com for more information.

Memberships & Directory:
Memberships applications can be mailed to Gary Stevenson or Charles Wasson. A current membership directory (hard copy)is available for $5.00 (includes U.S. postage) from Gary Stevenson at
801 Eichelberger St.
Louis, MO, 63111
314-351-5540

Note: the list is free when sent by email

2011 COAA Trifold Brochure:
Packets of 20 may be obtained from Gary Stevenson, Membership Chairman, at the address above.

Items available from the Merchandise Chair:

Logo Decal: This beautiful logo is now available for use on your trailer or windshield. The large decal is 10" high x 14" wide. This decal sells for $21.00 each or two for $33.00. Shipping and handling is $3.50. The small decal is 2¾" high x 4" wide and can be ordered for either inside or outside application (please specify). These are $6.00 each or two for $10.00 and shipping and handling is $1.50 for these unless combined with the large decals/then there is no extra charge.

COAA Pin:
This multi-colored pin is now available. The pin costs $5.00 (at rallies) or is available directly for $6.50 (includes postage).

Back Issues CD:
The "Back Issue CD" is now available for $30.00 plus $3.00 postage.

Back Issues (hard copies):
Actual copies of back issues are available. These are $35.00 for the complete set (those issues absent will be supplied on CD in PDF format) with postage being paid. Individual issues are $3.50

COAA License Plate:
Introduced in 2007 this colorful license plate displays the COAA logo on white background. The plate sells for $12.00 or two for $17.00 plus $5.00 postage.

COAA Clothing and other items:

•T-shirts (S - XL)		$15.00
•T-shirts (2X - 3X)		$17.00
•Golf Shirts (S - XL)		$20.00
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•Vest (2X - 3X)	"	$22.00
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•Ball Cap		$10.00
•COAA Coffee Mugs		$ 8.00

(shipping included with mug)

All items available in red, white, royal blue or navy unless otherwise noted. Shipping and handling on clothing items is $5.00 each.
(Note: all proceeds from these sales go directly to the COAA)

All orders need be sent to:
Danell Mauldin
3612 Pope Ave.
North Little Rock, AR 72116
501-920-1828

Development:
You can help to continue the improvements and future security of the COAA and its journal, the *Carousel Organ*, by funding one of several initiatives with your monetary gift. We have in place both the ***Memorial Donation*** (used for special projects) as well as ***Friend of the Carousel Organ*** (used to enhance the journal or the website). The COAA has obtained it's 501(c)3 (non-for-profit) status. All donations are much appreciated and, are tax-deductible.
All monetary gifts should be sent to:
PayPal at **coaa.dues@att.net** or
Charles Wasson
29979 Nagorski Lane
Vally Center, CA 92082

The end of the year is coming!
Consider making a tax-free donation to the COAA
(we are a 501(c)3 non-for-profit entity)
Send your donation to Charles Wasson (address above)

Education and Outreach—Help define the COAA Educational Mission

The Purpose of the COAA as stated in our bylaws is to promote public awareness, education, preservation, enjoyment and knowledge of all outdoor mechanical musical instruments and their heritage. We are launching an effort to define the education and outreach mission of the COAA and initiate projects to realize the mission. Members are needed for a committee that will: 1) generate and solicit concepts and ideas, 2) prioritize the most attractive ideas, 3) develop plans for a few ideas to determine whether they are practical, doable and still attractive after more thought and exploration, and 4) present the best ideas to the Board for implementation.

All areas are open for exploration, from a greatly expanded web presence, or more effective use of social media, to new print materials to help educate the public, to outreach in schools and other public institutions, to working with public carousels to improve the presentation and information available about their band organs—and more! Please contact Roger Wiegand roger@carouselorgan.com or 508-358-2563 to volunteer to join this six-month effort to define an education and outreach program for the COAA and to launch exciting new projects to bring The Happiest Music on Earth to the public.

The Development of the Dance Organ

Maarten van der Vlugt

Worldwide, people like to dance to music—when mechanical music became available, manufacturers of all kinds of instruments (from small reed organs to big orchestrions and organs) advertised their instruments as suitable for dancing, or dance hall owners. In the European country of Belgium dancing to the melodies from mechanical instruments, especially organs, became a part of the culture.

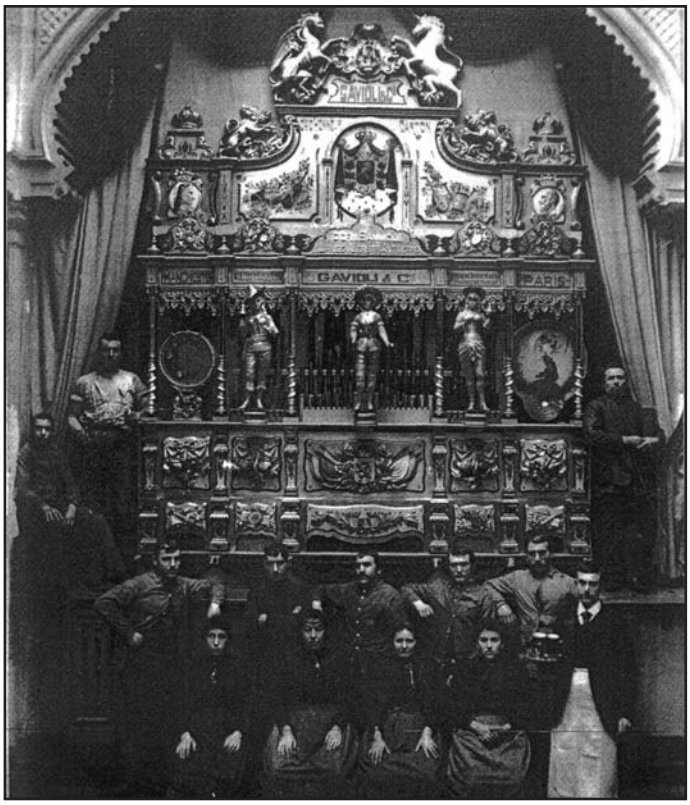
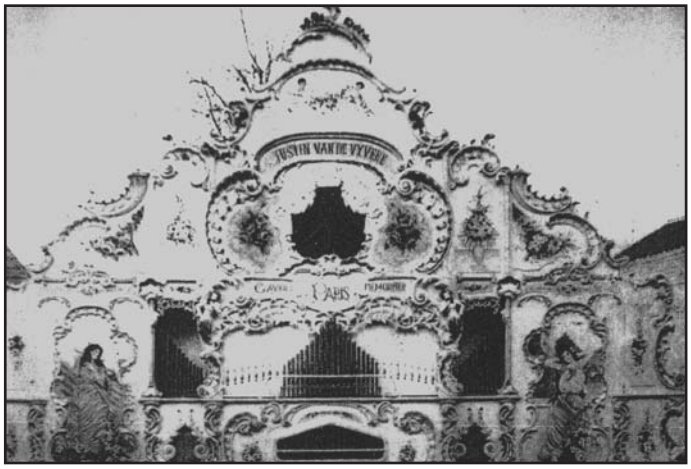


Figure 1. Except for the top proscenium of this Gavioli in the dance hall Balthasar in Antwerp, this organ does not differ from a normal Gavioli on a carousel.



Between 1870 and 1900 every major city of Belgium had dance halls with organs. On one street in the center of Antwerp there were 16 dance halls of which 14 used an organ for the music. Almost all of the organs were from the Paris firm of Gavioli and were barrel-operated. After 1892, when Gavioli invented the book organs, these organs became even more popular. At that time the organs in dance halls did not differ much from those in the carousels and other rides at the fairgrounds. **Figure 1** For small dance halls 57-key organs were used; medium sized dance halls used the 65-key organs and the largest halls used 87 or 89-key organs. **Figures 2 & 3**

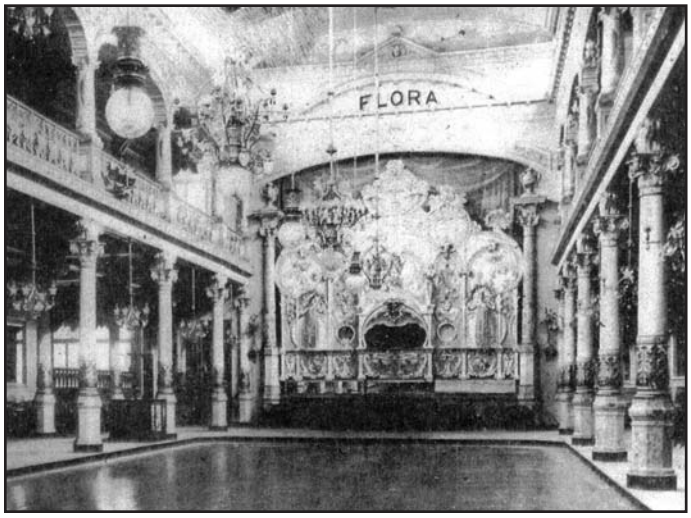


Figure 4 (above). Pictured is a big Gavioli organ with an expanded façade in the dance hall, Flora, in Antwerp. The owner of this dance hall was Jan Verbeeck, the great grandfather of Johny Verbeeck.

Figures 2 & 3. This 89-key Gavioli (left) was built for a rental agency and delivered to Justin van de Vijvere at St. Gilles-Waes near Brussels. The organ survived (above) and until recently was a part of the Veeningen collection in the Netherlands.

Theofille Mortier from Bredastraat 56 in Antwerp was the main importer of Gavioli organs and he enjoyed a good business. Around 1900 he started to change the organs by making the façades larger so they would fit into the hole in the wall at the end of the dance hall. **Figure 4** Swell shutters were added to get more expression. He also made changes to the music by replacing bells with the wood xylophone and added metal flute harmonique pipes for the melody.

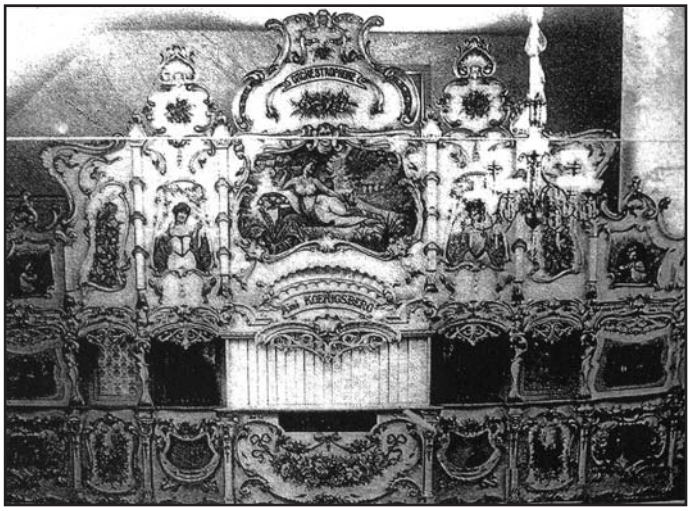


Figure 5. Mortier was not the only firm that rebuilt Gavioli organs as this picture shows. Koenigsberg is written on it and on the top we see the name Orchestrophone, which was the trademark of Limonaire.

Between 1900 and 1914 the dance organ business was booming. Some former workers of Gavioli set up their own workshops. These were Koenigsberg (since 1888) **Figure 5**; Charles Marenghi (1902) **Figures 6 - 9** and Eusèbe Fasano in Antwerp. **Figures 10 & 11**

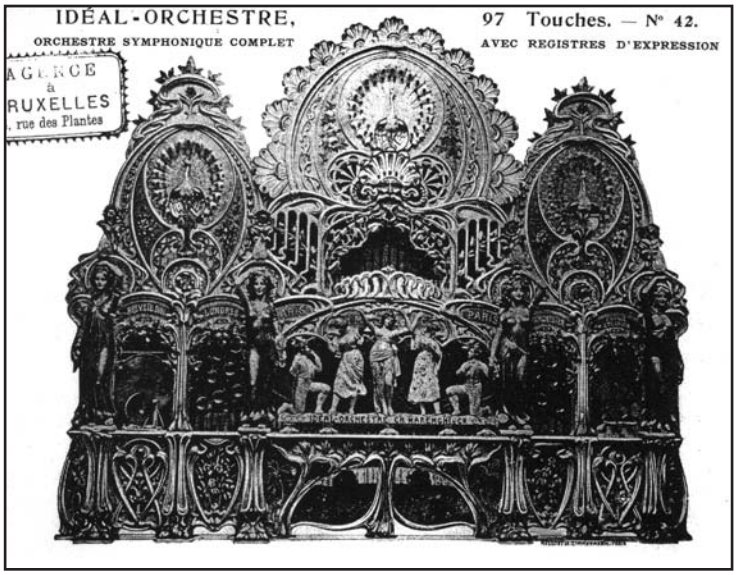


Figure 6. Above is a factory picture of a Marenghi Idéal-Orchestre with a stamp from their agent in Brussels.

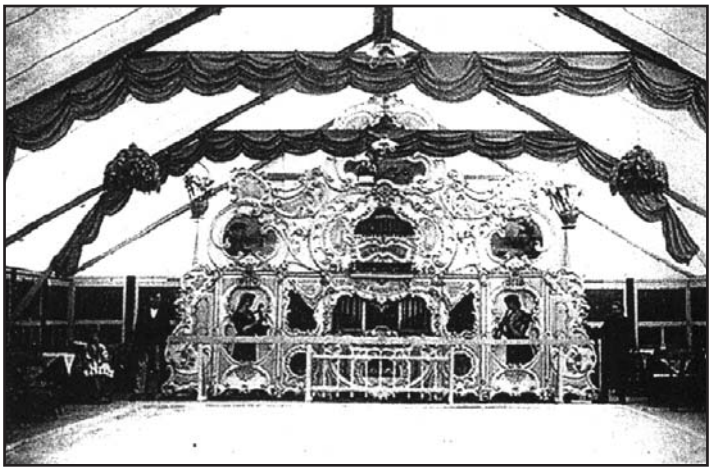


Figure 7. A Marenghi organ in a dance tent in Holland. Later this organ served as a carousel organ and was stripped of most of the façade . The organ is in restoration today for a Dutch collector.

Figure 8 (above) and 9 (below). The famous Marenghi from the cafe/dance hall on the bird market in Antwerp. The organ served until the mid 1960s and then was sold in the USA where it was restored recently by Dick Lokemoen for a collector (below). Photo: Dick Lokemoen

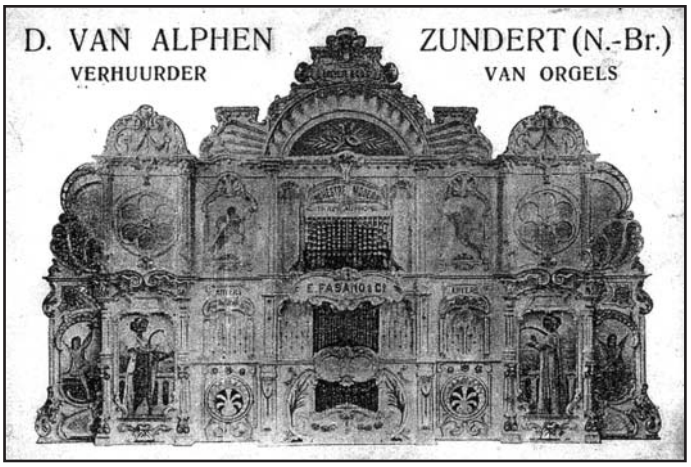


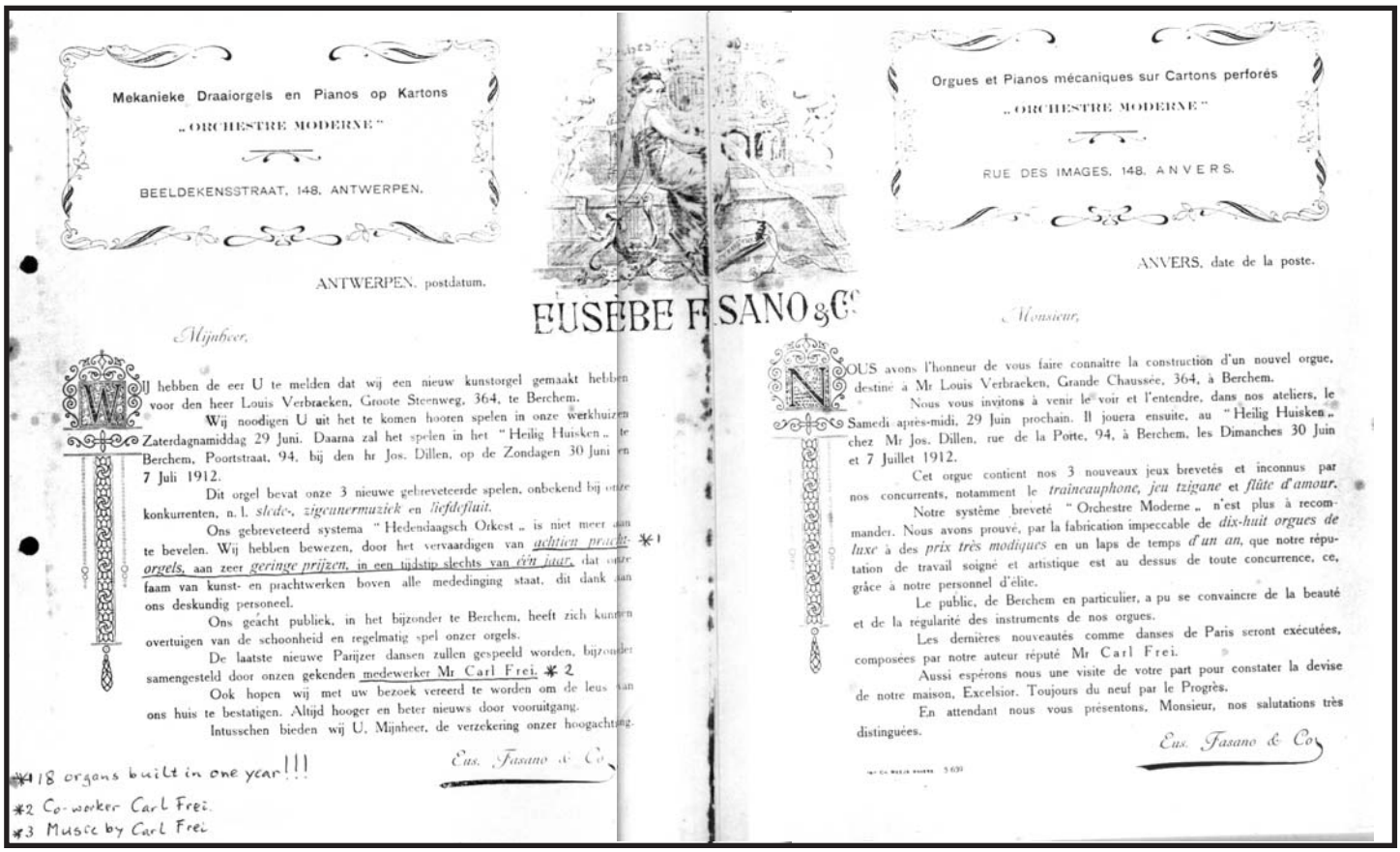
Figure 10. This Fasano dance organ was owned by the Dutch rental agency of D. van Alphen and had the new item mentioned in the Fasano letter below. Above the main case are tuned sleigh bells.

Figure 11. The only known original Fasano owned for a long time by Jef Gijsels of Brussels, Belgium. It is now owned by the state. Fasano was the biggest competitor of Mortier.

Fasano was Mortier's biggest competitor—in 1912 he stated that 18 organs were made in one year and noted that his co-worker, Carl Frei, arranged the latest Paris Dances. **Figure 12** In addition former Mortier workers started their own workshops: Joseph Bursens in 1907 (**Figures 13 & 14**) and Remond Duwuyn (who at first worked for Bursens). **Figures 15 & 16**

The organ illustrated in Figure 16 rebuilt by Gossling of hilversum to a street organ in 1958. It came on the streets of Haarlem in the spring of 1958. The first time the author cranked an organ was on this one at the age of 14. The organ is now owned by Craig Robson, Australia. Remond Duwyn worked for Mortier and Joseph Bursens before starting his own business, first in Wilrijk and later in Brussels. He built café organs and some larger dance organs.

Mortier introduced a new foreman in 1905, Guilliaume Bax. Bax organized the factory to a level where one organ was produced every two to three weeks. He also made a technical improvement by introducing the "baxophone," a special reed



Mekanieke Draaiorgels en Pianos op Kartons
„ORCHESTRE MODERNE"
BEELDEKENSSTRAAT, 148, ANTWERPEN.

ANTWERPEN, postdatum.

Mijnheer,

Wij hebben de eer U te melden dat wij een nieuw kunstorgel gemaakt hebben voor den heer Louis Verbraeken, Groote Steenweg, 364, te Berchem.

Wij noodigen U uit het te komen hooren spelen in onze werkhuizen Zaterdagnamiddag 29 Juni. Daarna zal het spelen in het "Heilig Huisken„ te Berchem, Poortstraat, 94, bij den hr Jos. Dillen, op de Zondagen 30 Juni en 7 Juli 1912.

Dit orgel bevat onze 3 nieuwe gebreveteerde spelen, onbekend bij onze konkurrenten, n. l. *slede-, zigeunermuziek* en *liefdefluit.*

Ons gebreveteerd systema "Hedendaagsch Orkest„ is niet meer aan te bevelen. Wij hebben bewezen, door het vervaardigen van *achtien prachtorgels,* aan zeer *geringe prijzen,* in een tijdstip slechts van *één jaar,* dat onze faam van kunst- en prachtwerken boven alle mededinging staat, dit dank aan ons deskundig personeel. *1

Ons geacht publiek, in het bijzonder te Berchem, heeft zich kunnen overtuigen van de schoonheid en regelmatig spel onzer orgels.

De laatste nieuwe Parijzer dansen zullen gespeeld worden, bijzonder samengesteld door onzen gekenden medewerker Mr Carl Frei. *2

Ook hopen wij met uw bezoek vereerd te worden om de leus aan ons huis te bestatigen. Altijd hooger en beter nieuws door vooruitgang.

Intusschen bieden wij U, Mijnheer, de verzekering onzer hoogachting.

Eus. Fasano & Co

*1 18 organs built in one year!!!
*2 Co-worker Carl Frei.
*3 Music by Carl Frei

EUSÈBE FASANO & Cie

Orgues et Pianos mécaniques sur Cartons perforés
„ORCHESTRE MODERNE"
RUE DES IMAGES, 148, ANVERS.

ANVERS, date de la poste.

Monsieur,

Nous avons l'honneur de vous faire connaitre la construction d'un nouvel orgue, destiné à Mr Louis Verbraeken, Grande Chaussée, 364, à Berchem.

Nous vous invitons à venir le voir et l'entendre, dans nos ateliers, le Samedi après-midi, 29 Juin prochain. Il jouera ensuite, au "Heilig Huisken„ chez Mr Jos. Dillen, rue de la Porte, 94, à Berchem, les Dimanches 30 Juin et 7 Juillet 1912.

Cet orgue contient nos 3 nouveaux jeux brevetés et inconnus par nos concurrents, notamment le *traineauphone, jeu tzigane* et *flûte d'amour.*

Notre système breveté "Orchestre Moderne„ n'est plus à recommander. Nous avons prouvé, par la fabrication impeccable de *dix-huit orgues de luxe* à des *prix très modiques* en un laps de temps *d'un an,* que notre réputation de travail soigné et artistique est au dessus de toute concurrence, ce, grâce à notre personnel d'élite.

Le public, de Berchem en particulier, a pu se convaincre de la beauté et de la régularité des instruments de nos orgues.

Les dernières nouveautés comme danses de Paris seront exécutées, composées par notre auteur réputé Mr Carl Frei.

Aussi espérons nous une visite de votre part pour constater la devise de notre maison, Excelsior. Toujours du neuf par le Progrès.

En attendant nous vous présentons, Monsieur, nos salutations très distinguées.

Eus. Fasano & Co

Figure 12. A letter from the Fasano Company in 1912 boasted that 18 organs had been built in one year. E. Fasano also noted that not only was Carl Frei a co-worker but he also provided the music for their organs.

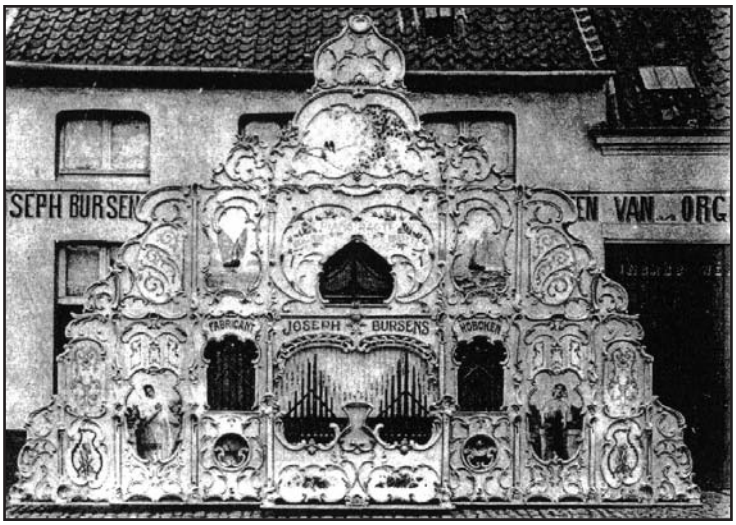


Figure 13 (above). A Joseph Bursens organ built in front of the workshop in Hoboken, a part of Antwerp. In spite of the large façade the instrumentation was only that of a 50 to 70-key organ.

Figure 14 (below). This Burdens organ was changed into a Dutch street organ and called the *Heen en Weer* (Back and Forth). It is now owned by Alberic Goderis in Belgium, who works in the Museum Speelklok in Utrecht, Holland.

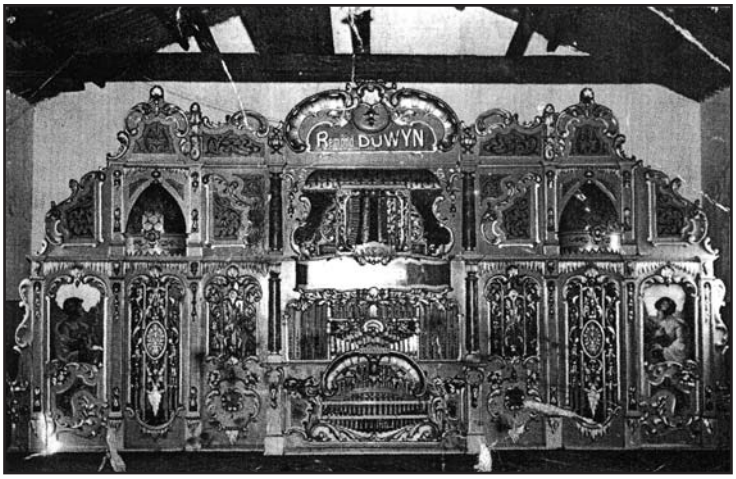


Figure 15. 89-key Duwyn organ with an accordion added by the Decap Brothers. The organ was built for the rental agency of Timmermans in holland. The organ is in a collection in the United Kingdom.

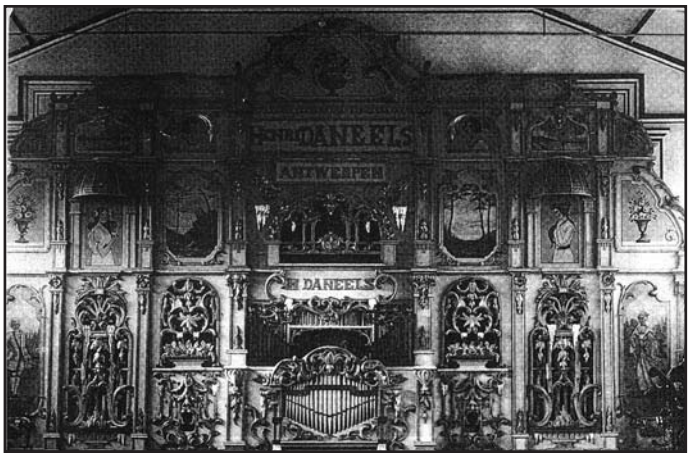


Figure 17. Also small was the business of Henri Daneels (a portion of him is seen on the right). The organ looks like a Mortier. It was sold to the Netherlands and recently owned by the Veeningen family.

pipe that was placed on top of the main case of every Mortier organ until the late 1930s. Bax also invented the jazz flute in 1925 and the vibraton in 1930.

In the mid-teens there were other people involved constructing dance organs including Jan Verbeeck (great-great grandfather of Johnny Verbeeck); J. Cornand and son; Ferdinand Daneels (**Figure 17**), Alois Decap; and Carl Frei who started his own workshop in 1913 and was also the representative of Charles Marenghi in Belgium. I should also mention Louis Hooghuys who built a number of loudly voiced dance organs. **Figures 18 & 19**

During WWI Belgium was a battlefield and even Antwerp was under attach——the manufacturing of dance organs stopped.

The firm of Hooghuys of Geraardsbergen in Belgium built a number of loudly-voiced dance organs before 1914. Special stops on the Vox Humana and the xylophone. Others had a mechanical zither on top.

During WWI Belgium was a battlefield and even Antwerp was under attack—the manufacturing of dance organs stopped. Some of the organ builders left Belgium and went to England and the Netherlands. Fasano and Verbeeck, along with his son, Jimmy, went to England. Also making the move was a young Eugene DeRoy, who worked four years for Keith and Prowse (orchestrion dealers in London). Pierre Verbeeck, Johnny's grandfather, went to Holland where he worked for the street organ rental agency of the Warnies Brothers in Amsterdam.

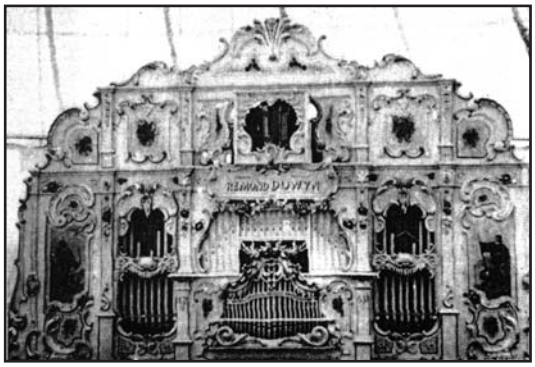


Figure 16. A 70-key Duwyn in a dance tent in Uitgeest in Holland.

Figure 18. A large Hooghuys dance organ in the collection of Jasper and Marian Sanfilippo. The organ was used in a Belgium dance hall until the 1970s. Photo: Robert Ridgeway

From 1918 to 1940 dance organs were built once again in large numbers. Mortier was the only one that was successful with the large organs—all others could not keep up with him and disappeared one by one. Fasano did not return to Antwerp and the business was taken over by Emil Devreese with the help of Charles van der Mueren, who earlier worked for Mortier. **Figure 20** The firm mostly made street organs for Holland from old Fasano dance organs. Most of his work consisted of rebuilding other makes and making street organs for the Dutch market. DeVreese died in 1924 and his widow continued the business until the late 1920s.

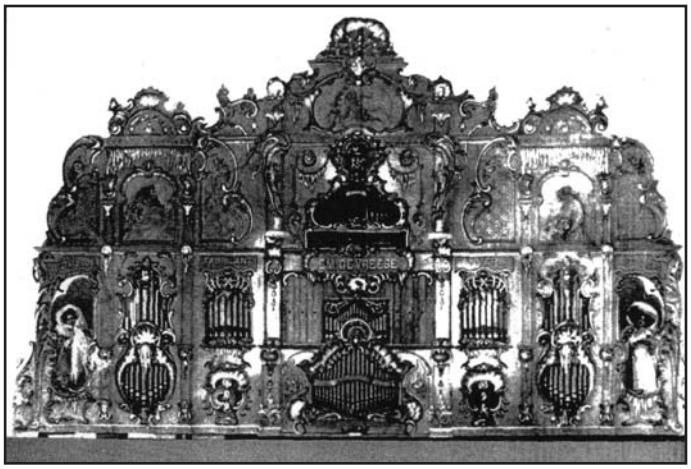


Figure 20. A rarely seen DeVreese dance organ.

Joseph Bursens also made a couple of street organs for Holland and tried to come on the market with café-orchestrions around 1925. This was also done by the Decap Brothers with some success. However, in the café organ business Mortier was also dominant. In 1928 Arthur Bursens took over his father's company and was very successful with the introduction of Arburo roll-operated café organs.

In the early 1930s Mortier was the only manufacturer of large dance organ—the production went to just three to four organs a year. **Figure 21** At that time the only customers were rental agencies and owners of mirror-tents which traveled to the

Figure 19. This Hooghuys organ was formerly in the Prinsen collection.

fairs. To add something new to his product line Mortier wanted to build an accordion on the organs. Not knowing how the public would react his first accordion was a box with pneumatically operated reeds, hidden behind the woodwork in the main case.**Figure 22** One year later the first accordions were built in plain sight, Afterwards, many organs were featured with accordions. **Figures 23 & 24**

In 1936 the Decap Brothers of Antwerp introduced their 121-key organs.[1] 12 were built until 1940. **Figure 25** This was encouragement for the Mortier firm and during the same time

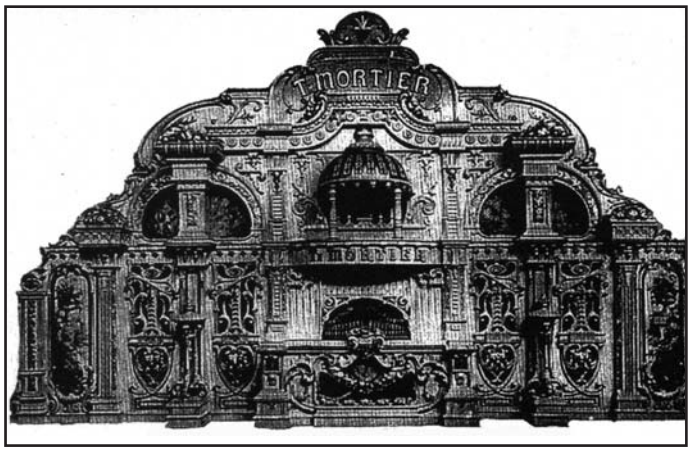


Figure 21. A factory photo of a 101-key Mortier organ from the late 1920s.

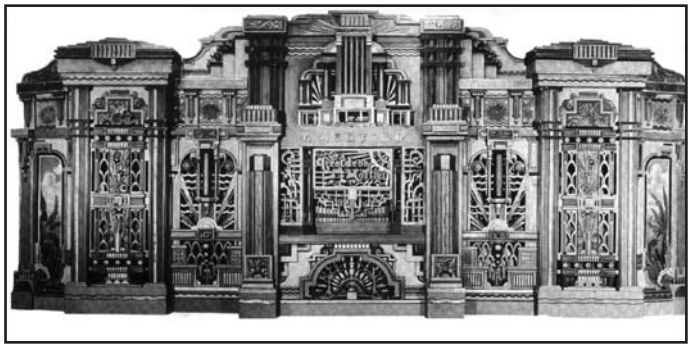


Figure 22. A 101-key Mortier from 1934, the first with a built-in accordion hidden behind the woodwork in the main case. The organ is still used in a mirror tent and travels all over the world.

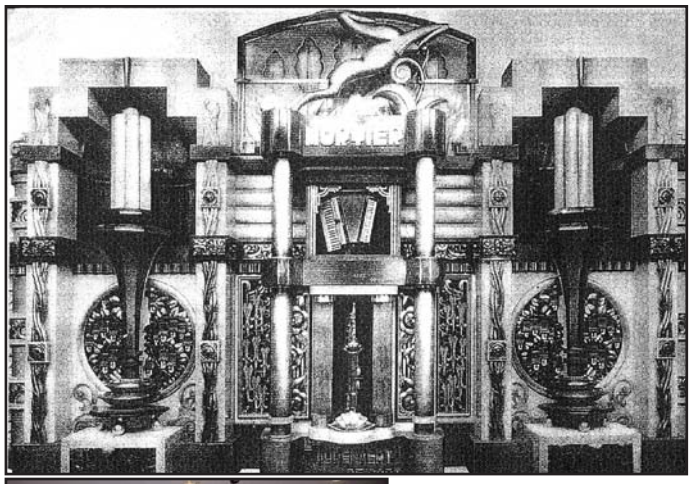


Figure 23. The only known Mortier with 123 keys in its original state (above). The organ is now in the collection of Paul Dyer, Fortville, Indiana, who built a replica of the Taj-Mahal front for it (left).

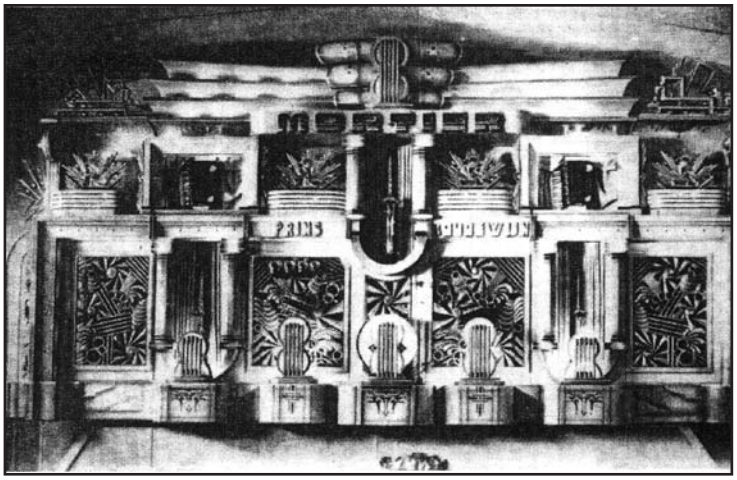


Figure 24. A post WWII Mortier organ with 105 keys, built for a rental agency in Belgium. The front disappeared and the organ is now owned by Alberic Goderris in Belgium.

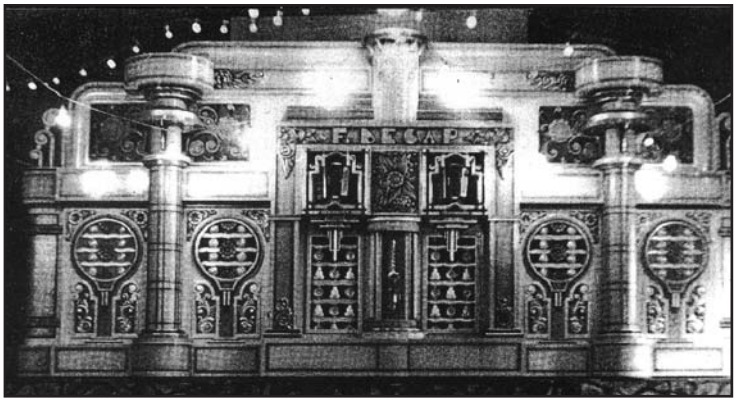
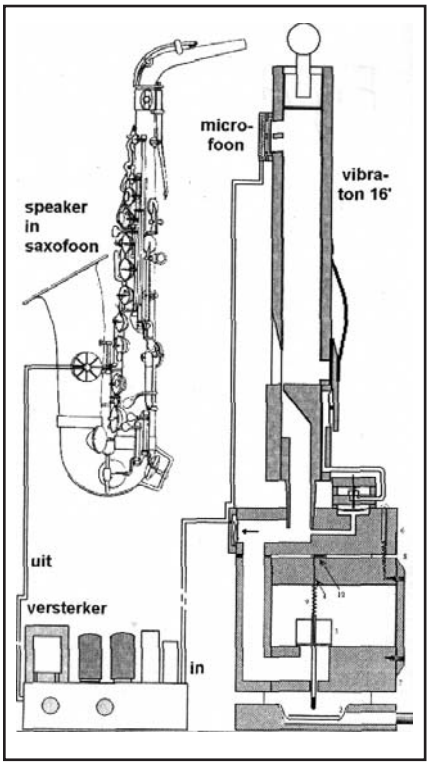


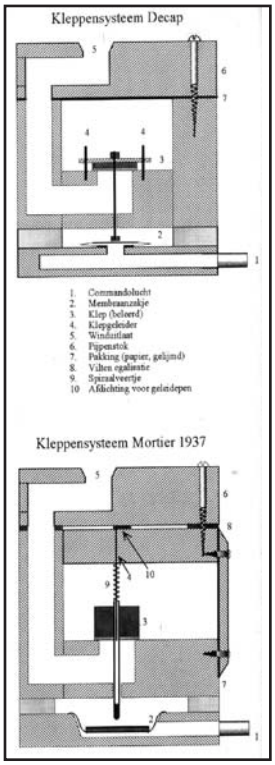
Figure 25. During WWII Frans Decap of Herentals, Belgium built two 121 key dance organs with his own scale. One of them survived in France.

period they produced 15 organs. Their answer to the 121-key organs was the 112-key organ with a third melody.

In 1938 the first electronic portion of dance organs was introduced by the Mortier firm. This was the electro-sax **Figure 26** They also changed the wind chest system (**Figure 27**—these two drawings are provided by Hans van Oost).

During WWII only Frans Decap of Herentals built large dance organs—two 121-key organs using his own scale. **Figure 28** After the war, Mortier built eight organs, the last one in 1948. The Decap Brothers built six organs during the same time. This would be the end of the production of large dance organs with pipes.





Figures 26 (left) & 27 (right). Drawings of Mortier's 1938 changes for its electronic dance organs. Courtesy: Hans van Oost

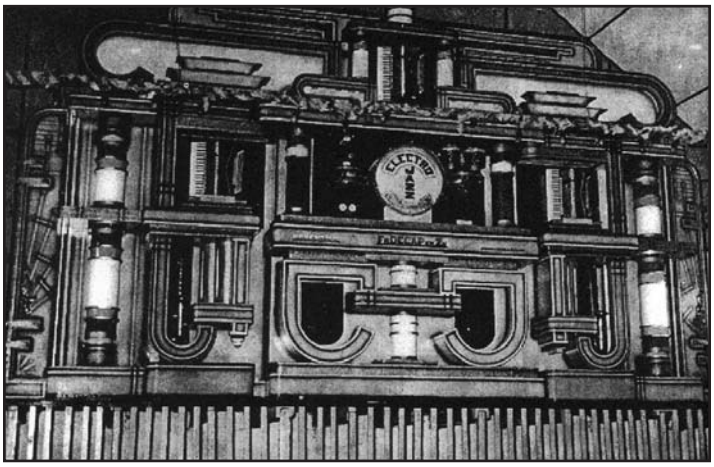


Figure 28. After 1945 Frans Decap of Herentals, Belgium built mostly smaller café organs. This one is an exception, an electronic organ with three accordions and a large facade. A very rare organ.

In the 1950s through the 1970s most dance organs were of the electronic nature. The Decap Brothers were the leading firm but others competed as well. This latter group consisted of Frans Decap of Herentals; Rene van den Bosch, successor of the Mortier firm; and father and son Verbeeck. The most common organ was the 105-key dance organ with a built-in Hammond organ. More than 100 were built. **Figure 29**

Today only a very few dance organs are still in use and even fewer are being built. Most of these are for private collectors.

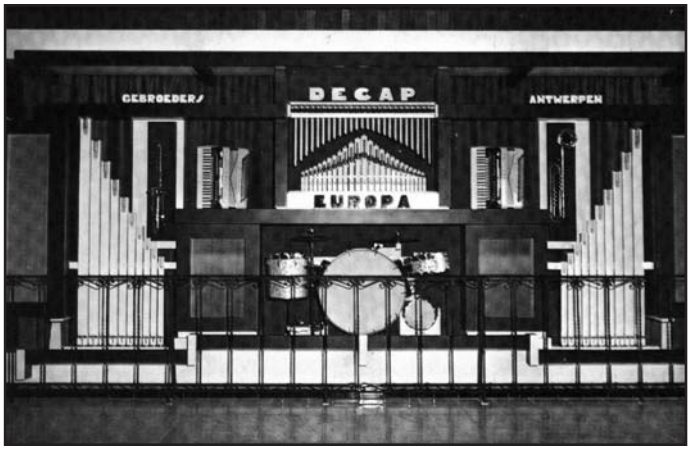


Figure 29. The most common model of the dance organs built in the late 1960s and 1970s consisted of 105 keys and a pneumatically operated Hammond Organ.

Notes

1. For the history of the 121-key Decap organs see Carousel Organ, No. 28, July 2006, "121-key Decap Organs."

Maarten vander Vlugt has been on the Dutch organ scene since 1955 (age 12). He used to walk behind the street organs, even at age four, when he lived in Haarlem. He operated street organs from 1955 until 1963, and traveled with fairs that had dance organs from 1964 to 1969. He took over the Symphonia Company in 1979 from Eugene DeRoy's daughter, and now produces books and rolls.

. . . continued from page 31

21. John Hovancak, personal communication, May 5, 2012. The piano and case were restored by Art Reblitz. The restoration craftsmen readily overcame the shortcomings in the de Kleist design as well as the ravages of time that had kept the instrument silent for decades.
22. The origin of the 0.1227" dimension is explained in a 1998 letter by Glenn Grabinsky posted at http://www.mechanicalmusicpress.com/history/articles/tech/gb_1998.htm.
23. de Kleist Musical Instrument Manufacturing Co., Journal 2, 1905-1907, 214, 233 and 244. The de Kleist journals are now in the Smithsonian Institution Archives. They were examined by the author when housed at Northern Illinois University in DeKalb, IL.
24. de Kleist Musical Instrument Manufacturing Co., Journal 2, 1905-1907, 240 and 307. The initial roll-playing 20A organ went to Silver Beach, St. Joseph, Michigan and was rallied for a number of years by Cliff Gray. It is now owned by Don Neilsen.
25. Copy in author's collection.
26. Q. David Bowers, *Encyclopedia of Automatic Musical Instruments*, (Vestal, NY: Vestal Press, 1972), 671; Arthur A. Reblitz and Q. David Bowers, *Treasures of Mechanical Music,* (Vestal, NY: Vestal Press, 1981), 322.
27. Matthew Caulfield, "Ralph Tussing," COAA *Carousel Organ*, 32 (July 2007), 12-17, completes the story to present times.
28. de Kleist Musical Instrument Manufacturing Co., Journal 2, 1905-1907, 203.
29. The various Wurlitzer ledgers and documents incorrectly identified the Ruth and many other German organs with the meaningless word "Gebruder," a corruption of Gebrüder, which means "brothers" in German. With the firms of Gebrüder Bruder, Gebrüder Richter, Gebrüder Riemer, Gebrüder Wellershaus and others all being affiliations of brothers, to translate every entry solely to Gebruder was inappropriate. It generally signals a German origin, just as the prevalent use of "Gavioli" likely denotes a French origin, but no specific maker.
30. Our coverage of the 112 Gavioli organs was based on readily available tertiary sources, including: Kevin Scrivens and Stephen Smith, *The Travelling Cinematograph Show*, (Tweedale, Telford, England; New Era Publications, 1999) and *The Electric Scenic Railway*, (Tweedale, Telford, England; New Era Publications, 2005); Philip Upchurch, "The Fairground Organ in Great Britain," an essay in *On Display*, (Fair Organ Preservation Society, 1999), 8-23; Jory Bennett, "More About the Gavioli Giants," FOPS *Key Frame*, 1983, 2, 12-16, and "The Fred Cox Gavioli," FOPS *Key Frame*, 1994, 2, 54-58; and Paul Angel, "Gavioli Musical Giants," FOPS Key Frame, 1979, 2, 106-110. There is additional material in *Het Pierement*, the FOPS *Key Frame* as well as in older issues of the Friendship Circle of Showland Friends publication *Merry-Go-Round*. A detailed and documented analysis of primary data will bring about revisions to the current knowledge of the 112s.
31. French patents 424,092 and 424,093, filed December 24, 1910 and granted May 4, 1911; and 427,520, filed March 18, 1911 and made public on August 5, 1911.
32. Carpentier had a long and interesting association with mechanical music dating back to as early as 1880. It is now overlooked in favor of his contributions to other fields. One area of expertise was the perforation of music bands for mechanical musical instruments, like the *Melotrope*.
33. Eric Cockayne, *The Fairground Organ*, (Newton Abbot, England: David & Charles, 1970), 182.
34. Jacob Studt is credited with another roll player in one account. None are known to have been sold elsewhere. Supporting Marshall Brothers are Upchurch, 17, and Scrivens and Smith, *Cinematograph*, 124. Studt's is identified as a roll player in Scrivens & Smith, *Scenic*, 50, but a recent communication with Scrivens diminished support for that possibility.
35. Cockayne, 187.

Coming in Part III:

Proliferation of Roll-operated Pneumatic Band Organs in the U. S. 1904-1930

Organ Grinders and Italian Opera
Race and Nation in Nineteenth-Century American Music

Katie J. Graber*

Introduction

Opera in nineteenth-century United States inhabited sound worlds across a wide spectrum of everyday life: theaters housed star singers, huge choruses and orchestras, and extravagant costumes and sets; amateurs in middle class homes sang or played piano arrangements of popular opera arias; and musicians such as organ grinders played opera selections on street corners. While elegant theater performances were popular and easily accessible even after the Civil War, opera became increasingly associated with refined culture as the nineteenth century progressed (**Figure 1**).

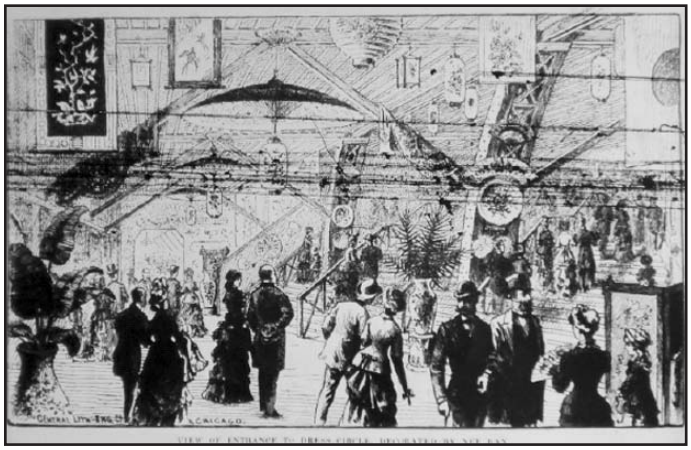


Figure 1. The Chicago Grand Opera Festival of 1885.
Photo: S.G. Pratt, "First Chicago Opera Festival,"

Theater performances and street musicians were becoming polarized in public discourse—upper vs. lower class, elegant vs. dirty, beautiful vs. irritating sounds—but curiously, they were both often stereotyped as Italian. These two divergent portrayals of musicians exhibit the continuum of the meanings of the words "opera" and "Italian" in the United States in the last decades of the nineteenth century. Grand Italian Opera was often promoted as luxurious and refined, while street musicians playing opera were portrayed as a detriment to society—or at best, a lighthearted entertainment for children or lower classes (**Figure 2**). The multiplicity and interconnections between the connotations of "opera" and "Italian" demonstrate the power of music to occupy both physical and abstract spaces, and conversely, the power of social space to create the meaning in music.

***Guest author**

The subtitle of my paper is *Race and Opera* because in the nineteenth century, Italian-ness was not just a nationality but was part of a complicated set of ideas about race. Historian Matthew Frye Jacobson argues that between 1840 and 1920, widespread immigration caused people in the United States to rethink whiteness. By the late nineteenth century, there was an extensive hierarchy of races ranging from "purely" white to ominously "swarthy." The white races included the Anglo Saxons, Teutons, Celts, Slavs, Hebrews, Iberians, Mediterraneans and others.[i] Even Italy, which was politically unified by 1871, was conceptually divided into the (more desirable) northern Celtic and the (less desirable) southern Iberic races.[ii] Scientific, journalistic, literary, and entertainment writers assumed that groups of people—sprung from the same soil and sharing the same blood—would display distinct physical appearance, personality characteristics, and sonic/musical propensities. At the same time, though, people believed these characteristics could be taken on by individuals outside the group. A German person could be described as having an Italian personality, or an Irish person could be described as looking like an Anglo Saxon.

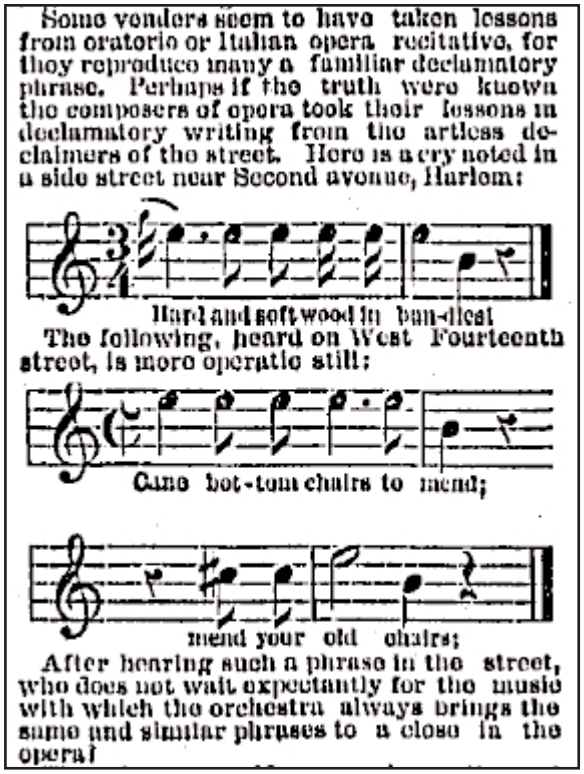
Figure 2. "The Organ Grinder. No. 1"
Photo: G. Hamilton

Because opera was such a widespread entertainment in the nineteenth century, it could inhabit many of those racial identities and influence ideas about people and their characteristics. Opera was carried from one performance space to another, and could be performed by different races and classes. In this essay, I will analyze race and

opera by examining the sounds of Chicago's streets as a case study: vendors' "street cries," depictions of immigrants' language, and "street types" (including street musicians). In each of these areas, I seek out those moments in which music and words speak through each other, in which music and race contradict one another and give each other meaning. We will see that just as music is comprehended through words, people are often deciphered through music.

Street Cries and Dialect

Two instances that sit between words and music are street cries and dialect. Street cries were the shouts of vendors that gave physical context to street musicians and added metaphorical context to the genre of opera. They were singsong snippets that were very much part of the sonic life of the city, and we have records of them transcribed in music journals and other periodicals.[iii] In this article from the *Chicago Tribune* in 1887 (**Figure 3**), the author even likened these cries to Italian opera: "Some vendors seem to have taken lessons from oratorio or Italian opera recitative, for they reproduce many a familiar declamatory phrase. Perhaps if the truth were known the composers of opera took their lessons in declamatory writing from the artless declaimers of the street." Following his notation of the street cry "cane bottom chairs to mend," he writes, "After hearing such a phrase in the street, who does not wait expectantly for the music with which the orchestra always brings the same and similar phrases to a close in the opera?"[iv]


Some venders seem to have taken lessons from oratorio or Italian opera recitative, for they reproduce many a familiar declamatory phrase. Perhaps if the truth were known the composers of opera took their lessons in declamatory writing from the artless declaimers of the street. Here is a cry noted in a side street near Second avenue, Harlem:

Hard and soft wood in ban-dicat

The following, heard on West Fourteenth street, is more operatic still:

Cane bot-tom chairs to mend;

mend your old chairs;

After hearing such a phrase in the street, who does not wait expectantly for the music with which the orchestra always brings the same and similar phrases to a close in the opera?

Figure 3. "Curious Street Cries" appears in the August 6th, 1887 of the *Chicago Tribune.*

It is striking how inevitably these street vendors are named Italian, or associated with Italian opera. Another author claimed, "The streets are not dependent for music during the summer months on the hand organs and wandering bands. There is vocal music as well, beginning at 6 o'clock in the morning, when the first Italian fruit vender goes his rounds."[v] He continues, "In the cries of the fruit peddlers [one] recognizes the influence of the Italian school of music. These cries are always high pitched and usually melodious. The berry man is the prima donna of the street choir."[vi] This author is being sarcastic, made very clear by his assertion that "One Chicago musician, however, believes that the music of the street cries is not properly appreciated. Any one who has a true love of art can, he asserts, get enough pleasure out of it to more than make up for the trifling inconvenience of being waked up two hours before breakfast."[vii] Even more derogatory reactions were recorded as well. In 1890, an article called "Silence the Street Cries" opined that street cries had "become an outrageous nuisance, which should not be tolerated in a civilized city."[viii] This objection was also directed toward Italians specifically, as the author wrote, "All that is required is for the Chief of Police to notify the patrolmen to warn newsboys, … and the musical Italian with his 'ban-a-noooes,' and the vender of 'straah-ber-ries,' or kindling wood, or potatoes, or 'feeesh' that they must use their tongues less and get some other way of advertising their wares."[ix]

This latter example demonstrates another way street vendors and musicians were marked sonically, by their foreign accents. Writers set people apart as immigrant, as other, by evoking the sounds of dialect. Street musicians – including people playing crank organs, accordions, harps, violins, and other instruments—were also often portrayed with foreign accents, such as this derisive depiction of an organ grinder from the *Chicago Tribune* in 1879:

> "Is that a hand-organ, Marchese?" [Marchese = Italian nobility]
>
> "Si, signor," responded the Marchese, in the soft accents of the tongue of Dante and Petrarch; "e vero ecche uno hando-orghano—ze bes' in ge viglia." [it really is a hand-organ—the best in the village.]
>
> "A hand-organa re—al hand-organ!" said the man in rapture, as the great tears rolled down his cheeks; "and this here is a bona fide monkey, redeemable at the will of the beholder—I mean not a flat monkey, but a hard monkey monkey!"
>
> "Ees, zat is ze monokey, signor." [x] [yes, that is the monkey, Signor.]

Here we have a visual representation of sonic difference. It creates a sort of triangulation between writing, speech, and music—an interconnection and opposition

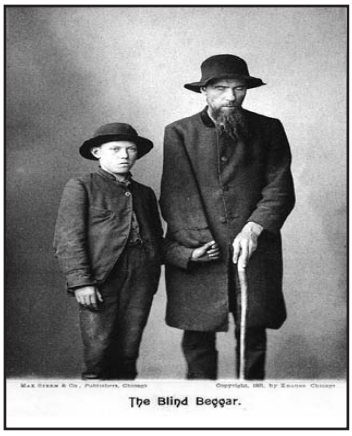
between sight and sound. In the nineteenth century, all of these aspects of words, music, and meaning continually came into contact and contradiction in opera and its performance in different contexts. This speaker of Italian dialect was an Italian immigrant playing foreign music (often Italian opera), and all of these overtones reinforced and nuanced one another.

Race, Street Types, and Street Musicians

All of these street sounds and personalities were part of the landscapes and soundscapes of American cities. In 1892, Sigmund Krausz left a fascinating record of these contexts when he published *Street Types of Chicago*, a book consisting of 36 images with lively titles and corresponding written descriptions of people one might see around the city.[xi] It included a range of races and classes, from "Tennis Girl", **Figure 4** (with enough money and leisure time for such sport) to "The Blind Beggar", **Figure 5** (destitute and helpless). Those two were not explicitly identified by their race, but a full third of the Street Types were. A few, whose race was explicitly identified, either in the title of the photograph or in the accompanying text, included the following: "Can't fool dis niggah," and "Oh golly but I'se happy," were African American, "Matches! Flypaper!" was Russian, "John" was Chinese, "From Far-Away Damascus" was Syrian, and "Our Beerman" was German.

Figure 4 (above). "Tennis Girl.

Figure 5 (below). "The Blind Beggar.



These street types helped make up the sound world of nineteenth-century Chicago, from the shouting (even singing) of the vendors to the noise of the workers. Krausz also included four images of musicians among his Street Types (**Figures 6 to 9**). The descriptions of these musicians make clear their connection to other, more "refined" musical experiences, and also their music's connection to race. Only the accordion player (**Figure 6**) is identified by race—Italian—but organ grinders were often stereotyped as Italian at that time. The harp and fiddle players were called "swarthy," which was a common description of Italians as well, but could have indicated any other dubiously white group (**Figure 7**).

Figure 6. "Accordion-Player." Figure 7. "Harp and Fiddle."
Photos 4 - 7: Sigmund Krausz, *Street Types of Chicago*

Krausz's description of the organ grinder (**Figure 8**) also demonstrates how these street musicians were embedded in the musical life of the city:

> Only a decade ago light operas were the fashion, and the streets were merry with their melodies. The boot-black whistled their catchy airs to the early morning, and the weary pedestrian quickened his steps at the sound of their inspiring measures. The gray-bearded man of affairs hummed them softly between the coming and going of customers in his office; the pink and dimpled baby in the crib sank into restful slumber, soothed by their rhythmical [sic] cadences. But more pretentious, if less musical, compositions have laid hold of the public's fancy, and these touching bits of harmony, once so familiar to our every-day life, are heard no more. … even the street bands have left off playing Hayes and Root to toot Volkmann and Wagner. The organ-grinder alone clings to the tripping valse of Strauss. [xii]

Although this quotation demonstrates the role of street music in the city, it is unusual for a couple reasons. First, it does not mention Italian music or people, and second, this portrayal of street music as entertaining was very uncommon.

Much more widespread were descriptions of street musicians like Krausz' accordion player. First, she is identified as coming to the United States "all the way from sunny, vine-clad Italy," and then she and her music are thoroughly insulted: "Straggling, unkempt hair, low forehead, prominent cheekbones and eyes that glimmer like half-extinct charcoal, she would do as a model for the

Figure 8. "Organ-Grinder." Figure 9. "A Musical Family."
Photos: Sigmund Krausz, *Street Types of Chicago*

witch of [Endor]." The writer continues, "repulsive in looks," she "uses her accordion as an instrument of torture on an indulgent public, producing nothing but shrill, discordant sounds."[xiii] This portrayal of the accordion player is what I would have expected in the description of the organ grinder, what is most common in newspaper and other accounts of the time: organ grinders and other street musicians were typically cast as Italian, physically unattractive (often diseased, dirty, disabled) and sonically unbearable. An author for the *Chicago Tribune* in 1875 wrote,

> We have male and female organ-grinders, of all ages; organ-grinders with one arm and one leg; organ-grinders with humped backs, with deformed limbs, with stumps for hands, with wooden legs, with goiter, and numerous other monstrous natural developments; organ-grinders blind in one eye and blind in both; organ-grinders with broods of dirty children swarming over the sidewalks; organ-grinders with sick and deformed children. They have taken possession of almost every corner of our busiest thoroughfares, until our streets begin to look as if some lazar-house had been emptied into them. All day long these wretched creatures fill the air with the din of their organs, which is reinforced with discordant noises from wheezy accordions, tuneless fiddles, and cracked hurdy-gurdies. Is there no relief?[xiv]

Though the opera excerpts (**Figure 10**) and other music the organ grinders played were well-known and even well-liked in other venues, as street music they were more typically described in these derisive terms. The music of the street came to inhabit Italianness and vice versa—the "shrill, discordant sounds" propped up stereotypes of dirty, diseased, impoverished (often Italian) street musicians.

The issue at hand is the music that inhabits the word "opera." Writers in the nineteenth century had particular sounds in mind when they wrote about street renditions of opera. In 1879, one author wrote about organ grinders' music that "each piece must be especially arranged with a view to utilizing the capabilities of the instrument … It is confidently expected that the effect of the 'tick, tick – tick, tick' and … the sudden and unaccountable stoppage of the antique timepiece on the demise of its venerable possessor, will be very fine."[xv] This description demonstrates that the sound in the author's ear was a contradiction to the refined sights and sounds he wanted to associate with opera.

Figure 10. Verdi's opera "Trovatore."

There were occasional positive descriptions of street music, but they were most often associated with children or lower classes' enjoyment. One Tribune writer asked, "Are the organ-grinders a nuisance? Well, that depends. In many cases they are, but we have seen, in some neighborhoods, troops of little children, hand-in-hand, dancing joyously round the swarthy organ-man, who in turn nods smilingly to them, and, in such a case, one is apt to condone the annoyance he causes persons of more advantage."[xvi] George Ade, a humorist who wrote a column that ran in the *Chicago Record* between 1893 and 1900, wrote about an organ grinder in an article called "The Advantage of Being 'Middle Class'":

> In front of one large house an Italian, with a street piano on wheels, was grinding out [Verdi's opera] 'Trovatore' for the benefit of a family which cuts a wide social swath. The Italian was rather to be pitied. He did not know that the family was debarred from coming out on the front porch to hear his music. The family was supposed to close its ears against all street pianos. Although the rooms were lighted, no one came to the windows and the music was wasted upon some appreciative children who marched and danced, keeping time with it.[xvii]

One of the advantages of being middle class, then, was that the author was freer to enjoy the music of the organ grinder. Listeners who wanted to uphold their status—either as mature adults or asserting their difference in socioeconomic status—had to resist the joys the organ grinder represented or created. This disconnect demonstrates that the social stratifications affected the reception of the music as much as the music affected the social stratification.

Street and concert hall performances of the same pieces of music produced radically different sounds, different meanings, and different receptions. Diverse timbres and contexts made the meaning of both "opera" and "Italian" unstable. Music has a mysteriously meaningful quality, which depends on its reciprocal relationships to language and contexts. In the nineteenth century, the meaning of "opera" was also informed by the meaning of "Italian"—which in turn was bound up in ideas about street cries, street musicians, nation, race, and class. The musical activities of the late nineteenth century were taking place in the context of discourses on racial-national progress and social (and biological) evolution. Organ grinders lived, worked, and negotiated their personal and musical identity in this complex hierarchy.

Katie Graber is a piano teacher and ethnomusicologist who is interested in the history of race and social status in the United States. She is an Adjunct Instructor of music at Otterbein University. This article is revised from a paper delivered at the 2011 American Musicological Society national meeting.

Notes

[i] Matthew Frye Jacobson, *Whiteness of a Different Color: European Immigrants and the Alchemy of Race* (Cambridge: Harvard University Press, 1998) 42.

[ii] Guglielmo, *White on Arrival: Italians, Race, Color, and Power in Chicago*, 1890-1945 (New York: Oxford University Press, 2003) 23. Guglielmo writes that by 1899, The United States Bureau of Immigration was making these distinctions.

[iii] See also Robert R. Grimes, "Come Buy Hot Corn! Music, Sentiment, and Morality in 1850s New York," in *Journal of the Society for American Music* vol. 5 no. 1 (2011) 33-59.

[iv] "Curious Street Cries," *Chicago Tribune* 6 August, 1887, p. 10; and "Lyric Street Cries. Peddlers whose Yells Possess Some Musical Attributes," *Chicago Tribune* 14 May, 1893, p. 34.

[v] "Music in Street Cries," *Chicago Tribune*, 17 July, 1899, p. 6.

[vi] Ibid.

[vii] Ibid.

[viii] "Silence the Street Cries," *Chicago Tribune* 23 March, 1890, p. 12.

[ix] Ibid.

[x] "Article 5 No Title," *Chicago Tribune* 10 Aug., 1879.

[xi] Sigmund Krausz, *Street Types of Chicago*. Character Studies (Chicago: Max Stern & Co., 1892). This book is online at http://tigger.uic.edu/depts/hist/hull-maxwell/vicinity/nws1/great_city/preface-t.htm.

[xii] Ibid.

[xiii] Ibid.

[xiv] "Law and Hand-Organs," *Chicago Tribune* 14 Jun., 1875, p. 4.

[xv] "Music for the Millions," *Chicago Tribune* 7 Feb., 1879.

[xvi] "The Grinders. Something Interesting About the 'Swarthy Organ Men,'" *Chicago Tribune* 23 Jan., 1870.

[xvii] George Ade, *Chicago Stories. By George Ade, Illustrated by John T. McCutcheon and Others*, selected and edited with an Introduction by Franklin J. Meine (Chicago: The Henry Regnery Company, 1963) 77.

A Perspective on Paper Roll-operated Pneumatic Organs
Part II

Fred Dahlinger, Jr.

II. First Roll-operated Pneumatic Band Organs 1901-1911

The initial implementation of rolls for pneumatic band organ use was undertaken independently on both sides of the Atlantic Ocean by two firms: Cocchi, Bacigalupo & Graffigna in Berlin, Germany (c1901); and the de Kleist Musical Instrument Mfg. Co. in North Tonawanda, NY (1904). They were the pioneers.

Cocchi, Bacigalupo & Graffigna, Berlin, Germany

The initial interface for the transfer of roll-operated pneumatic systems from indoor to outdoor instruments was provided by the Berlin operation of Cocchi, Bacigalupo and Graffigna (hereafter CB&G). Firms in Berlin, Paris and Waldkirch had simultaneously fabricated orchestrions and organs in the 1880s, during the cylinder-operation era, but none did so with dual emphasis during the implementation of keyed and keyless book systems in the 1895 to 1905 period. They focused on their book-playing machines, typically on the organ side, where the heavy and durable books provided an advantage in the expanding market for outdoor organs.

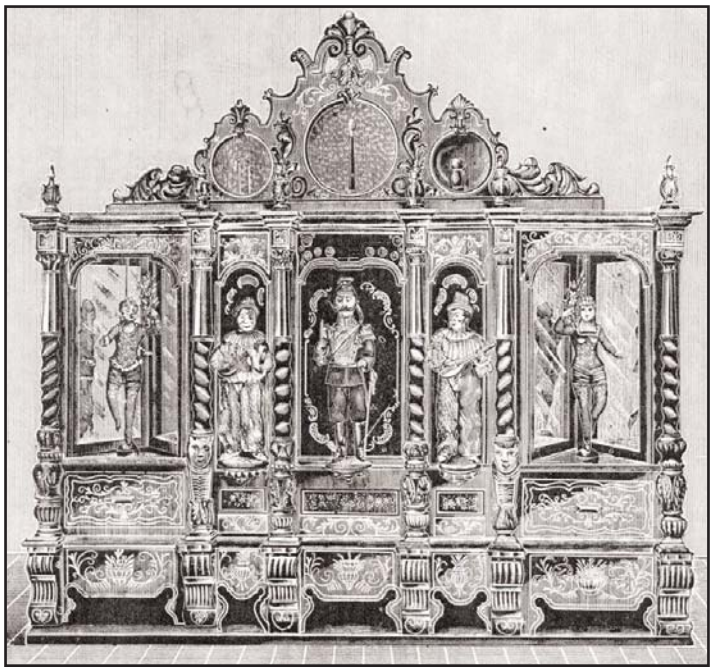


Figure 10. The smallest roll-operated CB&G pneumatic organ was the 68-hole No. 65. The façade had a lot of action, with five mechanical figures, revolving columns and the percussion mechanisms in front.
Image courtesy Howe collection, Piano Archives, University of Maryland

The focus elsewhere allowed CB&G to become the first firm to construct and sell roll-operated orchestrions and organs in the twentieth century. This they achieved in about 1901.[17] Their lines of roll-operated, pneumatic control orchestrions and fair organs were the first to be issued by the same manufacturer. The orchestrion brand name, *Soleil*, was perhaps chosen with the thought that their advancement, like the sun, would illuminate their customers. The fair organs were headlined in the catalogue in very practical terms as "Patentierte pneumatische Konzert-Orgelwerke mit auswechselbaren bandförmigen Papier-Musikrollen," which translates to "Patented pneumatic concert organ works with interchangeable, ribbon-shaped paper music rolls." **Figure 10**

The firm's offerings were adequately interesting that Paul de Wit, the highly selective editor of the industry's leading German journal, the *Zeitschrift für Instrumentenbau*, provided column space to announcing the firm's new catalogues in 1903. Few manufacturers gained that free publicity and de Wit's tacit endorsement.[18]

The organ catalogue illustrated and described five basic models of roll-operated pneumatic organs, with No. 65 specified as 68 holes and No. 66 with 86 holes. Three others, Nos. 67, 68 and 69 were not sized, but the largest must have approached 100-holes in breadth. The CB&G numbering scheme started where the cylinder organ model numbering had stopped, at No. 64. The *Soleil* orchestrion catalogue illustrated five different models, numbered 1, 2, 2a, 3 and 4, but did not specify a scale size for any of them. From a surviving example it is known that the 2a had a 68-hole scale. This would suggest that the organs and orchestrions shared scale sizes, a recognition of practical manufacturing efficiency.

It is known that CB&G fabricated at least one example each of a No. 67 and No. 68 organ, based on a catalogue photograph and a surviving example. The largest, the No. 69, was represented only by a sketch in the catalogue. It would have been an impressive eighteen and a quarter feet wide. That

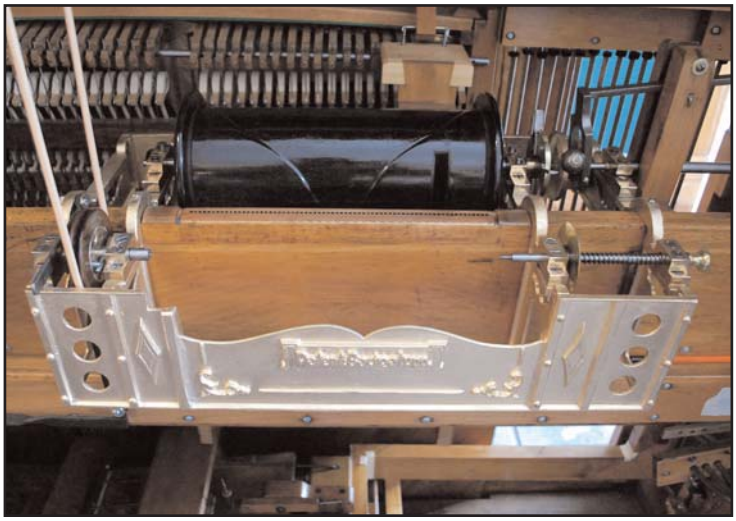


Figure 11. The interior of an early CB&G *Soleil 2a* orchestrion houses a horizontally-disposed roll apparatus with a vertically-oriented tracker bar integral with a channel board. Author's photo, courtesy Jens Wendel

equals the width of the great Model 38, 96-keyless Ruth organs. All of the CB&G facades were based upon the design elements present within prior cylinder organs, including: rococo carved elements and decorations; deep relief corbels; spiral-turned columns; mirrors; and revolving or mechanically-activated figures.

We think that the leaders of CB&G truly bet the farm on their new initiatives in the mechanical musical instrument field. Not only was the paper roll a complete change from the cylinder-dominated past, but across the board their entire line-up of organs and orchestrions was totally new. It was a bold move forward with such a broad-based line-up of machines and technology.

Assessing the practical and relative success of the firm's paper roll machines between 1901 and 1904 is impossible at this removed date. The general ignorance about their roll-operated pneumatic instruments is the result of the brief period of roll activity and the intervening century of time. Their business records, corporate correspondence and personal papers are largely gone. It's further complicated by an internal family issue, paternal dominance, which resulted in the principal of the new technology, Luigi Bacigalupo, leaving not only the firm, but his homeland and family for an entirely new life in the United States. A younger brother, Giovanni, only a youth when CB&G enjoyed its zenith, subsequently became the focus of attention, while Luigi has been entirely ignored in European chronicles.

Luigi Bacigalupo was fully aware of other developments in the mechanical music industry, Berlin having several firms making devices. He was also familiar with other German products from the Black Forest and Leipzig, all to be seen at trade fairs and in the field. A comparison of the CB&G *Soleil* orchestrion roll frame apparatus with that utilized by Welte suggests the strong possibility of influence. In both makes the paper flows from front to back, across an upward-facing tracker bar. Bacigalupo also used the same spacing as Welte, 0.167 inches, six to the inch, and a suction pneumatic system. **Figure 11**

Figure 12. The single surviving CB&G Soleil orchestrion is housed in a painted case ornamented with gilt carvings, two figures and revolving spiral-turned columns. Author's photo, courtesy Jens Wendel

A single *Soleil 2a* orchestrion survives today, of which Jens Wendel has recently completed the majority of a comprehensive restoration. Determination of register and other functions remains to be accomplished, a complex task owing to the lack of the instrument scale. He judged the mechanism to be very rudimentary, essentially a cylinder organ apparatus with pneumatic motors. The few surviving rolls are all originals, stamped "Patent Bacigalupo." They appear to be of regular paper. Owner Siegfried Wendel noted that it has no roll rewind feature, as mentioned in a 1903 CB&G catalogue, indicating that it is likely an earlier model. It is hoped that the successful operation of the *Soleil* will reveal much about the efficacy of the CB&G roll-playing system and the skill of the people who arranged the tunes. **Figure 12**

The closure of the firm in 1904, only a few years after the great array of new instruments was introduced, and the absence of any of the firm's roll-operated organs precludes analytical evaluation of the CB&G roll and suction-type control system. We think it is possible that one of their biggest machines, a *King of All Organs*, was reconstructed into the first Model 38 Ruth of 1903. Ruud Vader, who has seen this organ, advised that the case construction is entirely unlike other 38s, of which he personally owns two and has examined several others. It is also a very loud instrument, voiced with higher wind pressure. Rather than the usual double pump in a Model 38 Ruth, the organ has a triple. Given that the façade is definitely of CB&G manufacture, the Ruth conversion may be confined to internal apparatus, primarily the pipework. The Waldkirch artisans may have removed everything down to the main chest and worked upwards from there. A highly unusual drum and cymbal arrangement, directly in front, was implemented, or perhaps brought out from behind cloth panels in the original CB&G design. If the organ had a glockenspiel in 1903, it was concealed inside. One was later placed behind rectangular openings cut rather simply into the lower level of the façade.

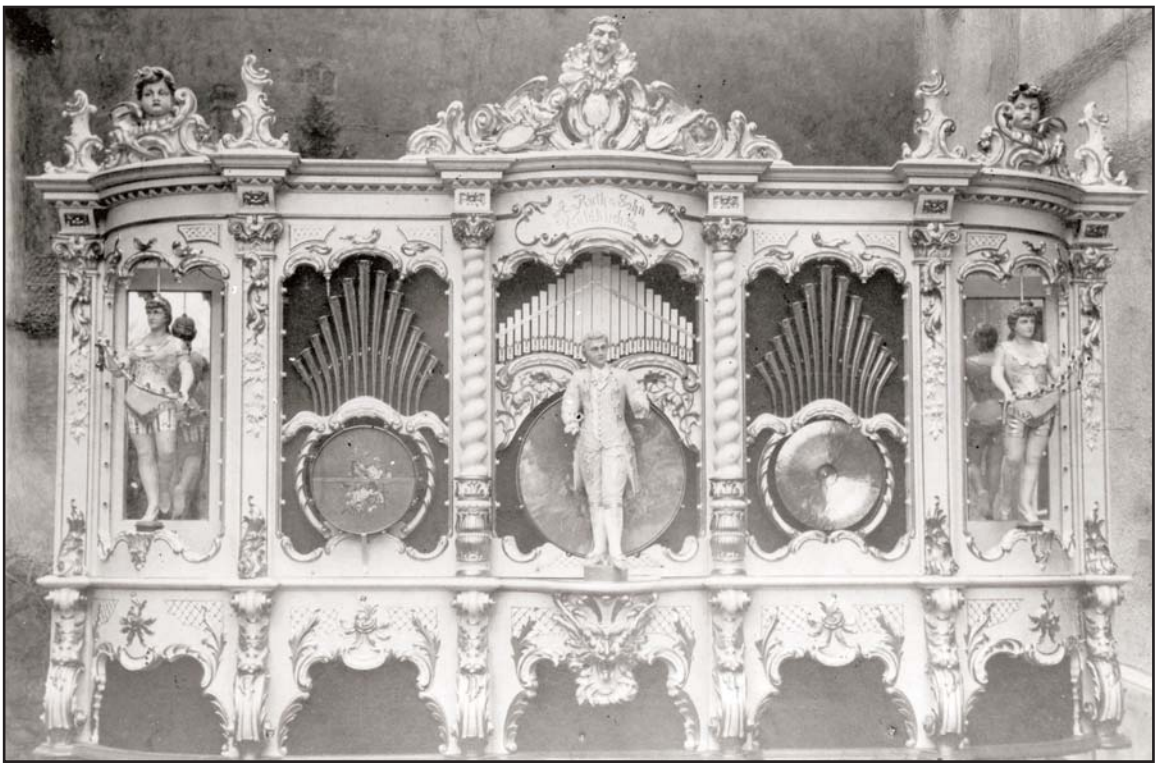


Figure 13. The one substantial remnant of an early CB&G roll-operated fair organ may be embodied in the first Model 38 Ruth, shown here beside the Waldkirch factory after completion in mid-1903.

Photograph courtesy Marcel van Boxtel

The author thinks it's possible that this conversion may have sparked, in part, the origin of the Model 38 design, the first entirely new example of which wasn't completed until a few months later in 1903. If that hypothesis proves to be accurate, it might cast aspersions on the CB&G design endurance, although the rebuild could have resulted from the inability to obtain more rolls. A huge organ was an expensive piece of machinery to not be working and conversion to readily available and reliable keyless books presumably made the most sense at the time. If the CB&G roll operation made any impression on Adolf Ruth Sr., or his son, when the big Berlin-built organ arrived at their shop, it was forgotten and not considered when roll operation came to the forefront among Waldkirch builders in the mid-1920s. **Figure 13**

CB&G's roll-operated orchestrion line was continued for a period by Emil Asmus, but whether he perpetuated the CB&G roll scales is unknown. His catalogue illustrates a different line of machines. Asmus was still making organs in 1908, but by then only cylinder and cardboard book types were being sold. None bearing his identification are known to exist today, nor are any intact CB&G roll organs identifiable.

de Kleist Musical Instrument Manufacturing Co. and Rudolph Wurlitzer Manufacturing Co., North Tonawanda, NY

Eugene de Kleist, the owner of the only North American band organ manufacturing plant at the time, was thereby by default the first to successfully implement rolls and pneumatic controls and to do this on a sustained basis. Yet, in our view, there is some question if his decision to move into roll-operated pneumatic organs was made independently and totally of his own volition. The story, from our perspective, is intertwined with actions originating in his native German homeland.

M. Welte & Sons had exhibited a truly enormous concert orchestrion operated by paper rolls at the world's fair in Chicago in 1893. de Kleist and his family arrived in the United States in June of the same year. The new and only man with an American band organ factory was fully occupied that summer and fall with establishing his shop in North Tonawanda, New York. Recreational travel presumably wasn't possible when the most popular world's fair in American history was underway. Thus, it must have been under different circumstances that de Kleist came to know about the giant 1893 Welte, installed in 1894 in Kramer's Atlantic Garden. Just when he may have examined it is unknown, but seeing such a monumental device playing great music so grandly must have had a substantial impact on him, as it would anyone with knowledge of cylinder technology and its limitations.[19]

Welte skipped the 1901 Pan American Exposition at Buffalo, New York, having conducted a more important showing at the Exposition Universelle in Paris in 1900. The next time de Kleist may have seen a cutting edge Welte was at the 1904 Louisiana Purchase Exposition in St. Louis, where he visited in September. A conventional concert orchestrion and an even larger organ played by both rolls and keyboard were their featured instruments.

Little more than a decade had passed since his arrival in the United States and there had been a change in North Tonawanda. It must have been a proud de Kleist, or his agent, who displayed his first pneumatic band organ at the St. Louis fair, operated by a 100-hole paper roll. They would have readily greeted any Welte representatives who expressed interest in their latest accomplishment, which had been inspired in part by the innovation incorporated in the giant roll-operated machines from Freiburg. **Figure 14**

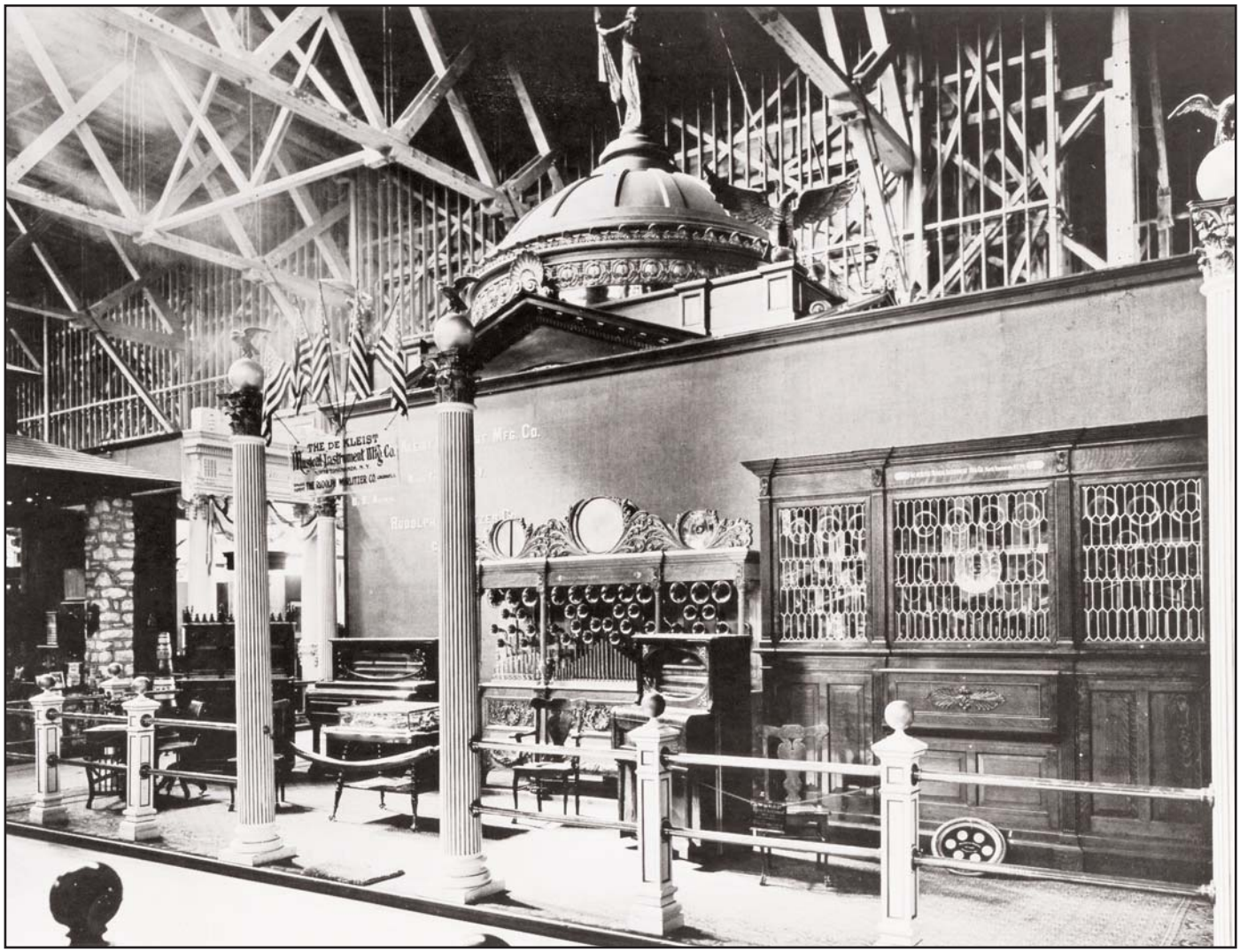


Figure 14. Eugene de Kleist gave his new 100-hole roll organ, on the right, a debut at the 1904 world's fair in St. Louis. It was the pinnacle of his organ-building career. A 119-key cylinder organ is seen in the center. Ron Bopp collection

By 1904, there had been nearly three decades of perforated paper roll use on mass-produced, American-made pianos, reed organs and organettes. It is important to acknowledge that several successful, roll-operated, mechanical musical instruments had also introduced by modest firms by the end of the century: the Encore *Automatic Banjo* (1897); Whitlock *Automatic Harp* (circa 1899); and the *Pianino* (circa 1900), made by a variety of manufacturers. Notably, all of these firms and products were eventually under contract with the Rudolph Wurlitzer Co. of Cincinnati, which had a superb marketing and sales network across the continental U. S. de Kleist and Wurlitzer also came to such an arrangement that changed the lives of the proprietors of both firms.

Considerable influence was initially exercised in North Tonawanda by Wurlitzer via an order with de Kleist for 200 cylinder-operated pianos, a device called the *Tonophone*. They were first sold in 1899. It was originally his intention to sell brass trumpets that had caused de Kleist to visit Wurlitzer, but the switch over to the mechanical piano pushed the organ builder into a field that would change the course of his business. At the time, we think de Kleist needed to fill his slim order book.

Like CB&G, the expansion of his trade to include piano-based orchestrions and other types of mechanical music devices, in addition to carousel organs, broadened his perspective and gave him entrée to a new era. In testimony to the importance of the new activity, de Kleist's career as an inventor and patentee commenced in 1901, starting with the *Tonophone*, and expanded to include other instruments and controls.

Despite what would prove to be opportunity and new insights on the future, de Kleist continued to embrace a common staple of the organ trade, the pinned cylinder, when smaller, upstart firms like Encore and Whitlock were already offering paper roll pneumatic machines. The cylinder organ had been the basis of de Kleist's training and experience. It could be said that his initial attempt to sell trumpets to Wurlitzer also reflected back on his expertise in shaping and assembling brass sheeting, which he continued to use long after others ardently embraced wooden pipework.

The old ways of the cylinder were perfectly adequate, simple and reliable, suited to operate the modestly-sized organs that provided the music for the track-style merry-go-rounds that were manufactured by the men that had induced him to relocate to North Tonawanda. That remained the case as the first

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enclosed amusement park debuted in Chicago in 1894. In just a few years the demands on organ builders and importers exploded with the origination of the larger jumping horse carousels, circa 1900, followed by Luna Park's incredible Coney Island debut in 1903. The great increase in recreational time and disposable income precipitated a boom in amusement park construction that fostered the proliferation of dance halls. The onset of interest in roller skating also fueled the need for larger instruments, making the first decade of the twentieth century an unequalled heyday for mechanical organ builders.

Coupled with his retention, through 1908, of the military style pipework specifications that leading European builders had abandoned in the mid-1890s, de Kleist's relative slowness to advance is clear from our perspective. His unwillingness to progress explains in part his strong advocacy for high tariffs on imported organs; it kept the newer designs at bay.

One can argue that Americans didn't care about better quality music, but that denies the considerable success enjoyed by book organ importers: the Berni brothers; Ernest Boecker; William Mangels; August Pollman; and others, all of whom actively sold European orchestral-specification band organs in considerable quantities for application in top amusement park, skating rink and dance hall applications. It's more rational to conclude that de Kleist had two niches, small military instruments for track carousels and then large skating rink organs, to which he confined his attention. For their buyers, those organs were a standardized catalogue commodity, as opposed to the specialty sales efforts accorded to larger book organs.

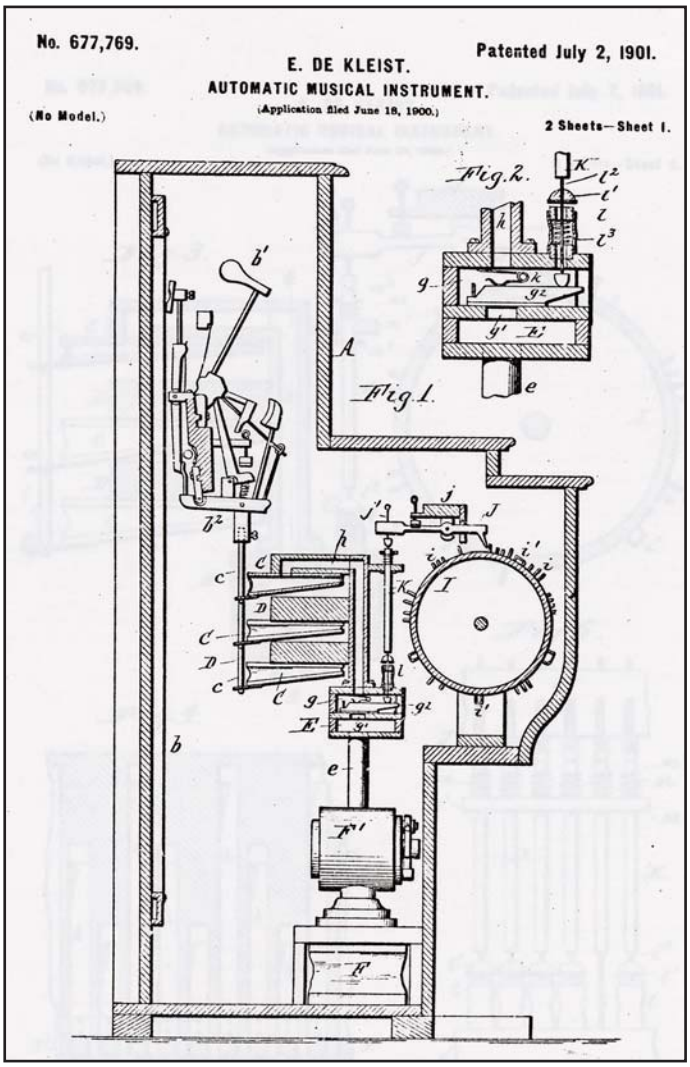

Figure 15 In 1899 Eugene de Kleist started to incorporate pneumatic control elements in his *Tonophone*, as confirmed by this drawing from a U. S. Patent 677,769.

Sometimes a new firm is more nimble implementing new technology than an experienced outfit that has committed capital in older technology, machinery and personnel. Such circumstances were witnessed recently in the computer industry; small firms devised and captured the personal computer market while industry giant IBM held fast to mainframe computers and fielded a PC with a "Chiclet" keyboard. de Kleist remained committed to the pinned cylinder until he realized that he needed to move into the world of pneumatic control instruments. Wurlitzer's *Tonophone* order gave him the first nudge in the right direction.

But there is positive evidence of ongoing technical progress in the North Tonawanda factory. An examination of the applicable *Tonophone* patents confirms that the device had a piano operated via a conventional pinned cylinder and set of stickers, but that was the extent of the old technology. The pallet valves opened by the stickers weren't in wind ways, but served to operate a series of suction-activated valves controlling a stack of triangular air motors that directly worked the piano hammer actions. Thus, shortly before the turn of the century de Kleist was utilizing pneumatic control system elements in a limited way. His design was protected by US patent 677,769, applied for on June 18, 1900 and granted July 2, 1901. **Figure 15**

The *Tonophone*, via a patented cylinder shifting mechanism, provided the customer with tune-choosing capability, a feature not possible with any roll machine at the time and not achievable until roll-changing devices were put into the marketplace a few years later.[20] Wurlitzer put a positive spin in their advertising by proclaiming it in their catalogues as "the first practical electric Piano ever built." Less than ten survive today; presumably they wore out and were replaced by later, more versatile roll-operated coin pianos.

de Kleist had indeed incorporated a newer suction pneumatic control technology, but in some ways the overall *Tonophone* concept harkened back to J. B. Napoleon Fourneaux Jr.'s pioneering *Pianista*, patented in 1863, wherein a pinned cylinder operated air motors in a push-up player device. It was four-decade old thinking that had been exhibited at the Centennial Exhibition in Philadelphia in 1876. de Kleist's machine simply incorporated the cylinder and pneumatics into the piano case with a tune selector. His completely pneumatic organ played by rolls was still a few years away.

John Hovancak, who rebuilt the control system in the Sanfilippo collection *Tonophone*, learned much from his experience. Overall the design was characterized as the "most unserviceable instrument ever made." There were no means provided for adjustment and the mechanism itself, especially the essential rocker valve, was very temperamental. Despite the lack of provisions for maintenance, regulation and service, the recently restored *Tonophone* provided a very enjoyable listen-

Figure 16. Silent for decades, the only de Kleist *Tonophone* playing today is shop number 9121, which beckoned dozens of enthusiastic listeners when it made a debut in the Sanfilippo collection on May 5, 2012. Author's photo

ing experience, the lilting, original melodies transporting the listener back to the very earliest days of the de Kleist—Wurlitzer relationship.[21] **Figure 16**

The old ways died hard and de Kleist continued to perfect the combination cylinder and pneumatic machine with multiple patent filings as late as 1902. The final development before complete pneumatic action was implemented was the little known cylinder and pneumatic bell bar piano, for which a patent was applied for on March 23, 1904. It was granted as US patent 779,716 dated January 10, 1905. de Kleist's tubular bell instrument of similar vintage likely incorporated an equivalent apparatus. Again, by comparison, a mechanical hand bell instrument with a pneumatic control system activated by a perforated roll was the subject of a patent application filed on November 15, 1898 by Charles S. Batdorf. He gained US patent 635,416 on October 24, 1899. There's no clear explanation why de Kleist hadn't moved towards roll operation and more complete pneumatic control, as had small-time, home-grown craftsmen.

The first appearance of a roll system in a de Kleist patent was for a "self-player," or push-up player type machine, patent coverage for which was applied for on July 8, 1901. It was granted as US patent 700,781 on May 27, 1902. Others complementing it were applied for into mid-1903. At this time, no example of a pre-1904 roll-operated, de Kleist-manufactured push-up player or any other device has come to our notice. de Kleist's development of additional patented components for pneumatic controls activated by a perforated roll, from tracker bars to valves and cut-offs, carried on through April 1908. He increasingly committed to the new technology. In summary, up to the spring of 1904 de Kleist had retained the pinned cylinder and mechanical action for his core band organ business; and in large part for the other instruments made in his factory, but paper rolls and pneumatics were within his knowledge base.

Another aspect of Wurlitzer's influence upon de Kleist can now be advanced, perhaps the one that compelled de Kleist to go with a completely pneumatic controlled organ activated by a perforated roll. Subsequent to their 1902 visit to the Leipzig trade fair, Wurlitzer wanted to sign up a supplier for the orchestral-style orchestrions that were rapidly taking over the market in Europe. The Wurlitzer brothers' efforts to gain an agreement with Ludwig Hupfeld A. G., the most prominent German musical instrument dealer, met with failure. Hupfeld directed the brothers to a smaller, but very competent competitor, Philipps. The contract that followed resulted in a quartet of *Mandolin PianOrchestra* devices arriving in the US in 1903. Like most early European machines exported to North America, the orchestrions developed a variety of problems owing to the differences in climate. This was the year before de Kleist brought out his first roll-operated pneumatic band organ. If de Kleist hadn't seen the future, the Wurlitzers surely had taken notice and would presumably make it happen. Mechanical musical instruments of the future were going to be roll-operated, with pneumatic control systems, for all of the reasons that Welte's customers had enjoyed since 1887, those of Philipps since c1896, Weisser since c1897 and CB&G's after 1900.

The Wurlitzer action, coupled with de Kleist's knowledge of other pneumatic roll systems and his own work from c1898 to 1903 supported the introduction of a new organ using a suction type pneumatic system and perforated paper rolls. In 1904 de Kleist introduced his "100-note" band organ, as it was identified internally. Later it would be known as the *Monster* and the Style 155. It presumably evolved from his 100-key No. 28 and 28A cylinder organs and took a place as the second largest of his organs.

Like other builders, de Kleist took his cylinder organ scales and re-used them when introducing a line of organs with a new control scheme—in this instance, suction pneumatics and perforated paper rolls. The so-called "100-note" scale included five holes, three at one end and two at the other, for roll func-

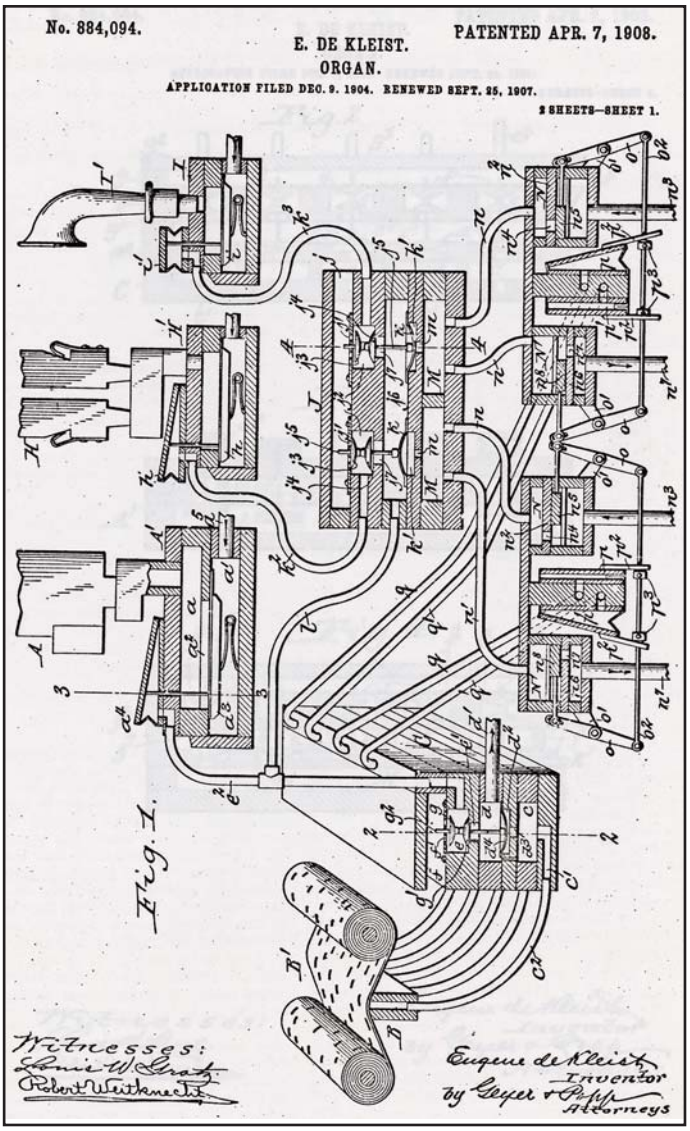

Figure 17 The construction and operation of larger organs carry with them challenges not experienced with smaller devices. This de Kleist improvement came along at the time of his first roll-operated band organ. Drawing from US Patent 884094

tions and percussion, yielding 95 playing notes. Those notes did not reflect the pipe layout, as did the former cylinder organ scale, but were grouped by type (trombone, bass, accompaniment, melody, piccolo, trumpet) and then into pitch order. This simplified order reduced the scale complexity for arrangers and others. The implementation of a different scale meant that all tunes for the instrument had to be newly arranged.

On December 9, 1904, in the same year that the 100-hole roll organ was given a debut, de Kleist applied for a patent for a pneumatic organ operated by a perforated paper roll. It took until April 7, 1908 for the US Patent Office to grant him number 884,094. The focus was on a pneumatic stop action, in lieu of the common slider, which was prone to failure owing to changing ambient air conditions. It was a necessary improvement in support of large organ construction and reliable operation. **Figure 17**

With a front and center-mounted roll frame and no bottom pipes to be muffled by the rink-surrounding barrier wall, the 100-hole instrument was designed specifically with roller skating rink applications in mind. A great expansion in the skating rink business, an adjunct of the amusement park trade success of 1903, took place over the next five years.

Using a substantially smaller cabinet than those housing Welte's giants, de Kleist re-arranged the roll frame, placing one spool over the other. It was the same configuration as in the Philipps orchestrions being imported by Wurlitzer. Other than the case being substantially shorter, the multitude of shiny brass resonators above the chest housed in a varnished oak cabinet with glazed doors gave it a great similarity to Welte's famed brass horn cottage and concert orchestrions. Yet, considerable difference was evident when the two machines were performed. In at least one instance, a skating rink proprietor conducted a direct one-on-one comparison between a Welte orchestrion and a de Kleist 100-hole organ before making his purchase.

The new roll and pneumatic system generally proved satisfactory. de Kleist dropped the pinned cylinder from his next piano-based models, the *Mandolin Quartette* (1906) and *Mandolin Sextette* (1908). They were designed as pneumatic system roll players, both with 67-holes at 10 holes per inch, the same spacing as the 100-hole organ. This 0.100" dimension varied just slightly from that used by Philipps, which was on 0.098" centers. The roll widths, for a 100-hole roll, would have differed by 0.198", or somewhat less than a quarter inch. Roll interchangeability wasn't possible; it was generally made that way intentionally, so as to not enable others to garner roll orders. **Figure 18**

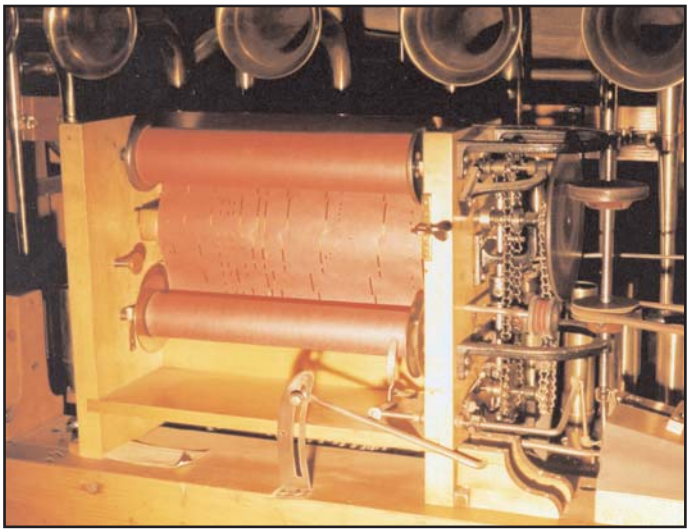

Figure 18. de Kleist's early spool boxes, like this one in a *Monster*, were of wooden construction with metal fittings and components. All metal roll frames were a later improvement.. Bill Black photograph

Two new de Kleist band organ roll scales were introduced in 1906. In both instances they would eventually operate a variety of different pipework specification instruments, each catering to manufacturer expense and profit plans, as well as customer purchase price, tonal and volume desires. These rolls were made with unusual 0.1227" hole spacing that became the Wurlitzer standard.[22]

The first scale was the 45-hole Style 125, based on the 41-key No. 18 cylinder organ, de Kleist's best seller. The first

Figure 19. The entire Wurlitzer line of band organs, via which they succeeded the de Kleist operation, are depicted in this section of a 1909 poster. Author's collection

entirely new organ made specifically to play the roll was shop number 1898, logged on April 16, 1906. It sold via the Wurlitzer operation in Cincinnati. A roll-playing No. 18 with drums was recorded on May 18, 1906. The lowest roll number was 1,001 and a test roll was also made.[23] The constituent elements of the scale were managed in the same manner as the 100-hole roll scale. The four additional keys for roll functions and drums were split evenly at the two outside edges.

The second roll of 1906 was the 54-hole Style 150, based on the 46-key de Kleist 20 and 20A cylinder organs. The first organ was number 1884, recorded on May 22, 1906. The roll number was given as 150 and included two drums and a cymbal. The rolls were initially numbered in the 10,000 series, the lowest one logged as 10,006.[24] The notes of the 46-key cylinder scale were augmented by two holes on one side and six on the other, for roll functions, percussion, bells, swell shades and a pipe register and cancel.

The 125 and 150 roll scales were sustained through the sale of the de Kleist operation and into Wurlitzer's band organ manufacturing period. There were others that did not have a long existence: Style 100 (48 holes); 105 (41 holes); 110 (44 holes); 120 (38 holes); 130 (46 holes); 135 and 140 (49 holes). They were all presented on a poster issued in 1909, the year in which they took over de Kleist's business, including his North Tonawanda factory. It was Wurlitzer's 53rd year of existence.[25] The eventual rationalization and reduction of the number of roll scales to a few standard sizes reflected the very business-like management implemented by Wurlitzer as they strived to increase the profitability of the former de Kleist cylinder organ heritage. Design and production had remained separate from sales until Wurlitzer finally acquired de Kleist's North Tonawanda factory and fully integrated their company, from lumber supply to customer enjoyment. **Figure 19**

The paper roll version of de Kleist's largest instrument, the 119-key cylinder organ, one of which had also been exhibited at the 1904 fair, was likely introduced in February 1907. The limited data that is available for what became known later as the *Mammoth* and Style 160 is admittedly indirect and incomplete. The 122 holes in it were the most ever in any band organ roll. It had five holes for roll controls and percussion, the 117 playing note positions were arranged like those in the somewhat smaller *Monster*.

The 122-hole size was somewhat less than Wurlitzer's largest orchestrion roll, the 130-hole *Paganini*, but the spacing on it was not the same, being 4 holes per centimeter, rather than 0.1227." This made the *Mammoth* roll slightly wider. The spacing for it is thought to have been 0.1227", based on a surviving scale stick. That would have continued the precedent set with the 125 and 150 roll scales, as opposed to the ten to the inch employed with the *Monster* and de Kleist's piano orchestrions. For a brief period de Kleist could brag that he had a larger roll scale than the famed Welte—by two holes.

The *Mammoth* was another skating rink design with a spool box mounted in front. de Kleist's largest machines were generally used indoors; the smaller ones were literally everywhere outdoors, with carousels and other rides, show fronts and wherever the silence of the day benefitted from the intrusion of loud music.

Wurlitzer continued parts of the de Kleist cylinder organ line into the 1910s, but generally pushed the making and sale of what might be termed "profitable" smaller roll organs. The big 155 and 160 scale machines were dropped when the skating rink market collapsed and no other customers for the devices were apparent. The original de Kleist roll scale offerings were sustained by Wurlitzer and were not expanded until 1914.

Wurlitzer then did something unusual, perhaps following a German innovation. In 1912, Waldkirch, Germany builder A. Ruth & Son imposed their 65-keyless Model 35 scale onto the 78-keyless Model 36 physical format to provide the basis for their new Model 46. There were thirteen extra keyless spaces for additions, yielding a very flexible platform for tonal design.

Ever vigilant for new developments, Wurlitzer perhaps took notice of the Ruth hybrid. In 1914 they introduced the new 165 scale, derived from an example of the 65-keyless Gebrüder Bruder *Elite Orchestra "Apollo."* To avoid the expense associated with the creation of a new roll width, the converted Bruder/165 scale format was imposed upon the existing 75-hole *Automatic Player Piano* roll width, with 0.1227" spacing, which had been introduced in 1907 or 1908. The design provided expansion capability for more registers and percussion beyond the foundational 65-keyless Gebrüder Bruder scale.[26]

Figure 20. A derivation of a Gebrüder Bruder 65-keyless *Elite Orchestra "Apollo"* design, Wurlitzer's Style 165 became the firm's best-selling large organ. Image from Wurlitzer catalogue, author's collection

The *Style No. 165 Duplex Orchestral Organ* became Wurlitzer's greatest contribution to band organ history. The versatile scale enabled the firm to spin off a whole family of instruments based on the same roll, from the 157 to the 175, similar to the process undertaken with the 125 and 150 rolls. Three of the machines, the 165, 166 and the later 157, were orchestral in nature. The others, 163, 164, 168 and 175, were revivals of the old military-type skating rink organs from the de Kleist era, with some modifications. **Figure 20**

The new 75-hole scale also took advantage of Wurlitzer's success after initiating the *Unit Orchestra*, resulting in the inclusion of numerous percussion devices, somewhat reminiscent of a "toy counter" concept in a theater organ. Wurlitzer liked to fully utilize the talent and materials on hand, gaining a sort of double bump on their initial investment. The pipe organ department had surpassed the band organ department in financial importance and the manager gave it more attention.

Wurlitzer pushed their band organ roll width to a new maximum with the 112-hole *Style No. 180 Concert Band* in 1922. Generally it was a throwback to military organs of the 1880s-1890s, but the tonal influence of the *Unit Orchestra* design was readily discerned. The 180 was an indoor machine, for large skating rinks, but one did play for a limited period beside a carousel on an amusement site next to the Pacific Ocean.

Wurlitzer added a page to their design book to evolve their new *Caliola* of 1928. When furnished with brass whistles, and a roll frame as well as a keyboard, it was a bona fide air calliope. It inspired a competitor, the brass whistle and glockenspiel-equipped Artizan *Air-Calio*, which came out a year later. Unfortunately, both were more than a decade too late to garner any of the hundreds of "A" roll-operated air calliope orders that had been issued to Tangley and others starting in 1914.

The 75-hole *Caliola* of 1928 was an unusual dual-purpose design. When fitted with wooden pipes, with options for drums and a cymbal, and even a keyboard, it was a single-voice band organ. In another consideration of component use efficiency, the *Caliola* was conveniently sized to use the same roll width as the Style 165, but incorporated the original scale of the *Automatic Player Piano* roll within its compass.

The onset of the Depression was the apparent cause for the Wurlitzer factory to produce one final prototype organ, the "65-note organ," which used the *Caliola* roll in duplex roll frames. Also incorporated into the design were bas relief carvings originally applied to *Caliola* casework. Inside there were six ranks of pipes, including a rank of theater organ style pipes, a tibia plena. Obviously this band organ design effort by Wurlitzer was intended to use current design methods, consume parts inventory and convert both to badly needed cash. Buyers were slim and only one was made and sold. **Figure 21**

The *Caliola* was too tall to fit inside panel trucks, so Wurlitzer created an "upside down," metal case version, with the brass whistles hanging downward and sold a few starting in

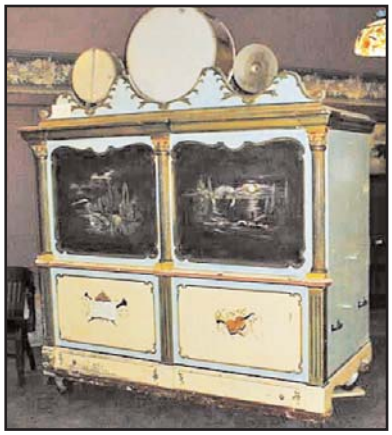

Figure 21. The second last scale applied to organ use by Wurlitzer resulted in the construction of this 1930 instrument using 75-hole *APP* rolls and having *Caliola* façade carvings.
Bill Black photograph

1930. The unique configuration reduced the height requirement considerably. It may have been the confined space that caused the designer to implement a pressure system, akin to that used by Artizan, to operate the device. The vacuum pump was eliminated. Suction pneumatics had been used exclusively up to that time, but this last, larger Wurlitzer air calliope design had a grooved roller riding on the paper passing over the tracker bar.

Wurlitzer's final band organ effort took the firm back to one of the earliest rolls of their existence, the 44-note, 52-hole *Pianino*. The concept of an amusement park kiddieland had been proposed as early as 1920 and ride builders and investors made them reality in the subsequent decade. The smallest organ in the Wurlitzer line was too large for kiddie ride application and it lacked experience in smaller hand organs. The end result was the newly designed Style 50, or *Kiddie Organ*, with 44 pipes, playing the *Pianino* roll. A positive pressure control system, with a grooved pressure roll was provided for control purposes, thereby eliminating the need for a vacuum reservoir. The first one was shipped in 1931. In three decades the American roll-operated band organ had reached full circle, and the end of the line. **Figure 22**

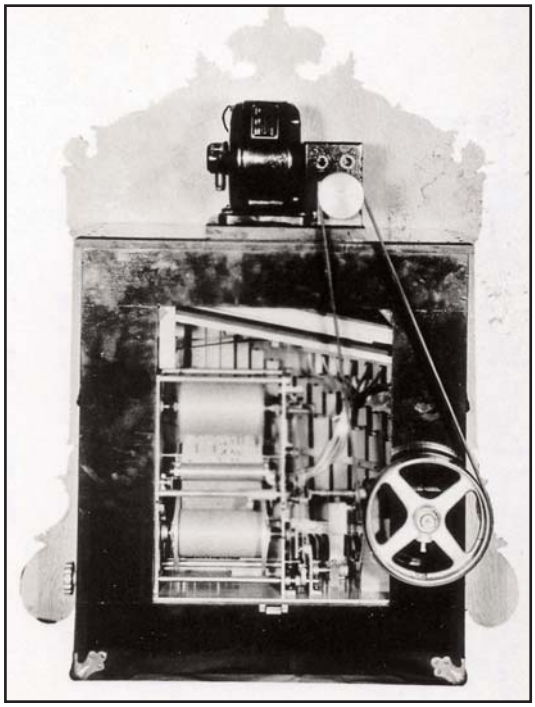

Figure 22. Wurlitzer's last attempt to penetrate a new market resulted in the *Style 50 Kiddie Organ*, playing the decades old *Pianino* scale. Sound amplification systems were already on the scene and instrument sales were limited. Author's collection

Wurlitzer continued to manufacture new roll organs through 1938 and then sustained only the rebuild and repair trade. In 1945 the division was sold to the Allan Herschell Company, also in North Tonawanda, since it complemented their sales activity more than the direction being taken by Wurlitzer. A boom in ride business, along with facing the arcane complexities of dealing with organs caused Herschell to spin off the acquisition to Ralph Tussing, whose T. R. T. Manufacturing Co. carried on starting in early 1947.[27]

de Kleist and Wurlitzer Roll Conversions

de Kleist and successor Wurlitzer kept the shop busy by soliciting winter repair orders. Initially the music work amounted to solely cylinder organ activity, but it moved into rolls quite rapidly after their introduction. When a different make of machine arrived, often as not a changeover to an in-house roll system was undertaken. All the advantages of roll operation, but especially lower cost, increasingly consigned the cylinder organ to marginal operations making final use of older music.

The installation of 125 and 150 roll system conversions was first accomplished by de Kleist in 1906. A second hand, 44-key de Kleist cylinder organ, number 1689 from 1904, was the first to play the 125 roll, before the first entirely new organ was finished. It was logged on April 10, 1906.[28] Given the plethora of makes and scales of cylinder organs that then populated America, there was a brisk business in such work. Book music was readily available domestically and the impetus to convert those instruments was far less.

The 100-hole Style 155 roll system was employed in the alteration of a few larger de Kleist cylinder organs of 62, 76 and 86 keys. One suspects that there was much coupling of unused holes to available pipes. There is no current reference to the use of the roll on other makes of organ, domestic or foreign. The Style 160 roll was too large for any practical use elsewhere and no conversions are in the record. The last application took place in 1909.

The earliest documented 165 roll conversion took place in the spring of 1914, accomplished before the first entirely new 165 left the factory. It was followed by dozens and dozens more. Older and larger de Kleist cylinder organs, including the 119-key, as well as de Kleist and Wurlitzer-made, roll-playing 155s and 160s were converted to 165 rolls, as were large North Tonawanda military organs playing either 82-key cylinders or 87-hole rolls. The total number of such alterations was likely less than ten examples.

War broke out in Europe and by the spring of 1915 book music was no longer available to American showmen from overseas suppliers owing to the cessation of their shop work. Just like a generation of cylinder organs had been subject to conversion owing to a technology change, the international situation resulted in a numerous cardboard book instruments being modified to Wurlitzer roll scales. Eventually the firm also sold the requisite parts for conversions, enabling local, regional and itinerant repairmen to undertake even more roll conversions. It sustained many organs that would have gone silent for lack of new music, but it also truncated and altered the

original tonal schemes of many great machines. The proliferation of European organ conversions to the 165 roll explains to a large degree the general popularity of the system, which caused a generation of ardent devotees to embrace the scale.

Several large Wurlitzer-made band organs were converted to play *Caliola* rolls after their 1928 introduction. These included Styles 157, 164, 165 and 180 instruments.

A single European organ was converted to Style 180 rolls. This was a Model 38 Ruth, the one that Charles Looff originally installed in The Zone, the midway area at the 1915 Pan Pacific International Exposition in San Francisco. The organ and four-abreast carousel it accompanied were eventually relocated to Krug Park in Omaha, Nebraska, the roll conversion implemented for 1924.[29] Cardboard books were still available in the U. S. and Germany, but a quick-thinking salesman likely secured an order that provided for the use of "cheaper" rolls. Model 36 and 38 Ruths were typically converted to the more conventional Style 165 roll scale. Exactly how the peculiar 180 scale worked out on the big European organ is unknown. From Omaha the uniquely modified Ruth went to Houston, TX, then to Venezuela and finally Barcelona, Spain. It was acquired for preservation by the Hennes Hinzen family of Roermond, Holland. In the course of the initial restoration back to the original 96-keyless scale Wilhelm Voigt removed the 180 roll apparatus. It was presumably discarded since Voigt's son Heinz and the Hinzens both profess to not have it. **Figure 23 & centerfold**

Figure 23. The only organ ever converted to play Style 180 rolls was this Model 38 Ruth, now owned by the Hinzen family in Holland. During a restoration the instrument was returned to playing books embodying the original 96-keyless scale. Author's photo

Conversions to various Wurlitzer rolls, especially 150 and 165 scale, continued until the time that a new generation of enthusiasts learned that book music could be made or bought in Europe. Heinrich Voigt supplied Ruth scale music in the 1950s as did Carl Frei in the 1960s. Paul Eakins was among the first collectors to commission new books from a European supplier, doing so in the late 1960s. The brakes went on harder against book to roll conversions especially after another group, led by Jack Hewes and Ken Smith, undertook to punch tunes and then to make entirely new book music in the US. There was also the realization that alterations diminished the historical and monetary value of a vintage machine. The mix of activities from the 1980s until today has resulted in three schools of thought: unilateral removal of roll systems and restoration of instruments to their builder-intended specification; preservation of the roll systems as a period-representative artifact, or to satisfy owner preference; and retention of roll systems while applying a MIDI-control to enable playing of original scale music as intended by factory designers. Each has proponents and objectors and it is likely that a mix of perspectives will continue into the future.

Gavioli & Cie., Paris, France

The Parisian organ builders, led by Gavioli & Cie., devised, implemented and perfected the use of punched cardboard music with mechanical, key-triggered, pneumatic control systems roughly between 1887 and 1900. Their work to replace the pinned cylinder with a more modern memory device may have been inspired by Welte's success with paper rolls.

The Waldkirch firms, watchful of what transpired in the capitals of Europe, including Paris, Berlin and Vienna, and elsewhere, followed with a different control scheme that was entirely pneumatic, starting in 1900. Although cylinder organs continued to be made there for years thereafter, the "paper" organ, as it was then known, playing punched cardboard books, was the primary focus of further development.

Early into the twentieth century the book organ became the standard for European outdoor organs. The cardboard was very durable and dimensionally stable through varying European weather conditions. It also embodied the advantages in repertoire variety and tune length that had been introduced with perforated paper roll operations. There was no thought given to an alternative to rugged cardboard books by Waldkirch builders until the mid-1920s.

The situation in Paris played out differently. A great portion of Paris fair organ output went to England, land of proliferating circular rides of ever greater size and grandeur, as well as traveling bioscopes that anticipated the coming of landed cinemas. The fierce competition among showmen for customers made it the land dominated by truly giant fair organs from Paris, an abundant population of them seen nowhere else on earth. Other organ buyers on the continent generally purchased more modestly-sized instruments, with only a few of the biggest being known on their fairgrounds.

Gavioli stood tallest amongst the Parisian builders, but the departure of Charles Marenghi and associates and his organizing of a competing firm for 1903 was a major blow. He'd participated in the inauguration of the 57 and 87-key Gaviolis, followed by the second generation, with 65 and 89-keys. His firm responded with a full line of equivalent machines, along with an alternative and louder violin-baritone scale concept. Together, Gavioli's competitors raised the size ante to fully chromatic 100-keys and more; that caused the firm to offer the unsurpassed 110-key organ in 1906 and then two years later, the 112, each of which was later offered in larger versions. Given the great variety of key sizes, abundance of façade designs and special requests to satisfy customer whims, the Paris situation became financially tenuous.

Gavioli faced overwhelming financial challenges, beyond the tooling and support of so many different size machines. Marenghi pushed them very hard for the best commissions, with the other Parisians, Limonaire Frères and Foucher-Gasparini also taking a share of the market. Then there were

additional expenses from: a new factory and the relocation to it; a flamboyant catalogue, specially illustrated by artist José Roy, issued in 1906; and the establishment of a New York branch in the same year. The credit-starved conditions of 1907 raised the cost to borrow money and culminated in an overt Panic late in the year. Owing to the differences in the way the firm was heading, the remaining members of the Gavioli family dropped out, depriving it of the creative powers and generationally-developed musical expertise that had raised it to the top. These and other factors forced the firm to seek lower manufacturing expenses in an attempt to stave off financial failure. One aspect of this was a two-step implementation of new control systems; first a German style, pressure exhaust, keyless system; then a revival of a pressure "infusion" system that dated to the 1880s.

It may be pertinent to observe that the consideration of paper rolls to control Gavioli fairground organs apparently did not take place until after members of the family had exited the business. Ludovic Gavioli II's resignation reportedly took place in 1907. In the family's studied opinion, rolls may have been ill-suited to operate their machines in the field. As the originator of the keyed book system for fair organs, Gavioli understandably embraced it as their primary music media. Yet, they and the remaining leaders of the great firm were surely aware of the progress, and the qualified to complete success, which had been enjoyed with pneumatic roll systems by the European orchestrion builders. The brief existence of CB&G, and its failure, may also have been a concern, depending upon how it was explained.

It was a fundamental philosophical shift, which acknowledged presumed advantages of the German keyless system, when Gavioli & Cie. proceeded to design and install an entirely pneumatic control apparatus, without keys. Like the German system, pressurized air was relieved through the tracker bar ports and punched holes in the cardboard book. Henri Prosper Yver was the applicant on July 17, 1907 for British patent 16,438, dated October 7, 1907, which covered the design. An improvement was received on February 18, 1908, British patent number 3702, also granted to Yver and released on May 21, 1908. A German patent, 199,991, was granted on January 1, 1908 to the Société des Anciens Établissements Gavioli et Cie. in Paris. This was followed by a French patent, 386,887, submitted on February 3, 1908 and issued on June 25, 1908. It was also in the formal name of the Parisian establishment.

Not to be found lacking, Gavioli's successor in Waldkirch, Limonaire Freres, undertook the construction of keyless organs for the first time in 1908, after taking possession of the German factory. Marenghi also patented a keyless control system, dated January 14, 1908, and assigned number 386,210, but it does not appear to have been placed into actual application.

Gavioli incorporated the keyless system into their latest creation, the 112 design. The first of these arrived in England in March 1908, and by year's end there were eight, all of which went into immense bioscope show fronts. The ninth went into a switchback in 1909 and the tenth was placed in a scenic railway ride in 1910. Added to the population of 110-key Gaviolis and a number of 100+-key Marenghis and a single 100-key Limonaire, England had more large Parisian organs than anywhere else on earth in 1908.[30]

Perhaps some discomfort with the German keyless system eventually caused a Parisian to question why the compressed air couldn't go in the *opposite* direction, as had first been patented by Emil Welte in 1883. With opportunity in mind, Gavioli devised exactly such a system and incorporated it in a control system that used paper rolls. They did so by 1910, when the first patent application was filed. Ultimately three patents, two granted in May and another in August 1911, covered various features of the apparatus.[31] They were obtained in the name of the firm, Société des Anciens Établissements Gavioli et Cie., and not any particular member of the firm, as per earlier practice. A notable French engineer, Jules Adrien Marie Louis Carpentier (1851-1921), given membership in the French Academy of Sciences in 1907, was given as co-patentee on the second patent, 424,093. The listing suggests that the firm sought him out as a technical consultant to resolve specific design difficulties.[32]

The core concept of their system was novel. They placed the roll frame into a tightly-sealed box, pressurized the enclosed space and used the above atmosphere pressure inside it to cause pressurization through the paper roll and tracker bar and thereby operate the valves downstream from it. That was the reverse of the Waldkirch style pressure system, which exhausted pressurized air out the tracker bar ports and cardboard book holes to activate valves. Another feature that was part of the design was revived from an 1891 Gavioli patent. It provided for two different wind pressures, the higher used for control, to pressurize the roll box, and the lower for the power apparatus, the pipework and percussion.[33] **Figure 24**

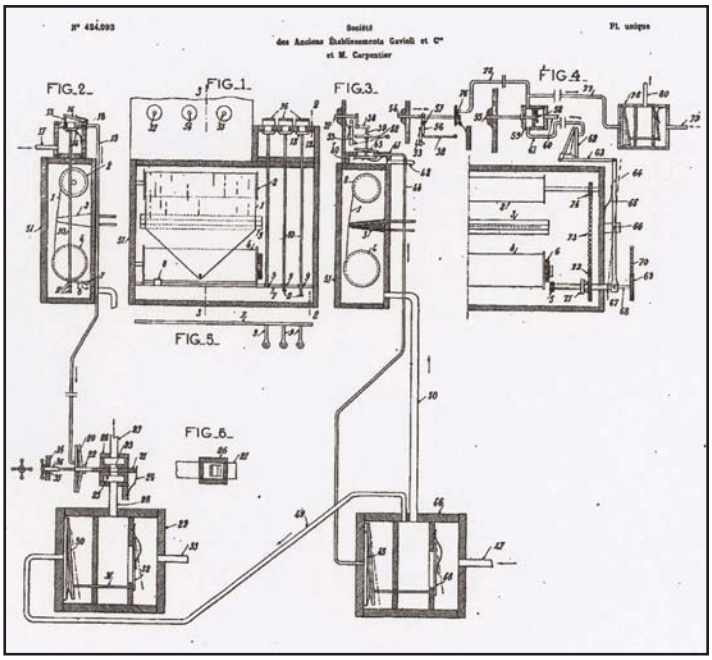

Figure 24. Gavioli's roll player was a unique mix of older and newer concepts that did not prove entirely successful in field operations.

Drawing from French patent 424,093

The roll-playing device was not totally an entirely new concept. The basic feature, namely compressed air pressurizing a valve action via roll perforations passing over tracker bar ports, was essentially the same concept employed in Emil

Welte's 1883 patent. In Gavioli's arrangement, Welte's bottom tracker bar was replaced by a pressurized plenum that housed the entire roll frame. The old idea was given new life with a slight twist, a not uncommon methodology amongst creative people, whose vision can extend beyond that of the initial contributor.

Most roll systems used holes in the roll paper to uncover a port in the tracker bar that either opened a suction vent or expelled pressurized air to shift a valve. The pressurized air inside the sealed Gavioli enclosure flowed through the holes in the roll and the tracker bar ports to activate the valve action. The pressurized air flow through perforations in paper, which apparently lacked adequate toughness for the application, resulted in unanticipated roll destruction. The high pressure air flow presumably "air shredded" holes in the paper, especially at the beginning and end of the provided perforations. Failure of the technology was so complete that no remnant of a 112-hole roll system is known to exist today.

Marketing-wise, Gavioli proceeded in a manner that somewhat replayed the innovation and failure of CB&G. The Berlin firm combined roll operation with a new line of instruments, with scales possibly requiring 100 holes or more. Likewise, Gavioli management also applied their roll system to the eleventh of their biggest and latest, the truly monstrous 112-hole *Gavioliphone*. This first example arrived in England in late 1910 and was displayed at the Chiappa works in London starting on December 15. The 112 was used that winter by Farrar and Tyler and then sold to Goldthorpe and William Marshall for the 1911 touring season. After a brief period the great organ disappeared.[34] **Figure 25**


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For SHOWS and ROUNDABOUTS,

And which will SAVE FIFTY PER CENT. AT LEAST, in the Cost of PERFORATED MUSIC, will be seen and heard in our Large

"1911" MODEL GAVIOLIPHONE.

Which will be on Show at our Works from the 15th of December next, and onward.

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Existing Organs Can be Converted at Moderate Cost.

All Particulars from—

Chiappa & Sons

6, Little Bath Street,

HOLBORN, E.C.

(Near Hatton Garden)

Sole Agents for Gavioli and Co., of Paris.

Figure 25. Chiappa's advertisement in the December 10, 1910 issue of World's Fair, the British showman's trade paper, didn't mention paper rolls, but focused on the sizzle, the 50% expense savings. Image courtesy Stephen Smith

Gavioli & Cie. and their British agent, Chiappa, were very optimistic for sales of the new paper roll-played apparatus. They were so sure of the success that they proposed converting other organs to the system, in order to reduce future expenses for the client. We've not read of any confirmed sales.

Unfortunately, the improved giant organs were sometimes complex failures. Construction and sales amounted to almost a dozen machines, a not unsatisfactory number given their extraordinary size. Unfortunately, the field problems some developed drained company reserves at a critical time. A newly patented feeder system, consisting of multiple, square reciprocating pistons, reportedly failed to meet expectations. The serviceability of the keyless system is unclear, but the unique roll system, another novelty, failed in field operations. The new apparatus must have worked initially, to some level of satisfaction, suggesting that some sort of fatigue-initiated failure became evident after repeated playing. The repetitive flexing under pressurized air loading when passing over the tracker bar ports may have been the culprit, in combination with a paper of inadequate properties and durability.

Following on the heels of the firm's other losses the roll system became one additional factor in the circumstances that brought an end to the legendary house of Gavioli. The long-established and world-famous "mother tree" of the fair organ world was undone, in part, by flimsy paper. Another bulwark of the trade, in Germany, would see its prospects for the future similarly dimmed two decades later when it could not provide a reliable roll-operated organ. **Figure 26**

In a repeat of recent history, Gavioli's experience with a roll player duplicated that of CB&G. Both firms failed thereafter, with the primary difficulties aggravated by the failure of the new control system. Akin to CB&G's *King of All Organs*, which was altered to 96-keyless book operation, some of the keyless 112 Gaviolis were reconstructed to play from conventional keyed books, giving very satisfactory service. The ultimate status of the one 112-hole roll-playing organ is unknown. Two 112s survive today, neither one being an original roll-player, both rebuilt to keyed book playing, one restored to play both 110 and 112, and the other 98-key Marenghi-scale music.

The above, linear discussion of Gavioli's roll system is somewhat called into question by a statement published in the *World's Fair* of June 1909. It makes reference to "the up-to-date Paris-made organ . . . fed by paper rolls . . ."[35] A search revealed nothing to indicate that any of the firms in Paris were furnishing anything other than folding cardboard book organs at that time. Whether the writer was confused, thinking of the German-made, paper roll orchestrions that were then leading that trade is unknown.

There has been some online and private discussion of roll systems being applied to Gavioli's 94-key specification dance organs, an expansion of the 84-key book scale devices illustrated in the circa 1906 Gavioli catalogue. These instruments would have been suited to continental dance halls, as opposed to the British fairgrounds. With the 112-hole roll encountering failure on the eve of Gavioli's collapse, it seems that there would have been equally great difficulty to turn out a satisfactory 94-hole roll.

A 94 Gavioli didn't reach the UK until after the first war, a transplant from the continent; it is known only as a book organ during its post-c1926 existence in England. There has also been reference to larger chassis devices, having 110-keys when originally constructed, being converted to the 94-hole roll. The purported identification of a single 94-hole roll-player Gavioli in the US is contradicted by the personal testimony of a man that recalled it played books—which he personally inserted into it.

The author has not found any authoritative written, photographic or artifact documentation to buttress the statements that have been made about the 94-hole roll or conversions to it. Knowledge of these applications revolves largely around recollections shared by the late Victor Chiappa, who presumably had close personal knowledge of Gavioli organs that passed through the family shop. To date, nothing has been released from the archives of the Chiappa firm that might provide additional insight on the topic. If no documentation survives in London, and no hitherto unseen papers or photographs are discovered on the continent, authenticating the various stories of the Gavioli paper rolls may prove to be impossible.

No specific knowledge of the spacing that Gavioli used in their rolls has been found. If their action anticipated that of the Waldkirch builders in the 1920s, they simply re-used the center to center distance of the keys in their key frames, which for Gavioli was 3.5mm (0.138"). That choice enabled them to mark existing masters onto new roll paper without adjustment, although current hit tunes would have to be newly arranged and marked. The resultant rolls would have been 15.75" (400 mm) inches wide, same as the 112-keyed and keyless books. That would have been the greatest width band organ roll of all time.

Despite the failure of the pressure box, roll-playing system for Gavioli, a Berlin builder revived it and successfully applied the apparatus to small hand organs. In a twist of fate, a younger brother of Luigi Bacigalupo, who had largely been responsible for the first roll-operated pneumatic band organs, would take the basic concept of the Gavioli failure and successfully devise the first generation of roll-operated hand organs. To one way of thinking, the scores of smaller, roll-operated hand organs abounding today are in a remote way an indirect product of this technology transfer from Paris to Berlin. Few enthusiasts, looking at a 20-note crank organ, would realize that the great house of Gavioli was the starting point for the lineage of such devices. The "mother tree," indeed, had many seedlings.

Figure 26. The Marshall Brothers' 112-hole paper roll-operated *Gavioliphone* was among the most powerful mechanical musical instruments ever operated by a perforated paper roll. The working mechanism filled the vast area in the center of the bioscope front.

Image from William Keating Collection, Fairground Heritage Trust, courtesy Stephen Smith

Followers

It was a few years before any other builders followed the initial actions of these pioneers. In the US, competitors were organized, who initially made cylinder and then paper roll pneumatic organs, following the same path taken by de Kleist. Their actions resulted in North America becoming the bastion of the roll organ.

In Europe, only CB&G and Gavioli attempted to manufacture a roll system, for application to entirely new organs and keyed/keyless cardboard book organs. Their prominent failures, technically and corporately, probably played a role in delaying further development until the 1920s.

Notes

17. *Zeitschrift für Instrumentenbau*, November 21, 1901, 156.
18. In a previous article about Luigi Bacigalupo, the first builder of roll-operated band organs, we surveyed the industry in the period from 1887 to about the onset of the Great War. The material there remains valid, so we will only selectively re-use a minimum of information and refer the reader to that publication. See "Luigi Bacigalupo to Louis Bacigalupi; Inventor of the Paper Roll Organ to Hand Organ Revivalist," COAA ***Carousel Organ***, 40, (July 2009), 8-21, 30-37 and 41, (October 2009), 8-29.
19. de Kleist was the presumable source of the information about the Welte that was given during hearings on tariffs to the House Ways and Means Committee by Warner Miller on January 6, 1897. His statement referenced an imported, $34,000 orchestrion in New York, the time and circumstances fitting Kramer's giant device.
20. imhof & Mukle manufactured a "drawing room" cylinder piano with a crank-operated tune-choice and indication device sometime prior to 1901. The first roll changer was part of a pneumatic zither patent application dated September 3, 1903, by William R. Verstraelen and Christian Alter, which was granted US patent 769,671 on September 6, 1904.

"Notes" continued on page 10 . . .

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For Sale: **Universal Player Piano Rebuilding Book—**now an easy step-by-step procedure to rebuild your player piano. Included are color pictures, places to buy parts, what to look for, and people to help you out. Exploded views of all parts. The right glues to use, diagrams, and the all-important instructions to take you to a fully-completed player piano to be enjoyed for decades to come are included. $49.95 ppd. to US addresses. Please contact for overseas rates. Bob Stanoszak, 17641 Sagamore Road, Walton Hills, Ohio 44146. 330-467-8271

For Sale: **Pair of beautiful female bell ringers** carved by Peter Smiesing of Holland. Mint condition; have been in storage for over 30 years. $4500. email johebra3@insightbb.com for photos. Herb Brabandt 502-425-4263

For Sale: **Bruder Model 79 48-keyless music books**, 27 total. Popular songs: $300.00 takes all. Music book punching unit. Both styles (Round and Square)--make offer. Contact Ron at 815-935-1655 (Illinois).

For Sale: **Prinsen 84 key "Primar" Organ**; This is the last organ built by Mr Prinsen before his retirement. This is your chance to own a genuine Prinsen creation. For more information please see our web page at www.nickelodeonco.com; email nickelodeon@gmail.com or call me, Ron Schmuck at 519 323 3582

In memory of . . . Don Redd

Don Redd of LaRue, Ohio recently passed away. LaRue is not far from Cedar Point Amusement Park which is probably where Don heard and saw his first band organ. Being good with mechanics Don rebuilt a large Wurlitzer band organ. His wife, Norma, always encouraged him with his projects. Don and Norma were a familiar sight with their colorful and good-sounding band organ.

Norma preceded him in death. They are survived by three daughters and one son, all of Marion, Ohio.

Hope Rider

In memory of . . . Jerry Brinkerhoff

Jerry Brinkerhoff of Gobles, Michigan died while enjoying a second hobby of experimental airplanes. His plane crashed on October 6, 2011.

Jerry was a frequent displayer of a Wurlitzer 146 organ at COAA rallies held at the Dutch Village in Holland, Michigan.

He leaves behind one son, Neil. Ron Bopp

In memory of . . . Donna Mackey

Donna Mackey passed away at the age of 79 on April 21, 2012. Donna and her husband, George, had attended many rallies in the past, playing their Pell street organ.

She and George had been married for 46 years. Donna will bemissed.

Nan Flint

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See what we are about!

— For Sale —

"The Three Roses" Street Organ

This organ was built by Nederlands Boekorgel Centrum of Tilburg. The instrument is currently located in New Hampshire and delivery is possible within the US and Canada. The price of this instrument includes a custom made trailer and a large library of music in MIDI format.

Asking; $87,000 US Dollars

Contact: Ed O'Brien
139 Beaver Meadow Rd.
Easton, N.H. 03580

1-603-823-8174 or
mredob@hotmail.com

Disposition:

MIDI system of 56 keys, based on the well-known similar 56-key scale of the famous French organ building company, Limonaire Freres (Paris, France).

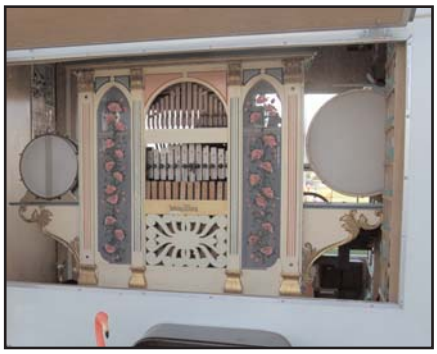
Melody: 23 keys
- Bourdon-celeste (2 ranks)
- Violin 8' (2 ranks)
- Trumpet 8' (1 rank of reed pipes with wooden resonators)

Accompaniment: 12 keys
- Stopped Flute 8' (1 rank)
- Open Cello pipes 8' (1 rank)
- Bass & Trombones of Ground-base 16' (1 rank)
- Superbass 8' (1 rank)
- Trombone 16' (1 rank reed pipes)

Percussion: 6 keys
- Bass Drum; Cymbal; Side Drum; Wood Block; Xylophone (23 notes)
- Tremolo (on Melody)

A video of "The Three Roses" may be seen on youtube at:
www.youtube.com/watch?v=BNvQGM6cBAU

Early Wurlitzer Model 146A Band Organ



This is an early Model 146A *Special Carouselle Organ* manufactured by the Rudolph Wurlitzer Company in North Tonawanda, New York. Approximately 200 of this type were built between 1916 and 1936. Later models sported a more modern case facade.

It was shipped in late April 1924 to the City of Pittsburgh, Pennsylvania for installation on one of three Philadelphia Toboggan Company carousels located in their city parks. The ravages of the Great Depression, vandals, and WWII took their toll and the carousel along with this band organ was sold at auction in September 1945 for $132. After storage for several years it is believed that the carousel and band organ were sold to an individual in Fishkill, New York. Details become sketchy at this point, but the band organ re-appeared in an antique shop in Richmond, Illinois after being purchased at auction. Then a married couple purchased it for their bed & breakfast inn in Richmond. It is hard to imagine how it would fit in with the peace and quiet of a hotel—perhaps that is why they sold it on eBay to the current owner in August 2000.

The trailer in which it is housed was specially built to meet garage door height restraints as well as to allow room inside to fit the organ. The large drive pulley was originally connected by belt to the Merry-Go-Round drive mechanism. The organ is entirely mechanical and can be cranked if necessary to make it play.

Asking Price: $20,000
(As is, where is; near Kalamazoo, MI)

Contact: Stephanie Peters at
brinkerhuf@aol.com

For Sale

27-keyless LeLudion 'Monkey' Organ

1. **Complete with custom stand and 34 books of great music.**
2. **Included also is a motor shelf which allows the organ to be either hand-turned or operated with a little motor (110 volt).**

The price for the complete organ, stand, motor shelf and 34 music books is just $8,750.00.

More information may be obtained at our web site at www.nickelodeonco.com. or email:
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Nickelodeon Co. Ltd, RR#4, 1 Minto Pines Rd, Mount Forest, Ont. Canada, N0G 2L0

Happy Holidays from the COAA Officers and Directors

Clockwise (from the top): Angelo Rulli (President); Charles Wasson (Treasurer); Fred Dahlinger (Director); David Mahr (Director); Ron Bopp (Director); Ted Guillaum (past-President); Wally Venable (Director); Bill Hall (Director); Mary Jo Bopp (Secretary); and Roger Wiegand (Vice-President).

2012 Organ Rally & Meeting Dates

2012 COAA Rally #5	Soulé Steam Fest & Rail Fest Meridian, MS	Ted Guillaum 615-226-5098	November 2-3, 2012 organgrinderted@bellsouth.net


TRUDY