MUSICALLY MADE In New Jersey!

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New Jersey inventors and manufacturers played a prominent role in the early music industry by introducing new audio technology to the masses through mechanical musical instruments and the early phonograph. The burgeoning music publishing business in New York and mechanical music industry in New Jersey were instrumental in meeting the public's demand for musical entertainment. Their combined growth and success drove New Jersey's musical manufacturing. Featured at Morris Museum from June 18 through October 18, 2015, the Guinness-related exhibit, Musically, Made in New Jersey, highlighted the "music makers."

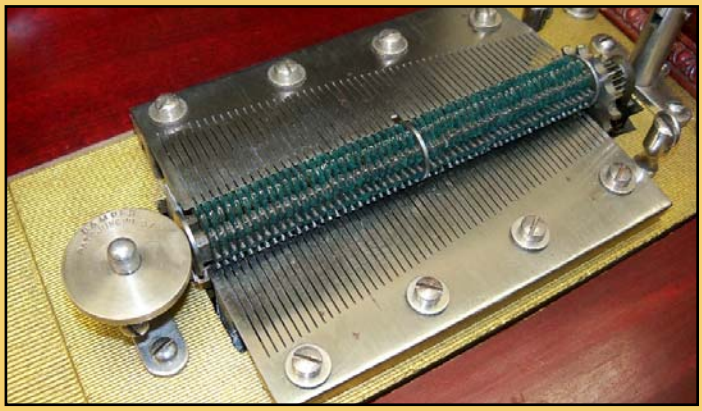
Advertisement for Monarch Music Boxes from *Munsey's Magazine*, December 1896

By 1895, New Jersey had become the musical box manufacturing center for the United States, and there were no less than six manufacturing companies located in Rahway, Jersey City, Bradley Beach, and Hoboken. These companies employed hundreds of workers, and produced several hundred-thousand instruments over a span of 20 years.

It is typically acknowledged that the top three New Jersey manufacturers were The Regina Music Box Company, F.G. Otto & Sons, and The Aeolian Company, and we certainly devoted an appropriate amount of space for their respective objects. But, there were other lesser known companies that were also featured, even if only briefly mentioned, such as the American Music Box Company.

Although we did not have a music box available to display, we chose to include this short-lived New Jersey manufacturer. In 1894, the American Music Box Company was incorporated and financed through stock offerings, and the Board of Directors selected Émile L. Cuendet as president of the firm. The company began manufacturing music boxes in 1896, first in West New York, then Hoboken, NJ.

Cuendet, a Swiss immigrant operated a music box shop in New York, selling goods produced by his family in Ste. Croix. He was also given exclusive rights to sell Monarch and Triumph music boxes. Unfortunately, the combination of financial difficulties and mismanagement—including several patent infringement lawsuits brought against them—resulted in the demise of the American Music Box Company in 1898; the company was dissolved after only two years. Today, the Monarch and Triumph brand music boxes are difficult to find.



Perfection 14" Disc Musical Box , Perfection Music Box Co., Jersey City, 1899-1901, Above: box open, Right: starwheel with felt dampers
On loan courtesy of MBSI (Music Box Society International)

Reflective of the entrepreneurial spirit of the times, three active parties of the fledgling Perfection Music Box Company—Julius Wellner, Theodore J. Gerth and Josef Natterer—set out to enter the popular and profitable coin-operated music machine business. Attributed with a unique design, Perfection music boxes were manufactured from 1898 to 1904, in Jersey City and Newark, respectively. Despite heavy competition from F.G. Otto & Sons in Jersey City and Regina Music Box Company in Rahway, the Perfection Music Box Company offered comparatively inexpensive music boxes for sale.

Julius Wellner was well-known in the industry, and well aware of Regina's propensity for initiating patent infringement lawsuits. Consequently, he devised a method to reduce, or dampen "buzzing" of the teeth of a musical comb by inserting felt within the starwheel. This patented technique using felt dampers was pioneered in all Perfection music boxes.

Today, Perfection music boxes are extremely rare. The lack of utility and longevity of the felt dampers may have resulted in a majority of them being discarded, rather than preserved. Still maintaining ties to Perfection, Wellner moved on to establish a successful and profitable business with coin-operated music boxes. He eventually relocated to Philadelphia where he set up a retail shop and continued building his coin-op and nickelodeon business.

Imperial Symphonion Duplex Disc Musical Box, c. 1900.

One of the principal founders of Symphonion disc music boxes was Paul Lochmann. A factory was established in 1885 in Leipzig, Germany, with Lochmann as director. Under his direction, the growth and success of the company lasted several years, and Symphonion music boxes were sold around the world.

In 1890, two key employees, Gustav A. Brachhausen and Paul Riessner, launched their own firm, Polyphon, followed a short time later by its American subsidiary, The Regina Music Box Company. Despite a competitive marketplace, Symphonion continued to thrive, and a decision was made in 1897 to open an American branch in New Jersey: Symphonion Manufacturing Company.

F. G. Otto Medical Supplies

Left: 15 ½" Olympia Disc Music Box, c. 1898-1900; Right: 15 ½" Crown Disc Musical Box, c. 1900-04
Crown on loan courtesy of Jane George

Capital Music Box, Style A, c. 1895-7 and Capital Music Box, Style C, c. 1895-7

At first, musical mechanisms produced in Germany were shipped to the Bradley Beach factory, and placed inside locally-made cases. Later, it was advertised that mechanisms were manufactured on site although this remains in dispute. Unfortunately, the short-lived factory experienced management difficulties and was not profitable, and the business was dissolved in 1903.

This large *Imperial Symphonion Duplex Disc Musical Box,* c. 1900, simultaneously played two 25–1/4-inch perforated discs. Symphonion promoted their discs as being "indestructible," a claim that was likely true as a heavier gauge metal was used. The musical mechanism was acquired by Murtogh D.Guinness, and, without an original case from which to pattern and construct a new one, this custom cabinet was designed and crafted.

Frederick Gustav Otto established a successful surgical supplies business in New York City in 1853. His sons, Albert, Gustav, and Edmond joined the business in 1875. In 1883, their manufacturing moved to Jersey City, with further expansion in 1887. A manufacturer of surgical, medical, and dental supplies, F.G. Otto incorporated early electrical batteries into devices that were believed to cure a variety of ills in the late 19th century. These early forms of electric shock therapy were, at times, dangerous as some used hazardous chemical substances such as acid and mercury, which also emitted significant amounts of radiation. As seen in the photo, these "shock machines" are relatively small and seemingly innocuous, along with an Otto surgical saw and tooth extractor.

With business booming, F.G. Otto began making cases for the newly-formed Regina Music Box Company in 1892, and started producing their own music boxes in 1893. Attempting to avoid patents owned by the litigious Regina Music Box Company, a

unique patented design was used by Otto. Perforated metal cones, or "cuffs" were placed on a rotating mandrel, and the projections activated a starwheel that, in turn, plucked the teeth of the tuned steel comb.

Aeolian Style 1500, Player Reed Organ, 1896, Meridien, CT.

Capital "cuff" music boxes were the first music box line manufactured by F.G. Otto & Sons, and was offered in several styles, or sizes. The size referred to the number of teeth on the musical comb: the Capital Style A is the smallest, with a comb comprised of 44 teeth while the Style C has 88 teeth. Interesting to observe during the instrument's operation, the unique cone apparatus was not as easy or efficient to store as compared to flat metal discs.

Following the introduction of Capital "cuff" music boxes, F.G. Otto introduced conventional disc music boxes such as the Criterion and the Olympia. Named after Commodore Dewey's Flagship, the USS Olympia, the Olympia disc music box was one of their more popular models. It commemorated the U.S. victory in the Battle of Manila Bay during the Spanish-American War in 1898. Concurrently, the firm capitalized on the Criterion music box to produce a slightly altered mechanism to retailers. F.G. Otto & Sons renamed instruments exclusively for specific music retailers, using unique private labels such as Crown, Euphonia and Sterling music boxes.

The Aeolian Company founder, president, and major stockholder, William B. Tremaine was joined by his son, Harry, in 1892. He took over as General Manager of the company, a position he successfully held for almost forty years. Under his leadership, several subsidiaries were established including Aeolian, Weber Piano, and Pianola Company of Garwood in 1903.

Aeolian is intricately woven into the history of Garwood, which was formerly part of both Cranford and Westfield, NJ. The Garwood Land Improvement Company entered into negotiations with Aeolian in 1899, enticing the company to construct a factory complex along the railroad. The positive result would increase the population and strengthen the local economy. It was even suggested that the new town be named Aeolian.

The factory was built in 1900, including housing for workers, but the town was not named Aeolian after all. In 1903, the new borough retained the name of Garwood in honor of Samuel Garwood, the first president of the Garwood Land Improvement Company.

Aeolian Duo-Art Pianola, c. 1920, Garwood, New Jersey.

Sidelining issues of local politics and economics, as President of Aeolian, Tremaine played a key role that contributed to the popularity and success of the organ and player piano industry in New Jersey. During Aeolian's early period, the main company focus was in the home player reed organ business, and its extensive product line became widely successful. Combined with Tremaine's foresight in purchasing and consolidating three competing firms, this would provide Aeolian with absolute control in supply of all necessary product components and ensure its profitability by opening showrooms in major cities.

While the reed organ pictured here was actually produced in Meridien, Connecticut, prior to the construction of the Garwood manufactory, this organ is representative of smaller organs that were fabricated in the New Jersey factory.

Tremaine was then propelled into the next new industry, and in just a few short years, Aeolian would dominate a healthy portion of the world's desire for in-home player pianos.

The earliest versions of player-pianos consisted of a separate floor-standing console, which would be "rolled up" to a standard keyboard piano, whether an upright or grand piano. A music roll would be inserted, and the piano was pumped using two foot pedals.

Although costly—about $250 between 1905 and 1910—they were immensely popular, and paved the way toward incorporating the player mechanism within the piano itself. A short time later, the player piano, as seen here, was commonplace, and technical advances made it possible for the paper rolls to be encoded with automatic "expressive and dynamic" control. Famous composers and pianists made special excursions to recording studios in New York, London, and Leipzig so that they could play a recording piano, which captured their music for posterity.

Polyphon of Leipzig, Germany, was founded by Gustave Brachhausen and Paul Riessner, formerly of Symphonion. In

Regina Corona Sublima 20 ½" Disc Music Box, 1899, Style 32.

Reginaphone, Style 139, 1909.

1892, Brachhausen left Germany to establish the Regina Music Box Company in Jersey City. Initially, Polyphon mechanisms were shipped to New Jersey where they were placed into locally made cases, circumventing expensive importation tariffs. Moving to its new home in Rahway about a year later, Regina began manufacturing the mechanisms as well.

During its heyday, the Regina Music Box Company was one of the largest producers of disc musical boxes, capturing an 80–90% share of the home market. With the introduction of the autochanger in 1896, viewed as a pre-cursor to the jukebox, Regina further encouraged growth of their business by supplying, servicing and collecting the money from their coin-operated disc players.

A coin-operated machine, this Regina Corona Sublima Style 32 left the Rahway factory in 1899, and automatically changed 20–1/2-inch metal discs. With the drop of a coin, a listener chose one tune using a dial selector on the side of the case. Then, the disc was automatically raised from the storage carriage below to the musical mechanism above.

An early form of jukebox, these musical disc auto-changers were enjoyed by the public in penny arcades, soda fountains, hotel lobbies, restaurants, and other public places.

With the success and popularity of the new 78 r.p.m. disc phonograph, Regina was forced to adapt to market demand. Under license agreement, they utilized Columbia (1899–1901), and later, Victor Phonograph components in order to create a dual musical instrument—a hybrid machine that could play both a music box disc as well as the new 78 r.p.m. record.

An almost endless variety of Reginaphone models and cabinet styles were available. The model featured here boasts a serpentine case with raised cupola lid and unusual faux rosewood finish. Under the musical box is a matching, original base cabinet used for additional music disc storage.

Although not in the category of mechanical musical instruments, it would be remiss of me to not mention New Jersey native, Thomas Alva Edison, in regards to NJ music makers. Creative and innovative, the inventions of Thomas Edison combined business and technology, which contributed to increasing consumerism and the popular culture of music. A prolific inventor, he made his first audio recording at his Menlo Park laboratory, in 1877. Moving to West Orange in 1887, Edison's home and large industrial laboratory was where he improved upon existing technology for the phonograph.

An astute businessman, Edison established methods of manufacturing through mass assembly and marketing.

Edison Standard Phonograph, c. 1908, Thomas Edison, West Orange, NJ; Reginaphone, Style 171, 1908, Regina Music Box Company, Rahway, NJ; Regina Hexaphone, 1917, Regina Music Box Company, Rahway, NJ.

Unfortunate casualties of this technology were mechanical musical instruments, which could not compete with recorded sound. For example, despite rapid expansion of audio technology in the early 20th century, Regina was able to remain in the market only until about 1920, and would never again be a major competitor in the music industry. Wisely, the Regina Company forged forward with a new product line: vacuum cleaners and other small household appliances. The resultant impact of Edison's phonograph influenced the emerging music recording industry, and encouraged the ongoing evolution of how and where society listened to music.

Three early phonographs can be seen in this gallery photograph. Displayed at right in the rear is another example of a 1908 Reginaphone, Style 171, with an impressive wood horn. The Regina Hexaphone, which plays 4-minute cylinder records, was manufactured from 1914–1921. Original records

for the Hexaphone Style 103, pictured at left, show that this instrument left the factory on April 25, 1917. Even though by 1917 the cylinder phonograph had effectively yielded to the new 78 r.p.m. flat disc or record player, the platter-style jukebox mechanism had not yet been invented. The result was that this early form of coin-operated "jukebox," using the tried and true Edison Amberol 4-minute cylinders, had huge market success into the late 1920s.

Featured at center is an Edison Standard Phonograph, c.1908, produced at Edison's lab in West Orange, New Jersey. First manufactured in 1897, the Edison Standard Phonograph played early celluloid cylinders. Customers could purchase marches, ballads, hymns, sound reenactments of events, and more, to listen to at home. However, the drawbacks included the cost and a playing time of just two minutes. Even so, that was to change in only a few years when 4-minute cylinder records were introduced.

In 2017, Morris Museum celebrates the 10th anniversary of the opening of the Murtogh D. Guinness Gallery, a permanent exhibition featuring a world-renown collection of mechanical music instruments and automata. Since November 2007, the museum has enjoyed nearly 1 million on-site visitors, with over 3,000 live instrument demonstrations. A multitude of specially-arranged group visits including demos have been presented to schools, seniors, special needs, collector and enthusiast groups. Related programming presented by the Guinness staff takes place at least 4 times a year, and while this is all quite an impressive feat, we continue with a variety of celebratory events throughout 2017 to commemorate this 10-year anniversary, including a rededication that will take place in December 2017.

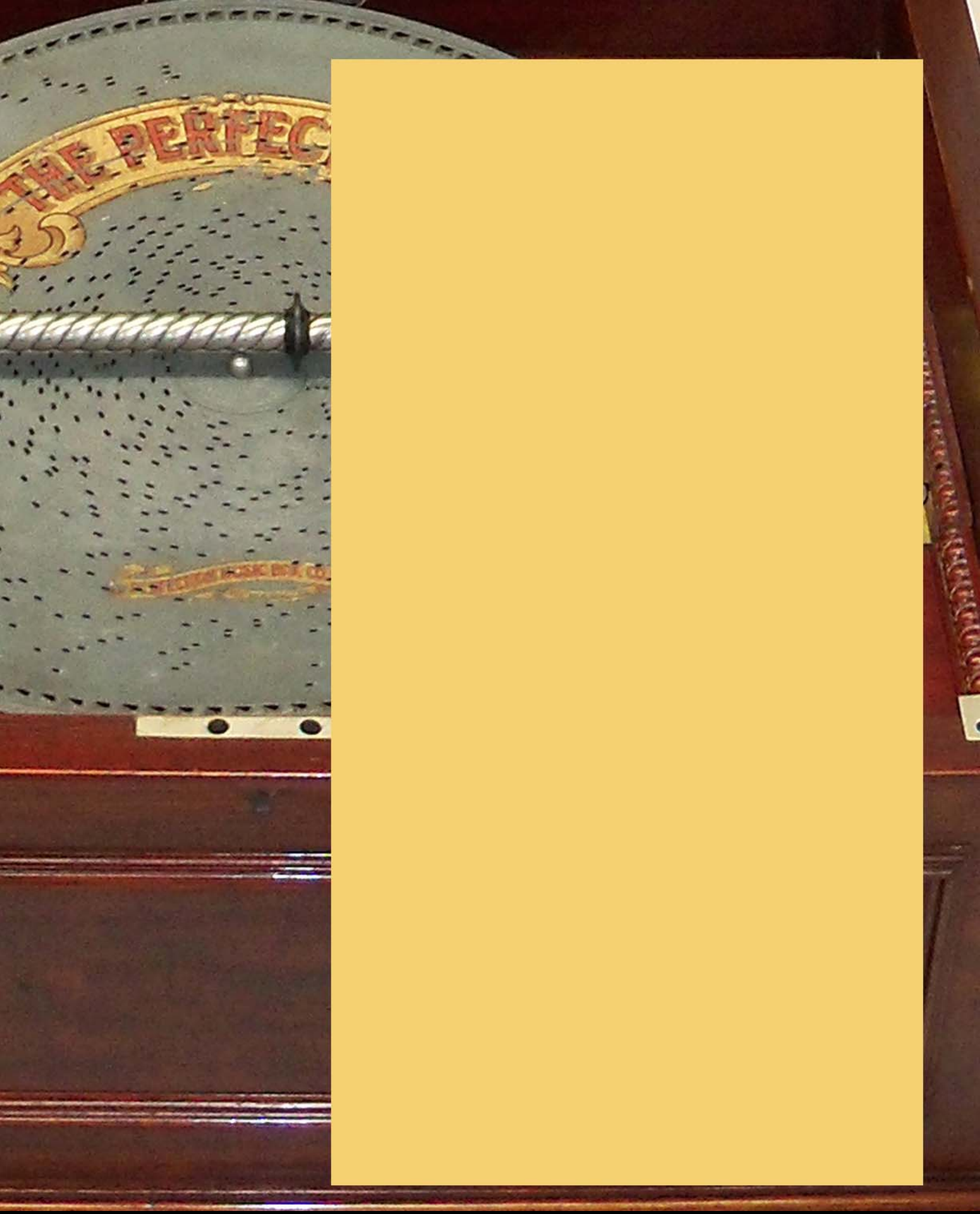
Upcoming events include:

Have a Guinness with Murtogh: Murtogh's Birthday Bash
Sunday, May 7, 2017, 5-8pm
In celebration of Murtogh D. Guinness' birthday, we invite you to join us for refreshments including Guinness Stout on tap, and a special concert of mechanical musical instruments performing selections from his favorite musical genre, Ragtime. Individual automata will also be displayed for those who wish to pledge a gift towards conservation, and of course, there will be cake!
Tickets: $35 per person

Exhibition: Murtogh's Music Room
Thursday, June 15 - Sunday, October 15, 2017
In celebration of the 10th anniversary of the Guinness Collection, we invite you to join us in Hedley Gallery to explore and experience an exhibit featuring some of Murtogh's personal favorites, musical objects that have not been exhibited in over a decade.

Opening Reception & Curator's Tour of Murtogh's Music Room
Thursday, June 15, 2017, 6:00-8pm
Step into Murtogh's music room! Allow us to share some of his favored pieces. Includes light refreshments.
Tickets: $25 per person

Full a complete listing of events, please visit the website:
http://morrismuseum.org/mechanical-musical-instruments-automata/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