

ANTIQUe MUSICAL BOXES

by Stephen Kember



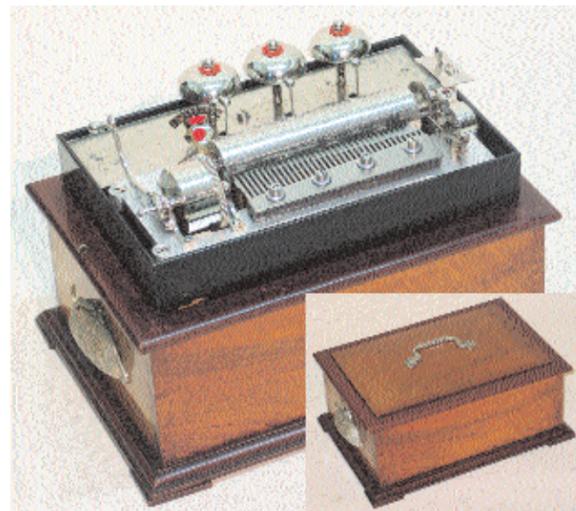
Almost without exception, people smile when they hear a musical box play. Why do we find them so interesting? Perhaps the mood or feeling of an earlier era is recreated. The sound produced by a properly restored musical box is exactly as it would have been when the machine was new, all those years ago. Each one of us has the opportunity to experience the delight and enchantment felt by, say, William Gladstone or Queen Victoria. We can enjoy the entertainment that was so new in that era.

There are two broad categories of musical box: cylinder and disc. Many variations of each type exist. The music is produced by plucking the teeth of a tuned steel comb. The musical information, or code, necessary for the production of the music is provided either by a pinned cylinder (as the cylinder rotates, the pins pluck the teeth of the comb) or by an interchangeable

Left. A disc musical box, 'Mira', Swiss, c.1905. 32 original discs of 12in. diameter. Speed regulator and zither. The drawer at the bottom of the case is designed to hold a selection of discs. This musical box plays with a very bright, distinctive tone.



Cylinder musical box by Lecoultrre Frères of Geneva. The serial number, 13171, dates the box to around 1840. It plays four airs as indicated on the original tune sheet. The case has been veneered with Brazilian rosewood with boxwood stringing. The three control levers are covered by a flap at the left hand end.



Rare and unusual 'Three Bells in Sight' musical box by B.H. Abrahams of St. Croix in Switzerland, c.1905. The musical part could be lifted and rotated to be stored in the case inverted. This was possibly to mimic the Edison phonographs that represented the new technology of the time.



Cylinder musical box by Nicole Frères of Geneva, Switzerland, c.1860.



A 'Twelve Airs, Grand Format' cylinder musical box made by the highly regarded manufacturer, Nicole Frères. Serial number 46334, gamme number 3091, c.1865. The twelve airs, by Rossini, Mendelssohn, Mayerbeer, Batiste, Handel, Mozart and Auber, are played via a massive 23-inch cylinder on two combs (56 and 57 teeth).

flat disc (the projections on the disc rotate star-shaped wheels which pluck the teeth of the comb). The cylinder of a musical box slides on its longitudinal axis to enable more than one tune to be played, each tune occupying one track or position on the cylinder. The tune is varied on a disc machine merely by replacing the disc.

Cylinder boxes are normally associated with Switzerland. In fact the production and export of musical boxes provided a significant contribution to the 19th century Swiss economy. Cylinder boxes were, however, produced in other countries including France and Austria. Early types were often plain and understated. Despite (or because of) the 'cottage industry' manufacturing process, these machines often play with a soft tone that can be much sought after in musical box collecting circles. Towards the latter part of the 19th century, production methods became more sophisticated and mechanised and manufacturers exported a large proportion of their output. Attendance at international trade exhibitions gave an idea of what overseas buyers wanted. Competition drove manufacturers to

supply boxes with ever more elaborate cases and familiar tunes. Brazilian rosewood veneered cases were popular in Britain and Europe, whilst oak found favour in America.

Cylinder boxes have certain obvious limitations. The limited number of say six, eight or twelve tunes would, perhaps, leave the owner wanting more variety after a while. Interchangeable cylinder musical boxes were expensive and quite cumbersome to use. A German company, Symphonion, solved this problem and produced the first commercially available disc musical boxes in the late 1880s. The choice of music was



A Swiss cylinder musical box by Ami Rivenc of Geneva, number 39208, c.1890, playing ten airs as indicated on original tune sheet. Cylinder length 9 1/2 in., case 19 1/2 in. x 11 1/2 in. x 16 1/2 in.



'Three Bells in Sight' cylinder musical box playing eight airs as indicated on original tune sheet, c.1890. Tunes include 'Little Annie Rooney', 'Mikado Waltz', 'Ask a Policeman' and 'Where did you get that hat?'. Cylinder 6in. long, case 17in. x 10½in. x 8½in.

potentially unlimited. This extremely robust design was louder and cheaper to produce than the delicate cylinder equivalent. Coin-operated machines were produced so that they could earn their keep. The manufacturers could keep producing discs as new songs became popular. Symphonion soon faced competition from another German manufacturer, Polyphon. Polyphon, based in Leipzig, became so successful that the name has passed into the English language to be used as the generic term for a disc musical box (just like Hoover/vacuum cleaner and Thermos/vacuum flask). As these items were highly sought after many other manufacturers entered the ring. These included Adler, Britannia, Euphonion, Fortuna, Kalliope, Komet, Mira, Orphenion and Stella.

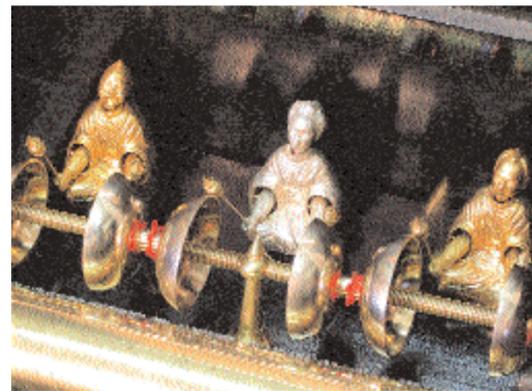
The musical box industry began to decline as new forms of home entertainment became available. The phonograph

and the wireless turned musical boxes into redundant technology that people stored in the outhouse or attic. Items once cherished were left to the ravages of damp and time. Manufacturers then used the engineering skills and experience gained whilst making musical boxes to produce other things (phonographs, cameras, typewriters etc). The musical box industry all but died.

Happily, the once discarded technology has now embarked on a new era of popularity. The restoration techniques that have been developed over the past 40 years or so have enabled musical boxes to be resurrected, enabling us to gain an intriguing insight into the world of 19th century entertainment.

Types of disc musical box

Bells Bells were sometimes added to what would appear to be a standard disc musical box. The bells could be saucer- or cup-shaped bells, tubular bells or glockenspiel (flat bar) bells.



A cylinder musical box attributed to George Bendon, c.1895. The six bells are struck by three automaton figures representing Japanese gentlemen. An example of how the musical box industry was trying to adapt to current fashions and changing tastes.

Auto change As the first 'juke box', this type of mechanism was most likely to be found on machines to be used in a public space (bar etc). Obviously complicated and expensive, this variation is mostly found on Polyphons. The tunes could be selected from a rack of vertically stored discs.

Multiple disc Disc machines playing more than one disc at a time allowed the musical arrangers a whole new set of weapons to add to their armoury. Symphonion were one such company producing machines capable of playing two or three discs simultaneously. The Eroica is one such example. A set of three discs, marked A, B and C, were needed.

Clocks Many disc musical boxes had small clocks incorporated into the pediment but Symphonion and Polyphon both collaborated with Lenzkirch to produce large hall clocks of very distinctive form. Symphonion also produced small mantel clocks using 4½-inch discs.

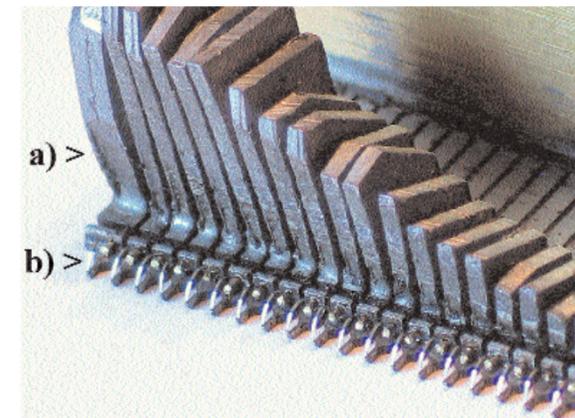
Disc phonographs By the early 1900s, the disc musical box era was coming to an end. Some manufacturers produced disc musical boxes capable of playing gramophone discs (powered by the same motor). Although comparatively rare, many of the major disc musical box producers made examples of these combination machines called Polygraphon, Reginaphone and Miraphone.



Coin-operated 'Symphonion', c.1900. Built to be used in any location where large numbers of people would gather.

Below. Disc musical box by Kalliope, Leipzig, Germany, c.1900, playing 9½in. discs.

Below. This illustration shows a musical box comb removed from the mechanism and inverted. a) points to the lead tuning weights that are attached to the longest teeth. These are the low notes. The manufacturer of the musical box attached these pieces of lead to the teeth to increase the mass of the tooth and therefore lower the tooth's natural frequency. The tooth could be tuned (remove lead and raise the note) during the final stages of manufacture. This is when the engineering stops and the artistry begins. b) points to the delicate dampers (the curved pieces of wire) that must be correctly adjusted to ensure a clear sound.





A large disc musical box by Orphenion, Germany, c.1895, in a high quality walnut case.

Types of cylinder musical box

Bells in Sight (or Vue) The first cylinder musical boxes to be offered with bells had them concealed underneath the mechanism, in the bottom of the case. The bells are struck by a hammer attached directly to the underside of the comb tooth. Some manufacturers offered the option of a drum (an up-turned tin!) struck in the same way. It was soon realised that a feature could be made of these options if the bells were placed where they could be seen. The upturned tin was replaced with a properly skinned drum, castanets (wooden block) followed. The use of highly polished, sometimes nickel-plated, bells and other accessories were used as a marketing feature. Bell hammers cast in the form of butterflies or bees added further to the appeal. Some bell-striking mechanisms were designed in the form of automaton monkeys, Arabs or Japanese figures whose arms moved to strike the bells (some heads moved towards the bell about to be struck).

Mandoline (Organocleide) The distinctive sound produced by a Mandoline musical box is made by a comb that has groups of teeth (five to eight) tuned to the same pitch. A mandoline box is easily identifiable, as apart from the fact that this feature was distinctly marked on the tune sheet, the pinning produces distinctive patterns at the treble end of the cylinder. The similarly tuned teeth are plucked in quick succession to

give the mandoline effect. Laws of nature will not allow a single tooth to be used in this way (musical box teeth need to be damped, i.e. vibration reduced, before being plucked to ensure a clean sound). This facility gave the musical arrangers the option of enhancing the music in a distinctive way. The Organocleide musical box was a development of the above in that the mandoline pinning is extended to the bass end of the cylinder. Organocleide musical boxes are very rare.

Interchangeable cylinders This development came about around 1850. The first machines of this type were supplied with a series of spare cylinders that could only be used with that particular machine. The manufacturing processes were refined to such an extent that, with later machines, extra cylinders could be bought when required and would fit different musical boxes if built to the same specification (type specific). The cases of these machines also became more elaborate and were incorporated into tables, often of large proportion.

Pianoforte The music of a pianoforte box is produced from two combs, one loud and one soft. This gave the musical arranger the option of having soft passages of music from the short comb, louder sections from the long 'forte' comb and the loudest of all, when the two combs are played together. These are much sought after and rare.

Overture Nicole Frères is the manufacturer usually associated with this musical box feature. These machines are normally recognisable from the large diameter cylinder and play three or four operatic overtures. The mechanisms were often supplied in highly decorated cases. The machines are not to be confused with the less sought-after 'two per turn' musical box. These machines, at first glance, look similar, but play twelve tunes, two tunes for each revolution of the cylinder.



A superior quality cylinder musical box by B.A. Bremond of Geneva, c.1885, playing eight airs as listed on original tune sheet. Serial number 23453, gamme number 1598. Burr walnut case with boxwood stringing and tulipwood crossbanding, 21 1/2 in. x 9 in. x 6 in.

Musical box music

Musical box manufacturers clearly had to sell the musical boxes that they produced. Consequently the choice of music had to be what was popular with the customers. Current opera and dance tunes would have obvious appeal. A market also existed for hymns, national anthems and local folk music.

The more sophisticated, business-minded musical box manufacturers such as Nicole Frères, were more ready to adapt themselves to the market and advertised extensively in Britain. Many of the tunes found on Nicole Frères' boxes had special appeal to the British and this was no accident. Other boxes can be found which play a selection of tunes clearly destined for the Scottish market. In the mid-19th century much of the top end of the business consisted of well-engineered musical boxes playing overtures from operas. Popular composers include Auber, Bellini, Bizet, Donizetti, Flotow (The Last Rose of Summer), Rossini, Strauss, Gilbert and Sullivan, and Verdi.

By the time the 20th century had arrived, musical boxes were produced in large quantities, often playing popular music hall tunes, Spanish folk music (for the Spanish/South American market), Indian or Chinese music.

What to look for when buying a musical box

Condition is a major consideration when choosing a musical box and assessing its value. Torn or missing tune sheets, lifting veneers or cases damaged by woodworm are some of the more obvious defects that hardly need further comment. The musical mechanism, however, needs careful scrutiny.

The cylinder

Careful inspection will reveal any bent pins. The bass end or any sections that drive accessories (bells, drums, etc) are especially vulnerable. An excessive number of damaged pins will impair the music and repinning the whole cylinder is the solution!

The comb

Look for excessive pitting to the surface of the comb, missing teeth and tips and badly repaired sections. Look underneath the zither (the gantry suspended above the comb that supports a roll of tissue paper) if fitted, it may conceal damage. Corroded tuning weights (suspended beneath the comb) will be indicated by a fine white deposit around the affected area.



A Swiss cylinder musical box with three bells playing six airs (Strauss, Offenbach, etc.) as indicated on original tune sheet. The cylinder is 8 1/2 in. diameter and the case is 19 in. x 12 in. x 9 1/2 in.

The dampers

Should a whisper, click or grating noise be heard whilst playing, a worn comb or dampers that are out of alignment or missing will be the likely cause. Dampers are small pieces of fine wire fixed to the underside of a comb that curl up to meet the comb tip. In the case of a disc box, the damper, in the form of a delicate leaf spring, will emerge from between the tips of the comb. This spring is often in two parts. The second part forms a brake that will ensure that the star wheel will stop in the correct position next time it is required.

In conclusion

Listen to and observe as many musical boxes as possible before making a commitment. When comparing prices, remember to make a realistic allowance for restoration to ensure that you compare like with like. A machine that has not been used for many years will not perform as the original manufacturer intended. All machines needs a degree of maintenance. Patina is a wonderful thing on a musical box case or a special piece of furniture but not in the form of congealed oil and grease on an antique piece of machinery.

Protect yourself with experience.

Stephen Kember is a specialist dealer in antique cylinder and disc musical boxes in Tunbridge Wells, Kent.