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The Music Box

An International Journal of Mechanical Music

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The Journal of the Musical Box Society of Great Britain

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From the Editors' Desk

Welcome to the 50th Anniversary year – details of the Society's celebrations appear elsewhere in the Journal and I hope that you have planned to join in with others to take advantage of the opportunities offered.

First of all let us welcome our new Vice President. Bob Yates may not be well known to some of you but he will be at the celebration in March, so there is a chance you will meet him there. He has been president of the MBSI (our American cousins) twice. He has been a member of our Society for many years. He has arranged many group tours for American visitors to enjoy mechanical music collections in Britain. Indeed, 'The Flying Pig' tours will be visiting venues all over the country as well as being at the Kent meeting. Bob certainly fosters harmonious connections between our two sister societies and we welcome him warmly. Perhaps one day he may be persuaded to give one of his famous slide shows!

You will not be unaware of the forthcoming imminent publication of The Disc Box book and we are printing the Author's side of the story in this issue. In the next one we will have an independent review of the book, which is very favourable, and should encourage you to purchase a copy, if you have not already done so. Congratulations to Kevin McElhone as author, Paul Bellamy, David Worrall and Ted Brown as the active publications committee team.

It was with great sadness that we learned of the recent closing of two musically related museums. The Reed Organ Museum run by the Flukes has now closed and the instruments removed. It will be much missed by enthusiasts. In addition, the Mechanical Music and Doll collection in Portfield, Chichester, run by the Jones family, has confirmed that it will no longer open to the public.

In this issue we have an article on the (nearly) lost case of a Nicole box – strange things happen in some Auction Rooms! I remember once at one of the London sale rooms spotting a box of a rare size of hand-painted magic lantern slides. I sidled up to David to point them out and he indicated a 'junk' pile of magic lanterns under a table. There amongst them was the very rare lantern that went with the slides. Fortunately we were able to purchase both lots and re-unite them. You really do have to view sales carefully and even think laterally!

Don Busby continues to build his musical box, and has taken as much care to answer the safety issues raised as he has to make the necessary calculations to recreate the technology of the makers of yore. Nevertheless, I would be remiss if I did not issue a word of caution. Over here on the advertisements for the lottery, the slogan 'Know your limit: play within it!' appears. Perhaps this may be amended to 'Know your limit: work within it!' Please keep safe in your workshops.

A huge thank you to all our contributors and apologies to those whose articles have had to be held over to the next issue.

May we take this opportunity to wish you all a happy and successful Anniversary year in 2012.

Front cover illustration:

A fine and unusual musical clock picture - see the article on page 176

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OFFICERS OF THE M.B.S.G.B. AND THEIR DUTIES

President: **Arthur Cunliffe**
MBSGB, P O Box 373, AL6 0WY E-mail: adcunliffe@btinternet.com

Joint Vice President: **Paul Bellamy**
46 Longfield Avenue, High Halstow, Nr. Rochester. Kent ME3 8TA
Tel: 01634 252079 E-mail: bellamypaul@btinternet.com

Joint Vice President: **Robert Yates**
901 Glenshaw Avenue, Glenshaw, Pennsylvania PA 15116 USA
E-mail: rsublima@juno.com

Treasurer & Subscriptions Secretary: **Kath Turner**
36 Lime Kiln Lane, Lilleshall, Newport, Shropshire TF10 9EZ
Tel: 01952 608114. E-mail: antiquekate@hotmail.com
To whom all subscriptions enquiries should be addressed.

Membership Secretary: **Kevin McElhone**
MBSGB, POBox 373, Welwyn AL6 0WY
Tel: 01536 726759 E-mail: kevin_mcelhone@btinternet.com
To whom all applications and queries relating to new membership should be addressed

Webmaster: **Robert Ducat-Brown**
MBSGB, P O Box 373, Welwyn AL6 0WY
Tel: 01438 712585 E-mail: robert.ducat-brown@virgin.net

Correspondence Secretary: **Nicholas Simons**
MBSGB, P O Box 373, Welwyn AL6 0WY
Tel: 01332 760576 E-mail: njas@btinternet.com
To whom all general correspondence should be sent

Meetings Secretary: **Daphne Ladell**
The Hollies, Box Hill Road, Tadworth, Surrey KT20 7LA
Tel: 01737 843644 E-mail: daphne.ladell@btinternet.com

Acting Recording Secretary: **Paul Bellamy**
46 Longfield Avenue, High Halstow, Rochester ME3 8TA
Tel: 01634 252079. E-mail: bellamypaul@btinternet.com

Editors: **David & Lesley Evans**
P O Box 3088 Revelstoke BC, V0E 2S0, Canada.
Tel/Fax: 001 250 837 5250 E-mail: mechmusicmuseum@aol.com

Archivist: **Alison Biden**
MBSGB, P O Box 373, Welwyn AL6 0WY
Tel: 01962 861350 E-mail: ali_biden@hotmail.com

Auction Organiser: **John Ward** (asst **John Farmer**)
Tel: 01217 437980 E-mail: wardjohnlawrence@aol.com

Advertising Secretary: **Ted Brown**
The Old School, Guildford Road, Bucks Green, Horsham, West Sussex RH12 3JP
Tel: 01403 823533

Committee members:
David Worrall M.B.E.: Tel: 01962 882269 E-mail: worrall@ercall87.freeserve.co.uk

John Farmer.: 8 The Lea, Kidderminster, Worcester DY11 6JY
Tel: 01562 741108 E-mail: john@musicanic.com

For your further information:

Publication Sub-Committee: (Non Journal)
Paul Bellamy, Ted Brown, David Worrall
See above for contact details

Website: www.mbsgb.org.uk E-mail: mail@mbsgb.org.uk

President's Message No. 23

Welcome to our 50th year! Was it really all those years ago when Cyril de Vere Green, Robert Burnett and others first founded our Society? I believe that only two of those founder members are still with us today. Fortunately both are in good health and can recall those days with clarity and enthusiasm.

Looking back at the early days the interests of members seemed to be toward disc musical boxes with cylinder boxes taking a secondary place. Chamber organs and singing bird boxes were also mentioned but the humble organette seems not to have been highly regarded at all.

It is rather strange that 50 years on, our latest book so ably written by Kevin McElhone, should be about Disc Boxes. Now we can read about no less than 1,600 of these instruments rather than the 10 or so that were appreciated in those early days.

The first fifteen to twenty years of our existence was the time when interest grew rapidly with our membership reaching about the 500 mark. There were plenty of musical boxes around which were largely affordable, so new members had little difficulty in starting a collection. Right from the start there were those who decided to make their living from dealing in mechanical music. There were at least two dealer members in London who took a great deal of trouble to advise and instruct new members on starting a collection. They had the preservation and survival of mechanical music at heart. Members were always welcome in their shops, allowed to browse, and often plied with refreshments. If times were particularly hard, one certain dealer would regularly reserve a box and allow the purchaser to save up for their acquisition month by month. No discount, but a helping hand to allow one to own a really decent box.

Gradually times began to change. No longer could one find a pile of 15 or 20 musical boxes stacked behind a shop door awaiting dispatch in a container to some far off place. No more the 3 bell box used as a door stop. Harder times had come to stay!

Steadily through the meetings and the journal the Society began to advance and improve our knowledge of mechanical music. We can look back now and sometimes be a little critical of some aspects of the advice given but the intention was always honest. Once it was thought possible to clean and polish a cylinder without removing it from the bedplate! The use of a fine brass wire suede shoe brush to clean pitted spots on a cylinder was acceptable. Please remember these were early days and now our skills and techniques are much better.

The Society has attracted many "colourful" characters over the years. A certain generation will remember a member from Scotland whose presence at meetings could never be denied. He was always the life and soul of the party and was renowned for providing every table at the banquet with a bottle of the finest Scotch whisky. He also produced a loose leaf pamphlet "The Haggis Bashers" from time to time which was sent round with the journal. Needless to say it reflected the lighter side of Society life, but was enormous fun while it lasted.

Among our members have been illusionists, comedians, entertainers and fire eaters. Musicians of every type from an orchestral conductor to a virtuoso on the musical saw have provided us with memorable occasions. We have also been fortunate in having been able to listen to some first class performances and talks from top rate artists who were able to demonstrate the skills of the musical arrangers of past times. The name of the late Freddy Hill springs to mind in this respect. Those lucky enough to attend his talks on small chamber organs or his renditions using a recorder to play original music for Bird Organs will testify to his ability.

As some of our members got older, there began a period when some collections were gifted either to a museum or to a national institution. This I believe was in the mistaken belief that the collection would be left for posterity for all to enjoy. Unfortunately, nothing could be further from the truth. In the majority of cases the exhibits have been put away into long term storage or brought out infrequently with instructions that they were not to be played as that would wear them out. Lack of use and proper maintenance will quickly ensure that these boxes have sounded their final air and will never delight any ear again!

The Society has obtained copyright and also the rights to reproduce articles from a number of world-wide experts. Arthur WJG Ord-Hume has joined this company by granting Rights to Reproduce (limited of course by the specific conditions laid down and granted). I would like to take this opportunity of thanking Arthur for his gracious support and I can assure him that the membership recognises and appreciates the sterling work he has done over the years.

None of us know what will happen to the Society during the next 50 years. I hope that it will survive and that someone then will look back at our efforts to celebrate our first 50 years. I am sure if enough people in the future are given the opportunity to listen to the magical sound of the Victorian musical box, there will be many people who will succumb to their lure just as we did some years ago. They too may wish to become part of a society devoted to their survival. In the meantime, please do all that you can to ensure that mechanical music in all its varied ways lasts into the future and that you too remain a member of this wonderful Society.

Arthur Cunliffe

This That and T'Other No: 7

When I first saw both items to do with this article, my initial reaction was, "You are having me on!" Never in all the years I have been associated with the world of mechanical music, have I ever seen anything like these two boxes.

Through the work on the Register, I knew that boxes were made for the Chinese market and occasionally, I have had the opportunity to listen to the music that is pinned on such boxes. To see a case covered with Chinese painting and art work came as a complete surprise. Then to realise that the whole case was covered with writings and decorations of such a high standard, including the inside of the lid, was even more staggering. Unfortunately, there has not been an opportunity to listen to this box, so musically I know not what it plays.

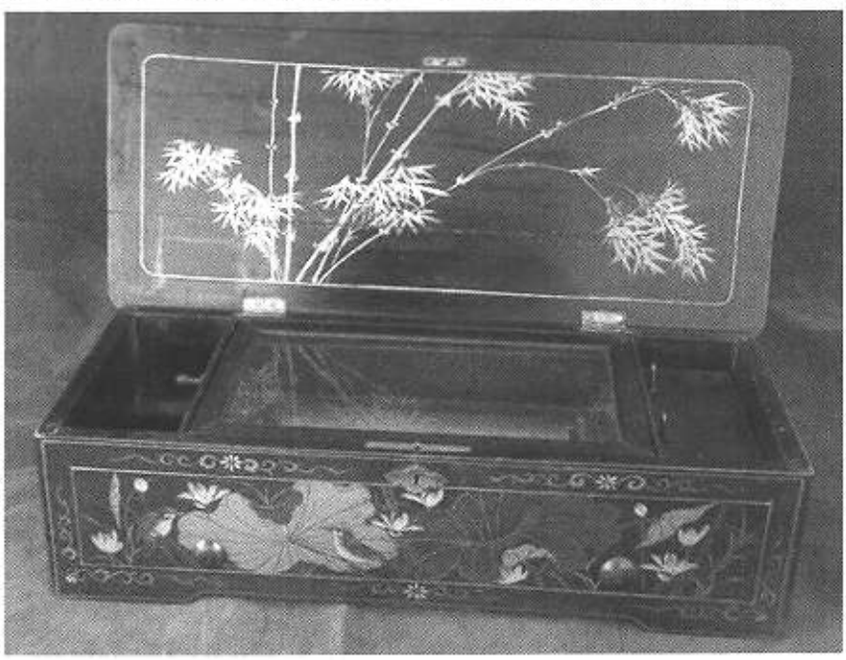
One has to presume that the case was made especially for the Chinese market and it may have been a special order. It is true that the writing has been placed on the rear panel only, but why so much writing? It must be saying much more than "Happy Birthday!" I am hoping that there will be someone in the big wide world who will be able to translate this writing. If so, everything may become clearer. To anyone reading this article, who understands the Chinese language, please let me know what it says!

We must assume that this box was made for a rich Chinese individual and may have been a present for a special occasion. I wonder if it ever reached China and somehow in the mists of time it has found its way back. Who in the western world would know how to draw those Chinese letters so painstakingly? Of course there is the chance that the box may have been exported with a normal case and later decorated in China. That I believe is the most likely thing to have happened. The only known thing is that the box was offered for sale in an auction in England in December 2011. We are indebted to The Burnt Common Auction Rooms in Woking, Surrey, for pictures of this box and their kind permission to publish them.

If any member of the Society was present at that auction and saw the box please contact me by email. Even better, if by any chance you bought the box please, send me more details!

The second box to be featured is what at first glance appears to be a standard forte piano box of the key wind period. When the owner described it as being "wrong way round" I was at first very puzzled. It was only when the photographs turned up that the description began to make sense.

An initial study of the box shows that it was a key wind box that had been modified to lever wind. The name Moulinie Aine stamped on the bedplate gave us the clue that it was made by Langdorff for them



as agents. Then more and more interesting facts began to show up the like of which I had not encountered before.

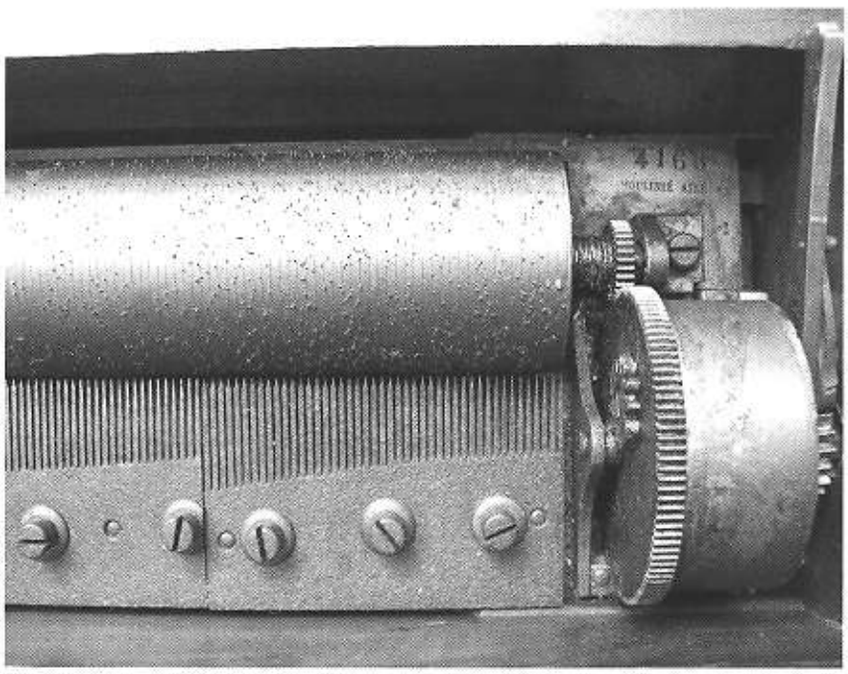
The case is much older than the movement as it does not have a drop flap. The case holes do not line up as they should and the adapted lever does not fit the case well being too large. As the lever would not fit, snugly in the case the lid seems to have been abandoned altogether.

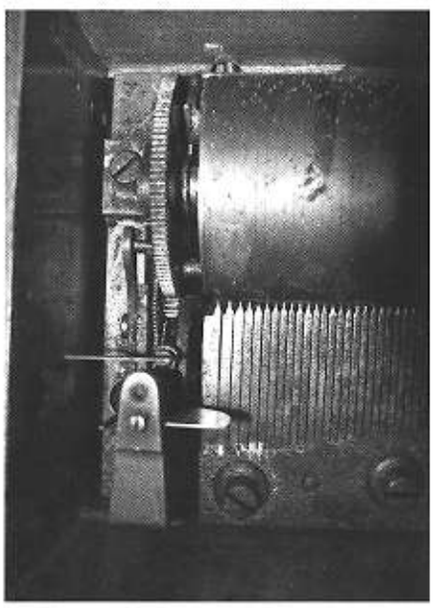
The movement provides the most challenges in that the spring barrel and winding is on the right hand side with the governor at the left. I wondered if the bedplate had been turned upside down with everything else being put in a "new" position. Reason quickly returned. The stamping of the name and serial number is just as it should be. The governor layout has been properly modified to have the stop/start detent on the other side of the governor block. The bedplate has the cut out to take the leads of the bass teeth properly made but seemingly in the wrong place.

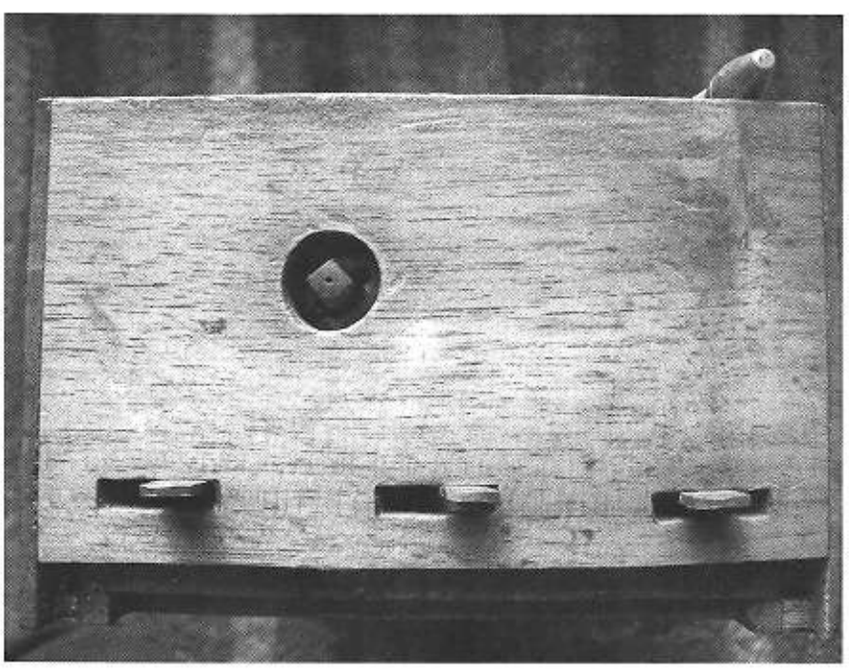
The serial number 4168 is only 3 numbers away from a forte piano Moulinie Aine box (4171) that is on the Register, but that is laid out as a traditional box with the spring at the left hand side. This information does give us sufficient information to know that both boxes were made in 1848. There will be a lot of work to do on this box as the rust on the comb is peeping through shyly in places and brazenly in others but I know restoration is in hand. I hope that in the end the box can be brought back to life again.

I am not going to attempt to say what has happened here, but I am certainly looking forward to reading your views in the journal.

Arthur Cunliffe







Chanctonbury Ring Christmas Meeting 26th November 2011

By Alan K Clark

Yet again Ted and Kay had a full house for our latest Christmas Meeting held at the Old School Bucks Green. Ted had arranged the next Chanctonbury Ring meeting for the last Sunday in March, (25/03/2012). The meeting started with the first, but not the last, playing of Jingle Bells on Ted's musical card which is operated by a broad moulded rubber band with projections to pluck the wire teeth. Daphne then demonstrated just a few of the various versions of Silent Night which have been written over the years. We heard it played on a 15½" Polyphon, Helvetia, and what was nowadays claimed to be the most performed version, played on a computer. Ted then showed us a selection of musical drink pourers and demonstrated how the simple start-stop mechanism worked on one he had taken apart.

Following these items we then moved on to more serious music played on two snuff boxes owned by one of our members. The first was by H Lecoutre and played two unusually long tunes. The composition case was considered to date to the 1830's and had an impressed scene of a farmyard on the lid. Our second treat was to listen to the music from a snuff box by F Nicole, 31,000 series, contained in a tortoiseshell case with domed lid. Paul Bellamy then described the problems of buying large manivels, (or any manivels for that matter) where the combs can not be examined before purchase. The first one played six tunes one after another from a large diameter cylinder, it should have had 42 teeth, but was left with only 20 as purchased. The second one had 18 teeth broken. Paul described the problems of making new teeth and gluing them in with Araldite, and with the rather more difficult task of working out the tuning of the missing teeth.

Ted then showed a member's box which had been obtained from the USA. This early forte piano movement (serial numbered 4168) was contained in an early style case with the three control levers protruding from one end. This case had never had a lid fitted, as there were no holes for the hinges, or signs of remains of external wire loop hinges. There was a name Moulinie Aine on the bedplate, but he was considered to be an agent. This was a very early example of a two comb forte piano movement, and it raised various questions as to what the case had originally been fitted into. The morning continued with Kevin playing Santa Claus is Coming to Town, and White Christmas on the Orchestrelle. We also had a good comparison of the different tones of the 15½" Polyphon and Regina machines playing Silent Night, as arranged on Polyphon and Regina discs.

Gordon then played us some birdsong from his very finely enamelled singing bird box. This was followed by Ted's very amusing description, and demonstration of two original Speaking Books. The workings were described and shown to us, plus we had fun listening to their makers' best attempts at imitating the sounds of the animals portrayed on the pictures within the books. Following an excellent lunch provided by Ted and Kay the afternoon got off to our usual Christmas fare of musical novelties, followed by Norman demonstrating his Wittmann & Niemeczek organ. This beautiful sounding pipe organ would play paper rolls with 20, 26 or 28 note widths. All three formats were demonstrated with a range of different musical styles. Next we were treated to music played on four different small early cylinder boxes. The first two were Terry's, one having exposed control levers, and the improbably low serial number of 136, playing six airs, and the second one with 80 teeth plucked by an 8¼" inch cylinder. These were followed by two of Ted's favourite boxes, one by Rzebitschek, which despite is small diameter cylinder played for 1min 40 secs, and then his delightful Alibert box. Following a not very successful attempt at some tune identification for Alison we continued with Kevin playing the 1879 Mechanical Orguinette using rolls cut from plastic sheet to copy some paper ones cut in the 1990's by Walter Moore of Dallas. We then had a very interesting comparison of the different types of music that can be played on the Orchestrelle, as Ted chose to play for us some Beethoven, followed by a very lively version of Charmaine. This high quality music was quickly followed by our usual Christmas meeting descent into the realm of musical novelties comprising carousel horses with lights, quacky penguins, musical dogs, walking snowmen, etc.

Following the afternoon tea many of the members stayed to be delighted by a lantern slide show ably put on by Terry and Ros. The topics were Winter and Christmas, with the normal slides being interspersed with animated humorous ones. The Christmas effect was made more magical when, directly on cue, Ted played Silent Night on the Orchestrelle which just happened to be right behind where Terry had positioned the screen.

Our thanks go to Ted and Kay, and all those who contributed to the success of the day by taking instruments, and helping with the running of the meeting.

Essex Group Meeting – 22 October 2011

from Don Busby

We were pleased to welcome Merry Bellamy and new member Michael Young to this eleventh group meeting. Twenty-one came to Hullbridge for yet another interesting programme arranged by Bruce Allen.

The day started with Kevin McElhone displaying a Regina disc player housed in a highly polished case with curved sides. The lid is mahogany but the carcase is of unknown wood, decoratively grained to match the lid. Kevin explained how makers offered discs with their name within the tune title; the first which he played being "Polyphon Mazurka". This was followed by seven further airs supplied on new discs by HensTooth of America who offer a range of a hundred or so tunes. Kevin pointed out that the arranger of a tune can affect opinion about the quality of an instrument on which it is played.

Paul Bellamy demonstrated two automata. The first was based on a 20-note toy Faventia barrel piano with tuned steel rods, by Vincent Llinares of Barcelona. It is a very loud instrument for its size and never needs tuning. At auction, it played all of the notes in the right order but the result was a 'Les Dawson' experience (the piano-playing comedian noted for playing all the right notes but not in the right order!), four rods were out of tune for unknown reasons. Thus 4 replacement silver steel rods were cut just over-length, flame hardened, water quenched then tempered in a lead bath. Tuning was by grinding the free end of each rod. The fixed end of the rod is a tight fit in its cast steel base screwed to the soundboard. Here it is tapered about ½ inch from its end, a feature that lets

Paul Bellamy's 'Piglet' Symphonionorgan

the rod 'ring'. The cart did not have a monkey box, thus one was made to sit between cart handles. The box has a shaft so that the original handle (now fitted with a pulley) could be belt driven from the rear of the piano. The whole mechanism is fixed down to a baize covered wooden base. The scratch-built organ grinder comprises a box for head and another for the body, profiled for facial features, etc. His hand is pivoted on the piano's handle and as the handle rotates, it oscillates a shaft that passes through the body at the shoulder. The shaft operates a mechanical stepping drive to shake the other arm, which holds the money tin, about every tenth turn of the handle. Similarly, another step drive opens the mouth and raises one eyebrow. A direct link from the shaft swings the eyes left and right at each turn. The monkey automaton, shaft-and-belt-driven, is mounted on a platform painted to match the piano. He is a dissected 'Beany Bag' toy with tubular card insert. The innards of the head are wood, mounted on a dowel. As the input shaft rotates, a cam lifts the dowel to raise the head. A lever mounted on the side of the cam engages one on the dowel to turn the head as it rises. A spring causes the head to snap back. The monkey's arm waves to the children, a simple link connecting it to a wheel on the input shaft. In comparison, Paul showed an early Symphonion disc box with an automaton scene of dancing pigs. Its drive was a pinned wooden wheel that sits on the music disc. As the wheel rotates, its pins lift and drop a lever. The lever connects with another, which in turn has threads attached to the pigs, causing them to dance.

Finally, Paul showed two similar sized late musical boxes of about the same date, to demonstrate that one can get a great deal of musical satisfaction at relatively low cost. One was a cylinder movement with excellent arrangements, the other a disc movement. The cylinder box case had to be completely re-scumbled, showing that it is basically a simple task when applied with a little experience. The other box had fine figured walnut veneers but a badly damaged lithograph transfer to the lid. It was restored using silver and gold pens and art paint.

Terry Longhurst played the first cylinder box he owned, a 3-bell, 6-hymn box left to him by his mother some 30 years ago. It was made by Ami Rivenc about 1889 (serial no. 37308) and has an optional zither which it was generally agreed by those present added nothing to the music! Operating instructions from the original supplier, Campbell & Co. of Glasgow, have survived with the box. Then Terry played several items from a "fat" cylinder, key-

wound oratorio box by Nicole Frères (serial no. 35902) made around 1858. This box plays 12 tunes at two per turn and includes pieces from Handel's Messiah and Haydn's Creation. The lid is well decorated and appears to have a hard stone lozenge. This is more likely to be of wax or printed cardboard and great care should be taken in cleaning.

A Nicole sacred air lever-wind cylinder box which Alan Clark had purchased recently was described as having all its bass teeth stuck together by grease and dirt, the cylinder needing partial re-pinning and the case being dirty with damaged lid veneering. He has corrected these defects and we listened to its four very nice sounding airs.

Before a break for lunch, Daphne Ladell tabled her Stella 9" disc box with its double comb. The movement is contained in a highly polished walnut case with a side handle for winding and a bottom drawer for storing several discs. Daphne played some discs with the lid and bottom drawer open and shut to show how this affected sound emission. Next she showed a Kalliston AGS German organ with 4 bells, controlled by 124mm wide, 120cm long zinc strips with rectangular punched holes. The music strip wraps around the outside top of the box and is driven by 4 rubber rollers. This organ dates from 1880-1900 and is in a cube-shaped, ornamented wooden box, painted black. Four hammers each strike one of the bells. A central lever can be operated to disconnect the bells. Daphne explained that she has only three zinc rolls which are hard to find and expensive: of the three, only one is playable because the zinc becomes brittle and breaks due to work-hardening. Whilst playing her good roll she had to stop because it too was starting to fail. The photograph shows the machine with the roll removed. She and

Daphne Ladell's Kalliston

Clive Houghton are investigating alternative material with which to form copies of her three rolls.

After lunch, Robert Ducat-Brown gave a presentation of large instrument videos prepared by our member Nicholas Newble and now available on the website video at www.mbsgb.org.uk.

The last of 9 videos was a clever computer simulation entitled "Extraordinaire Instrument de Musique" which played for several minutes, displaying bouncing balls striking various percussion items such as drum, strings and cymbals. Don Busby screened two videos which are posted on his "MrDoneBy" YouTube account. They are "Musical Box Cylinder Cement - 2" and "Muff 1", accessible via the Society's website. The first shows a rosin/sand mix melting to form cement in an experimental steel cylinder, followed by loading and cementing the first cylinder of his musical box development. The second is about a coke-fired muffle oven for heat treatment of small items such as comb segments. Both videos describe how power and work piece temperature are controlled during the processes.

A cornucopia of novelty musical automata was pulled from a large cardboard box, one at a time, by John Nattrass. The first was a small hand-wound barrel organ, serial number 80271, which plays music strips or endless bands. Next came a large glass dome enclosing a scene of a tropical lagoon with a rolling sailing ship. Then followed numerous items including small and large barrel organs on carts drawn by donkeys, an old mug with a picture of a huntsman, a camera, a player saxophone and many more. John finished with a captivating tale of his being hi-jacked as he was driving a lorry, many years ago: he hoped that the stolen load of novelty spirit display items had not found their way into the collections of those present today!

The day ended with Roy Russell playing his Mojon, Manger twelve-air, alternate tip cylinder box, hoping that the audience might identify their titles. The first was Gottfried's "Maiden Wolf No. 2"; others were possibly "Patience", "The Lost Chord", a Gilbert and Sullivan style tune of unknown title, others remained unrecognised.

Our thanks to Bruce for an enjoyable day. The Spring meeting has been set for 28th April 2012, again at Hullbridge.

Museum Closures

The Reed Organ Museum in Saltaire, Yorkshire run by Phil & Pam Fluke for about 20+ years has just closed down & all instruments have been removed.

The Museum of Mechanical Music and Dolls at Portfield, Chichester, West Sussex, previously run by Clive and Lester Jones, is now permanently closed.

Teme Valley Winders Christmas Meeting – 3rd December 2011

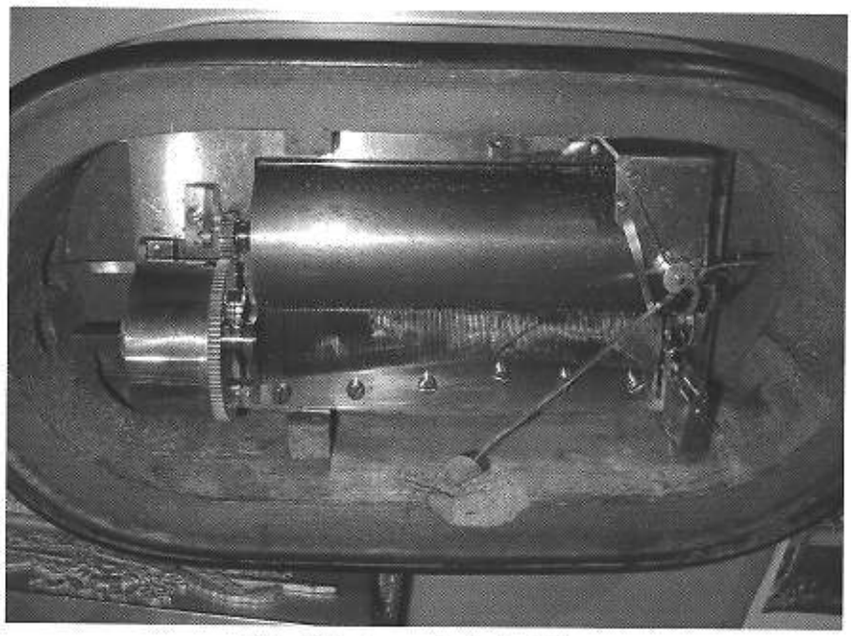
from John Farmer

Some 25 revellers joined John and Hilda Phillips for this year's Christmas meeting. John Harrold gave an illustrated talk on a unique collection he had visited in France. This was Le Musée de Automates in Rue la Désirée, La Ville en Bois, La Rochelle. This large collection of Automata includes exhibits from Phalibois, Descamps, Lambert, Vichy, and others. The owner spent 30 years building his collection which is one of the most important in France. The main area is a recreated street from the "Belle Époque", and includes animated shopkeepers, street musicians, clowns, speakers, artists, etc., along with animated shop displays from department stores. The Sausage Maker is huge fun, but the star of the show must be Columbine, sitting at a desk writing on a sheet of paper.

Since the overhead projector was already on, John Farmer followed with a short video showing Francois Junod's life-sized automaton of Alexander Pouchkine. This was built in 2006 and is able to write over 1400 poems and make various drawings. John had visited Junod's workshop in St. Croix recently where can be seen various test components for the Pouchkine automaton. Some of Junod's work can be seen on his web site, www.francoisjunod.com, and on YouTube. YouTube also has clips of automata from the La Rochelle museum mentioned by John Harrold.

Bob Dyke was our next presenter, firstly demonstrating a French gilt brass mantle clock, circa 1830, with "Pons at St Nicholas, Marts, Rouen" on the clock back.

It chimes every half hour and this activates a cylinder musical movement in the base below. The musical movement is by F LeCoultre, No. 1023, with forte piano movement playing one overture and six 'popular' airs. The movement has a single comb providing the piano and forte notes. Secondly Bob showed an unusual clock modelled on a well, with a "bucket" pendulum which swings in a circle, instead of a conventional pendulum. It is decorated with blue tiles around the base. The bucket should have a "silk" suspension and Bob was asking for advice on where to obtain suitable thread.



Bob Dyke's musical clock base

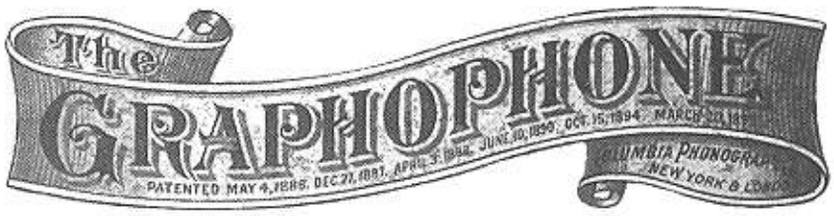
Another musical interlude was provided by Nicholas Simons who played a couple of piano rolls from Julian Dyer, namely Chopinata, by Clément Doucet, and Shostakovich's Suite 2. Mike Cardew then took us back to timepieces with his collection of wrist and pocket watches which he has made himself. Mike is a full time electronics engineer, but his hobby is making watches. With some he fits bought movements into cases he has made, but others are made completely from scratch. The results are some very unique, and attractive, designs, including a Tourbillion movement which is still being refined. He is also experimenting with production of acrylic cases for his wrist watches. Doug Pell provided some entertainment, firstly with a 1950's electro-mechanical performing Elephant by Alps of Japan. This plays a Bass drum, Cymbals, Top hat, Side drums and a Bell with its trunk, hardly musical but certainly mechanical. The other item was a battery operated ball which jiggles and rolls around the floor flashing a blue light and "giggling". This caused much laughter!

Keith Reedman gave a presentation entitled "Old Family Heirloom", which turned out to be a Columbia AA phonograph, c. 1900. Keith and his wife found it as a lump of rusty metal when clearing out a relative's property, but Keith thought he knew what it was and was determined to bring it back to life. Eventually after much de-rusting, cleaning, and nickel plating he had a working movement. He then set to and built a case, using photos from a friend's original phonograph. The difficult bit was making a replica barley-twist moulding, but Keith's ingenuity soon added a modification to his lathe to create a barley-twist spindle which was appropriately sliced to produce the moulding. The addition of a homemade maker's transfer and a new reproducer produced a complete phonograph which was demonstrated to the group.

Concluded on page 172...

Restoration *Matters!*

9 – Making Decals with a Home Computer



This article describes a simple method for creating copies of old waterslide transfers (decals) using just a home computer and special paper. When restoring old instruments we often come across the problem of restoring a case which originally had some form of decorative transfer applied, or alternatively a decorative stencil, and these can be difficult to repair and impossible to replace commercially. The advent of the home computer has led to new processes being available that can cheaply reproduce such decorations and it is such a process that is described here.

An old phonograph mechanism, found during a clearance of a family home, was identified as a Columbia Model AA and eventually restored to working condition. There was no box with the mechanism so one was constructed to match an original which had been measured and photographed. Unfortunately the original from which the measurements were taken had a poor external finish and the decal which read 'Graphophone' on a gold-coloured ribbon was in a very distressed state.

The new box certainly needed the decal to finish the job and while I was considering taking the poor image and doing the best I could in Photoshop, I was made aware of a Model AA for sale on Ebay. This sale was accompanied by several photographs, one of which showed the decal on the front of the instrument in very good condition. Happily the image was of a relatively high definition so I down-loaded the file to my computer. As the image was not square-on to the camera, there was some distortion, but this was easily rectified in Photoshop using the perspective cropping tool and then getting the proportions looking right by stretching, using a transformation. When other corrections for colour and contrast were applied to make the image look as good as new (which the box was), the image was printed using an inkjet printer on to a special paper. The corrected image is shown above.

The paper, a water-slide paper for inkjet printers, is available in two versions. One version is on a transparent backing and is used where the surface on which it is to be applied is either white or light coloured. The other version is on a white backing and is used for dark backgrounds. My box is oak so the latter type was used. The disadvantage of this is that the decal has to be cut out carefully to remove any white border which would otherwise show on the finished job.

Having printed the decal it is necessary to waterproof the image by spraying with three thin coats of acrylic varnish, allowing an adequate drying period between each coat (5 minutes with my spray) and then leaving a few hours before the next stage. A small can of aerosol clear glaze spray was more than enough for several attempts. This spray should, ideally, match the finish on the instrument, whether it is gloss, satin or matt, but further finish matching can be done over the entire panel once the decal is applied and fully dry.

When the decal has been carefully cut out, it is placed in a bowl of water for about thirty seconds until the decal is felt to be capable of being slipped from the backing paper. At this point remove the paper from the water, shake off any excess and then gently slide the decal on the backing paper so that some of the transfer is overhanging and free to be placed approximately in its final position. Gently holding the free part down in position, the rest of the backing paper can then be slid away from under the transfer.

It is surprisingly easy to re-position the decal to its exact final position before using a lint-free cloth, gently dabbing off the surplus water and easing out any air which might have been trapped. Leave to dry for a day and then spray again with a varnish for added protection.

My first attempt failed because I had attempted to do the waterproofing with a paint-on varnish. It was too thick. My second attempt worked well but I was heavy-handed with the dabbing cloth and blurred part of the image. My third and fourth attempts were highly satisfactory and all four only used one A4 sheet of paper which cost £1.59. The paper I used was bought from Crafty Computer Paper of Leicester; www.craftycomputerpaper.co.uk. Waterslide transfer paper can also be purchased through Ebay, where a number of suppliers offer packs of 20 A4 sheets for less than £10 with free P&P under the 'buy it now' facility. These papers are only suitable for ink-jet printers and not laser printers. Most home computer printers are of the ink-jet variety.

The completed Graphophone phonograph

Fig 2 shows the completed phonograph, with its new case and sporting a perfect copy of the original decal. What started as a piece of junk that many people would have thrown away has been restored to a working phonograph that only an expert could tell apart from an original.

Teme Valley Winders

Continued from page 170...

Finally, John Phillips demonstrated a few items from his collection starting with a small early tabatière movement, serial 144, having 64 teeth in groups of 2 and playing 3 tunes. This was followed by music from the Imhof barrel organ and the 48 note Racca. It was nice to see an increasing contingent of "clock winders" as originally envisaged when the Teme Valley Winders name was chosen.

The next meeting of the Teme Valley Winders is planned for Saturday 10th March 2012, starting at 1:30 p.m. prompt (to be confirmed). Those wishing to attend should contact John Phillips on 01584 781118 to confirm and get directions if required. Any instruments, clocks or items of interest are welcome.

The complete French clock on base

San Francisco Airport

Here's news of a fabulous new exhibit just opened within the International Terminal building, San Francisco International Airport! It will run for **6 months**, is strategically located immediately in front of the BART transit system, open to **ALL visitors (ticketed & non-ticketed)** & features 11 Automata from the Murtogh D. Guinness Collection, graciously loaned from the Morris Museum (www.morrismuseum.org).
Recent Travel blog about same: **http://stuckattheairport.com/2011/11/23/at-the-sfo-museum-selfmoving-mechanical-creations/**

And here is a link to a past NJN segment that overviewed the wide range of the Guinness Collection: **http://www.njartsnews.org/2011/05/08/guinness-collection-of-mechanical-musical-instruments-2/**

Enjoy, Happy Holidays, and be sure to visit the permanent exhibition of the Guinness Collection, here at the Morris Museum, should you ever be in the vicinity of New York City!

Jeremie Ryder

Conservator of the Guinness Collection, Morris Museum, 6 Normandy Heights Rd., Morristown, NJ. 07960 Tel.-973-971-3724, E: jryder@morrismuseum.org, www.morrismuseum.org

The Lost Case of a Nicole Three-tune Overture Musical Box

By Christopher Fynes

Bought in the 2011 Summer Auction at Stourbridge, in a very dilapidated state, this popular little Nicole (circa 1850, number 30688, gamme 737) went for ten times its "come-and-get-me" estimate. Providing the restoration costs did not escalate this could still be a good buy. As I was to become the final unexpected bidder – that ultimate responsibility would now be mine.

Fig 1. The Nicole box finished

My main concern was the extremely rusty comb. In fact, so solid was this rust, it completely covered every pore of the entire surface.

What other problems were there? The movement was loose, sitting in a somewhat later type of case devoid of its interior furniture, lock, hinges, case screws and key to wind the movement. It did have a detached and rather pretty (but wrong) lid.

At the preview, my enthusiasm initially arose when I gently rotated the cylinder to witness that rusty old comb render surprisingly melodiously those famous overtures - William Tell, Semiramide and Fra Diavolo – enriched and enhanced further with mandolin trills of up to ten notes.

After the auction ended, I was amazed to find someone else had bought the proper box to the movement in a different lot, while yet another had bought the lid. After some friendly negotiations, all of the parts were finally re-united.

The original box and lid were in a very sorry state. Large chunks of wood were falling away owing to the spongy nature of the badly worm-eaten body. The end-flap and key divider were missing, as were all the edging strips off the lid, not to mention the missing brassware. Large patches of veneer and stringing were also missing or had started to peel away. The most solid part of the lid was where someone had levered out the old hinges leaving the broken tips of the rusty screws deep in the wood. The veneer had been rubbed-down to zero in places and a thin cigarette paper in others. It would be extremely tempting to use the wrong lid.

Close examination of the comb and cylinder on my box confirmed no significant mechanical damage. Amazingly, it had not suffered a run! With luck, the restoration would just be a cosmetic exercise.

Undoing the comb screws proved to be nearly impossible. Four screws would not budge whatever I tried. It took numerous applications of oil, a screwdriver and ring spanner forced over the heads before they would finally move. I then had to face up to the trickiest problem of all. How do I get rust off the comb without putting it out of tune?

I decided a scalpel knife and liberal applications of oil would be the best treatment. This way I could concentrate on one note at a time while constantly checking the tuning. I was happy not to scrape too much rust away, but just enough to bring back some brightness to the comb. After cleaning and polishing up the rest of the movement, I started on the most time consuming part – the tatty old case and lid.

Having given the bits a good soaking in woodworm killer, I had to fill about 500 holes with glue and suchlike. On the lid, I developed a technique of punching out tiny disks of rosewood to plug into the holes. The veneer was a pain though. Wherever I replaced it, adjoining patches would start to flake off from the fragile honeycomb base, which I had to then re-stabilise with as much glue as possible. Finding replacement hinges (1 3/8 inches wide) was far from easy, as was seeking out rosewood for the edging and then there was the 'dragons blood' for the red polish. When it came to the case-screws, I resorted to a jobbing engineer to manufacture new ones. My daughter plied her best hand to the replacement green tune-sheet that matched coloured remnants found beneath the old tacks. The rest I was able to cope with myself.

The Organ Grinder

Hendrik H. Strengers

From the Book: The Littlest One's Third Book.
The author of the poem is Marion St. John Webb (1888-May 2, 1930) and the illustrator Margaret W. Tarrant (1888-1959).

The book was published in 1928 by George G.Harrap & Co.Ltd., 39-41 Parker Street, Kingsway, London and printed in Great Britain by R. & R. Clark, Limited, Edinburgh. There are 34 poems on 60 pages.

The Organ-Grinder

The organ-grinder came along
An' smiled with all his teeth at me
When I was near the garden-gate –
Jus' by the crooked apple-tree.

An' then he played a little tune,
An' winked one eye, an' laughed, an' said,
"I got a secret. I tell you."
Then winked again, an' shook his head.

"I'm not an organ-grinder man,"
He said, "I'm really in disguise.
And really truly I'm a prince!
Ah, ha! That makes you feel surprise!"

An' then he played another tune.
"I have my palace up the lane,"
He said, "You pass the grocer's shop –
An' then you turn – then turn again.

"And I am always happy there –
For some one wants what I can bring.
The little lords and ladies come,
And while I play they dance and sing."

An' then he played another tune.
He said, "And now I say good-day,"
An' smiled again with all his teeth,
An' waved his hand, an' went away.

I runned indoors to Emily Jane,
An' told her, an' she said to me,
"All right – you let me get my hat –
And I'll come out with you and see."

So Emily Jane an' me went out,
An' through the gate, an' up the lane,
An' passed the little grocer's shop,
An' then we turned – then turned again.

An' there we saw the organ-man,
An' he was playin' very loud.
There wasn't lords an' ladies though –
Jus' ragged child'en, in a crowd.

An' some of them had got no shoes,
An' got no stockings on their feet.
But when he made the organ play
They laughed an' danced about the street.

There wasn't any palace there
For me an' Emily Jane to see,
An' so we came back home again.
An' Emily Jane she said to me,

"I shouldn't mind if I were you.
Although the palace weren't in sight,
It couldn't have been far away,
Because – he is a prince all right.

"He stopped to play a little tune
For all those ragged kids to hear.
And that is always what they do –
The princes in disguise, my dear."

The Street Organ.

From an original postcard in the Ted Brown Collection

Auction Team Breker, 19 November 2011

Auction Report

Bright skies and brisk bidding marked another successful sale for Auction Team Breker on 19 November 2011. Buyers filled seats in the saleroom and in front of the computers across the world (Breker has a strong online auction presence) for six hundred lots of scientific instruments, office antiques, tin toys, mechanical music instruments and musical automata.

A specialised assortment of **pioneer office machines included a Polyglotte pocket typewriter** beautifully preserved in its original box (lot 68) for EUR 3.690/US$ 5,000, an unconventional **American Keaton Music Typewriter** (lot 75) for EUR 4.920/US$ 6,650 and an 1896 **"Buckner Lino-Typewriter"** (lot 111) for EUR 3.200/US$ 4,320.

A fascinating link between the writing machines and the toys in the auction was an automaton that combined both functions. **"Colombine"** is a sophisticated 28-inch 'android' created by the late Claude Laurent of Grenoble (lot 523). Laurent and his wife Geneviève originally worked for J.A.F. (Jouets et Automates Français), successor to Vichy-Triboulet, before establishing their own atelier in 1987. Reminiscent of the automaton in the soon-to-be released Martin Scorsese film ***Hugo***, Colombine inscribes her lover's name on an ever-fresh sheet of paper, thanks to the complex three-way articulation of her hand that reproduces an uncannily lifelike writing motion. Fluttering eyelids and gentle rhythmic 'breathing' accompanied Colombine's performance and beguiled a bidder at EUR 40,000/US$ 54,000.

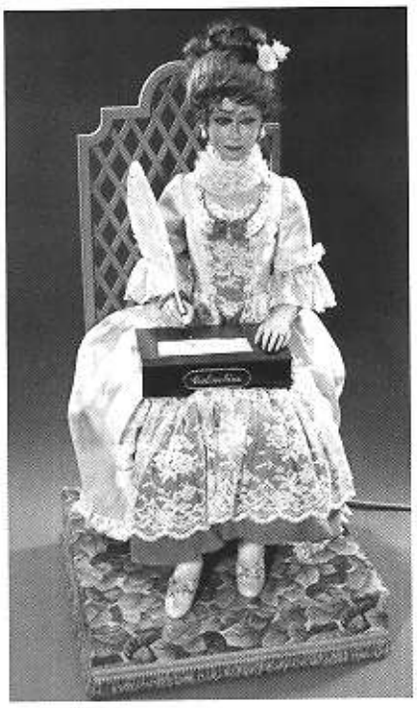
Antique automata in the auction included an elegant **"Marquis Smoker"** a la Watteau by Leopold Lambert (lot 426) for EUR 9.850/US$ 13,280, and an all-original **"Mouse Trainer"** by Louis Renou (lot 424) for EUR 10.450/US$ 14,100. A large example of the **"Magic Theatre"** by the same maker (lot 427)

Lot 392 - Fortuna musical box

features a beautiful Jumeau conjuror with a changing cast of five dancing men who appear and disappear from the stage of a puppet booth each time she raps her wand on the roof. Attracting bids from all over the world, she sold for EUR 32,000/US$ 43,000.

Two traditional clockwork toys that also attracted international interest were a charming **"Berliet" double-decker tin bus** from the workshop of Parisian artisan Pinard (lot 612) at EUR 7.600/US$ 10,270 and a very rare **double-team buggy** with rider by Connecticut toy maker **George Brown** (lot 583) at EUR 19.675/US$ 26,560.

A group of sixty mechanical musical instruments yielded more than a few surprises. An **11 3/4-inch Symphonion disc musical box** in elaborate pressed walnut bombe case (lot 396) fetched EUR 6.900/US$ 9,300, while a superb **18 3/4-inch Fortuna musical box** with 34 discs and matching stand (lot 392), all in fresh original condition, made three-fold its low estimate at EUR 8.240/US$ 11,125. **A Regina Hexaphone auto-change phonograph** (lot 379), also in unusually good condition down to the original finish on the oak case, sold for EUR 11.700/US$15,770.



Lot 523 - Claude Laurent automaton 'Columbine'.

Completing this group of princely toys was a delicate objet de vertu in the form of a **miniature singing bird automaton in Hungarian gilt cage** (lot 373) with wrought perch and guilloché enamel sides, which flew to a new home for EUR 6.600/US$ 8,900. (*See colour page – Ed*)

The next sale is scheduled for 26 May 2012. The closing dates for entries will be 30 March 2012. For a 2012 sale calendar and news of forthcoming highlights, visit online at www.breker.com.

STOP - PRESS!

Please remember before the end of March 2012 to complete and return the survey form that was sent with your membership renewal form. This information is very useful to your Society officers as a guide to planning for the future and your input would be much appreciated. If you prefer to email your comments, please do so to Kath Turner, or mail the form to Kevin McElhone. Their contact details are on the Officers page in this magazine.

Bonhams, Knowle, November 2011

Auction Report

This was the last Mechanical Music sale to be held at Knowle. From 2012 the 'Collectors' sales, including mechanical music, will be at the Oxford saleroom.

On offer was a good selection of instruments starting with boxes by P.V.F., Baker Troll and Junot making between £420 and £676. An early tortoiseshell snuffbox by F. LeCoultre needing some restoration went for £470.

The potential of a 'Concert-Piccolo' box by Ami Rivenc was appreciated despite its rather sad appearance and realised £1755. A key-wind Nicole Frères (serial no. 29084) playing a selection of polkas and waltzes made £1235, whilst an impressive looking Weill and Harburg with three bells, drum and castanet reached £3500. An interesting feature of this box was a brass tune indicator with engraved tune titles. On the underside of the lid where the tune sheet would normally be found, was a glazed panel with a splendid transfer of the Royal Coat of Arms and the legend "By Her Majestys Royal Letters Patent" (For the purist, the apostrophe in Majestys is missing on the original).

Next came an interesting musical picture in oval form. Rather than the more often seen rocking ships and windmills, the picture was of a lake scene with the details highlighted in mother of pearl all behind a domed glass. The two-air movement is by Ami Rivenc, operated by a pull cord, played well. This lot realised £800. (Fig 1)

The ever-popular Eckardt Christmas tree stand with original plate holder and four air movement made £468. An eight air box also by Ami Rivenc with a seventeen note organ section, in a splendidly presented case made

Fig 1. An unusual oval musical picture

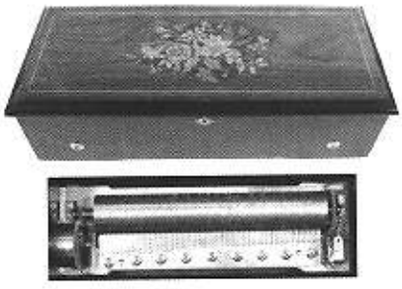


Fig 2. A four air box by Paillard

£1755, and a four air box by Paillard, playing on a 165 tooth comb, was a delight to the ear and realised £2400. (Fig 2)

For the restoration enthusiast there were four lots of empty cases awaiting movements, and one of these included an eight air movement with most of the bits for three bells which, despite its desperate appearance, actually managed to play! All sold, so hopefully we shall be seeing some rehoused and restored musical boxes in the future.

Five disc box makers were represented in the sale. A Fortuna model 310 lacking its pediment made a creditable £1300 to include twenty discs in a separate custom box, whilst a 12 inch Mira, with thirty discs, in a very attractive case realised £2470. Star of the disc boxes however was a fine 15½ inch Regina in a heavily carved oak case.

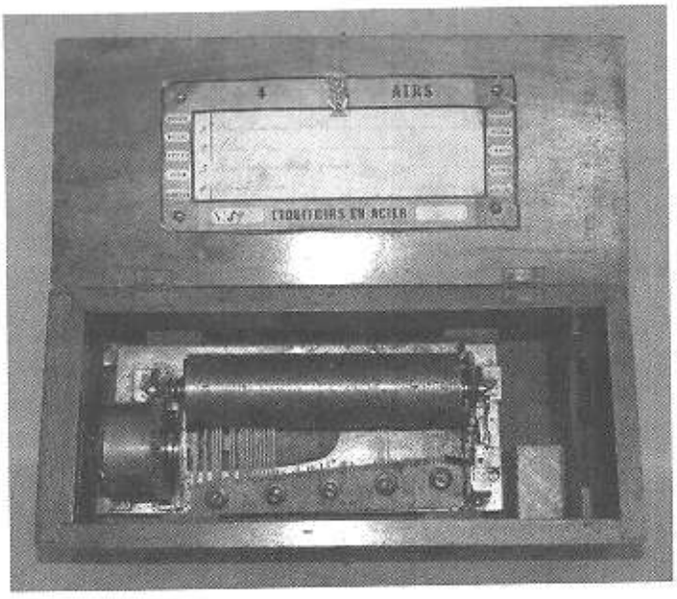
Fig 3. A fine oak cased Regina disc player

Producing a lovely sound it was well worth the £3250 paid. (Fig 3)

A 9⅛ inch Kalliope and a 11¾ inch Symphonion went more modestly for £364 and £520 respectively. Singing birds in cages were well represented in both single and multiple lots. One lot of three birds-in-cages made £800 and a similar multiple lot of five realised £2080. Bringing up the rear of the mechanical music section of the sale was an interesting automaton by Frank Nelson. His humorous instruments are always in demand and this example, in excellent condition, made £442. (Fig 4)

The next Bonhams sale of Mechanical Music will be at Oxford on Wednesday 12th February 2012. Closing date for entries for this sale is 21st December.

Fig 4. (below) The Frank Nelson automaton



A suitable piece for restoration? Found by Kevin McElhone (NOT at Bonham's!)

'Chinese' musical box - see 'This, That & T'Other' on page 165

Right: Frati Orchestra piano orchestrion - see article on page 198

Left: Magnificent singing bird - see article on page 175

Left: the finished Nicole overture box - see article on page 173

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It Only Takes A Tiny Corner Of This Great Big World To Make The Place We Love....

The Musical Box Society International — Golden Gate Chapter

Behind Writing a Book on Mechanical Music

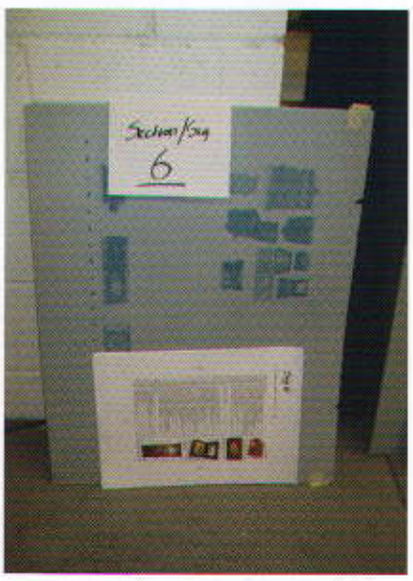
by Kevin McElhone

Some background notes on Why and How I wrote "The DISC MUSICAL BOX", a technology that is over 120 years old.

Since my interest in Mechanical Music began over 25 years ago, I have always had an idea that I could best serve the interest by committing to print the knowledge and information that I acquired. To-day, I find it increasingly frustrating to have auction descriptions that are incomplete or incorrect. I have similar feelings regarding dealers and other vendors. I am also less than happy with the practice of selling disc musical boxes with only some of the discs that came with them, the remainder being kept to "put with another identical box which might be taken into stock in the future without discs". During the last three years I have purchased over 3,000 such discs from four dealers. Some of these discs were difficult to identify but they enabled me to correct dimensional errors contained in earlier works about discs.

If the information and knowledge I have acquired over these 25 years were in a book, it could help auctioneers, vendors and purchasers with the correct identification of both instruments and discs. It would also help satisfy a longstanding desire to re-unite orphan discs with their parent musical box and so enable their music to be heard again.

In 1998, I telephoned Shire Publications to ask when they were going to update their book about Mechanical Musical Instruments; their reply was that they were looking for someone to do that for them and so I took the opportunity to write the first edition of a replacement booklet, "Mechanical Music", with black and white illustrations. All 4,500 copies of this were sold within four years. I produced a second edition, sixteen pages longer with different photographs, all in colour



1. A set of printing plates for one of the sections of the book; notice this is for one of the 'colours' so does not have any text.

and this sold out in about five years. The updated, third edition of 2011 is print-on-demand - with a much smaller number of copies printed each time.

My interest in Organettes dates from about 1990 and, encouraged by Ted Brown, President of the Musical Box Society of Great Britain from 1997 – 2001, I decided to seek M.B.S.G.B. support in writing '**The Organette Book**', a 400+ page hardback book in monochrome. Under the auspices of the Publications Committee it was published by M.B.S.G.B. in 2002 to mark the 40th Anniversary of the Society. Many people, including some on the committee, thought this a rather obscure subject, but of the 620 copies we printed there are less than 25 unsold. More importantly, 562 Organette models were included in the book and only another six have been found since. Nevertheless, though I am pleased that I did not miss many from the 1st Edition, it is my intention to produce a supplement in the future.

I have been interested in the Aeolian Orchestrelle and other roll-playing reed organs since about 1987 and in 2005 decided it was time to write a book about the 16 makers of these instruments. I had owned about 12 instruments over this time and had inspected and played another 250. I scanned 650 pages of photographs and original advertising material but suddenly thought – "How many instruments are left?" and "How many collectors would buy a copy of the book?" Unfortunately, the answers, about 500 and 250 respectively, were not enough to justify putting money and time into such a large project. Therefore, I abandoned the project. However, the advent of digital self-publishing might provide a way ahead in the future.

Disc Musical Boxes being another of my interests, I decided that they should be the subject of my next book. However, a major decision concerning the purpose of the book had to be made. There were many aspects - historical background and development, the engineering and construction, the maker's, the music, the music arrangers as well as the tuning and repairing of a disc musical box; all of these could be covered in a single book. However, some of these, the engineering and construction, the music arrangers and the repairing and tuning, all lie outside the scope of either my capabilities or immediate interest. In view of this, and the comments received from others with experience in the field of musical box publications, I decided that it would be best to leave these to those more qualified than myself to undertake the type of research needed to do these subjects justice. Thus my objective was to write a more general book, a compendium

2. Putting more Yellow ink into the printing press.

3. The four parts of the press are clearly shown here; this machine would cost over £750,000 if new today; it is kept running for 15 hours a day whenever possible.

of current knowledge, information and understanding of the subject, and one that would have the widest appeal, interest and usefulness. It was at this stage that I approached the Society and received their support to bring a project of this nature to fruition.

I like collecting the tunes for these and choosing music I can play rather than having to listen to the few tunes on a cylinder musical box that cannot be changed. Therefore, I turned my attention to this subject and to deciding the areas of research and the data that needed to be accumulated for "**The Disc Musical Box**". I like processing data, it comes from my work in a data processing environment; I worked with computers on leaving school in 1976 and in those early days, before the advent of bar-codes, when a box of shoes was sold an 80-column punched-card was returned to me at head office. From these, we could determine the items needed to re-stock the shops the following week. These cards were similar to the Jacquard weaving loom cards still in use by The Royal Wilton Carpet factory at the time of my tour c.1990. Although designs were made on a computer, they were punched on to card for the 120+ year old weaving looms - but I digress...!

Writing a book takes a vast amount of concentrated time, indeed I spent 10 hours a day for 6 days a week for a month to try to complete one particular chapter. But where do you start? First, the style and content of the book has to be decided; I looked at "**The Organette Book**" and from that listed the chapters or sections to include in "**The Disc Musical Box**". I then considered what tables of information would be interesting and useful to auctioneers, collectors and dealers. For example, over a period of 12 to 15 years I had been working to complete the Disc tune lists in Graham Webb's book "**The Disc Musical Box Handbook**" and so decided that these should certainly be included.

Once there was a list of headings, a start has to be made on research. In the 21st century, with the Internet at hand, I had a very powerful aid with this task; I did not have to visit libraries in person, but was able to look on-line at their archives and at the many patents and contemporary trade journals now available by that means - although a complete issue of the latter might yield only a single sentence of facts for the book! It is important not to become distracted by other material whilst searching by this means, although I must admit to saving anything I thought useful for a supplement to "**The Organette Book**".

In 2007, about a year after I started writing, I requested help both on-line and in Society magazines; I also sought and gained permission to use illustrations from many auction catalogues and other publications, something that saved many miles of travelling with my camera. As stated in the book, I am extremely grateful for the many offers of help and support I received, particularly from those fluent in other languages and with access to their own collections.

Hundreds of hours were spent selecting photographs to illustrate the book - over 9,000 were made available for me, sending thousands of E-mails requesting Serial Numbers of instruments for sale or in collections & museums and for clarification of information that was otherwise incomplete or inaccurate.

An ability to concentrate on one task for many hours is useful but very tiring; so, for example, if I was checking patents on-line and became tired then I would leave it and work on some other aspect of the book in order to keep the momentum going. Consistency is also very important; for example, ensuring that both Imperial and

Metric measurements were included and keeping the entire book in both alphabetical and size sequence. As for the tune lists, over twenty years ago I was advised by Richard Cole from the Musical Museum at Brentford, that any list should include space(s) where the title(s) is/ are unknown. Such is good practice, allowing the numbers lacking their titles to be quickly identified, listed and published to encourage others to search their collection to complete the missing information.

What appear to be small ideas can take a long time to complete. For example, the idea of counting the number of turns of the winding handle needed to fully wind Manivelle disc musical boxes or, alternatively, the need to gather other specific information. Unfortunately, many owners either could not see the point of what I was doing, could not be bothered, or did not have time to supply the requested information. In such instances I resorted to buying the musical box in order to determine the information I needed, but I learnt much more by having the instrument or disc in front of me. In particular, I found that my measurements differed from those in earlier publications, both contemporary and more recent. Quite clearly, mine had to be correct and so used in the book. It was from this that I learnt not to trust contemporary makers' catalogues as these often contained figures rounded up to make their products seem larger than those of a competitor.

Once the text is written and illustrations selected, both have to be 'laid-out' on a computer system using a format compatible with modern printing processes. In the past it would have been type-set with photo-blocks such as were used for the early Society magazines, but today a set of Portable Document Format (PDF) computer files is produced. These cannot be altered thus avoiding accidental erasure or misplacement of lines or words.

5. The Author standing next to one of several growing piles of printed pages.

At this stage, the number of pages becomes known and quotations for printing may be obtained. All companies that had printed books or magazines for the Society in the past were invited to tender for printing and

4. The finished end of the press showing the pile of finished sheets.

binding a case-bound book of 496 pages in A4 format with 1700 full colour illustrations.

With proof reading and cross-checking the text of "**The Disc Musical Box**" now complete, (it had been undertaken at least four times), with the able assistance of David Worall MBE, a member of the Publications Committee,the final version was sent on the PDF files to the selected company, Flo-Print. The book was to be printed using the four-colour printing process CMYK (Cyan, Magenta, Yellow, Key) in which the three colour plates are carefully keyed, or aligned with the key of the Black or "Key Plate". For this, each page of the book is "split" into these four colours and, when the press is running, the paper passes through a 4-stage printing process with each part of the machine printing only one of the colours but the complete sheet emerges at the end of the process - see Illustration No.3. Stacks of sheets, each containing eight pages of the book, were printed by the machine in this manner, see Illustration Nos 4, 5 & 6, and these had to be collated and guillotined before being bound. I visited Flo-print on one of the three days it took to complete the printing; it was an interesting experience as it is 35 years since I have run a printing press - the smell in the print room brought it all back to me.

As with other hard-back books produced by the Society, "**The Disc Musical Box**" has been sewn, that is the pages are sewn together in sections using threads, the sections threaded together, and secured into the hard-cover. It is at this stage that the dust jacket is printed, to the exact dimensions of the bound book.

The Society's soft-cover books were either 'stitched', the pages being stapled like the "**Musical Box Tune Sheet**" Supplements and the Society's Journal, "**The Music Box**"; or 'Perfect Bound' with the pages glued into place as with the "**Street Musicians on Postcards**" booklet or the soft-back version of "**Musical Box Tune Sheets**". These types of binding are done in-house by Flo-Print; case-bound books, such as "**The Disc Musical Box**", however, are bound off site by a sub-contractor. We can thus assure our members that the Disc Musical Box book is produced not only in full colour but also to the highest quality standards of any commercial production.

6. Several of the pages straight from the printing press, untrimmed and showing the 4-colour blocks or strips that the printer uses to check that all parts of the colour process are running evenly - rather like 'traffic lights' in the margins of sheets of stamps.

In addition to writing & printing the book, packaging materials had to be obtained from the company who supply me with new piano roll boxes; their costs were about a third of those of other suppliers. We also managed to obtain half a kilometre of bubble-wrap and packing tape at very good prices; - all this takes up a lot of space in a home!

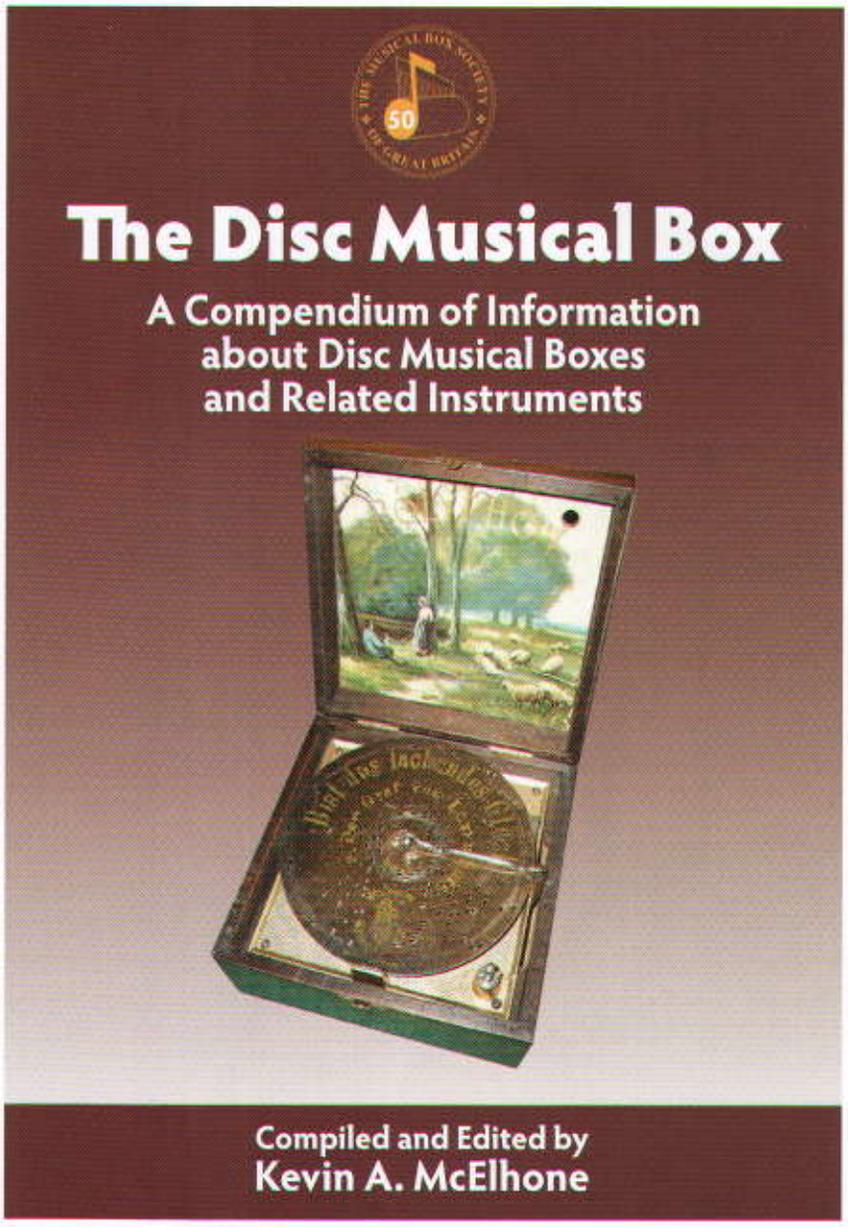
By the time this issue of the journal reaches you, this limited edition of "**The Disc Musical Box**" should have been delivered and stored prior to despatching copies to meet individual orders.

"**The Disc Musical Box**" has been over 5 years in preparation and many previous years collating information. Thus, as I state in my Introduction, such a work can never be complete. Therefore, should you find any new information that up-dates, corrects or adds to the information in my book, then I would be most interested to hear from you I would particularly like to hear of the following: surviving Disc Musical Boxes not on the list of Serial Numbers, Patents, Coloured Lid Pictures and Tune Titles. Indeed, anything that might be worth including in a future Supplement to "**The Disc Musical Box**" would be most welcome.

I would like to encourage the reader to think "Do I, the reader, have a subject about which I could write a book, either on my own or in collaboration with others?"; it does not have to be large as even smaller books are very popular; the three editions of Shire Publications '**Mechanical Music**', have sold nearly ten thousand copies at the time of writing. Alternatively, if writing a book does not appeal, then perhaps the thought could be "Can I, the reader, suggest to the Publications Sub-committee a subject(s) on which we would like to see a book published in the future?"

Although two legacies, from Mr.L.Mount and Mr.Brian Campsie, and another sum donated by Anthony Bulleid have helped fund the Society's publications to-date, it is important for members to realise that their support by buying the books has been essential to the success of the Publications Sub-committee's work in promoting and publishing books on Mechanical Music. The money recovered as books are sold to members is set aside and, hopefully within a reasonable period of time, there is enough to finance the next Society publication. Sometimes, however, as is the case with "**The Disc Musical Box**", this has to be supplemented with a short term loan from the author! Nevertheless, each project is largely self-financing and does not drain the Society's main account.

The Society's work to promote the Mechanical Music interest through the printed word can only succeed if the books sell well; this means we need members, like you, to buy them. Therefore, if you have not done so already, please consider buying a copy of any or all of the Society's publications; even if the subject is not about your specific area of interest, this might change in the future and Society books are usually limited editions restricted to the initial print-run.



7. The Dust Jacket of "The Disc Musical Box".

The Contents of "**The Disc Musical Box**" are:-

Introduction

Acknowledgements

1. **A Brief Description and an Overview of the History of Disc Musical Boxes**
2. **Descriptions of the Instruments**
3. **Table of Models - over 1,600 Models listed.**
4. **Serial Numbers of over 1,500 surviving instruments.**
5. **Tuning Scales - over 170 of those most commonly found.**
6. **Identification of Discs - over 350 types.**
7. **Tune Lists**
8. **Case Lid and Cabinet Pictures**
9. **Patents**
10. **Storage of Discs or Music Sheets**

Appendices

1. **Original Costs and Notes on Currency Conversion**
2. **Makers of New Discs, Bins, Instruments and Parts**
3. **Further Reading**
4. **Mechanical Music Societies**
5. **Mechanical Music Museums**
6. **Finding and Buying a Disc Musical Box**
7. **Sources Used During Preparation of this Book**

Glossary

Index of Illustrations

Details of the Accompanying DVD

There are over 1,700 illustrations in the book; in addition, accompanying **DVD** contains:

466 pages of scans of original makers' catalogues,

211 pages of scanned makers tune lists.

5 tune lists - in PDF format and so are searchable.

1,600 Musical Box Models - in PDF format and so are searchable

1,100 additional illustrations

Stray Notes

A occasional series originated by Luuk Goldhoorn - this group from Nico Wiegmann

21. Dimensions of the spring
The correct spring for your musical box is very important, it needs to be of the right length but most important is its thickness (strength).

A good rule of thumb is that its thickness is 1% of the barrel diameter. That is most of the time correct, weaker is of course no problem but if you fit stronger be careful not to overload the wheel work.

22. Temporary pins
Pinning a cylinder starts with a line of small punch marks (the dotted line) of the first tune that is set out on the cylinder, each corresponding with the tip of a tooth. These markings are used to set-up the box accurately. Between the first and second punch even smaller punches can be seen each corresponding with the tip of the extreme bass tooth for the other melodies.

The two markings at the beginning and at the end of the cylinder were actually drilled and pins were inserted to facilitate the right position of the comb

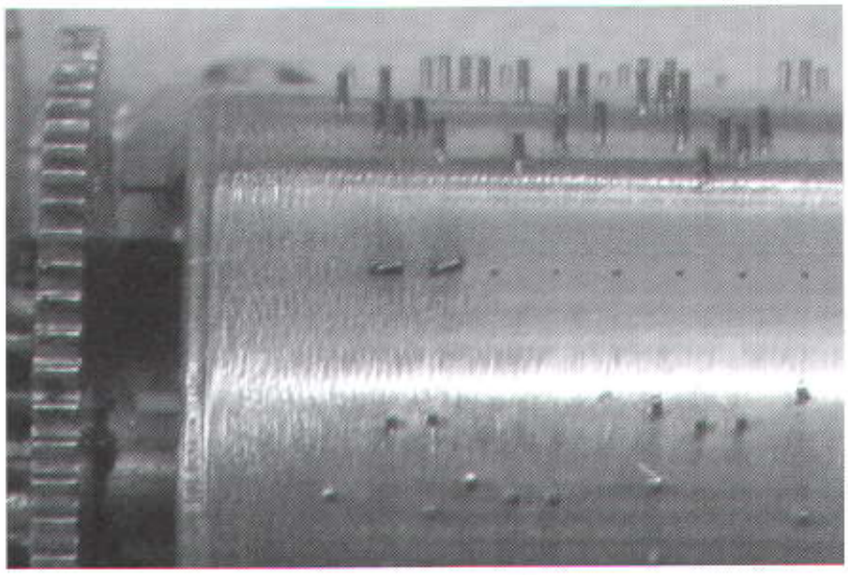


Fig 22. 'Temporary' pins on a snuffbox type movement

After all this work the temporary set-up pins were broken off. In the fabrication of snuff boxes after 1890 this seemed to be too labour-intensive and the pins were simply hammered down. (fig. 22).

23. Fan construction in snuff box works
In cartel works the governor cock is screwed to the governor block but in snuff box works it is separated from the governor block. That construction was chosen because of the form of the snuff compartment. Doing so the blades of the fan could be broader. But in the very beginning, say before 1815, this idea was not yet "discovered" (fig. 23)

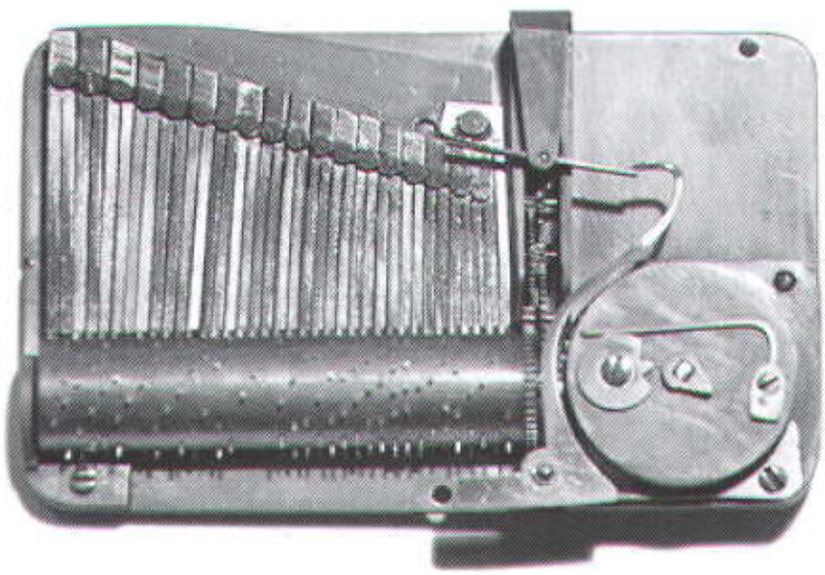
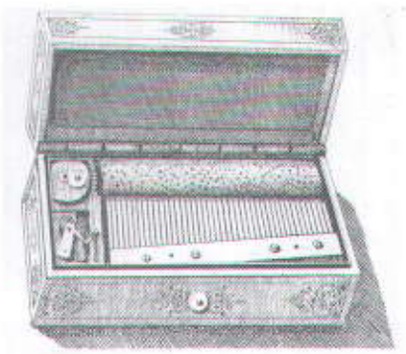


Fig 23. Early fan blades



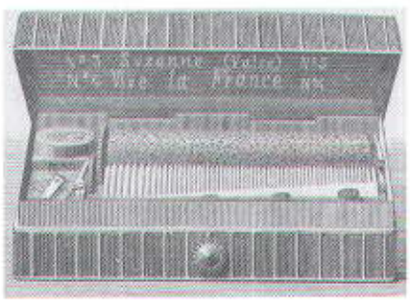


Fig 24 (above and below). Examples of odd perspective in illustrations

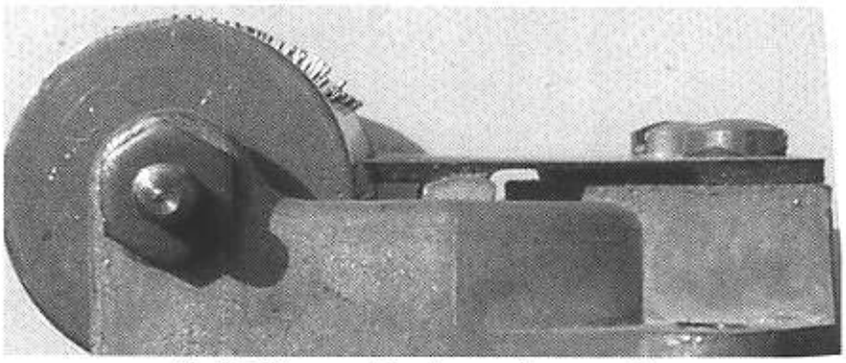


Fig 25. The comb is almost along a radius

24. Perspective

Making a design in good perspective was a big problem in the middle ages. But even in the 19th century not all artists had mastered this technique, as can be seen in these pictures used in contemporary advertisements. (fig. 24)

25. Angle of the comb to the cylinder

It is said that the tooth-tips should attack the cylinder a bit above its axle. The reasons why are too difficult for me to understand. In any case later manivelle movements don't show it. (fig. 25)

26. Useless toothed wheel

Looking at interchangeable cylinders, one wonders why the wheel at the right side is often toothed. It does not gear in any other wheel so it should have been cheaper to omit the tooth cutting operation. (fig 26) *(I too have observed this frequently. My explanation is that the other features of the cylinder wheel are required, viz: the snail, its pivot screw hole, the drive pin etc. I believe these wheels were produced in large batches, either in the manufacturer's wheel making department or possibly bought in, and it was easier and more efficient to use standard cylinder wheels than to make special untoothed versions for interchangeable cylinders. – Ed)*

AN APPRECIATION

With the publishing of the Disc Box book comes the opportunity to mention the outstanding work done, not only by Kevin McElhone, but also by David Worrall, Ted Brown and Paul Bellamy as members of the Publications Sub-Committee.

Countless hours of commitment to sort out the vast amount of work entailed in any publishing project has been willingly done by this group of people. Arranging quotations, sorting out ISBN numbers and contracts has been one of the tasks largely undertaken by our Vice President. Paul has also, with the assistance of the other members of the Sub-Committee, obtained the very best deal possible for the Society.

Over the years, the Society has produced quite a number of books all of which came to fruition by the work of the Publications Sub-Committee. Without these books the Society would not be in such a healthy state as today, nor would it be held in such high regard. We owe a great deal to these members for their efforts and I feel sure you will join me in sending them our thanks and congratulations.

Arthur Cunliffe. (President)

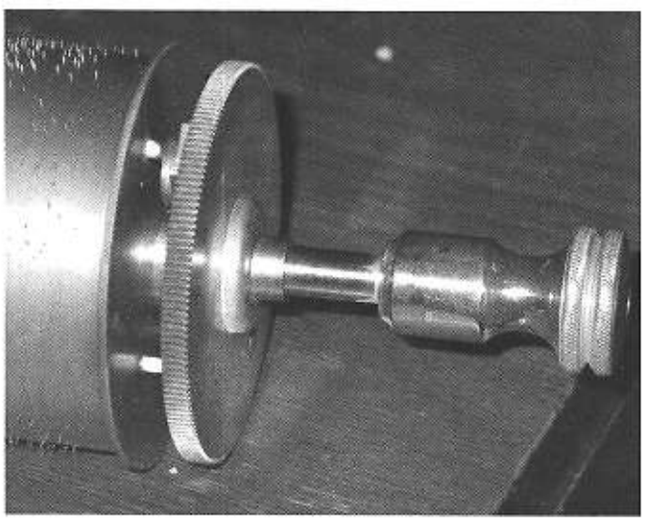
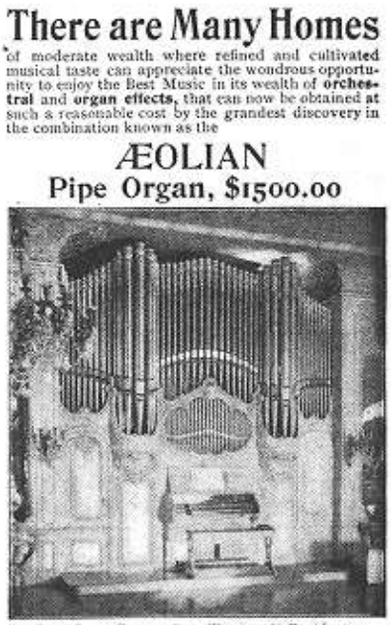


Fig 26. An 'unused' toothed wheel

Left & Right: A couple of adverts that are currently floating about on the Internet



Dates for your Diary 2012

compiled by Daphne Ladell

Teme Valley Winders

Saturday 10th March 2012

1.30 p.m. start

Please contact John Phillips on 01584 78 1118

Chanctonbury Ring

Sunday 25th March 2012

10.30 Coffee / Tea

for an 11am start

Lunch provided

Please contact Ted Brown on 01403823533

Essex Meeting

Saturday 28th April 2012

10am -4pm

Hullbridge Centre

Windermere Avenue,

Hullbridge, SS5 6JR

Bring your own lunch – coffee & tea provided by us

Why not bring along your own favourite musical item to show

Please phone Bruce Allen – 01702 23 2040

Annual General Meeting & Society Auction

(1 week later than normal)

Saturday 9th June 2012

Roade Village Hall

Near Northampton

11a.m. Start -

followed by buffet lunch

After lunch - Society Auction

Teme Valley Winders

Saturday 23rd June 2012

1.30 p.m. start

Please contact John Phillips on 01584 78 1118

Autumn Meeting 2012

John & Hilda Phillips

Friday 14th September – Sunday 16th

Teme Valley Winders

Christmas Meeting

Saturday 8th December 2012

12 Noon start

Please contact John Phillips on 01584 78 1118

Special 50th Anniversary Inaugural Dinner and weekend

Friday 30th November – 2nd December 2012

Hatfield Hertfordshire

(more details in next Journal)

50th Anniversary Meeting

Wednesday 18th – Monday 23rd April 2012

This is your last chance to book rooms

The closing date for room reservations, held for us by the hotel based on 5 night's accommodation, will soon cease on 10th March. After that and for those who wish to attend part of the meeting, Daphne Ladell (daphne.ladell@btinternet.com, T: (0)1737 843644) will consider applications on a first-come-first-served basis. She will do her best to meet your requirements and quote the cost of the reduced package according to individual requirements, if accommodation is available.

Itinerary

Day visit to Jack Henley's Private collection and Organ Grind.

A visit to Salomon's Welte Philharmonic player and manual Organ Theatre.

A visit to the world-famous Georgian Manor House, Finchcocks, to hear and see historical musical instruments: Clavichords, harpsichords, organs, pianos, and some rare mechanical instruments.

A day of 'Talks, Play & Display'.

Society Auction – Auctioneer: Christopher Proudfoot.

Have you anything to auction? Can you donate good quality raffle prizes?

Contact Daphne Ladell on 01737 84 3644.

A visit to the award-winning Biddenden Vineyard.

A visit to 13th century Hever Castle, childhood home of Henry VIII's second Queen, Anne Boleyn.

A very special free Commemorative Souvenir for each person attending

Full of entertainment and fun **at an astonishingly low all inclusive price of £420.00 per person** for this 5 night, packed celebration deal! There is a single room supplement of £20.00 per night.

Making a Musical Box

by Don Busby

Cementing and Grinding a Pinned Cylinder

This article has been brought forward in the series to draw attention to a possible danger outlined in a footnote to this paper.

The first cylinder has been drilled and pinned for music. This can only be played after pins have been cemented in and their ends ground. A method is developed for spinning cylinders on the lathe for the two operations. This article covers these processes, completion of which should allow precise setting of comb on bed plate and output of music.

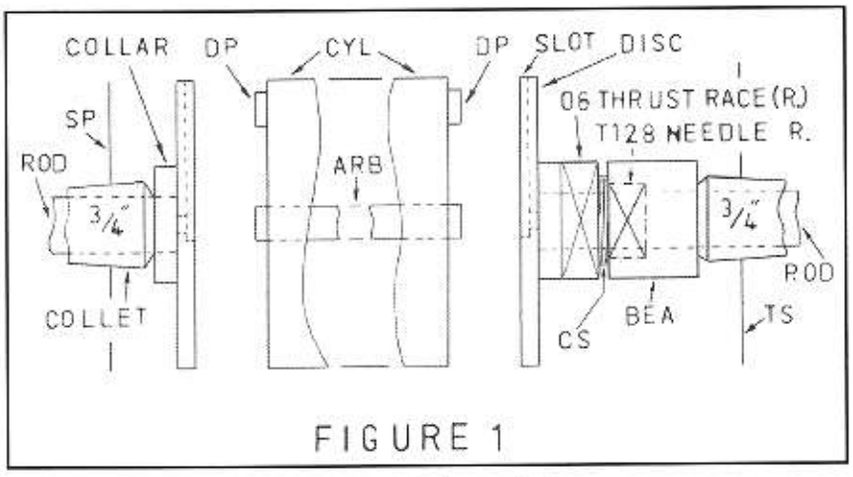


FIGURE 1

Fitting cylinder to lathe

Cementing is described first, with grinding of pins and associated measurement appearing in the next Journal.

Properties of various cements and ingredients are considered, giving rise to a specific mixture and means of application to the author's cylinders.

Turning Cylinders

The tasks of cementing pins in and grinding their ends to a cylindrical envelope call for cylinders to be turned on a lathe at up to 400 rpm. A method is needed for securely setting a cylinder on arbors at spindle and tailstock of the lathe, with positive drive from the former. Whilst developing a pinning machine, described in the article "Dividing a Cylinder for Music", it was envisaged that its removable arbors would serve to carry a cylinder on the lathe for the operations now being undertaken. It has indeed been possible to use these items as defined by fig 1 and shown in photos 1 and 2.

Fig 1 depicts a cylinder as viewed from the front of a musical box, bass end to the left. Each pinning machine arbor is made up of ¾" **dia. Rod** sweated through a **Collar**. A **Disc** which matches cylinder diameter is screwed to the Collar. Each Disc has a **Slot** to accommodate cylinder arbor (**Arb**) and drive pin (**DP**). The end of the ¾" dia. Rod, turned down to 6mm dia., enters half the Disc thickness.

At bass end, the ¾" dia Rod is held in a collet, taking drive from lathe spindle (SP) to DP. At treble end, the ¾" dia. Rod is supported by, and passes through, a needle roller bearing **T128 Needle R.** This bearing and tail of the Rod are recessed into a blank end arbor (**BEA**), the Morse Taper of which is held by the tailstock (**TS**). TS is adjusted to push the cylinder towards SP, applying light pressure through compression spring (**CS**) and thrust race 06 **Thrust Race (R.),** onto the Collar of the pinning machine arbor. CS allows for slight expansion of cylinder arbor when heat is applied.

The cylinder is held securely in the arbor Discs by clips described in the earlier article. For added security, bespoke aluminium clips are fastened around, covering arbor discs and ends of cylinder, but bridging cylinder clips. Available lathe speeds for the two main operations are 160 and 400rpm.

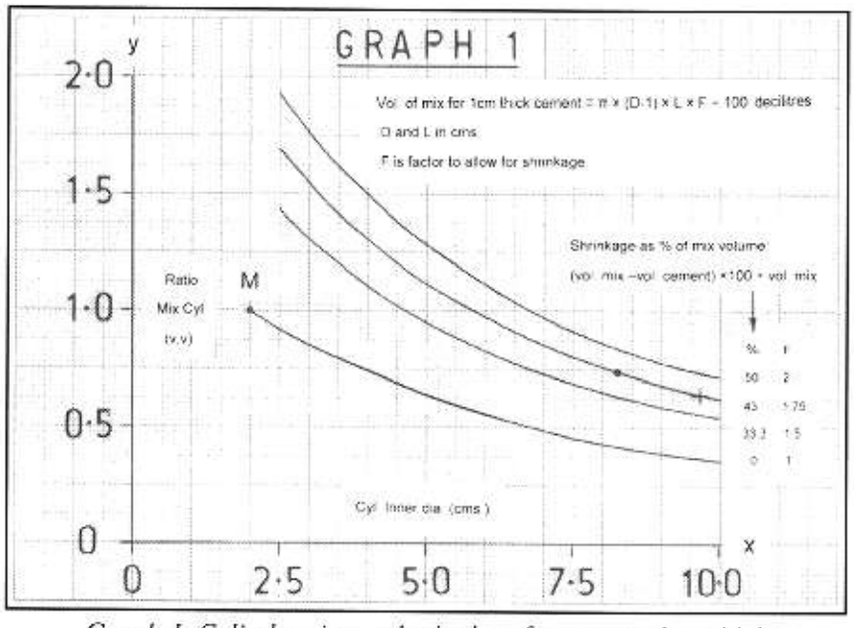
Composition and Application of Cement

The literature describes various compositions of cement for fastening pins to a cylinder wall. The simplest, to mix rosin and silver sand (ref 1), was chosen but the suggested ratio of 1:2, rosin to sand by volume was increased as will be explained later. The reference

Table 1

Density of Materials

Material	grams/decilitre	Relative Density
Water	100	1
Rosin	65	0.65
Silver Sand	145	1.45
Rosin/Sand 2:3 (v:v)	125	1.25
19thC Cement (crushed)	110	1.1



Graph 1. Cylinder size and mix data for cement 1cm thick

also suggests that rosin be melted without overheating and sand stirred into the melt. It also recommends that cement around pins should be at least 10mm thick. Elsewhere it is stated that cement melts at 110-135°C depending on its composition.

Rosin was purchased in flake form from ref 2 and silver sand was obtained from a local garden centre. Having developed a method of turning our cylinder and with materials to hand we have the wherewithal to 'glue' pins to cylinder wall. However, questions started to arise due to the author's unfamiliarity with rosin and its properties. Further, how was the required large quantity of cement material to be placed in the cylinder through the 12mm dia. arbor holes in each end cap, the caps having been pinned into place? Some writers recommend pouring molten cement into a cylinder: not practicable for our cylinder, an alternative method is needed.

Properties of Rosin

Rosin arrived in flake form, flakes ranging in size from 1 to 25mm, all 2 to 3mm thick, with a degree of powdering. They are easily crushed using an old-fashioned wooden potato masher and a tin tray, a poor man's pestle and mortar!

It was decided to achieve the required mix by weighing ingredients rather than by measuring volumes, taking density into account to get correct volumetric ratio. Table 1 gives results of density measurements for this purpose.

The **first question** to arise is, when measuring volumes of rosin should it be in flake or powder form? It was supposed that a given volume of powder would weigh more than the same volume of flake. However, using a copper sampling cup of known volume and accurate digital scales, the weights of each form were found to be the same, within the limits of error when loading flake. On reflection, interstitial air between the very many powder particles equates in volume with the fewer, larger air gaps around the flakes. It was decided to crush rosin to a fine powder before measuring and mixing with sand: this will facilitate loading of a cylinder and ensure even distribution of mix along its length when spun on the lathe.

Why more rosin than recommended? The author was curious to know how pure rosin and mixtures of rosin and sand behave when melted, followed by solidification on cooling. Samples were placed in plastic cup-cake moulds (volume 25cc, temperature tolerance 230°C) and heated in a bath of engine oil over a gas camping stove: bath temperature was taken by probe and digital thermometer. As predicted, rosin and rosin/sand mixes melted in the range 110-135°C. A 1:2 (v:v) rosin/sand mix was rather viscous until taken to 180°C, so rosin content of samples was incremented until the melt flowed readily at around 140°C, occurring at a mix ratio of 2:3 (v:v) which was therefore adopted as our standard. In addition to rosin, shellac, 19th Century cement and crushed 78rpm gramophone records were investigated. Table 2 is a record of melting temperatures: for each sample, temperatures are listed for

Table 2

Melting Temperatures

Material	Temperature °C	
	Melt starts	Sample is fluid
Rosin	110	120
Rosin/Sand 2:3 (v:v)	125	135
19thC Cement (crushed)	125	140
Shellac	120	135
78rpm Record (crushed) 78R(c)	140	200*
78R(c):Rosin 1:1(v:v)	130	135@
78R(c):Shellac 1:1(v:v)	125	135@

* Even at this temperature the sample was not fluid: it behaved like very dry Plasticine.

@ The melt contained particles of 78R(c). Temperature was raised to 150°C for 10 minutes: the resulting cement became homogeneous. A speedier amalgamation at the lower temperature would probably have resulted from a finer grinding of the 78R(c): particles used were up to 5mm across.

Note: In all cases cement formed was less in volume than the starting mix.

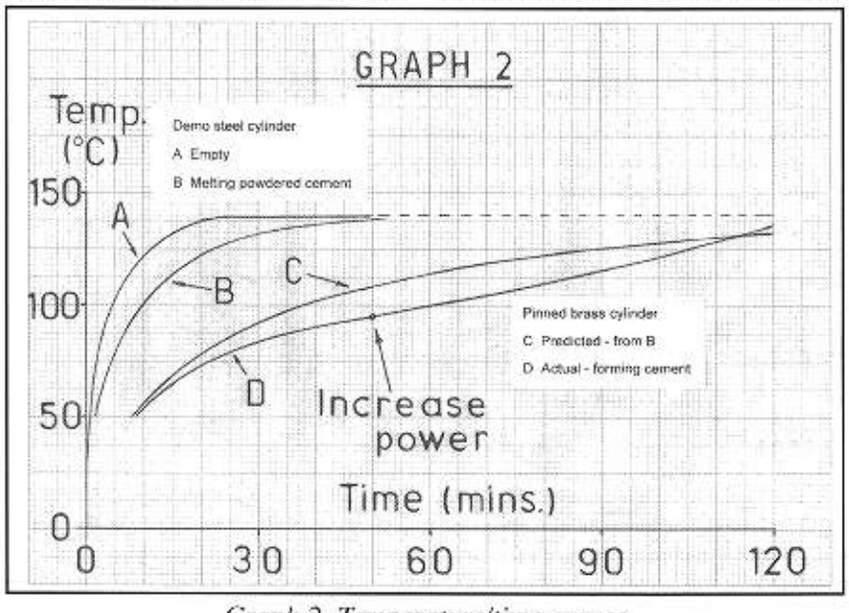
when melting commenced and, when a sample became fluid. Samples of mix and resulting cement are shown in photo 3.

The **second question** falls out from the above. What volume of mix of rosin and sand, before melting, is needed for a given volume of cement? It was to be expected, that a mix will reduce in volume as molten rosin fills its own air gaps and those between grains of sand: an effect observed during the trial melts. Only measured trials would provide the answer. A known volume of 2:3 (v:v) rosin/sand mix was spread out on a flat tray lined with aluminium foil. The copper cup holding engine oil at tray centre allowed temperature readings to be taken: foil was used around the cup to isolate it from the melt. The tray was heated on an electrical hot plate with regular monitoring of temperature. The mix started to melt at 110°C, becoming fairly fluid at 140°C. Heating was continued to 180°C to ensure some compaction of the cement, especially as the centrifuging effect of spinning a cylinder was absent. On cooling, the resulting slab was measured. It was found that cement volume was roughly 2/3rds that of the original mix. This result would be more accurately determined during the following trial as the cement still contained more air than might be expected in a spun cylinder.

Third question: can a rosin/sand mix be melted to cement within a rotating cylinder? Writers recommend preparing cement by stirring sand into molten rosin. The melt can then be poured into a cylinder before re-capping and centrifuging on a lathe with further heating and final cooling. Alternatively, freshly prepared cement can be solidified on a tray and crushed to small granules for loading into a cylinder and re-melted whilst centrifuging. The author wanted to know if a mix could be loaded into a cylinder and melted to cement as part of the centrifuging process.

Experimental cylinder trials

A trial was set up as in photo 4 which shows a short, steel cylinder with a polypropylene cap at one end for viewing the process of melting mix to cement as it might occur in a cylinder proper. Heating would be by propane/butane gas torch played on the cylinder. Arbors and lathe mounting are similar to that shown in fig 1, without the slotted discs. The test also allowed precise shrinkage of mix to cement to be established by measuring thickness of cement resulting from a known quantity of mix. For the mix tested the shrinkage was found to be 43%,



Graph 2. Temperature/time curves

Table 3	
Trial Temperature and Time Data	
Time (mins.)	**Temperature °C**
0	10
5	107
10 - heat off	193
15	122

slightly more than crudely observed earlier. Thus, the volume of our rosin/sand mix needs to be just under 1.75 times the required volume of cement. Photographs 5 to 7 illustrate certain stages of the trial cementing run.

Graph 1 presents information and guidance for loading different sized cylinders with a mix to produce cement 1cm thick. The four curves define, for four specific shrinkages, what proportion of a cylinder (y-axis) needs to be loaded with a mix: y is a function of cylinder inner diameter (x-axis) and percentage of shrink. Interpolation between curves covers shrinkages in the range 0-50%. We have determined shrinkage for our 2:3 (v:v) rosin/sand mix as 43%. The dot on this curve shows that our experimental cylinder (id 8.28cms) will be ¾ filled with mix; the cross is for our cylinder proper (id 9.64cms) which will be slightly over 5/8 full at start of melt.

A formula is shown at the head of the graph for calculating required volume of mix to produce cement 1cm thick: D and L are cylinder inner diameter and length in cms, respectively. It applies to any mix for which percentage shrinkage, leading to factor F, has been determined. The general form of the formula, to produce cement **t** thick in a cylindrical void of diameter **D**, has **(D-1)** substituted by **(D-t) × t**.

For further explanation of the graph, it is convenient to start at the point labelled M on the lowest curve. This point represents a 2cm inner dia. cylinder loaded with a mix having zero shrinkage. Obviously, cement produced will fill the cylinder and be 1cm thick, extending from wall to centre. We are ignoring volume

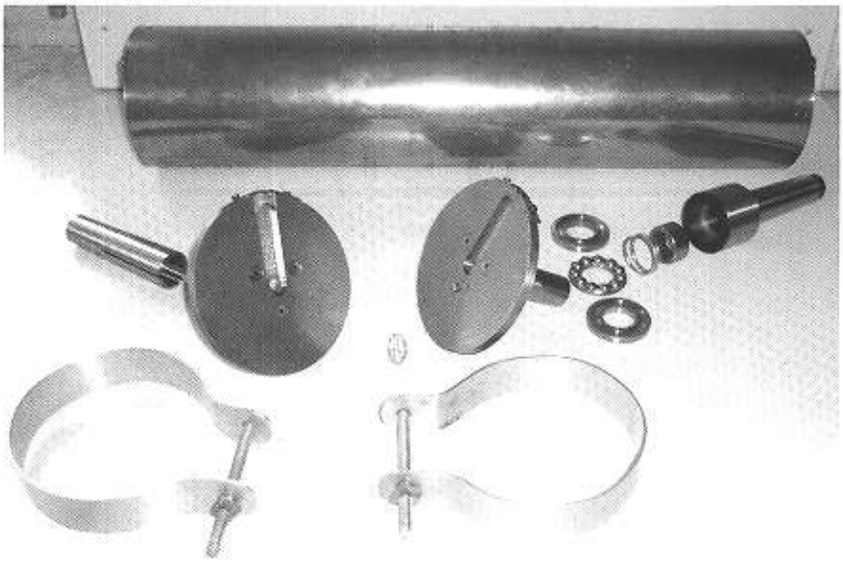


Photo 1. Components of cylinder/lathe fittings

of cylinder occupied by pins, arbor, etc. With a shrinkable mix, the same cylinder would need to be re-loaded to fill residual space following melt, each time leaving an ever decreasing space: a repetitive process down to grain-size level. Cylinders where x is less than 2 are excluded from the graph which is specific to cement thickness of 1cm. It is noted that this value of thickness is not critical, the discussion concerning point M being purely academic. Cylinders with x greater than 2 and y=1 need only a single loading and melt cycle: if y is greater than 1, then two or more cycles are needed.

During the trial, mix/cement temperature was taken at 5 minute intervals using probe and digital thermometer as before, probing a short 3mm inner dia. closed end brass tube (photo 7) sweated into the centre of cylinder length: it was obviously necessary to stop rotation of the cylinder for this. The temperature/time data shown at table 3 would guide the melting process on the cylinder proper. In particular, temperature of 193°C after 10 minutes of heating gives cause for concern, producing the danger of melting soldered seams of cylinders. This value is far too high and results from the author playing too hot a flame directly on the steel cylinder. He concludes that when heating his actual cylinder the flame should be held under, rather than on the cylinder. Further, temperature readings will be taken at shorter intervals, accepting that the mix and/or resulting cement will tend to slump: this will be countered by a long spin at final temperature of 140°C.

When discussing achievement of correct temperature with a Society friend he asked if using a heat gun had been considered, it hadn't, but his suggestion would be tried out. A heat gun with variable temperature control from 50-630°C and adjustable airflow between 120 and 550 litre/min was purchased. Preliminary trialling of the gun, with its exhaust gas spreader 5mm from the cylinder and at full airflow, showed that a temperature setting of 480°C, producing an exhaust gas temperature of 280°C, was required to bring the **empty** steel cylinder to 140°C in about 20 minutes: graph 2 shows this as temperature/time curve **A**. In comparison with the heat gun, the mildest possible flame on the blow torch produced 550°C at 50mm from the torch outlet. The gun was chosen as the tool with which to melt cement in our cylinder. In order to ensure safe and correct positioning of the heat gun at the lathe, a jig was constructed as shown in photo 8. The gun is slid along the top guide rail to maintain correct distance from the rotating cylinder: end stops prevent the gun fouling cylinder retaining clips.

Will these heat gun settings melt cement or a rosin/sand mix? Only a second trial in the steel cylinder will tell. For this trial, the cement formed earlier was melted out and crushed to powder using a kitchen mincer. Sufficient extra rosin/sand mix was added to increase final cement thickness from 0.8 to 1cm, the shortfall having resulted from the assumed shrinkage of 33% against actual of 43%. For this, D and t in the general formula for volume of mix are the diameter of the void within the first cement formation and the extra thickness of cement required, respectively. F is also increased from 1.5 to 1.75 to apply the more accurately measured shrinkage. The temperature/time plot of this successful melt is shown in graph 2 as curve **B**. As might have been expected, temperature rise is somewhat slower than for the empty cylinder because of the extra material

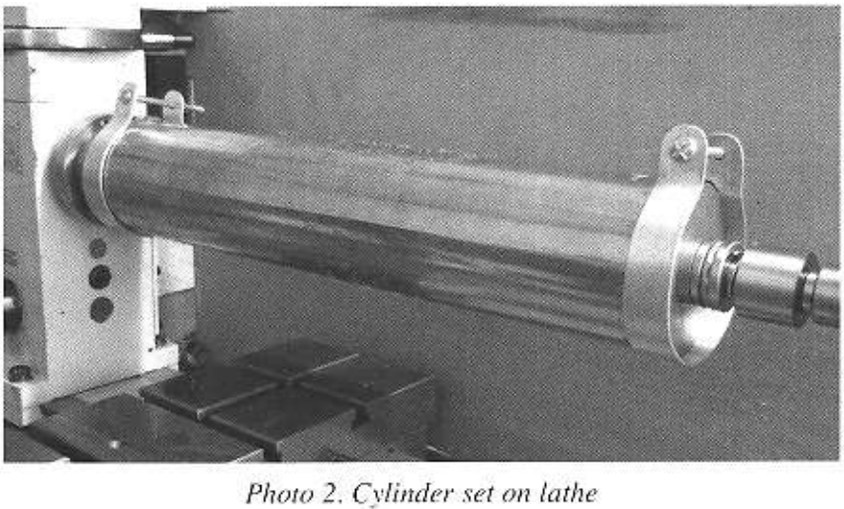
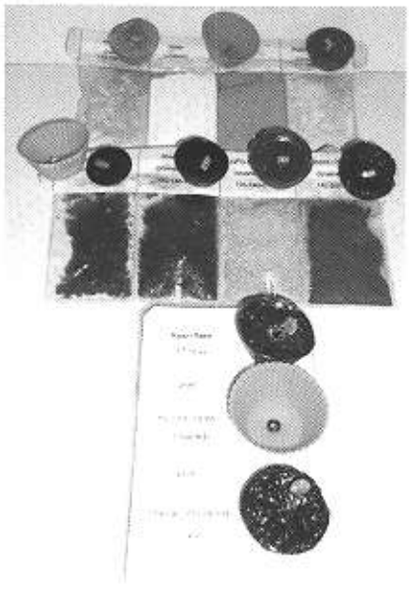


Photo 2. Cylinder set on lathe



Rosin (raw) 110-120°c	Rosin (crushed)	Silver Sand	Rosin:Sand 2:3 (v:v) 125-135°c
Shellac (raw)	Shellac (crumbled) 120-135°c	19thC Cement (crushed) 125-140°c	Record (78rpm) (crushed) 140-200°c

Photo 3. Samples of mix and cement and key (above)

to be heated. This effect will be greater for the longer, pinned cylinder with its greater mix load: a prediction for this is curve **C** on graph 2.

Cementing our first pinned cylinder

Now, knowing some of the properties of rosin and the behaviour of a rosin/sand mix when heated, we can proceed to cement pins of our first musical cylinder.

Three temperature probing points were sweated into the cylinder for control of heating: one was at centre of cylinder length, two 10mm in from end caps, all being in line in the quiet period between tunes. The only unknowns will be temperature of the mix remote from temperature probing points and, quality of resulting cement. Also, has it melted sufficiently well around pins and throughout its thickness and, has it spread evenly along cylinder length? In order to achieve this last requirement a cylinder will be spun for several minutes before applying heat. Having observed how the trial mix had been flung around, it is concluded that cylinder dividers with their scalloped and additional observation holes should not hinder spread of a dry, finely powdered mix along cylinder length. Loading half the mix at each end will help. Of course, totally filling the cylinder would ensure an even spread of mix, but this idea was not adopted because of the 60% extra weight of cement this would entail; an unnecessary burden.

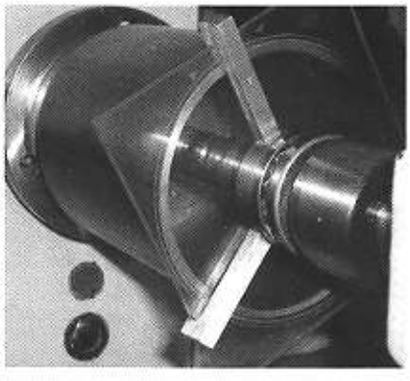


Photo 4. Trial cylinder on lathe

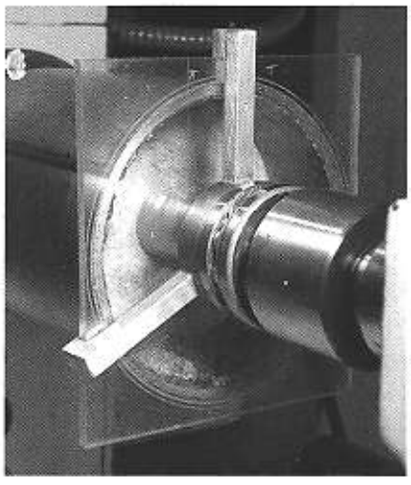


Photo 5. Mix packed at bass end

Entering dimensions of our cylinder into the formula at the top of graph 1, then proportioning calculated volume of mix between rosin and sand in the ratio 2:3 and finally, applying respective densities from table 1, we find that we need 560 grams of rosin and 1875 grams of sand. This is of the same order of magnitude as the weight of our empty, pinned cylinder at 1800 grams.

The cylinder was set up for loading as shown in photo 9. A collar of thin card, seen from above in photo 10, prevented spillage as half the mix was loaded at each end using a brass

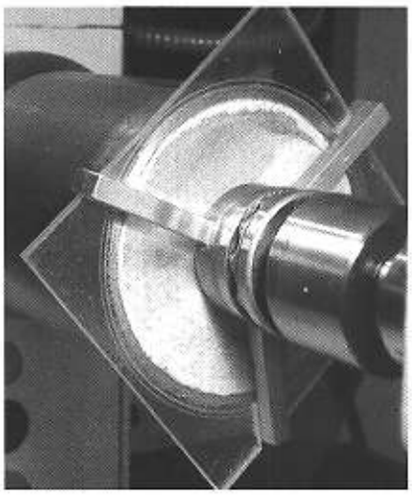


Photo 6. Mix spread and slumped after spinning - no heat

sampling cup. During this operation, the end of the 12mm diameter arbor was 15mm inside the end cap: this diverted the mix out towards the scallops in the cylinder dividers thus helping it to spread along cylinder length. Once loaded, the arbor was correctly positioned and locked at both end caps. The cylinder was then placed on the lathe and secured by aluminium clips. As before, the heat gun was supported on its jig, this time adjusted so that the cylinder was fully covered by lateral movement of the gun, again limited to stop short of fouling cylinder clips, see photo 8.

Heating was started with the heat gun spreader set 5mm from the cylinder and exhaust temperature set at 280°C, manually moving the gun back and forth along the cylinder. Temperature measurements were taken at 10 minute intervals. It was soon noticed that temperatures at cylinder ends were lagging behind the central temperature. This was a function of time of passage of the heat gun and the fact that end caps are of 4mm thick GFS. By dwelling longer at cooler spots with the heat gun temperature differentials were readily eliminated. At 40 minutes it was clear that temperature was rising more slowly than expected (see curves **C** & **D** on graph 2): therefore after 50 minutes the gun exhaust was raised to 300°C, its maximum output, and its spreader moved to within 4mm of the cylinder. This proved sufficient to raise cylinder temperature to 135°C and convert the mix to molten cement: evidence of the melt was seen by slight weepage of pure rosin through a few pin holes, and, of course, by the measured temperature shown at the upper end of curve **D**. Because of the large mass of cylinder and cement it was decided to allow 60 minutes turning and cooling to ensure that the cement did not slump. It is noted that curve **D** is a plot of the average of the three temperature probing positions. This is regarded as a valid course of action because the cross-section of cylinder, mix and/or cement is consistent along its length; also, temperature differences between the three positions were small. Finally, the increasing gradient at the upper end of curve **D** shows that there is sufficient power for higher temperatures to be reached if required. A future melt will commence at this higher power setting.

This article will continue in the next issue of The Journal when equipment and methods for grinding and measuring pins will be described and discussed.

References

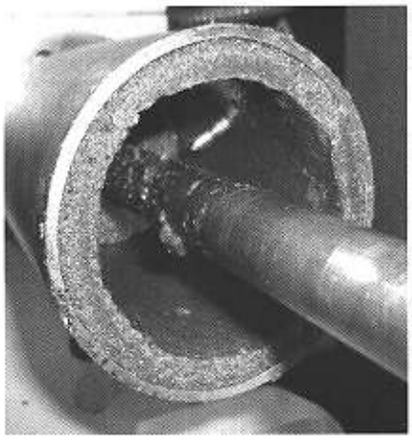


Photo 7. Resulting cement and temperature probe tube

1."Cylinder musical Box Technology" HAV Bulleid. ISBN 0-930256-22-0 Page 208

2. John Myland Ltd, 26 Rothschild Street, London SE27 0HQ Tel: 0208 670 9161

Rosin 500g Code-30 899 8707 £4.89*--

Shellac Flake 500g Code-30 899 8703 £7.07*--

*Prices at end of 2010 plus p&p and VAT

Footnote

Concern has been expressed that the seam of this author's rolled

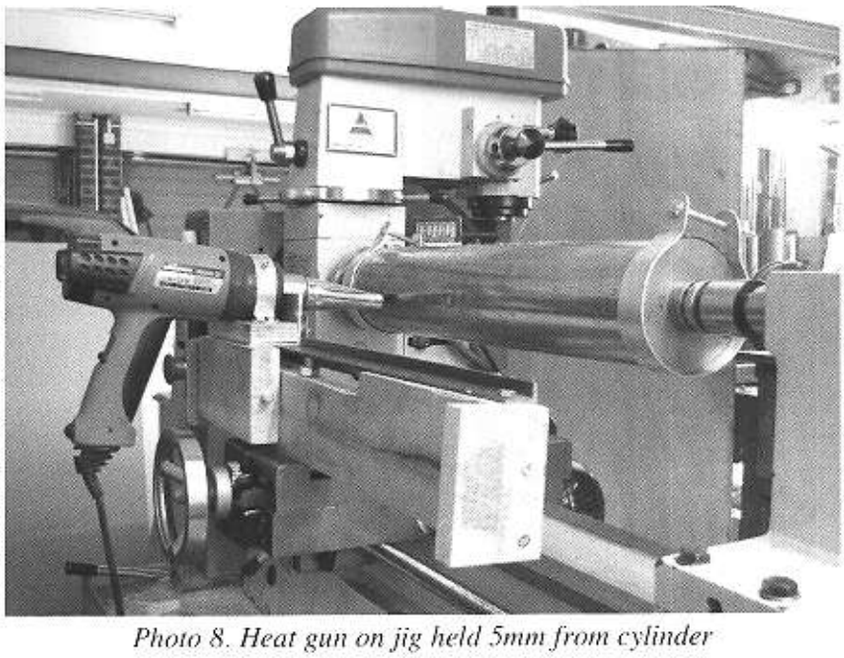
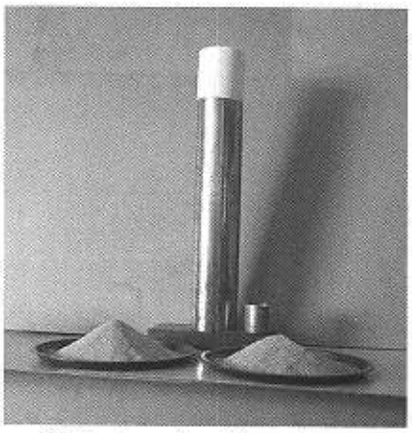


Photo 8. Heat gun on jig held 5mm from cylinder



9. Ready to load the cylinder

cylinder has been joined with solder having a melting point in the range 183-235°C: Article "Forming a Cylinder" in Journal of Summer 2011 refers. The worry is that heating to form cement might cause the seam to open allowing hot cement to be ejected and cause personal injury and other damage.

The author is grateful for this observation from the readership who is reminded that his articles are written by a novice for the novice in the hope that helpful criticism of his methods will help him and other novices should they choose to build a musical box from scratch.

It is recommended that cylinder seams be joined by brazing: alternatively, make a cylinder from stock brass tubing.

On this particular aspect of safety, the author draws attention to the following points from the above article which ensured safe control of the process of melting a rosin/sand mix in his large cylinder.

1. Trials with the experimental steel cylinder allowed him to learn about the behaviour of molten rosin/sand mixes and cement. They highlighted problems in controlling flame torch temperatures, leading to the use of a heat gun with its better control of power.
2. Large aluminium clips held the cylinder securely in place.
3. Temperature probe holes along cylinder length allowed monitoring and full control of temperature.
4. Heat gun exhaust temperature of 280°C, raised finally to 300°C, may seem excessive to the casual reader. It is an expanding gas stream, which cools markedly as it works against atmospheric pressure.
5. Graph 2, Curve D supports 4 above and shows that cylinder temperature remained well below the melting point of his seam solder.
6. The compression spring at tailstock arbor would act as a 'safety valve' for any lateral movement of cylinders or their components, including cement.
7. Three points not specified in the article are:
   a. All lathe operations were at a spindle speed of 160rpm.
   b. Rosin/sand mixes were thoroughly dried over low heat before they were loaded into a cylinder.
   c. Length of temperature probe tubes was such that temperature of cement and adjacent cylinder brass was read.

Finally, let us consider the possibility of an eccentric load bursting the cylinder whilst it is spinning on the lathe. Taking account of data in the article and published values of tensile and shear strengths for the solder used, and noting that it alloys to a degree with cylinder brass, the force needed to part the seam, whether under tensile or shear stress, or a combination of both, reduces to 125-150lb/inch of cylinder length if it is made from 0.7mm thick brass sheet.

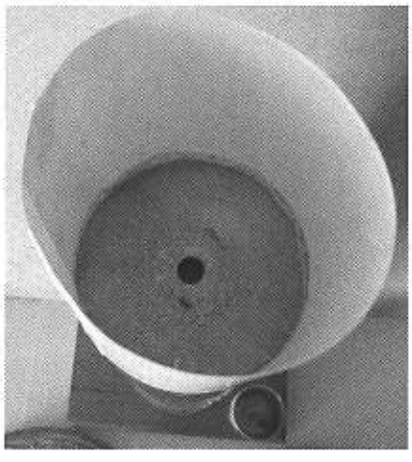
The rosin/sand load is 0.3lb/inch which, even if it could be concentrated at cylinder circumference, would produce a maximum centrifugal force of 13lbs (poundals)/inch on the cylinder wall – an order of magnitude less than needed to part the seam. Earlier trials with a steel cylinder had shown that only a small proportion of the mix is in contact with the cylinder wall when spinning, the rest being in 'free fall'. This effect can be seen in a YouTube video accessible via a link on the Society's website, details are given in the latest Essex Group report which appears in this issue of the Journal.

Further, the cylinder is first spun cold to evenly distribute the mix: if any weakness has been caused by heavy-handed pinning it should manifest itself before the heating phase.

The author has load-tested a 2 inch length of cylinder, formed as per his large one but using 0.4mm thick brass - seam strength 70-85lbs/inch - and found it impossible to break its seam under tensile or shear strain, both with static and dynamic application of masses of 1, 5 and10lbs – dynamic tests were repeated 4 times for each mass; also with a static load of 20lbs. In these tests the seam did not have the inherent support of a complete cylinder with its end caps, dividers and arbor. The seam could be broken fairly easily by flexing the brass about the seam axis after the tests. He concludes that eccentric loading is unlikely to open a seam under his operating regime; indeed it did not on his large cylinder, but accepts that heed must be taken of the warnings raised.

Please readers, continue to make helpful comment on this musical box development.

Author



10. Inside the collar

News from Other Societies

Compiled by Alison Biden and Nicholas Simons

Mechanical Music, Vol No 57, No.6, November/December, 2011
(See also www.mbsi.org)

Annie Tyvand, the new President of MBSI, looks backwards and forwards with great enthusiasm to the various chapter and national meetings of the Society in her first address, while the Editor, Rosanna Harris, describes the challenges of moving an entire collection from Colorado to South Dakota. Meanwhile Ardis Prescott, membership chairman, has had her own excitement on a trip to Switzerland. Joe Berman, Museum Committee Chairman recalls the thrill of the Annual Convention (complete with earthquake), before the 'meaty' part of the magazine kicks off with a nine page account by Christian Eric of his restoration of a Bontems free standing silver singing bird, thought to be one of only two ever made, and the only one still extant.* Hendrik Strengers discusses 'Two American Trade Cards' (Mason & Hamlin Organ & Piano Company, and Steinway & Sons.) This is followed by Part 5 of Tom Meijer's series on Belgian music makers, featuring Louis Somers. There is a twelve page record of the Annual Convention, themed on Stars and Stripes Forever, held in Rockville, including the Trustees' Meeting business and awards (and lots of photographs, naturally.) As a post script, Knowles Little describes making the table favours. Two chapter reports follow, and a short article in the series 'The Hunt' – this time for Bill Harris's Seeburg K orchestrion.

* Subsequently sold at Bonhams in London November 2011.

Mechanical Music, Vol 58, No 1 January/February 2012

In her address, President Annie Tyvand highlights MBSI's new status as a partner of the Musical Instrument Museum (MIM) in Phoenix, Arizona, whilst Editor, Rosanna Harris expresses her appreciation for all those who have contributed to Mechanical Music during the past year. MIM also features prominently in the Museum Committee chairman's report, where Joe Berman describes two of the exhibits on loan from MBSI. Reading the report from Ardis Prescott, Membership Chairman, one gets an eerie sense of *déjà* vu as she talks about the aging membership and makes various suggestions for interesting new members and keeping them. A fascinating 11 page article by William ('Bill') H Edgerton, with help from Craig A Smith expands on one from 1978 by Mr Edgerton, relating the history of the American Orchestrion builder, Bernhard Dufner, and gives a description of a number of his instruments. Some of the illustrations for this feature were supplied by Bernhard's granddaughter, Marie Joiner, whom Edgerton managed to track down in the 1980s, and who provided additional information.

Helmut Kowar writes about videotaping a musical box in order to help transcribe its music, and there are two short articles about unusual cylinder boxes. Tom Meijer concludes his series on Belgian music makers with a feature on music arrangers employed by Mortier (eleven listed), some independent arrangers, and Alphonse Dufey. Besides the regular Chapter reports, the contents are complemented by three and half pages of photographs of fire damage at the Nisco Museum of Mechanical Music, Israel, accompanied by poetic captions.

The Key Frame (Issue KF3-11)
(See also www.fops.org)

A large part of this issue is allocated to reporting on the Great Dorset Steam Fair and this is profusely illustrated in colour. Each year over 100 organs of all sizes come together, some from across The Channel, to play for five days at the largest steam rally anywhere. This fair is now in its 43rd year.

Elsewhere, Andy Hines continues his regular series giving brief histories of lesser known composers whose works we are familiar with through the medium of music rolls and books. Firstly is James Monaco, who wrote 'Row, Row, Row' in 1912 and later, 'You Made me Love You', both tunes being well known today in our little world. His second composer is the Mexican, Juventino Rosas, who is remembered today for just a single tune, which most people know but cannot name the composer. This is 'Over The Waves'. Rosas lived for only 26 years, but in this time he composed 92 full works, led an orchestra and a brass band and toured internationally. His music deserves to be more widely known.

The Key Frame (Issue KF4-11)
(See also www.fops.org)

The FOPS is 54 years old, but its first newsletter wasn't published until 1961. To remind members of its small beginnings, this issue reprints the first newsletter, all 5 pages of it. Names mentioned and still familiar to us today are D. A Robinson, who had just acquired Roland Hill's Gavioli, and Jan van Dinteran of the KDV, who has recently passed away.

A three page advertisement appears which reminds readers with very deep pockets of the delights awaiting anyone going to the auction of the Milhous Collection in Florida next February. This is one of the largest collections of musical machines, cars and collectibles anywhere in the world.

Andy Hines starts his regular column with a modern composer, at least he's modern for those of us who are over 60! This is Phil Coulter, who most of you will never have heard of, in spite of him writing such hits as 'Puppet on a String', 'Congratulations' and 'All Kinds of Everything', all of which have found their way onto fair and dance organs. Andy's other composer is the rather better known German military composer of marches, Carl Teike, who is best known for writing 'Old Comrades'. Carl was also interested in technical and engineering developments, which led to him writing the march 'Three Cheers For Aviation'.

Player Piano Group – Bulletin 200, Autumn 2011
(See also www.PlayerPianoGroup.org.uk)

This issue starts with an article that might offend the purists amongst us. It is a review of the Yamaha Disklavier and its history over the last 25 years. Putting one's prejudices to one side it is evident that these instruments can produce performances of remarkable fidelity, but, as is pointed out, they will not be around in 100 years whereas our currently 100 year old pneumatic instruments still will be.

Peter Phillips of Australia starts a series of articles about the restoration of a Duo-Art Pedal Electric piano, a subject which has never been covered in adequate detail previously. Colour diagrams explain how the theme valves and four hole tracking system work. Further instalments are promised.

The PPG have recently had the pleasure of a visit to MBSGB member Jack Henley and this is reported complete with colour photos of Jack's instruments, cars and Jack himself.

North West Player Piano Association Journal – Christmas 2011
(See also www.nwppa.freeserve.co.uk)

The NWPPA is an offshoot of the PPG for people who live too far north to get to any of the PPG's meetings. With only a small membership it has, however now reached its 40th anniversary and will be celebrating this next May.

Meetings recorded here include a visit to Taylor's Bell Foundry in Loughborough, one of only two left working in Great Britain today. This company is over 200 years old and was the pioneer in the art of tuning the harmonics in bells rather than just the fundamental tone. Of special interest was the Taylor/Aeolian carillon player which uses paper rolls to play a set of bells. An original Chime Piano is kept in their museum, and this was originally used to check the musical arrangements on the specially punched rolls. Seven carillon players were originally installed in Great Britain of which four survive, with two in full playing order.

This issue's Famous Musician is Robert Armbruster, who will be well known to Duo-Art owners. In his very long career (he lived to 97) he recorded 366 Duo-Art rolls and over 100 discs with his orchestra, mostly with Nelson Eddy as vocalist.

Elsewhere appears an article about Mr T.A Barrett, who was responsible for bringing Paderewski to Manchester in 1890. After a successful career as a concert promoter, Mr Barrett moved to London and changed his name to Leslie Stuart, who we know as the composer of 'Soldiers of the Queen' and the music for 'Floradora', and many other melodies found on late musical boxes.

Reed Organ Society Quarterly, Vol XXX, No.3, 2011
(See also www.reedsoc.org)

Frans van der Grijn reports on a reed organ meeting held in three little churches in the Netherlands and featuring nine harmoniums. This is followed by a description by Michael Hendron of a trip he made last July on the east Coast of the USA, visiting various collections and seeing a number of different instruments. A short article by Robert Allan tries to unravel the confusion as to the real identity of the maker of 'Malcolm' organs, thought to have been located in Chalk Farm, London. The featured scores in this issue are 'Consolation,' 'Sortie brève' and 'Action de grâces' by Hedwige Chrétien. Coleman Kimbrell contributes two articles, the second of which describes the rebuilding of a Loring & Blake 'Palace' Organ, accompanied by several photographs, and the final article by Jim Tyler and Kirk Dath describes the restoration of an abandoned Moline organ.

Non-English Journals

Musiques Mecaniques Vivantes – No 79 3rd Quarter, 2011
(See also www.aaimm.org)

This is a packed edition. After the as-ever genial address by Jean-Pierre Arnualt, the society's President, there follows an enthralling review of *L'atelier du Dr Wyss* (also featured in *The Music Box*, Winter 2011.) Continuing the theme of the preservation of heritage, Philippe Lefebvre gives an account of a conference on barrel organs and mechanical music held in January 2011 for 370 eleven to fifteen year olds under the aegis of Club UNESCO Les Temps d'Art. This is followed by over eight pages of a detailed account by Jean Nimal of the purchase on eBay and subsequent challenging restoration of a flute clock movement. Bought in a sorry state from a somewhat clueless vendor in the USA, he speculates that it originally came from Mirecourt towards the end of the eighteenth century. In a later article he discusses amateur restoration, referencing Q David Bowers and Arthur Ord-Hume. Michel Tremouille describes a very successful Society visit to some northern carillons, and Patrick Desnoulez one to La Ferme des Orgues. For technicians, there is an illustrated description of a Jules Cuendet tune-changing mechanism

which allows the tunes to be selected independently of the revolution of the cylinder. Mirecourt features again in an article by Francoise Dussour writing about organ and serinette manufacturers from this town.

Other features in this issue include a report on the fourth Arpajon Festival, a homage to Herve Lefebvre on his retirement, an article on the serialised novel *La Joueuse d'Orgue* and the regular round-up of some of the more interesting mechanical music items on YouTube, significant auctions and announcements.

Musiques Mecaniques Vivantes – No 80 4th Quarter, 2011
(See also www.aaimm.org)

As M Arnault observes in his address, AAIMM and its members are very active, as demonstrated by this edition of their magazine containing an article by Guy Cautin on the cultural evolution of festivals and reports on no fewer than five of them – two of them new this year. One has to admire the energy and enthusiasm with which our French cousins address such events: the 8th Wintzenheim festival, for example, featured a huge model of a barrel organ used to demonstrate its workings, whereas the 2nd Ventabren International Festival received extensive media coverage.

Pierre-Louis Freydiere gives an inspiring account of how his nurturing of a young enthusiast's interest in mechanical organs has led to the production of new music for M Freydiere's own instrument, courtesy modern technology.

In an article about a visit to the Maison de la Musique Mecanique de Mirecourt Yolande Mauffrey traces the evolution from serinettes (made in Mirecourt) to Black Forest flute clocks, barrel organs and then orchestrions, via the Bruder family from Waldkirch. The next two articles focus our attention on the town of Nancy, adopted home of the watchmaker Ransonet. The first is a biography by Marie-Louise Wey of this exceptional craftsman, who in 1772 was awarded the prize from the Academie Royale des Arts et Sciences, for his musical watch; the second, by Etienne Blyelle explores in greater detail the technology of said watch, which in the author's view is both worthy of admiration yet unnecessarily complex. In concluding, M Blyelle states it would be wrong to suggest Ransonet invented the musical box, though he was the first to appreciate the sonourous qualities of tempered steel. The next two articles are follow-ups to two from the previous edition: the first, by Philippe Beau, referring to *La joueuse d'orgues* offers a more precise date for its publication, whilst in the second, Jean Nimal continues his speculation, based on interim discoveries, on the origins of his flute clock, and whether or not an horology industry developed in Mirecourt.

Other items include the operating instructions from a Husson & Buthod organ, the mystery of two differing titles (from different times) for the same tune, an up-date on the European project, as well as all the regular features.

L'antico Organetto (Associazione Musica Meccanica Italiana), September 2011
(See also www.ammi-italia.com, or www.ammi-mm.it)

With great fanfare AMMI announces the opening of its library, the only magazine article to be printed in French and English as well as the original Italian. An impressive undertaking, it can be accessed on the internet. There follows a report by Antonella Casalboni and Edi Strocchi of a concert held in May 2011 celebrating the 150th anniversary of the unification of Italy, and another by Valter Salvi on the Plombieres Festival (one of the five featured in the French magazine, see above.) Ernestino Marchetti gives a brief description of a visit to the Hintzen family collection of organs in the Netherlands, containing organs from all major builders but especially Waldkirch makers, accompanied by a side bar about A Ruth & Sohn, and a stunning double centre page colour photograph of Gockel's Santa Lucia organ. There follows a more technical article by Franco Costi about volume control in gramophones. The 2011 Waldkirch Festival is written up by a team of Italian attendees, preceded by a very brief account of the Waldkirch organ industry. The remainder of the magazine is given over to numerous announcements and advertisements.

NEW MEMBERS

We welcome the following new members who have joined us since the last journal was printed.

If you would like to get in touch with members near to you please look at the new members list or contact the correspondence secretary. If you would like to start a NEW Local area group please contact Kevin McElhone on 01536 726759 or **kevin_mcelhone@btinternet.com** or Ted Brown on 01403 823533 as either will be pleased to advise.

You will get far more out of your membership if you come along to a local or national meeting, you might make some new friends and hear wonderful instruments... If you are not sure then just book in with our meetings organiser as a day visitor the first time.

3117	Mr. & Mrs. Storey Isle of Wight
3118	Mr.Hodson P.Tilley Gloucestershire
3119	Ian C.Davies Wales
3120	Allan Walker Lincolnshire
3121	Bernard L.Jonker Netherlands
3122	Warren & Hilda Merchant U.S.A.
3123	Emily Baines London
3124	Glen Chambers, U.S.A.
3125	Caroline Field. Dorset

The Piano in the Postcard

by Nicholas Simons

Hendrick Strengers shows us three old Dutch postcards in Volume 25 Number 4, the second of which show the interior of the 'Electric Automatic Musical Café' in The Hague. The instruments all incorporate a protruding cabinet at the front, and Hendrick is unable to identify these instruments. I believe I am able to identify them, because I actually have one such in my collection.

I suggest that this 'café' is more likely to be a musical instrument showroom as it is unlikely that a café would have so many similar instruments installed for the enjoyment of the customers. Alternatively, the owner may have had a sideline as an instrument dealer. I also suggest that the date of 1910 is rather late as this type of instrument was made for only a short period around the turn of the century. There appear to be at least four similar instruments, all with that characteristic extended front. Reference to the Holzweissig catalogue of 1901 will show the Orchestra Piano, Nos 1 to 3 on pages 35 to 37. These all have that characteristic front and look like barrel piano orchestrions. The box on the front doesn't, however, contain the barrel, but houses the new playing system, a card roll or endless band. Around this time, Hupfeld and Pianotist were developing card roll playing systems for pianos, but this problematical system was very soon superseded by the paper roll.

The piano to the left of the photo is most probably an Orchestra Piano No 2, which plays a 55 key roll or endless band, with instrumentation comprising a 36 note piano, 12 bells, 12 violin toned organ pipes, a bass drum, cymbal and a reiterating side drum. The front of the case contained either glass panels backed with illuminated pictures or non-functional display organ pipes. The price of such an instrument in 1901 was 1417 Marks or 1771 Francs. Music cost 3.60Mk for an endless band or 1.85Mk per metre as a roll. The instruments were supplied with electric motor and

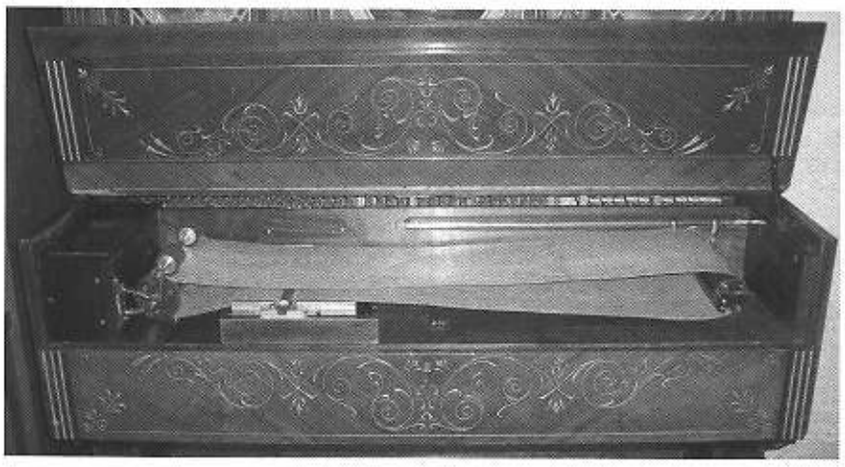


Fig 2. The Player Shelf with endless band

display lights and are operated by a coin in the slot, which, unusually for European instruments is incorporated within the piano rather than in a remote wall box. This is the instrument that I have in my collection, although mine has unfortunately lost its pediment. It is shown in Fig 1. (*See colour page 178 – Ed*)

This orchestrion is unusual in many ways, and must have been a short-lived product. Its manufacturer was most probably Frati of Berlin who had previously made barrel instruments and very soon changed to paper rolls with their Fratinola and Fratihymnia ranges of orchestrions. The music is read by a key frame, which can cause wear to the manila roll because it is much thinner than the card used on organ music books of the period. The pneumatic system works on a low pressure of 7" WG, which has the advantage of being able to be used directly for the organ pipes, but has the disadvantage of being rather too low for reliable use in the player system plus the added expense of having to use ribbed bellows throughout the action. The reiteration on the side drum is operated by a ratchet wheel driven by a chain from the main crankshaft.

The player shelf is shown in Fig 2, with endless band installed. Different lengths of band are accommodated by an idler roller to the right which runs on a slider rod and can be locked in any position. The band is driven by the rubber coated roller at the left and adhesion is aided by the pressure roller above. The music runs at 1.5 metres per minute which is about half the speed of a conventional organ book. Rolls would be slipped over the right hand roller, run through the key frame and wound onto the left hand driven roller. After playing, the driven roller can be disconnected from its drive axle and the card rewound by use of a handle on the right hand roller. I obtained two original bands and no rolls with the instrument. I have since arranged and cut a number of additional bands. The registration is such that the piano plays all the time, with no expression but with a sustain function. The 12 violin pipes play off their own keys and the bells are register controlled off these same keys. The bass drum and cymbal play together and the side drum reiterates from a single key.

This orchestrion makes an interesting addition to a collection. Its musical abilities are not much better than those of a barrel piano orchestrion and are no match for the roll players soon to come. It does, however, show one very short step in the development of mechanical music for the entertainment of the public.

Letters to the Editor

From Don Busby:

Dear Editors
Taking note of Alan Clark's letter (Winter 2011 Journal) about the use of soft solder to close seams of musical box cylinders, I have attached a brass plaque to the bed plate of my development: it reads, "Cylinder Solder Solidus 183°C".

Thus, if around the turn of the century my great-great grandson, or even Alan's, is melting out my cement he will know to keep temperature below 150°C, as during manufacture.

Alan's intervention also prompts me to place a CD of my series of articles with my movement, to assist future owners with maintenance.

Thank you Alan.

From Nicholas Simons:

Dear Sir

Arthur Cunliffe asks about plasticised paper suitable for making music rolls, especially those for the Triola. The most common type of plastic used for modern rolls is a polyester film,such as Melinex. This is available in a number of thicknesses and is available in the UK. Some suppliers will slit this into desired widths but minimum order sizes preclude its purchase by all but the professional producer. The Triola requires paper thicker than other instruments due to it being key operated. Drafting film is ideal for this purpose, and can be bought in various thicknesses from any competent drawing office supplier. The late John Young made a batch of new Triolas and recut rolls using drafting film. The only problem is that this film is matt on at least one side and this can have the effect of causing premature wear of any tracker bar parts. It is, however, available in more reasonable lengths of 50m. It will also cause excessive wear to your punch and die.

I prefer to use paper and card for music rolls, as a well maintained instrument will not damage the roll. As for a mis-tracking Triola, this is caused either by misalignment of the spools or an uneven regulation of the keys. Each key must rest against the roll with an equal, and low, force. Uneven forces will create a torque that causes the roll to swerve to one side.

From Michael Start:

Dear Editors

I am so pleased to read that the Mrs M Wright has granted permission to the society to use articles written by her late husband Lyn.

Lyn Wright's line drawings of automata and exploded mechanisms are incredibly inspiring and interesting. It is just so difficult to effectively communicate the technical details of an automaton in one simple drawing, but Lyn managed it in a simple freehand style that led the eye on a journey with many turns yet you never felt lost.

The Vichy Fruit seller (printed in the York Museum of automata guide book) is a devilishly complex machine, yet it unravels with ease in Lyn's confident, and completely computer un-aided drawing. I recently had cause to study another of Lyn's drawings, the tweeting bird bocage mechanism (MBSGB Journal of the 1980's) complete with flitting, flapping and floating birds (a swan!), along with the waterfall, each element easily followed through its journey from key to cam to moving figure. I am sure there are many articles and drawings that I have not seen and I look forward to seeing them.

Perhaps there is enough material for compilation into a book published by the society. The educational nature of the drawings and their subject matter would appeal to a wide readership and help to promote membership interest from a growing number of automata enthusiasts.

Thank you to Mrs M Wright and the Society

www.thehouseofautomata.com
Scotland

Church and Chamber Barrel Organs

For some years now I have been noting down the names of the tunes played by chamber barrel organs of the 18th and 19th centuries, finding that many of them do not feature in the list developed by the late Canon Noel Boston and the late Lyndesay Langwill and published in their fine book 'Church and Chamber Barrel-Organs' (2nd Edition, privately published, Edinburgh 1970). I have scanned the list of tunes from the second edition and have supplemented it with additions I have come across from our own collection of such instruments (currently numbering eight examples) and other sources. The list is now some 20% larger than the original Langwill and Boston one.

If you own a barrel organ, I should be delighted to hear from you with a list of the tunes it plays, together with a few details of the organ (maker, approximate date, number of keys, number and name of stops or anything else you consider relevant). Eventually I hope to publish the results in the Music Box, with full acknowledgement of course to Messrs Langwill and Boston and to any other contributors should they wish. Since both those gentlemen have passed on, I assume there would not be a problem with obtaining permission from their estates to use their list. If anyone has any information regarding the ownership of the copyright on 'Church and Chamber Barrel-Organs', could they please contact me.

Any lists of tunes may be sent or emailed to the Editors, contact details as found on the Officers page.

Thank you in anticipation.

David Evans, co-Editor

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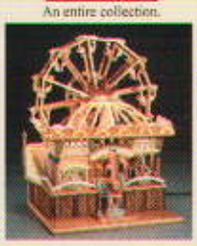

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