

From the Editors' Desk

Is there light at the end of the tunnel – or is it another train coming straight at us? We hope that you are all keeping well at this time and are enjoying being home based with your hobbies. Thank you to all our contributors. Ted and Kay Brown are making plans for the Christmas meeting, possibly with a Saturday/Sunday alternative to keep the numbers small and allow physical distancing. There will be more details in the next issue.

We are pleased to welcome you to another diverse edition of Mechanical Music World.

We are indebted to Uwe Breker and his team for a most intriguing auction report. Interesting times we are living through!

David Soulsby has contributed another of his beautifully illustrated articles, this one takes a trip to the Victoria and Albert Childhood Museum at Bethnal Green. We share his disappointment with the lack of life of the automata exhibits – perhaps after their major work is finished the staff will consider an interactive display, otherwise one might as well collect stamps.

Paul Bellamy has given us an insight into working in the film industry. After reading about the production of the new disc we naturally wanted to hear the music. The good news is that there is an Internet

link within the article to a video for those who care to follow it. The film's production has been halted temporarily but we will keep you posted when it is released.

Don Busby is once again busy in his workshop and kind enough to share his experience with us. Paul Bellamy continues his researches on early cylinder boxes in preparation for the next AMBC book.

Meanwhile, Joseph Berman sent us an interesting article on his early box, a rare and lovely piece by an unusual maker. Remarkable also for its connection with the musical box rental trade which he and Juliet Fynes have detailed for our edification. The instructions to the person operating the box is still very relevant (not surprisingly!), including “music should never be allowed to cease playing in the middle of a tune” and the reasons for it.

Teapot stands should make a come-back! They are useful as well as decorative. Thank you Juliet Fynes for alerting us to them.

It has been an amazing few months, I am sure you will agree. However, people with hobbies seem to have fewer mental health issues! So keep up the good work!

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Chairman's Report

It's been a worrying year for the whole world due to the Coronavirus pandemic. Closer to home we have had to cancel our April and June meetings. Unfortunately the plans for another auction have had to be postponed, but we intend to hold one just as soon as it is safe to do so.

I sincerely hope that you are all coping and that you and yours are keeping well.

I know that some members, deprived of the opportunity of gallivanting, have used the enforced confinement to tackle long-postponed restoration and other projects. We are able to keep in touch with our members through the magazine, which we will endeavour to publish by its due dates, but do continue to contact your friends by phone and email. Some of you may even be able to enjoy face to face contact with these new-fangled methods such as Skype, FaceTime and WhatsApp (all a complete mystery to me!).

It is good to see other societies are starting to make arrangements for meetings. It will be a while before we are able to start up again and the September meeting has unfortunately been cancelled. We shall have to wait and see if the situation will have improved sufficiently for us to be able to meet in some way in November. We will keep you informed.

There have been a number of enquiries by telephone, via our website, regarding mechanical music repairs and information. Some of these people have subsequently joined AMBC, appreciating the friendliness and helpfulness they have found here.

I would like to thank you all for your continued support.

Take care and keep safe.

Ted Brown

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Publication Dates for "Mechanical Music World"

Winter issue 28th January; Spring issue 28th April; Summer issue 28th July; Autumn issue 28th October

We need articles and advertisements (unless repeats) to reach the Editors at least one month in advance of these dates. Please allow more time for involved articles with many illustrations.

AMBC Meeting Dates

Please contact the host to ensure a place is reserved and for needs to be catered for. Include any guests you may be thinking of bringing. Also please advise if a booking has to be cancelled so that places can be offered to others.

Chanctonbury Ring Meetings Diary

Saturday November 23rd Lunch supplied

All meetings take place at the Old School.

Please let Ted know if you intend to come.

In the present circumstances it is hard to be certain when restrictions will be lifted and we can meet again as a group as we used to. We will keep you informed as soon as possible about when meetings can take place again. Please contact Ted if you need an update.

Auctions and the Vanishing Audience

Auction Team Breker's mechanical music sale

When Henri Lioret unveiled his No. 3 Phonograph at the Trocadéro in Paris in 1897, the auditorium was by all accounts full. When Auction Team Breker sold a rare example of the weight-driven model in Cologne on 16 May 2020, the room was almost empty.



Lot 242: Lioret No. 3 Phonograph, with original horn, tripod and three celluloid cylinders
Sold: € 25,660 / £23,200

The spread of the novel coronavirus and the worldwide measures to counter it have introduced a new set of challenges to the auction industry, which depends upon personal contact and a ready access to goods.

Faced with the restrictions of social distancing and a federal ban on public gatherings, the Cologne-based specialists in technical antiques decided against postponing their spring program and made the bold choice to move their auctions into a virtual forum instead. Uwe Breker, whose sales have built up a loyal international following, is well versed in the possibilities – and occasional pitfalls – of online auctions.

The preview was conducted by private appointment only, with minimal contact, masks and hand-sanitiser. The auction itself took place with a worldwide live video-stream on 6 online platforms but, whereas the room would usually be bustling with bidders from across Europe, the audience now consisted of staff conducting telephone bids at desks set two meters apart.

Breker's first online-only sale on 4 April, 2020 (a marathon double-bill of photographica and office antiques from the world-famous collection of Tom Russo) set the pace for a winning formula with a 96 % sold quota, running almost 11 hours. Their second virtual outing of vintage technology, toys and mechanical music, bucked the trend with some impressive results for rare and wonderful inventions.

An unusual sub-section with particular relevance was a single-owner collection of Second World War spy equipment. Clandestine receivers, such as the British Whaddon MK VII paraset transceiver in metal 'cash box' casing, were developed for resistance forces in France, Belgium and the Netherlands.

Built not for secrecy, but display, was an impressive ensemble of mechanical music instruments. The auction included fine examples of pneumatic and stringed instruments, complex musical boxes, singing birds, imposing clocks and musical timepieces.

Lot 231 was a 'Sur-Plateau' Pocket Watch by Thomas Sauvél, Paris, with two-air movement, c. 1820.

It sold: € 3,625 / £ 3,277.

Amongst the earliest instruments in the auction was a rare musical clock with six-air organ accompaniment. Attributed to Christian Ernst Kleemeyer, court clockmaker to Friedrich Wilhelm II, the piece with its architectural mahogany case fetched € 9,700 / £ 8,700.

A century later, the musical landscape looked very different. Large-scale manufacturers exploited the new railway network to turn Leipzig into the mechanical music capital of Europe. Firms such as the Polyphon and Symphonion Musikwerke built displaying musical boxes for every taste and occasion, while the retailers Ernst Holzweissig and Gustav Uhlig supplied customers across Europe with a stock of mechanical pianos, accordions, toys and household goods.

Across the Atlantic, the Mills Violano Virtuoso, invented by the prolific Swedish-born patentee Henry Konrad Sandell, was a familiar sight in hotels, saloons and dance halls during the first quarter of the 20th century.

A fine longcase clock with carillon and moon Phases, c. 1800, had a 15 inch engraved brass dial



*Lot 202: Empire organ clock, attributed to Cristian Ernst Kleemeyer, Berlin, c. 1800
Sold: € 9,700 / £ 8,770*

signed: Jo. Friederich, Steen, with half-hour strike on a bell and 4-air 20-bell musical movement mounted on the top and to the left of the principal movement, 39 bell-striker, the lowest tenor tone with only one striker. The pinned wooden barrel is 17 1/3 in. wide, released by the clock or at will with a string, impressive cherry wood case, front and sides with panels, 6 columns with brass bases and finials, top with sound frets, 3 wooden urn finials and standing 113 inches tall. It came with two 4-air barrels (one of them new) and 2 cranks.

It unfortunately failed to find a purchaser.

A carousel of colourful tin toys, trains and automata rounded off the auction on a playful note.



Lot 192: Model 18 Orpheus Mechanical Piano, with hand-turned mechanism for 13-inch Ariston discs, Musikwerke Ludwig & Co., Leipzig, c. 1900.

Sold € 4,660 / £ 4,130



Lot 203: Mills Violano Virtuoso, automatic violin with piano accompaniment, Mills Novelty Co., Chicago, c. 1925

Sold: € 15,100 / £ 13,650



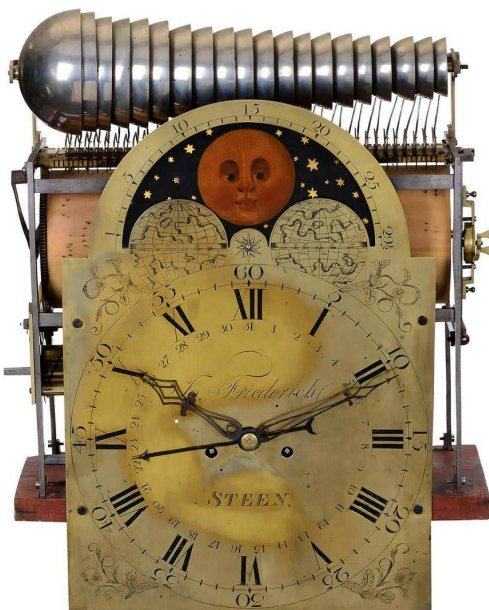
Lot 228: Style 4 Automatic Disc-Changing Musical Box, Polyphon Musikwerke, Leipzig, in Art-Nouveau walnut case, c.1900

Sold: € 20,720 / £ 18,700



Lot 346: Musical Acrobat Automaton by Rouillet et Decamps, c. 1900

Sold: € 10,075 / £ 9,100



Left and above

Lot 190: Musical longcase clock by Jos. Friederich, Steen. Circa 1800.

The Making of a Musical Disc, rare as a Hen's Tooth

Paul Bellamy

This may seem to be a ridiculous title for an article but, in this case, it is not. In fact, there is no better description to explain what follows. Somewhere in the non-self-playing instrument world were two people bent on a mission. One was a film director and the other a musician. The director's sixth feature film was to be a poignant sort of ghost story, based on a mother, two daughters and a musical box - a nostalgic yet troubled reflection of childhood memory.



Tanya Myers plays 'Turtle Doves' on the Symphonion

The script of the story and its location, based in a large old house on the Isle of Wight, was well in hand but two things were missing; one was the music and the other the self-playing musical instruments to perform the music. The theme required a player piano and a musical box.

The film director, Jon Sanders, started to make enquiries which, after a rather tortuous route, landed up as a telephone call with a question: "Can a musical box be programmed to play a piece of music?" Of course, the answers had to be both yes and no, plus another question in response: "What type of musical box?" Jon's friend and long time collaborator Douglas Finch, a Canadian/British concert pianist, composer and improviser, had the task of creating the musical score.

On the basis of 'never say never,' the result was that both were eager to visit me and hear a number of different cylinder and disc musical boxes. All problems have a number of possible solutions. Finding a solution to this one, though, seemed to be about as impossible as finding a needle in a haystack? No, in this case finding a

hen's tooth.

Douglas had already composed the music for a player piano and received expert help and advice from Julian Dyer that resulted in a piano roll. Transcribing the melody onto a cylinder musical box was a non-starter but a disc was a possible solution. Jon and Douglas came to my home. Cylinder and disc musical boxes were demonstrated and, after listening to some small disc boxes and a 15 inch Polyphon in my small collection, it was now time to visit Ted Brown at the Old School to inspect a

larger range of musical possibilities.

Of all Ted's instruments, his Symphonion, with its single comb, was their choice. The tone is sweet and soft. All that was needed was the music and the disc. To find someone to make a disc from a musical score was still as rare as.... well, as rare as finding that illusive hen's tooth!

So what are hens' teeth and do they exist? A silly question because the answer is no, they do not. It is a mid-nineteenth century expression, from across the pond in the USA, used to describe the exception that proves the rule, namely to find something completely unique.

By now our band of four, Jon, Douglas, Paul and Ted were playing from the same metaphorical hymn sheet but the quest for the disc was yet to start and a specification was required. Did the Symphonion play for 45 seconds? Yes it did. Was the scale of the comb known? Yes it was. Was there a possible disc manufacturer who could produce a disc from a musical score? The answer to that was to become a positive yes! The name, of course was HEN'S TOOTH DISCS, to

be found at henstoothdiscs.com.

Douglas wrote out the score as a first draught, transposing it from a piano version into a key to suit the more limited scale of the Symphonion comb. Getting the right pitch was essential because the musical box was to accompany a female voice. Once more, luck was on our side because the music could be transposed to a pitch that suited the range of the Symphonion's tuned steel comb and hence the voice of Tanya Myers, who plays the part of Phoebe, one of the two sisters in the film.

It was at this juncture that Douglas needed to understand the musical limitations of a steel comb played by means of a punched disc. Unlike a piano, loud and soft are more difficult to achieve, crescendo/diminuendo nigh impossible although a combination of notes forming successive chords can have an effect on volume. A sustained note, as required by the score, was also impossible although clever punching can give the impression by repeating a note. Grace notes are limited by the mechanics of the star wheels, those little cogs that are acted upon by the projections on the disc to pluck the comb.

Douglas soon learned that when a tooth on the multi-pronged star wheel rotates under the action of the disc, another of its teeth lifts and releases the tuned comb tooth. Also, that slight changes of musical pace, accelerando and rallentando, can be effected by varying the distance between notes as the disc rotates at constant speed.

Ted had suggested that the firm Hens Tooth might be a candidate for producing the disc. With the first draft of the musical score to hand I was able to play it on my Yamaha piano, gaining sufficient understanding to give advice on the sort of score required for the disc. It was in that capacity that my first cautious email enquiry led to an immediate response from director Jack Perron. Yes, he could arrange music for Ted's Symphonion. Yes, he could work from a musical score. By now it was time for me to 'bow out' and let Douglas and Jack work through the score to their satisfaction.

The following transcripts of emails give some idea of how this was achieved:

1. *From Jack Perron, HensTooth Discs, email jackper@post.harvard.edu, to Douglas Finch:*

Hello Douglas, I've incorporated your changes, and fixed one note in error that I found. At our original tempo, demonstrating the repeat you requested, go to

http://www.henstoothdiscs.com/Custom/Finch__115_Sym13.mp3

to listen to the music!

It was the first step in solving the problem because a trial arrangement could actually be played, albeit via the computer and with a digital simulation of the sound of a disc musical box. The exchanges continued and the response from Douglas was to request a slightly faster tempo to allow a longer pause between two repeating musical bars.

What followed next was a series of exchanges, described as 'current edits', that only two musicians would understand. They included editing of a descant part of the score (its upper range), lowering a C by one octave, fixing an error in bar 8, changing a high G# to an A# and much more. Even the simulated rotational speed of the disc had to be taken into account to achieve a total playing time of about 50 seconds. The response was:

2. *Dear Jack, I just listened again and I think the timing of the pauses and the grace notes sound very good. The last grace note at 18/100ths sounds fine to me. Please see two small revisions to the descant line below; otherwise I think the notes and the balance sound fine. Just one small thing at the beginning of bar 7..... etc., etc, etc.*

Your comments about having a slight bit more space for the rubato to be more effective makes sense - also, I think it wouldn't hurt for the overall tempo to compensate for this by being a notch quicker. Would you like to have a go with that? I think we should probably have at least 2 or 3 seconds of silence at the end, etc, etc.....

so I think we already may need to condense the piece a bit as it seems to go slightly over the 50 second mark. (51, I make it, by the time the last note has died.)

The above may seem like a foreign language to most but it illustrates the care that Jack took to meet Douglas' musical requirements; the two musicians understood the exchange perfectly. Also, Jack's use of the website to play the music as the changes progressed was brilliant.

Whilst the reader may not understand all the detail of these exchanges, the development of the final disc score was fascinating and could be heard, stage by stage, via the simulated musical disc box. To be able to hear the results as the modifications progressed was a unique experience. In fact, as rare as a hen's tooth. At its conclusion, I had just one comment to make: the tune needed a title!

Douglas had visited a delightful museum, Dimbola Lodge, on the Isle of Wight, near the location of the film. He had seen a photo of two little girls in an exhibition of photography by Julia Margaret Cameron (1815 - 1879). The image of the two children aligned well with the two sisters in the film, when they were little girls. The photo was charmingly entitled Turtle Doves. And that became the title of the tune.

Julia Margaret Cameron was a British photographer, one of the most significant and influential of her generation and an avante garde pioneer of soft focus photography. Dimbola Lodge, now a museum, is her former home. By strange co-incidence the year of her birth, 1815, was also when the first of the musical box makers were established, such as François Nicole in Geneva. Now that is a coincidence that is about as rare aswell, as rare as a hen's tooth! Her remarkable life story is worth a visit to her former home. Much of the information can be accessed 'on the net.'

The completed disc arrived at Ted and Kay Brown's Old School on the day before we were organising our first AMBC auction. It was a busy and entertaining day. At its conclusion,

when everyone had left, Ted and I strolled up from the old school canteen to the former classrooms. Up the steep steps to the narrow cloakroom, still with its original coat hooks that once supported the children's hats, coats and school satchels.

The school room, now the museum, consists of two classrooms, once divided by a high concertina set of folding doors, long since drawn apart to form one high vaulted space, acoustically ideal for its vast number of musical instruments. We extracted the disc with some trepidation, wondering if it would both fit and play on the Symphonion. It achieved both. Ted cranked the spring motor to about half power as I walked over to the door where the headmaster would have entered from his study. The room was as quiet as the day he once stood there, just as quiet as the children would have been in his presence.

The music played out clearly, a much sweeter sound than the digital version played via the computer. It sounded perfect. We played it several times, our trepidation slowly disappearing. What a relief that, at last, the disc and the Symphonion, with all its mechanical limitations, had produced such a sweet and charming result. To say the occasion was as rare as a hen's tooth for both Ted and I was an understatement but it had yet to pass another test, the tougher scrutiny of Douglas.

He was not able to collect the disk himself. Ted had offered to loan Jon and Douglas the disc musical box. Someone came to collect disc and box. More weeks passed as filming progressed. Finally Douglas sent the following message:

"I just wanted to let you know how lovely the music box has sounded these two weeks during rehearsals and filmingIt will appear in three scenes, first when the sisters first discover the musical box, then later when Phoebe remembers it as her mother sang the song and finally when Phoebe sings a two-verse song that she refashions with new words to her mother.... Everyone says that the music box will be something magical in the film."

The end result was not quite as intended because one note in the score could not be sustained quite as it would have done when played on a piano. Also, another note seemed to have crept into the score unannounced. To us it had sounded perfect but was it a disappointment to a perfectionist like Douglas? Clearly not! He continued:

“.... but, honestly, I think that added to the music in terms of veracity and a touching kind of vulnerability. Like Charles Ives, who apparently relished a couple of mistakes that crept into his 2nd edition of the ‘Concord Sonata’ and refused to correct them, I think these small imperfections were an enhancement It was a real delight for me to work with Jack.”*

Postscript from Douglas Finch

Learning to compose music for a music box has indeed been a fascinating experience, and it has been great to work with such a serious artist and craftsman as Jack Perron at HensTooth. As I have found before, having specific qualities and limitations can test your resourcefulness as a composer and, as I hope in this case, produce interesting results. There is one thing I would like to add to Paul Bellamy’s delightful account, in terms of how the music evolved. There was another collaborative factor in this - working with the singer/actress Tanya Myers who plays Phoebe in the film. I spent a weekend in Nottingham at Tanya’s home with her husband and renowned playwright Stephen Lowe a couple of weeks before filming. She was in the process of creating the words to the song, and I was helping her to set them to the music, which we still only had in the form of the final electronic sound file sent by Jack Perron. We made some progress, but knew we would have a few more days on the Isle of Wight to refine it before those scenes were shot. When we got there, and had our first rehearsal with the real music box, the prominence of the descant line took me by surprise. At certain points it seemed to be taking over from, and even drowning out, the main

tune. So I suggested to Tanya that maybe at some points she could change the song’s tune to these upper notes, and they could be the voice of the child, while the lower ‘main’ tune could be the voice of the mother. I think this created a much more dramatic and convincing ‘lullaby’ than we had previously envisaged, again proving that limitations can be the source of creative inspiration.

Postscript from Jack Perron of HensTooth.

Yes, it was really nice to work with Douglas Finch on this project. Throughout, Douglas was patient when confronted with the many constraints of the mechanical musical box. And I was especially happy when Douglas invited me to experiment a bit with tempo changes. Of course, as always, I see my role as music box arranger is first and foremost, ‘to do no harm’: to get as much of the original composition on the disc as possible, without wrecking it.

And, I agree with Douglas...what a delightful account Paul has given of the process of adapting a musical score to play on an antique musical box.

While I am happy to work with composers ‘from scratch’, I have developed a few tools that composers can use to learn about the various nuances and constraints of writing for mechanical music boxes. Some of these are available online:

For automated tools to aid in writing for smaller music box, more information is available at: <http://www.henstoothdiscs.com/DIY.htm>

For the larger 15.5” Regina/Polyphon, an automated tool can be found at:

<http://www.henstoothdiscs.com/PHP/ReginaCheck.php>

**Charles Ives (1874-1954) was an American, another avante garde artist and modernist composer who combined elements of American popular music with church and European musical forms. He had a major influence on musical experimentation combined with spontaneity of performance followed by other musical artists such as Douglas.*

Found in a Cellar

Don Busby

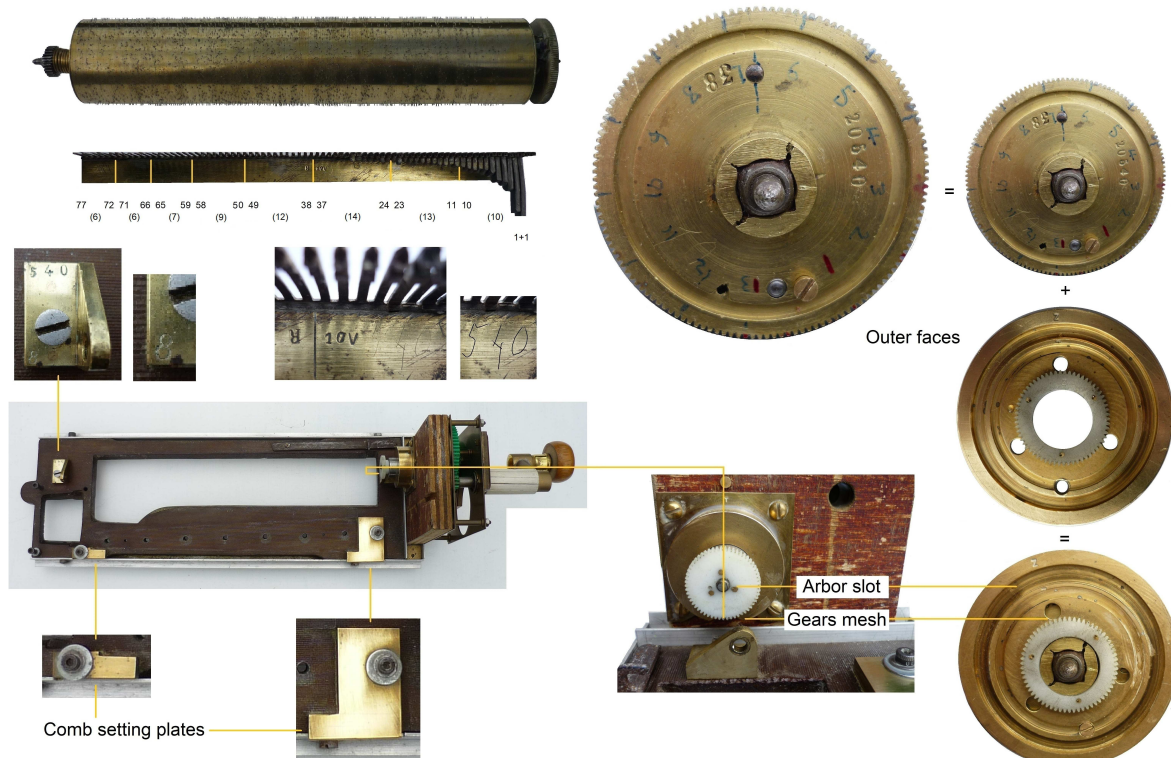


Fig. 1: Various markings etc.

“This might be a useful guide when you are designing and fitting comb to bed plate of the musical box which you are making. It was given to my cousin David by the new owner of a house he was helping to renovate, having been found in the cellar”. So remarked Robert Ducat-Brown as he handed over a rusting bed plate and comb at a society meeting. It was carried home with gratitude and, on checking tuning of the comb, was found to have a nice tone. What a shame that this old movement was in such a poor state: was it really at the end of its life? Repairs effected to date are described and suggestions are given for further work to complete its rejuvenation.

In between work on his own bespoke musical box, the author cleaned up the old bed plate and began repairs to the comb. On learning of this, Robert gave him the movement’s old cylinder complete with great wheel, drive pinion, compression spring and

tune-change snail. He had already melted out cylinder cement and dissolved the pins with acid to use the bare cylinder for demonstrations of pinning. The cylinder is drilled for 8 airs and the comb has 77 teeth at 3.5mm centres. This old machine was ideal for the author to practise mending a vintage musical box, knowing that he could not make its condition any worse. Now, in 2019, it is in a reasonable state of repair and plays 8 tunes of which only three titles can be guessed at pending tuning of the comb, see Table 1. Airs are currently played through a hand-turned gear train as the assembly is still short of a spring drive and governor. Gear train and supporting aluminium frame will be removed to allow these components to be fitted once they have been sourced.

There is evidence on the various components of this old movement which might help a reader to identify the maker, the writer does not have such expertise. Observed markings are shown by Fig.1 and quoted

below in bold italics. The numbers **540** and **8** are stamped on the brass, bass arbor bracket, being the last three digits of its serial number and the number of airs, respectively. The outer face of the great wheel bears the full serial number, **20540**. Under the cast brass base of the comb, **vertical lines** separate groups of teeth as listed in Table 2. These might be sets of similarly tuned teeth, although the large number of teeth in each group casts some doubt on this suggestion: they might indicate the progression of octaves along the comb. Very lightly scribed by hand on the base, **540** seems to be evidence of work undertaken in the past, or maybe was for matching of comb with bed plate during manufacture. Also stamped on the base are **R** and **10v**, the former being upside down.

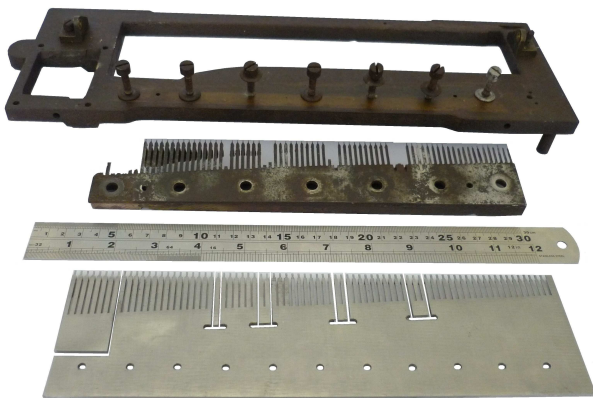


Fig 2: Bedplate and comb, plus new comb.

What was the condition of this old movement when gifted? Fig. 2 shows the bed plate and comb as they were, together with a new comb made to supply missing teeth and to repair damaged ones. As can be seen, the movement must have suffered a run: seven bass teeth and several smaller groups had snapped off at their roots. Some treble tooth tips fell far short of the line of tips of the majority of good teeth. Fig. 5 shows T59 as having already been replaced by a previous owner and an attempt having been made to slit the tip of short tooth T67, presumably to sweat in tip wire.

Was it the intention to replace the old comb by the full new one? No! Not knowing how many teeth might eventually need replacing and, because of the short state of many treble teeth, it was deemed more efficient, once the lathe had been set up, to mill and

slit a whole comb rather than cut individual small sets of new teeth.

One mistake made by the author in his ignorance, was not to realise that the extreme bass tooth of an old machine can be twice as wide as the remainder. Thus, he initially assumed that the 7 missing bass teeth were 8 in number and that the whole comb carried 78 teeth instead of the correct number, 77. A new comb had been made with 78 teeth, so the first two bass teeth will be joined together by a tuning lead to form a single, wide tooth, removing the tip of the first of the pair: the lead has not yet been added. Most teeth should be in-tune or nearly so, as leads show no sign of corrosion: however, replaced teeth and those with tip repairs will certainly need to be checked and re-tuned as necessary. A full tuning check is warranted because teeth can go out of tune for reasons other than changes in weight of lead.

Having effected repairs as described below, the remaining non-hardened spare comb will be passed on to a new owner of the movement for any further repair work.

One aspect of making the new comb was how to match tooth tips to those of the old comb. The shaping of these was achieved, prior to slitting teeth, as described below: all drilling, milling and slitting operations were carried out with the Ground Flat Stock (GFS) clamped on top of a 3mm thick brass sheet, but not sweated to it, allowing tools to slightly enter the supporting brass sheet

To form the tips, a small hole was drilled through the GFS and into the brass plate at the centre of the inter-tooth gap, out from the base of the tips. A slotting drill was then brought down, centred on the hole and, with repeated shallow cuts, the comb was withdrawn, milling out the gap between tooth tips. Slotting drill diameter was chosen to leave tips slightly wider than finished size: tips were also left over-long for later grinding down to mesh correctly with cylinder pins. Slitting of teeth was carried out by standard methods, width of saw being varied across the comb to match old tooth widths.

Repairs were carried out and are reported as two

separate phases. Firstly, single teeth and small groups of teeth were sweated-in, followed by repairs to tooth tips: Table 3 lists teeth involved. In the event, it was found impossible to add tips to some teeth so these were replaced as whole teeth. An opportunity missed is that it would have been easier to replace T65-T77 by a single replacement piece cut from the new comb.

Replacing whole teeth. The comb with tapered slots ready to receive filed-to-fit replacement teeth, can be seen in Fig 3. It is shown on the cleaned-up bed plate, alongside the as yet unpinned cylinder purely for setting into context: the following operations were of course carried out off the movement. It is noted that the whole body of the comb at teeth 1-7 has been cut off. Later, with new teeth partly shaped, hardened, tempered and sweated into position, the comb is shown at Fig 4, the lower part of which is a composite of several photographs to show teeth in more detail, after sweating to comb base but prior to finishing tips.

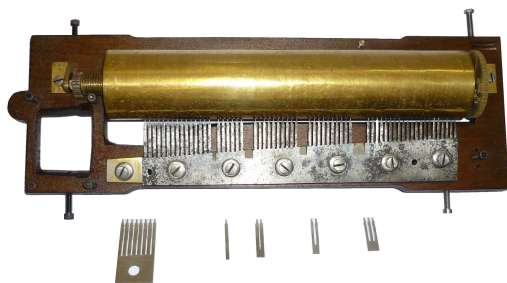


Fig 3: Slots filed in the old comb ready for new teeth

Repairs to tooth tips. The poor state of teeth at the treble end prior to repairs is shown clearly by Fig. 5 and it was decided to re-tip teeth T65 - T69 and T73 - T76. Taking advantage of previous work by another, slitting for new tips commenced at T67 to increase the length of its existing slit. Cutting this deeper with a suitable circular slitting saw, the author, in his ignorance, was enjoying the resonant humming from adjacent teeth when, ‘whoops!’ T63 pinged across the garage. Thus, he learned the hard way that he should have clamped neighbouring teeth.

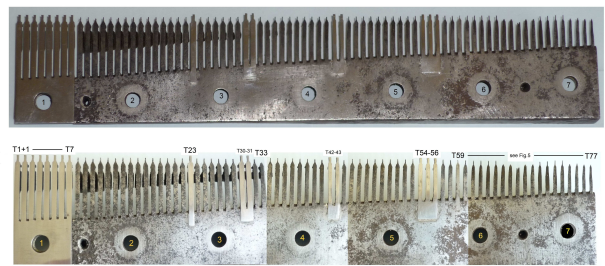


Fig 4: The new teeth sweated into position

The repaired comb is shown in Fig 6, set against the cylinder after the new teeth had been shaped to correct length. A thin stainless steel cover plate hides corrosion pitting of the non-tooth part of the comb.

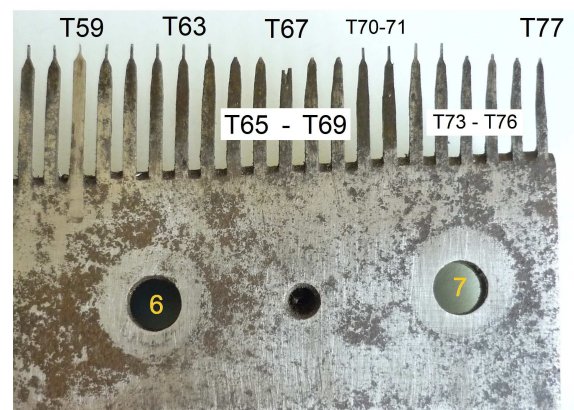


Fig 5: Showing damaged treble teeth

New teeth were hardened and tempered using a specially built muffle oven which is described in a video on YouTube which can be found on account “MrDoneby” under title “A Mini Muffle Oven”. In the video certain improvements are suggested, namely to have a circular oven and array of air delivery holes.

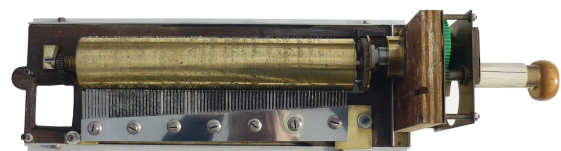


Fig 6: The repaired comb in position

Turning attention to the bed plate, this was cleared of rust by immersing in “Hammerite Rust Remover”, diluted to manufacturer’s instructions, and left for several days until no bubbles came to

the surface of the liquid when the item was tapped. Periodically, the bed plate was rubbed down with a wire brush and the point of a “Stanley” knife blade was run along the surface grooves. After washing and drying, the bed plate was treated with two coats of Meadows & Passmore “Metal Lacquer – Medium Gold”.

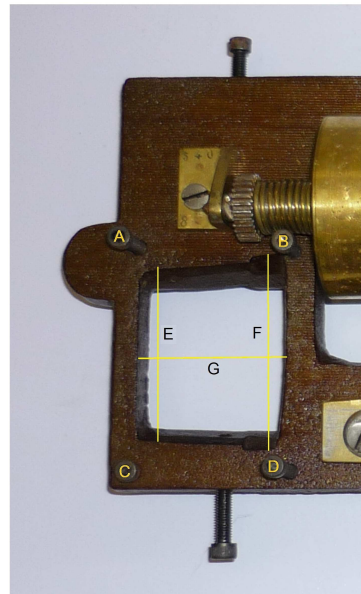
Cylinder re-pinning and grinding were carried out calling on experience gained by the author during his own musical box development. Pin wire of diameter 0.305mm was used for the majority of holes, increasing to 0.355 for holes which had become enlarged. A total of about 4700 pins were inserted prior to cementing and grinding them to length. Since tracks are at 0.4375 centres, the space between 0.355 pins on adjacent tracks is 0.0825, a fine tolerance calling for precise ‘justification’ for playing accuracy.

Brass flats (Fig. 1) screwed to the bed plate allow for easy removal and replacement of the comb during repairs. Over-size holes allow minor adjustments of the flats using a feeler gauge to move the comb by as little as 1/1000 left/right and forwards/backwards, at either or both ends. During such moves, the flats are rotated to keep them in full contact with the comb base. These flats are only intended for temporary use, being held by fixing screws in bed plate holes for spring drive and governor: if deemed worthy of retention alternative fastening points and design of flats will be necessary.

Three of the teeth at bass end have anvils drilled for damper wires. There are no damper wires currently fitted, playing speed being slow enough not to call for them, possibly helped by the stiffness of these short teeth which resonate only briefly when plucked. Half of the teeth at bass end have lands carrying tuning leads.

The Great Wheel has 136 teeth. These are useful datum points for recording pin positions around cylinder circumference.

The bespoke hand-wind gear train ratio is 125:1, then through 57 and 62 tooth, white plastic pinions



AB	47
CD	47
AC	68
BD	68
AD	83
BC	83
E	51
F	60
G	43
(mm +/-1)	

A,B,C & D take M4 coarse thread screws which lock on tightening, but would best have locking nuts on the underside of the bedplate.

Fig 7: Showing where the barrel bridges fitted

to give an overall ratio of 135.965:1: thus one turn of the handle moves the cylinder near enough to 1/136th of its circumference, convenient for working and recording data. A temporary aluminium frame supports the train. Whilst fitting the train, which came from an earlier project, it was found that although it was rigidly mounted on the bed plate the plastic pinion gears tended to over-ride teeth whilst lifting several comb teeth at the same time, causing slippage. This gave rise to the temporary brass disc screwed to the Great Wheel, with its ‘Arbor slot’ into which the arbor of the plastic output gear of the train gained support to eliminate this problem (see Fig.1).

Further work for a new owner includes ‘justification’ of cylinder pins and tuning of teeth, in addition to provision of spring drive with key-wind, governor and permanent case to house the movement. Perchance someone has suitable spare items of which, spring motor void dimensions and its screw sizes are given at Fig. 7.

Suggestions as to the maker of this old movement, Serial Number **20540**, would be welcome.

OH, YE SPIERS OF OXFORD!

(with apologies to Wordsworth)

by **Joseph Berman**

The musical box shown in this article was in my possession for almost five years before I discovered its story. Its tale is interesting, mysterious in some ways, yet it provides insight into the development of the musical box “business” in England and one quite important businessman in Oxford.

This is a complex tale, with some conjecture but much factual information about Richard Spiers. His business model seems to have provided an unusual path for the young musical box industry as boxes were quickly moving into homes around Europe.

I purchased it on line from a friend’s life-long, collection of stunning instruments. As the auction moved closer to its close — and I moved on to items I felt I could “win”, something about this instrument seemed familiar. It reminded me of my first musical box, an 1840s Ducommon-Girod, which I still prize.

My purchase had a 2” in diameter, 11” cylinder and a 103 tooth comb in a plain box, measuring approximately H 5 ¼”, L 18 ½”, and D 6 ½”. The serial number, 20519 was stamped in the left end of the bedplate, scratched on the left cylinder endcap, and written on the bottom of the box.

There was a full sized, mostly intact, glued down Tune Card with a bit of physical damage and “wrinkling” from moisture. The card contained six airs, of which I had heard 1 or 2 during the online auction. Looking at the card I still did not recognize any of them. No “Home Sweet Home”, no “Last Rose of Summer.”

After winning this unidentified box, I put it aside.

A CLOSER LOOK

Recently, I looked more closely at the instrument, considering some professional restoration. The box had a few mechanical issues, such as comb-to-cylinder registration/alignment and a few non-playing teeth. There was slight worm damage on the rear of the box. I made mental notes about the box, wound it and studied for a time. The musical arrangements of the tunes did seem similar to my

1840s Ducommon-Girod. The actual manufacturer is yet to be determined but if it is a Ducommon-Girod, the serial number would indicate it was made in 1849 according to Bulleid’s dating charts. The box had a traditional lock for the lid.

Then I noted an anomaly. There was a framed but unhinged glass inner lid covering the movement. This did not seem appropriate to the period as such glass lids generally appeared later. Further, when I attempted to remove the frame, I found two steel pins, holding the frame into the inner front edge of the box AND a lock loop in back! Adaptations had been made to totally secure the mechanism. This retro-fitting explained the less refined hole thorough the back of the box made for the lock keyway locking the protective glass lid. I pulled my bag of small keys to try to find one to fit the locks. To my surprise NO key I had would fit into the rear keyway. It had been deliberately cut too narrowly. I’d never seen a glass cover with a dual locking system clearly meant to protect the FULL interior of the box.

Why?

THE ANSWER WAS ON THE TUNE CARD

This box was marked B. B. and Cie., an agent for a number of musical box manufacturers. B. B. & Cie. name was stamp was on the bedplate and was not printed on this tune card, as was the usual practice. The listing of tunes, seemingly all dance tunes, comprised only the middle one-third of the tune sheet and only the titles of the six airs were scribed in French. Atypically, no composers nor arrangers were listed. This was a replacement label.

Eye-catchingly large letters announced: “A large stock of musical boxes for sale, or to let, or hire for any period.” It appears that the total focus of the tune card was NOT the musicality of the instrument but rather it concerned the business of hiring and cautiously using it.

The label enumerates several amusements available for rent “From SPIERS & SON, 102, HIGH STREET, OXFORD” including: “Bagatelle

boards for sale or hire. Chessmen & boards, backgammon tables, etc." As the biography that follows indicates, Richard Spiers ran a well-known and respected business selling stationary, Oxford souvenirs, fireplace screens and other fancy goods. He was particularly well known for hand-painted papier-mâché items and at one time maintained 30 employees.

CUSTOMER USE

On the left side of the card is USE OF THE STOPS with a simple line drawing of the box with instructions. Referring to the instant stop, the last entry reads: "This stop, not being required for general use, is taken out; workmen only having occasion for it." One could assume that "workmen only" would also have the key to fit the narrow hole allowing access to the internal workings. One mystery explained.

The right side is titled GENERAL DIRECTIONS and reads: "In winding up the spring, turn the key round to the right with moderate force, until it is stopped by the check. The music should never be allowed to cease playing in the middle of a tune, but at the end of it only, because the pins of the barrel, if subjected to a continual pressure, are liable to become bent and injured; the steel notes themselves too may be broken off by the neglect of this caution."

S - 27 AND S - 39

A casual search netted only one similar tune card. It appears on page 384 in Arthur W. J. G. Ord-Hume's *Musical Box - A History and Collector's Guide*, 1980.

The sheet in Ord-Hume's book shows S-39 handwritten near the top. Mine is numbered S-27. The differences in these two tune sheets are enlightening. If these are Spier's stock numbers, the box in my possession is older. Other differences corroborate this. Ord-Hume indicates that S-39 is a Nicole Freres box made in 1862. As the engraving on its sheet shows, it is a lever-wind mechanism with controls inside the box on the right. The directions read: "In winding up the spring, move the key (lever) forwards and backwards with moderate force until it is stopped by the check." Interestingly, this later box has addi-

tional warnings in large letters above the border of the tune sheet: "CAUTION. The music must never be allowed to stop in the middle of a tune. Great care must be taken in winding up." Orde-Hume states that the obliterated words read:" All damage must be paid for by the hirer!" By this time, it seems that the firm had experienced customer damage to their "let and hire stock." Nevertheless, the fancy goods business must have been good. The addresses given on the two tune cards reflect Spiers' expansion in 1851. On S-27 it lists 102, High Street. On S-39 it lists 102 and 103 High Street.

Even then, renters and customers may have wearied hearing the same airs repeated over and over and Spiers perhaps built a business on this fact. He may have recognized the public's early and growing desire for "music on demand." Customers could return a rented box and rent another with different tunes. It was, of course, this desire to enjoy a broader selection of the most current music that provided the impetus for the development of interchangeable cylinder mechanisms and later, disc musical boxes.

RICHARD SPIERS

So many questions remain. Did Spiers have a business agreement with B. B. & Cie. that involved quantities of musical boxes? Did Spiers offer a potential customer a box on trial prior to purchasing it much like today's hire purchase or rent-to-own? Did Spiers buy, or even trade, pre-owned music boxes to increase his rental stock? As a town leader himself, how were Spiers' business practices shaped by his widespread connections with influential townspeople? And what was that grand dinner he hosted for 1,000 guests? (See the bio that follows!)

By carefully studying a tune card you can learn a lot. By studying two tune cards you might find a fascinating bit of mechanical music history!

Note to readers - I am interested in seeing any other rental box tune cards that might have survived. I am curious to know more about this program of tunes and I would appreciate further information about this box, especially any details that may help identify the maker.

The Life and Times of Richard James Spiers

by Juliet Fynes



Oxford - The Mayor's Banquet 1853

Richard James Spiers, the son of a hairdresser, was born in Oxford in 1806. At the age of 21, and a hairdresser like his father, he was matriculated at the University of Oxford as a “privileged person”. Matriculation is a ceremony undergone by students to confer membership of the university. Up until the mid-nineteenth century this was extended to certain tradesmen, especially those of use to the university such as booksellers, to give them protected status from the city’s jurisdiction and the obligations imposed on freemen. This was very significant at this time as otherwise only freemen could enter into business within the city.

Richard was clearly an ambitious and energetic young man. In 1834 he took possession of the premises at 102 High Street, running it as a stationery and fancy goods shop and later branching out into china and glass. After his wedding in 1837, and a 3½ month honeymoon, he and his wife took up residence above the shop. The business prospered and his prestige in

the city grew. In 1842 he and his growing family moved into a substantial town house elsewhere in the city.

The shop sold all manner of fancy goods and gifts, including musical boxes, which he hired out as well as selling. The shop was particularly noted for papier-mâché souvenirs. The blanks were probably sourced from producers in the West Midlands, the centre of papier-mâché manufacture in Britain. They would have been painted by his employees, some of whom lived above the shop, said to number 30 at this time. They were 'ornamented with views of every college & public building in Oxford', making them very popular with students and visitors to the town who could also order bespoke designs of their coats of arms or other decoration. There are two Spiers papier-mâché hand screens in the Victoria and Albert Museum.

This success meant Spiers could extend the shop to include 103 High Street around 1851 and soon after



A hand screen with the Spiers' mark on the reverse. A similar pair are exhibited in the V&A Museum

another shop in the Cornmarket. The year 1851 was a very significant one for Richard. He was elected Alderman of the city and served in the office of Sheriff. This was also the year of the Great Exhibition at the 'Crystal Palace' in Hyde Park. Spiers had an advertisement in the 340 page catalogue for his stand, situated in the 'Papier-Mâché and Japanned Goods' section in the central avenue of the exhibition, which was ar-

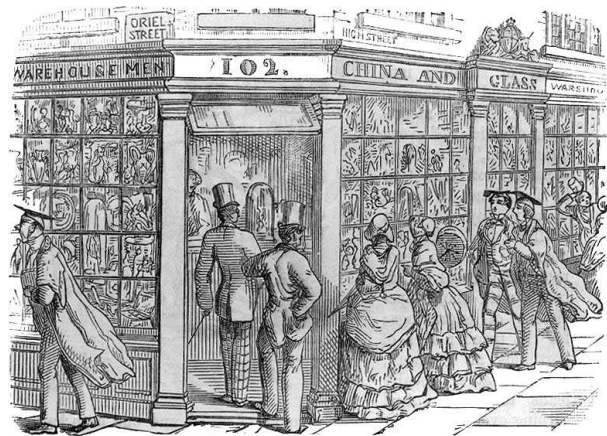


102 and 103 High street Oxford today

ranged around a beautiful model of the Martyr's Memorial in the centre of Oxford. He also appeared in the 'Paper, Printing and Bookbinding' section with a variety of fancy stationery.

In 1853 he was elected Mayor of Oxford and the following year hosted a very grand reception and banquet for a thousand guests in the Town Hall, including leading members of the town and university, local gentry, distinguished people from literature, science and the arts. They were treated to displays of great works of art and literature in order to "afford intellectual enjoyment" in which he "most eminently succeeded". He was clearly a person of consequence in intellectual and artistic circles and was elected Fellow of the Society of Antiquaries in 1857. Another feather in his cap was to become stationer, china and glass merchant to the Prince of Wales.

His oldest son, Richard Phené Spiers, became an eminent architect, artist and author. Perhaps he inherited all his father's flair. The second son Samuel joined the business, followed by the third son Frank. By 1871 Samuel was managing the stationery side and Frank

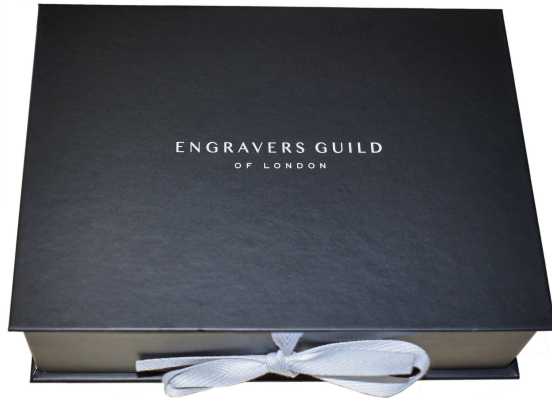


From the book "The adventures of Mr Verdant Green"

was in charge of china. The business must have gone downhill under their management as Richard Spiers went bankrupt in 1872. Considering his former eminence in the town this must have come as a severe humiliation. He resigned from being an Alderman that same year and took no further part in public affairs. Having been widowed some years previously, and in declining health, he died in 1877. Spiers and Son closed in 1890.

Acknowledgements; Arthur Ord-Hume, Stephanie Jenkins.

A PRESENTATION POSTPONED



February marked an important anniversary for AMBC – our 5th birthday. The AGM in April was to have been a celebration of this milestone and include a presentation to our chairman, Ted.

He inspired the formation of the Association, his home has been our headquarters, his hospitality and extensive collection the backbone of our meetings and many a magazine article. So this was to be a fitting occasion to acknowledge the membership's appreciation of his leadership.

We commissioned an engraved hip flask to be presented, but sadly it was not to be. The intervention of the coronavirus pandemic caused the cancellation of this and an unknown number of future meetings. As we didn't



want to wait indefinitely for Ted to receive this well-deserved award we had it delivered to him courtesy of Royal Mail. He was pleased and touched by the gesture, even though it was somewhat lacking in ceremony.

When we are next able to meet we will set up an appropriate photo opportunity. In the words of the Queen, on the occasion of her VE Day address to the nation, and in the words borrowed from Vera Lynn's wartime song - we WILL meet again.

In the meantime take care, stay safe and keep in touch.

ERRATA

In issue 20 of Mechanical Music World we failed to acknowledge that not all photographs were taken by the author. Some were kindly donated by the designers and builders of the automata featured and were used with their permission. We apologise to all concerned.

Keith Newstead's contribution to the development of modern automata is huge and the number of inventive collection boxes that he has provided is exceptional.

Photographs 2 and 3 of the "Hallelujah" box in the Foundling Museum, London, 4 and 5 of the Moby Dick box at the Elstree Studios and original sketch, 6, 7 and 8 of the Flying Scotsman, in the style of Roland Emmett, at Inverness, are by courtesy of Keith Newstead.

<https://www.etsy.com/uk/shop/Newsteadautomata>

Lucy Jean Green describes herself as a kinetic artist and paper sculptor, she provided photographs 9 and 10, which are from her very early work for the National Trust. Her fine body of work featuring beautifully constructed and painted birds using paper and fabric can be viewed at www.nameandcolour.co.uk

Tim Hunkin is known for his modern day automata incorporating humour. He has two establishments featuring his work, the Under the Pier Show at Southwold pier, and Novelty Automation in Holborn. Tim is an engineer and his skills are on display at an interactive exhibition at the London Science museum. He is also a cartoonist and these skills are very much to the fore in his automata. Tim provided Photo 14, a drawing of his Pitt Rivers Museum exhibit. To appreciate the full range of his talent go to www.timhunkin.com

French Musical Trivets

I don't much care for this description. To me a trivet is a three-legged (for stability on an uneven surface) metal stand to keep a pot or kettle warm in front of an open fire. It has now come to mean a stand, with any number of feet, to protect a surface from a hot teapot or dish. An 1890 Thibouville-Lamy catalogue calls them "Dessous de plat", a more accurate description, which perhaps the musical box fraternity could resurrect.

A 6-air stand with bell and Longwy tile. Notice the two control levers. Top shows the underside of the back showing bell and tunesheet.



These attractive novelties were made during the Art Nouveau period. They consisted of a square carved wooden frame, deep enough to house a small musical movement, on four small bun feet to accommodate the winder underneath. The on-off control projects from one side and the surface is finished with an inset ceramic tile. The movements were often made by Thibouville-Lamy and typically played from one to four airs, though a superior example might have as many as six. The T-L bargain basement model, costing 9 francs, had one air played on a 19-tooth comb. An example playing two airs on a 28-tooth comb could be had for 13 francs, or with a higher quality enamelled tile, for 15 francs.

This example has "hand-painted" in French in the right hand bottom corner beside a tiny J.T.L. logo.

The underside still bears the 3-air tune sheet but the tunes are indecipherable. Also the label, contravention of which will be "rigorously pursued."



Two-air stand with Gien tile



Some models had a bell in addition to the musical movement to call the servant, which even a middle-class household could afford at this time. One can imagine the lady of the house entertaining her friends to a dainty afternoon tea and having a skivvy on hand to refill the teapot as required, giving her the opportunity to demonstrate her six-air teapot stand with bell. Many of the tiles used came from the Longwy ceramic factory. They were decorated with either monochrome transfer prints or the vibrantly coloured faïence designs, similar to those of the English potter William De Morgan. These colourful enamelled ceramics were developed in the latter part of the 19th century, inspired by Persian designs.

Faïence tiles from other French ceramic companies were also used in musical dessous de plats. For example Creil et Montereau who also produced beautifully hand-painted tiles. Another was Gien, founded in 1821 by an Englishman, Thomas Hall, who had previously worked at Montereau. Whilst the musical movements in these novelty items are nothing special, the tiles have become desirable collectibles in their own right.

Auguste L'Épée and P.H. Paur

Paul Bellamy



Fig. 1: Early Key-wind Musical Box

One of the hardest things to do is to find the actual maker of a musical box when there is very little to go on. Sometimes there are sufficient clues to make an educated guess; otherwise it is just that - a guess!

An early key-wind 4-air musical box with very well arranged airs became the subject of close scrutiny, Fig. 1. Some interesting observations seemed to point to an early but unidentified maker. It has a plain walnut case, early wire hinges that were as perfect as the day they were made, a fixed end to the box with its three protruding control levers, Fig. 2, thus probably earlier than the types with a hinged end flap.



Fig 2: The winding and control end

The controls are standard for the period: tune change, stop/start and instant stop, plus a hole for the key. The governor has a fixed small jewel. There are few makers whose serial numbers would fit an estimated date for this early movement, circa

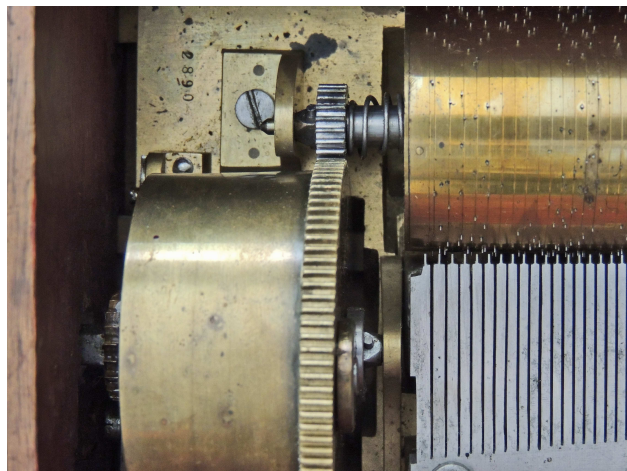


Fig 3: The serial number

1830s, serial 2890, Fig 3. We can almost certainly discount Nicole, and Henri Lecoultre, leaving Ducommun and L'Épée as possible makers.

The movement is mounted front and back by two cheese-head screws set on small brass washers, all original, Fig. 4. The small countersunk wood screw is a later addition, securing the soundboard.

The single piece comb has 96 teeth for a notional 6-inch long cylinder, $1\frac{1}{8}$ inch diameter. The governor gears are a simple, robust, two-step reduction. The bay leaf (endless drive gear) is of early design, comprising a standard width large gear wheel with about 30 teeth, the teeth taper in thickness towards the tip.



Fig 4: Back of the case

The serial number, as shown in Fig. 3, is stamped on the plain polished brass bedplate, clearly stamped on the top left-hand corner but parallel and facing the edge. The last two digits, 90, are also stamped on the great wheel and written in ink on the soundboard. The 4th tune is 'on the dots,' i.e. the circumferential track lines, typical of Geneva practice but not exclusively so.

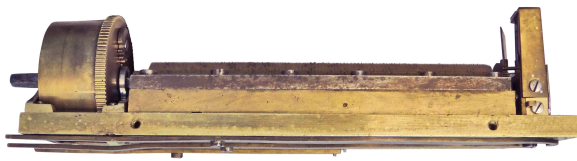


Fig 5: Bedplate

The bedplate is a solid slab of sheet brass, not cast but also about 0.32 inches thick, Fig. 5. Almost certainly it was standard English 5/16th inch stock. It is about the same thickness as the brass comb bass that is shaped with an upward inclination of about 7°. The comb is exactly ¼-inch thick, standard English stock.

The hand written tune sheet, Fig. 6, is headed N°. 30180 (or possibly 30/80? - Ed) but the 'N°' is crossed out. It is definitely not the serial number. The 4 airs are the 1st and 2nd parts of the overture to Othello, by Rossini, first performed about 1816. Tune 3 is by Robert Burns: 'Scots wha hae with Wallace Bled'. The verse continues 'Scots, wham Bruce has aften led, welcome to your glory bed, or to victory.' Powerful stuff, spelled correctly, as per the word 'aften.' Tune 4 is a military waltz by Joseph Haydn. Thus, 'who made it' remains speculation but narrows down the possibilities. A study of the Bulleid dating charts gives two possible options, Ducommun and L'Épée.

L'Épée took over the factory in 1839 from a man named P. H. Paur who started it in 1833. The Bulleid dateline for L'Épée was constructed from fixes published in his book Cylinder Musical Box Technology (page 76, Fig. 2-8) based on a table of 'fixes' (page 74, table 5).



Fig 6: The tune sheet

His lowest serial number for a 'fix' is 7847. If one studies the book's chart, reproduced as Fig. 8, he

drew his date line considerably to the right of a possible shallower curve to the left. The reason for doing so is not clear but probably based on what he perceived to be a starting date for the serial numbers. However, with Paur starting about 1833 it seems reasonable to redraw the line nearer to 1833, as shown chain-dotted.

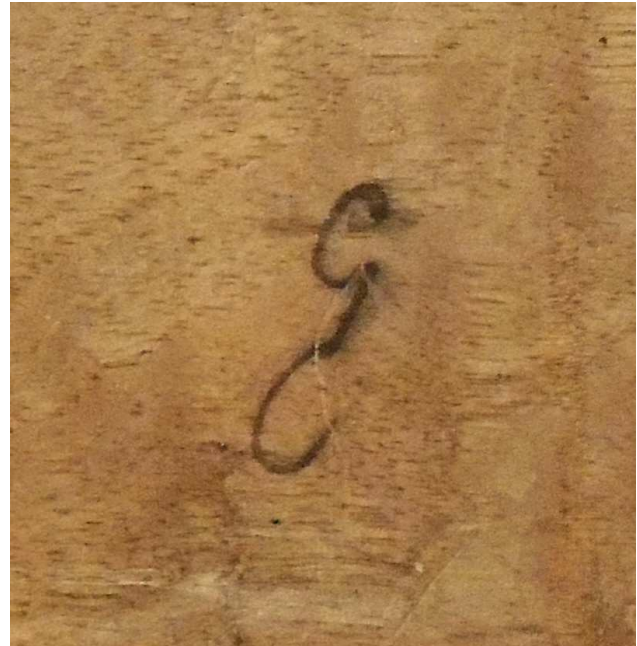


Fig 7a: A strange symbol on the upper surface of the sound board. Perhaps the letter G?

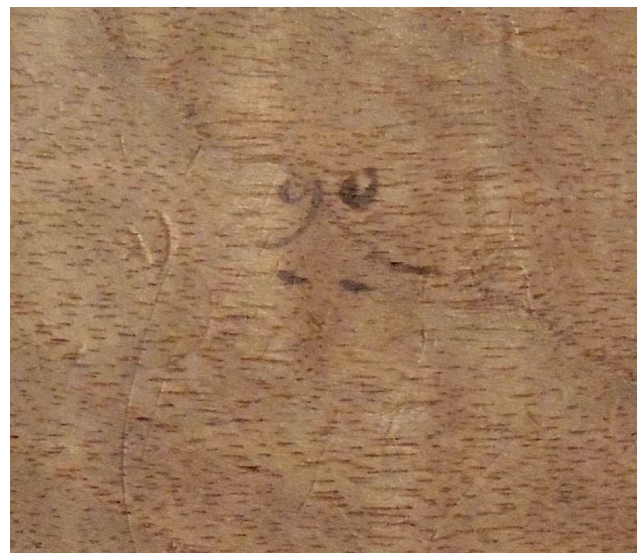


Fig 7b: Symbol on bottom of soundboard, perhaps the number 90?

It is possible that the serial numbers used by L'Épée were a continuation of Paur's but there is no evidence as yet of this. I think it is justified to keep an open mind about a possible alternative

Table 5.

Item	Serial Number	Date of latest tune	Type of tune sheet	Number of tunes	Cylinder		Notes
					inches	cm.	
1	7847	1846	-	4	10	25	Brass bedplate
2	14943	1853*	-	6	12	30	Key wind
3	24256	1864*	A	8	11	28	Tune sheet stamped A W
4	26925	1860	A	12	16	41	Lever wind
5	39210	1866	A	4	4 1/2	11	Bought in August 1872
6	39829	1867*	B	4	4 1/2	11	
7	44588	1874*	A	6	8	20	Tune sheet stamped A W
8	49483	1875*	-	8	16 3/4	42	Mandoline
9	254	1877*	D	6	13	33	Mandoline
10	872	1880	D	4	6	15	
11	1216	1879	C	6	13	33	Drum and six bells
12	4321	1879*	C	8	-	-	Serial No. 5300 has same tune sheet
13	20057	1883	B	8	9	23	

Table 5. L'Épée boxes. The first listing by Lyn Wright is in TMB Vol.13 p.195. The above references to tune sheet types are:

- A - Wide L'Épée type with narrow borders, the top inscribed Musique de Genève (my previous book Fig. 5-17).
- B - Thibouville-Lamy type, similar to Fig. 4-31.
- C - See Fig. 1-15.
- D - As shown in Fig. 1-15 but the mystery FC monogram is replaced by a panel stating the number of tunes.
- E - L'Épée's late multi-coloured type, as Ord-Hume No. 25.

Fig 8: Bulleid's Table of Fixes

date line based on Bulleid's fixes as shown by the dotted line. Its trajectory would take it closer to the Paur factory date. Also there remains the question: 'Did Paur make musical boxes before the known factory date?' Perhaps we shall never know. However, if serial 2890 was made by Paur it would fit the adjusted date line superimposed on Fig. 2-8.

The Ducommun date line and its fixes has at least three firm fixes at the start of the line. Thus serial 2890 would sit well on this line. Does it make the speculation that Ducommun made the movement more justified? It remains unanswered.

The Bulleid dateline's first serial number (Chart 6) starts at 1840. Normally he used a dotted line if uncertain about earlier musical boxes in the series, so he must have been fairly certain of the starting point.

Perhaps it is better to reconsider the Paur and L'Épée date line as a continuum. The take-over by L'Épée created one of the largest musical box manufacturers in competition with the Swiss

makers. Edward and Henry, his sons, joined the business in 1845 and later took it over at a date unknown. The factory was taken over during the Franco-Prussian war of 1870. The stock was destroyed and the father died soon after in 1875 at the age of 77. It is said he invented the hand-operated musical boxes called manivelles, thousands of which were made, mostly marketed by Thibouville-Lamy. His agency arrangement with Thibouville-Lamy started about 1861. The sons closed the business in 1914.

AMBC committee is undertaking a review of Bulleid's work with the intention of publishing a book. This will include a review of the Bulleid dating charts, updated where appropriate, together with information about the makers and their tune sheets. Charts 5 and 6 are examples of what is to be published.

Ducommun - Girod, Ducommun et Cie

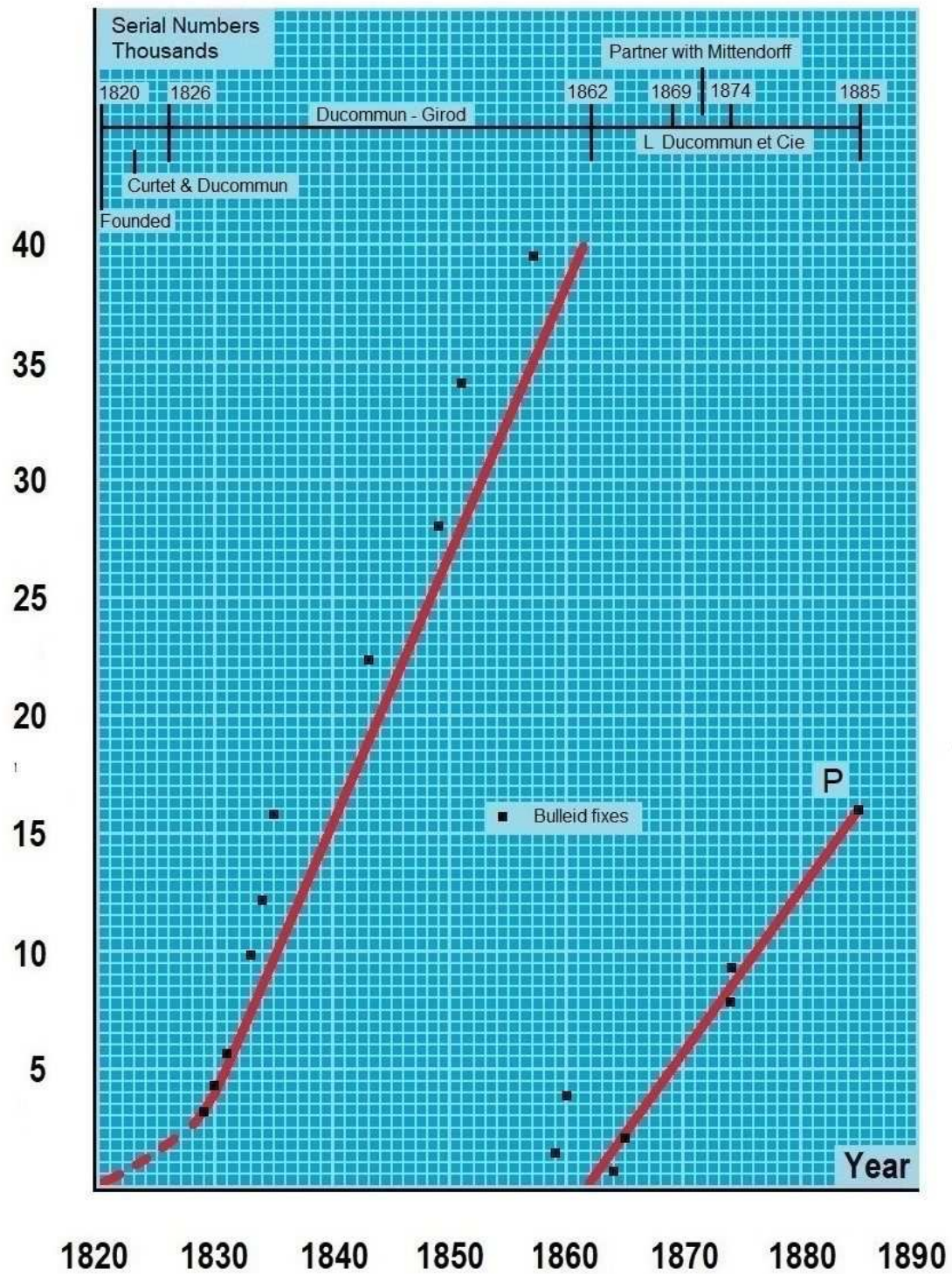


Chart 5

L'Épée & P H Paur, including Thibouville-Lamy, Alexandre Soualle

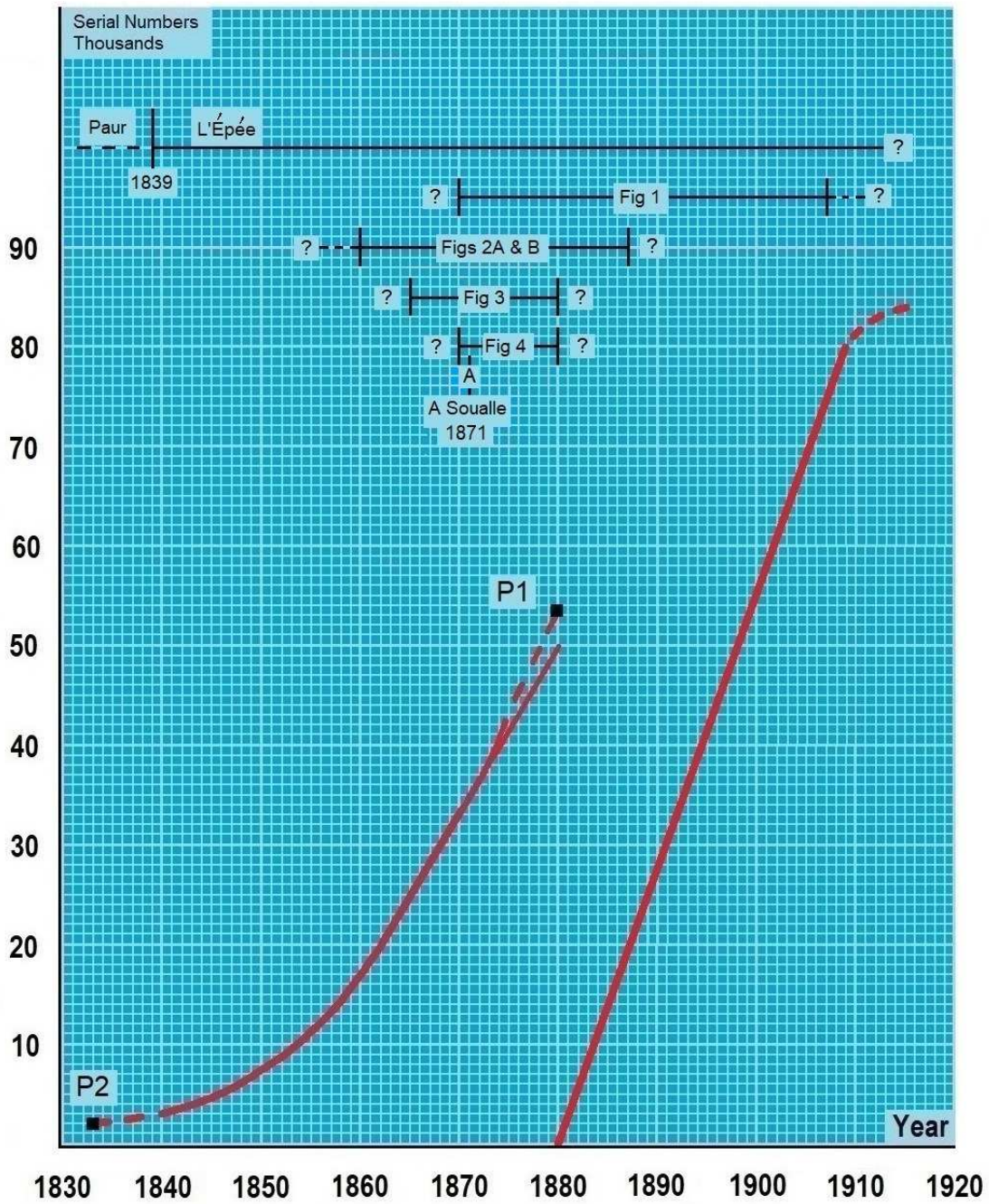


Chart 6

Automata that don't move

A visit to the “Moving Toys” gallery at the V&A Childhood Museum.

By David Soulsby

The building at Bethnal Green, London, was opened in 1872 but it was not until 1922 that it began the slow evolution towards its present niche. In fact it was not until 1974 after all suitable exhibits had been transferred there from the main Victoria and Albert museum at South Kensington that the V&A Childhood Museum was born.



Photo 1: Moving toys - Springs & Cogs

I spent a rainy afternoon there checking out the collection of automata toys on display. There is a complete area entitled “Moving Toys Springs and Cogs” (Photo 2); but not unsurprisingly I guess, not a single one moved. I was expecting, at least, a video showing the toys being put through their paces. Maybe a curator showing off the least fragile exhibits to the public at certain times - but there was nothing! This is in stark contrast to exhibitions of modern automata that can be seen in action; interacting via push button motors or turning handles.

Putting my disappointment to one side, and after a welcome cup of coffee and a brief trawl through the V&A database on my mobile for clues; I began my tour of the collection.

There are several Jack-in-the-Boxes on display. One of the oldest is from Germany, made in the mid nineteenth century. The lid of the box has a wired hinge and inside the figure of a grinning woman in a blue fabric dress is mounted on a spring. Strangely her wooden painted hands are on the wrong arms. Any child flipping this catch would surely have been scared stiff.

One of the many dolls in this display is the “Autoperipatetikos”, an automatic walking model, (that hadn't taken a step for some time) made in the USA in 1862 by Martin & Runyon (Photo 3). The body is conically shaped cardboard and wood containing the

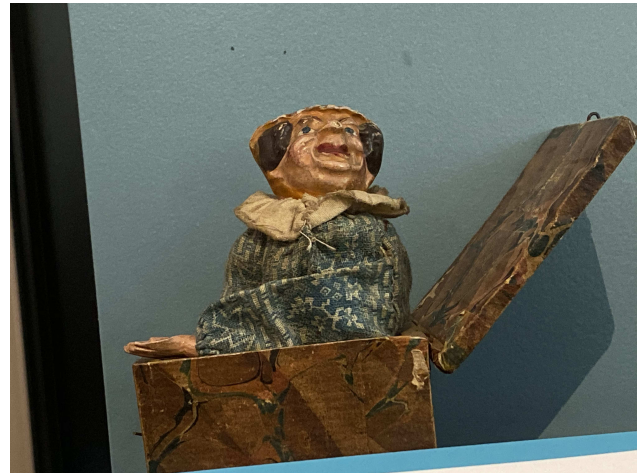


Photo 2: Jack-in-the-Box. C. 1820

clockwork mechanism, and the head is of composition (glue and sawdust) with moulded hair. It is displayed alongside the original box with the instructions on how to wind it up and make it walk.

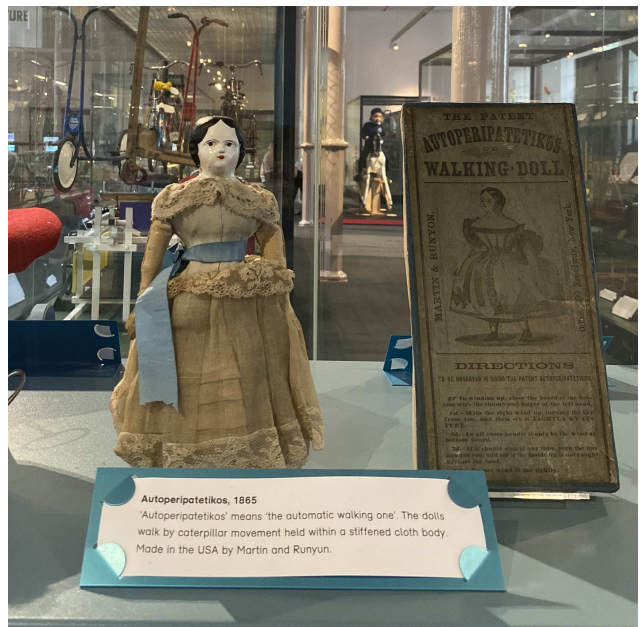


Photo 3: Walking Doll 1865

Another toy, that would surely have caused sleepless nights for children, is the rabbit in the cabbage from the famous Roulet-Decamps stable. (Photo 4). When wound up the rabbit slowly emerges from the cabbage, turns and nods its head, opens and closes its mouth and finally pricks up its ears and drops back inside the cabbage. Nearby two monkey musicians with papier – mâché heads, glass eyes, moving upper and lower lips, and



Photo 4 Rabbit in Cabbage c 1890

dressed in 18th century aristocratic costumes, are seated on a rosewood cabinet playing the violin and cello (Photo 5). The cabinet contains an hand cranked reed barrel organ that plays eight tunes. The monkeys when in motion “play” the instruments with movement of head, lips and arms. They originated in France circa 1875.



Photo 5 Monkey Musicians c 1875

Another doll, with a face only a mother could love, is Johnny the Dunce (Photo 6), sat on his school desk, he is wearing a cap with donkey’s ears and DUNCE written on it, a wicker basket on the floor bears his name. The arms are of painted porcelain and the face sculpted in wax. The notice on the exhibit indicates that it is French, made



Photo 6 Johnny the Dunce 1860

around 1860. The model was static of course, when I was there; but I have seen a video of a very similar one named Jean, made by Vichy which exhibits several complicated movements. The boy swings his left leg, turns his head and raises his hand to his face as if wiping away tears. The ears of the Dunce’s cap move backwards and forwards, finally his head turns again and he lowers his arm.



Photo 7 Organ Grinder

I should have realised earlier that the captions by the exhibits, describing the automata, are deliberately simplistic in order for the young children (now entering the place in droves) to at least glean some background

information from their visit. The card next to an impressive porcelain figurine, part of a an intricate display, merely speculated - *Organ Grinder 1870 – 1880. Craftsmen showed their skills by making complex mechanical toys. Winding this toy up makes the figure turn the handle and the monkey jumps up and down. Made in Germany.* (Photo 7). Further searches since my visit have failed to throw any further light on this rather splendid piece.



Photo 8 Dancing Bear 1880

“Moving” forward to 1880 there was a splendid model of a dancing bear (sic). The bear with fur ears, a single glass eye and apparently real bone teeth, is restrained by a brass wire muzzle attached to a ring and chain. It is standing up on its hind legs, and supported by a walking stick (Photo 8). The wood and cardboard figure has the clockwork inside. The nose and paws are of carved wood painted black. The base is formed by elongated feet and holes through which metal plates poke out. When it is wound up the plates emerge, alternately rocking the bear from side to side, to give the impression of dancing..

Another animal, only ten years younger (1890) on view was a metal pig with a reluctant rider on its back. The pig is realistically moulded with wrinkles round his neck and snout. The male rider has a porcelain head with glass eyes and a wood and composition body. He has some hair on his head and a moulded beard and moustache. The pig is activated by winding a key set in its stomach making it jump forward, rearing and bucking. Again unfortunately



Photo 9 Man riding a pig 1890

the manufacturer is not known. Next door were some of the tin figures from Zikra – Lehmann, a German manufacturer between 1894 and 1930. A 1927 model of a zebra, pulling a cart which, if ever it was set into life, would buck his hind legs and shake the driver up and down on his seat.



Photo 10 Bucking Zebra Zikra-Lehmann 1927

Walking round the museum further I found other mass produced tin models from the 20th century. There was a group of clockwork figures made by the German toy maker Schuco in 1935 on display (Photo 11).

One was a figure of a mouse holding a grey pottery mug standing near a bunch of clowns. The mouse’s eyes are metal beads, and the nose is made of black thread. The other facial features are all hand painted. When in action the mouse vibrates and raises and lowers the mug at regular intervals as if drinking. Also in the group is a single clown with a drum hung around his neck and a drum stick in each hand. When wound up he also vibrates and beats the drum. The other figures are two clowns holding hands. When in operation, the large clown lifts and lowers the smaller one as they rotate and move about.



Photo 11 Schuco toys c 1935

Gertie the galloping goose (Photo 12) is a character in a well known book published in 1930 by David Lucas, *Lost in the Toy Museum*. When wound up, her neck moves up and down on her legs which move the model forward. Gertie is made from lithographed tin by the Unique Art Manufacturing Company, Newark 1930.



Photo 12 Gertie the goose 1930

Feeling somewhat down, because of the motionless exhibits I had just seen I headed towards the exit. On my way out I passed a mournful group of Sweeney Todd, marionettes, (Photo 13) from 1938, which seemed to cry

out for their puppet master to return and pull them back into life.



Photo 13 Sweeney Todd puppets. J D Bickerdike England

I have since contacted the museum and they unfortunately do not have plans to include demonstrations or video presentations for the *moving* toys, that stubbornly refuse to do so.

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To promote the enjoyment of mechanical music in all its forms.

To provide opportunities of social interaction to members through meetings and outings of musical and other historical interest.

To establish formal links and working relationships with other national and international organisations in the field of mechanical music.

To encourage research and publication of articles and books on the subject.

To reach out to the public and foster a wider interest in mechanical music.

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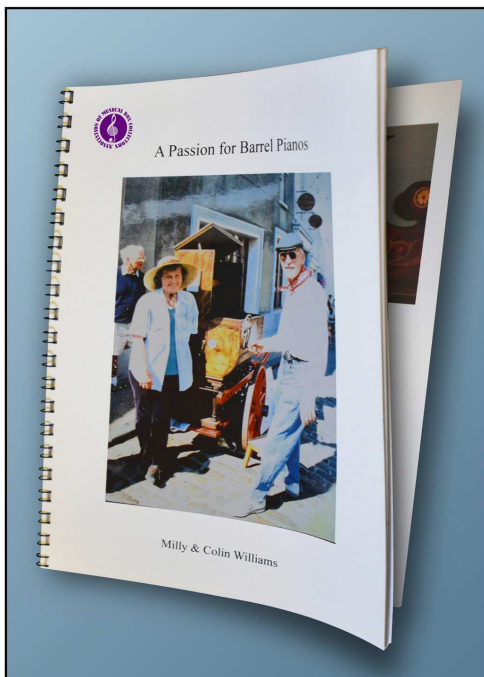
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