Volume 25 Number 2 Summer 2011

The Music Box

An International Journal of Mechanical Music

In this issue:

The Journal of the Musical Box Society of Great Britain

ISSN 0027 4275 **Price £6.00.** Available free to members on subscription.

50th ANNIVERSARY

1962 - 2012

In 2012, the Musical Box Society of Great Britain will be celebrating its 50th (Golden) Anniversary.

Our celebrations will start in April 2012 with our spring meeting based in Kent; the Garden of England. This will be a full 4 day event with lots to do and see, arrive on Wednesday 18th April and depart Monday 23rd.

During the 4 days we are lucky enough to have a full day visit to Jack Henley's private musical collection (which has increased considerably since our last visit) and Vintage Cars. Jack will also be holding an Organ Grind in his grounds.

A full day will be spent in the hotel using 4 of their conference rooms to hold a series of 'Demonstration, Play & Display'. We will be able to see and hear mechanical music from members representing the north, south, east and west regions of the country. For the Ladies, a shopping trip to Royal Tunbridge Wells will also be available.

We have arranged for two ½ day musical visits;

1 - to Salomon's Museum and in their Victorian Theatre we will be treated to a recital on their famous Welte Organ;
2 - a visit to Finchcocks Musical Museum, this Georgian Manor House is home to a celebrated collection of over 100 historical keyboard instruments.

Also two ½ day non musical trips;

1 - A trip on the Bluebell Railway.
2 - A visit to the Biddenden Vineyards.

We will continue to celebrate our 50th with the Autumn Meeting in September; this meeting will be held in Worcestershire. John and Hilda Phillips are our hosts. More details in next journal.

To end our year's celebrations we will have an extra special weekend in December (Saturday 1st – Sunday 2nd) for a celebratory dinner, which also happens to be the exact anniversary date of the society's inaugural meeting 50 years ago.
More details in next journal.

THE MUSICAL BOX SOCIETY OF GREAT BRITAIN

From the Editors' Desk

This is, in my opinion, a most varied and interesting issue. We are delighted to begin a series of 'Stray Notes' from our good friend Luuk Goldhoorn. We all know and appreciate Luuk's knowledge and scholarship – and I am sure that any Notes that Stray from his pen will be worth a close read! Speaking of notes brings to mind the Duo-Art piano roll we acquired many years ago – set pieces from a Piano Competition! David has written a short description of it on Page 75.

As a society we should not shrink from controversy, and Paul Bellamy's thoughtful article should stimulate us into more in-depth research into the origins of the tuned tooth and the musical box. Janvier was certainly a giant among clockmakers – one of the most original thinkers in his field – and there is obviously a lot more work to be done in this direction.

Nicholas Simons is reaching a significant Birthday this year and marking it with an Open Day. He has given us a 'taster' with his Hupfeld Phonoliszt Expression Piano – 100 not out. One of many very interesting instruments he has restored.

We are grateful to Roger Booty for alerting us to the possibility of an Aurophone arson attempt! We trust the idea will not catch on.

Edward Murray-Harvey writes on 'Dots' – he really is a mine of information and we have found him always to be most generous with his time and expertise for those researching obscure titles and tunes.

Restoration Matters really does command your attention with an in-depth evaluation of a 'sticky' subject – which glues to use for what and when. We certainly agree wholeheartedly with the opinions and views expressed here.

It is many years since I last restored a 'smoker' (see Teme Valley Meeting report) but I vividly remember the state of the poor chap's 'tubes and lungs'. Anybody who is in any doubt about whether they should quit smoking should be looking at such restorations. The nicotine, soot and tar mixture clogging the inner workings should be enough to deter anybody!

A big Thank You to all our contributors – keep up the good work and keep those letters coming in too – this is your magazine, after all.

Have a great summer!

Postcard from the Ted Brown Collection

Front cover illustration:

The Aurophone - found not guilty of arson!

Contents

The Music Box is printed for and published by the Society quarterly 27th February, 27th April, 7th August, 7th November from the Editorial Office.

Back numbers obtainable from:
Roy Ison, 5 East Bight, Lincoln, LN2 1QH © 2010 The Musical Box Society of Great Britain

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:

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

Treasurer: **Richard Kerridge**
32 Queens Road, Reading, Berkshire RG1 4AU
Tel: 01189 577453 E-mail: richardkerridge@edwinsmith.co.uk
To whom all subscriptions enquiries should be addressed.

Acting Subscriptions Secretary: **Kath Turner**
36 Lime Kiln Lane, Lilleshall, Newport, Shropshire TF10 9EZ
Tel: 01952 608114. E-mail: antiquekate@hotmail.com
Subscription enquiries may also be sent to this address.

Membership Secretary: **Kevin McElhone**
MBSGB, POBox 373, Welwyn AL6 0WY
Tel: 01536 726759 E-mail: kevin_mcelhone@hotmail.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

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

Acting 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 member: **David Worrall M.B.E.**
Tel: 01962 882269 E-mail: worrall@ercall87.freeserve.co.uk

Co-opted acting Archivist: **Alison Biden**
MBSGB, P O Box 373, Welwyn AL6 0WY
Tel: 01962 861350 E-mail: ali_biden@hotmail.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. 20

It is pleasing to note that the number of people wishing to join the Society is on the increase. The requests are coming in mainly from our Web Site and the Internet. I hope that this trend will continue and that the Society will survive in the future for a long time to come. Like most societies, we are declining in numbers and we do need new blood to maintain our position as one of the leading institutions devoted to the history and preservation of all forms of mechanical music.

Bob Ducat Brown has to be congratulated on his work to re-vamp our Web Site. It has been expanded and improved so that what was already good is now even better. This must have been a particularly difficult task to undertake.

It is now possible to hear a wide selection of instruments playing and this section of our Site is well worth visiting. For those of a timid nature, and not really used to a computer, please have a go and play around. There is a wealth of information there and you are sure to be impressed.

If you have not already renewed your membership, please do so as soon as possible. Your continued support for the Society is vital as these are difficult times for all. I believe that maintaining our interests and hobbies is more important than ever, so that enjoying our collections and sharing our interests with others gives us some happiness and relief in this rather sad uncaring world we live in.

I recently made contact with some of our members in Japan and wished them well. I also passed on our sympathy for the plight they are in at the present time. I am pleased to say that they have survived everything that nature could throw at them. One museum was damaged, but none of the staff were hurt. There was some damage to a few barrel organs, but everything else appears to have survived. How lucky we are to live in a part of the world where natural disasters are few and far between!

I am looking forward to seeing you all at the Spring Meeting and later at the AGM. Later in the year it will be the Scarborough meeting with 2012 to look forward to after that.

Arthur Cunliffe

Open House and 60th Birthday Party

Nicholas and Eileen Simons

Saturday 17th September 2011

12 noon start

Buffet lunch will be provided

Contact details in Journal Page 43

Dates for your Diary 2011

Annual General Meeting & Society Auction

Saturday 4th June 2011
Roade Village Hall
Near Northampton
Doors open at 9.30 am
AGM start 10.30 am
followed by buffet lunch
After lunch - Society Auction

Chanctonbury Ring

Sunday 12th June 2011
10.30 coffee for an 11am start
Lunch provided
Please contact Ted Brown on 01403823533

Teme Valley Winders

Saturday 18th June 2011
1.30 p.m. start
Please contact John Phillips on 01584 78 1118

Chanctonbury Ring Open Day

Saturday 6th August 2011
10.30 coffee for an 11am start
Bring your own sandwiches
Please contact Ted Brown on 01403823533

Autumn Meeting 2011 Scarborough

Friday 9th September –
Sunday 11th
Details in Journal

Register News No: 71

Several people have expressed a willingness to help in getting the Register into a modern computer format. Thanks to all who have offered to assist. It seems that it may be possible to change all the records over providing each and every one is accurately matched to the receiving programme. In lay terms, it is like having chapters within a book with each of those chapters containing eight paragraphs. When moving those chapters over to a new book it is essential to match the information exactly. If for instance one chapter had only seven paragraphs, the computer would place information in the wrong place and that would corrupt the new book. This is not a very good analogy but it does illustrate how computers do only what they are told to do and are incapable of thinking for themselves.

At the moment I am working on the Register to make sure that all records have the same structure so that all will transfer easily. In time, when the new database is made, there will be a programme available on a CD or DVD that all can use for pleasure or research. It will be a very powerful programme as it will have in excess of 23,753,400 bytes of information available for use in one way or another. Put another way, it represents over 42 years of hard work!

There are now 9,130 boxes registered and I am looking forward all the time to receiving more information for processing. The magic number of 10,000 boxes on the Register still seems to be a long way away. Please do keep on sending me details of boxes that you have.

I recently received information from America about a gamme number for Nicole. As a result I have been able to find five Nicole's that had no record of the tunes they played as their tune card was missing. The gamme number was 851, so if you have one of those boxes do let me know and I will send you details of the tunes. There are examples of boxes that have their entire programme selected from the works of a single composer. The one composer that stands out is Bellini. There are no less that 18 boxes that play nothing else but his airs. I would guess that Nicole made hundreds of these boxes in their time for such a great number of them to have survived to this day. Only one other composer seems to have been chosen by Nicole where the entire selection on that box comes from that person. Unsurprisingly the composer is Verdi.

Please do keep the information coming in.

Arthur Cunliffe

MBSGB Overseas Trip

5th – 12th October

Switzerland

If you are interested in joining us please phone Daphne Ladell – 01737 843644

Open House

Nicholas & Eileen Simons

Saturday 17th September 2011

Details in Journal

Teme Valley Winders

Saturday 24th September 2011

1.30 p.m. start

Please contact John Phillips on 01584 78 1118

Chanctonbury Ring

Sunday 25th September 2011

10.30 coffee for an 11am start

Lunch provided

Please contact Ted Brown on 01403823533

Essex Meeting

Saturday 22nd October 2011

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

Chanctonbury Ring

Christmas Meeting

Saturday 26th November 2011

10.30 coffee for an 11am start

Lunch provided

Please contact Ted Brown on 01403823533

Teme Valley Winders

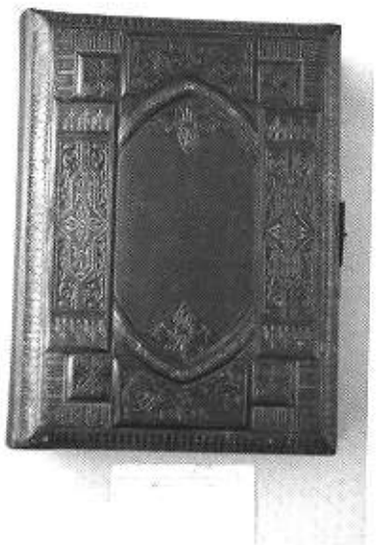
Christmas Meeting

Saturday 3rd December 2011

12 Noon start

Please contact John Phillips on 01584 78 1118

This, That and T'Other No: 7



Those new to starting a collection of mechanical music must find it quite a daunting task. Forty or fifty years ago there were many antique shops that had musical boxes and other forms of mechanical music for sale. There were a number of auction houses that offered specialist sales of such products so finding a musical box was not an arduous task. Things are very different today with all forms of mechanical music being much more difficult to locate. Strangely, the law of supply and demand has not worked well on this occasion as prices realised have gone down in spite of there being fewer items on offer! In many ways there has never been a better time to buy.

Those who have inherited a musical box are indeed very fortunate and have a foundation on which to build a collection, but the question of how to move on can be fraught with difficulties. The initial temptation is to buy everything and anything, but I would advise against this. Many have fallen into this trap including myself, but when the initial excitement has worn off one realises that it was not the best decision to have taken.

The first consideration should be, "Do I like the music that is being played?" In the case of instruments that have discs, paper rolls or other forms of music, the number of discs or rolls available must be taken into account. It is little use buying a disc box that has only one disc that plays a rather obscure tune especially when more discs are difficult or impossible to find. Do not fall into the trap of buying an item just because it is rare. At the end of the day a rare item without appeal is just that! Equally, if a common item turns up that has a "wow" factor but is a little over priced, then seriously think about buying if you can afford it.

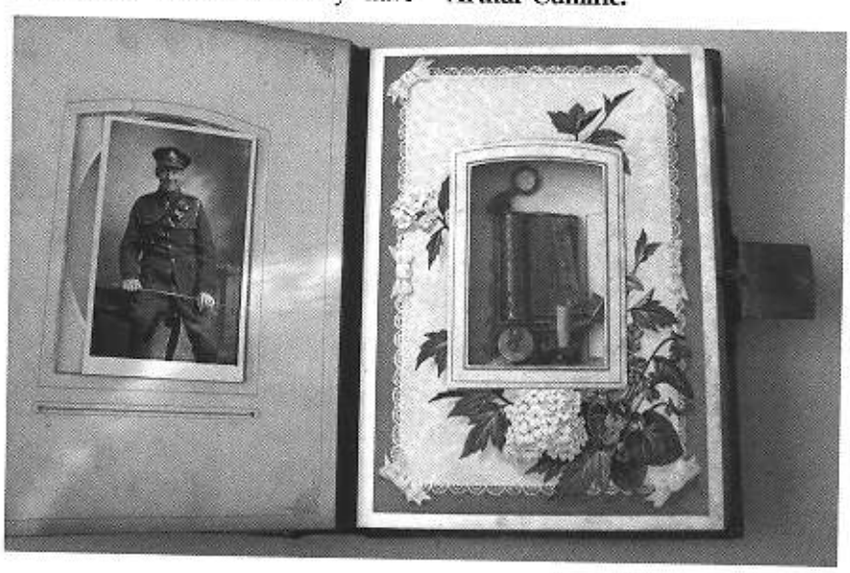
Having found an item that is of interest the next considerations should be condition and cost. Restoration costs, unless you can undertake this task yourself, are expensive these days. Any purchase price is entirely down to what you are prepared to pay. If you particularly enjoy an item and deep down really want it, then after a period of serious consideration, go for it. Of course there will be those who will say with a gasp, "I could have got you one for half the price." Do not worry about such statements. Over all the years I have met many such people, but never one who actually did produce the goods at half price!

Being a member of our Society is a great advantage in that other members are often able to give unbiased opinions. Coming to a meeting can be especially beneficial to new members as they can usually see a range of mechanical instruments they have never seen before. It is also possible to learn about restoration techniques, where to find equipment and specialist items and most importantly get advice on how to, or how not to, tackle jobs. Never be afraid to ask questions even if they are the most basic. We all started off from that position.

Remember that there are people around who are out for the greatest return for themselves and are sparing with the truth. Always follow the old maxim. "Let the buyer beware." Take time to look around and ask questions. Try to collect a few instruments that particularly interest you and then be prepared to sell them on if a better example turns up or if your interest changes. You may not get as much as you paid for it, but the experience will be worth the price and you will have had the satisfaction of owning and enjoying the item. If you are buying items just to sell on at a profit good luck to you but you may be missing the one vital aspect of collecting that is called enjoyment.

Here is an idea for starters. Look for a good quality photo album. The 2 air movements usually play well and albums are always a conversation piece. Avoid damaged examples that have the spine torn or split unless you know a good bookbinder.

Arthur Cunliffe.



Chanctonbury Ring Open Day Meeting 6th March 2011

By Alan K Clark

Thirty eight members and guests attended the latest Chanctonbury Ring meeting hosted by Ted and Kay Brown at the Old School Bucks Green. Two rejoining members from the late 1960's and 70's were welcomed to the meeting. Ted then read out and explained the reasons for the change of wording which was being proposed by the committee regarding the post of Registrar. Praise was given to the Registrar for the huge amount of time and effort spent by him over the last 40 years compiling, updating, and searching his huge database to answer our questions. During the day many of those attending signed a card congratulating our young committee member John Ward on his forthcoming marriage.

The first topic of the day was small musical boxes and snuff boxes and the first item was a German made box called an Organino. This comprised an unusual musical movement with a wooden barrel, and single comb teeth contained in a small model of a barrel organ, its tune was Cuckoo – Cuckoo. Next came two 28 note tabatiere movements each playing two tunes. We then heard the music from two 60 tooth four air movements by Reuge and Thorens. Terry then took over to raise the quality of the music being offered by demonstrating a carefully chosen selection of twelve of his, Ted's, and other members snuff boxes. This feast of snuff boxes included; an early sectional comb box playing two Chinese tunes; boxes by Le Golay, H LeCoultre; Hy Capt; and an F Nicole from the C de Vere Green collection. The cases included tortoiseshell and tin examples with lid scenes of printed pictures of Swiss views, reverse painted pictures on glass, and pictures painted on ceramic panels. The boxes varied in size, but all enthralled the audience with the complexity of their music.

After eating up all of Ted's excellent dinners and puddings we then moved on to a brief demonstration of the values and differences in the sounds produced by a range of different types of cylinder boxes. Starting with a normal plain single combed box we were able to compare a Harpe Harmonique by Bremond, with a Guitare by Rivenc, an Expressive Harpe Zither by Paillard and a Mandolin box. Ted's advice was that the novice collector should never buy the first box they see, but should always listen to a reasonable range of boxes to determine which type gives them the most pleasure.

Following the same theme we then heard a comparison of two of the musical box maker's methods of increasing the number of tunes that could be pinned on a musical box cylinder. The first method was to half the number of teeth on the comb thus leaving twice the space between the teeth to double the number of tunes available. Ted played two tunes on his 12 air Nicole Frères box, which sounded fine, but the smaller number of teeth did not allow for much ornament within the music. The next box played was also a 12 air Nicole, but this was of the "two-per-turn" type, which meant that it had a much finer comb, identical to a normal six air box, but the cylinder was twice the diameter and played two tunes one after the other. The improvement in the number of notes that could be played, and thus the complexity of the music played was quite obvious.

Gordon then showed us his home made organette automata. This was based on an Amorette organette, but included three pairs of dancing dolls. Apart from the dolls, the whole machine was home made, including all the organette parts and the discs. It was a very creditable machine and used 16 reeds taken from an old piano accordion. Unfortunately in designing the keys which were depressed by the projections on the discs he had made an unintentional error which increased the duration of the notes so that some of them overlapped. Gordon had realised this and his new key frame was almost ready to be fitted.

Kevin then played us four tunes on the Aeolian Orchestrelle. These were on a newly cut roll of tunes from My Fair Lady. The organ theme continued with our attempts at identifying some unknown tunes on a 24 key barrel organ. The tunes appeared to be mainly dance tunes, and most were unknown to our members. Thus ended yet another very enjoyable society meeting, and I am sure that all those present wish to thank Ted, Kay and all those who helped to make the meeting a success.

During the day the following dates were planned for the Chanctonbury Ring meetings for the reminder of the year.

Sunday 12th June;

Saturday Open Day and Organ Grind, 6th August, (bring packed lunch)

Sunday 25th September.

Saturday Christmas Meeting 16th November.

Essex Group Meeting – 26 March 2011

from Don Busby

This tenth group meeting saw the usual regulars at Hullbridge to welcome Kevin, John Odger's son, maintaining average attendance of eighteen.

The day started with Alan Clark displaying two miniature barrel organs. When acquired, the first had a missing pipe and, of the 11 present, only two were original, the other 9 were thought to have been pirated from other machines. Alan made up the missing pipe, purposely keeping it different for historical identification. Bellows were re-covered and what appeared to be the original tune sheet was suspect because outlines on the wooden lid were evidence of two smaller sheets. There was only one barrel, but Alan thought a second was missing. His second organ had two barrels, each with 10 tunes from which we heard a small selection. Alan then played 2 airs from a Sankyo Orpheus movement from "Hobby's" followed by some tunes on an early, small a box, both owned by John Odgers.

Actions of components inside Organettes and aspects of their repair were described by Bruce Allen. He played some airs on his Mandolina, dated 15 March 1892, which has three volume flaps. One air was "Taking Violets from my Mother's Grave", another, "Over the Hills to the Poorhouse". Bruce explained how thin card gaskets and use of PVA allows joints to be easily broken for subsequent repairs; also, that leather gaskets supplemented by blue, non-hardening engine gasket compound is useful for wooden joints damaged by earlier restorers. A large scale mock-up of a tracker bar demonstrated control of vacuum chamber valves. Help was sought from the audience, with no success, to identify 6 unknown airs of 8 from a cylinder box, originally thought to be a Bremond, now identified as a Paillard, part-mandolin, having a 62/61 teeth split comb.

Ten unusual and amusing automata were shown by Daphne Ladell, who stressed how children and adults love to see them performing: so did those present. The set included various clowns, conjurors, a 'Laughing Policeman', acrobats, a maggot singing "Born to be Alive" (unstoppable!) and a Tipoo's Tiger circa 1836 and showing its age as Daphne pointed out. Daphne's first of two finale pieces was a non-musical male peacock made by a Swiss automata maker, Walter Dahler. Finally, a coin-operated bear, sitting atop a money box, dipped his 'spoon' into a 'honey pot' and, bringing it to his mouth, blew soap bubbles.

John Nattrass gave a brief description of Bruno Ruckert's moves from Leipzig to Canada, working as a fur trapper and becoming interested in timber production before returning to Leipzig where he made cabinets for musical box manufacturers, finally returning to America to make musical movements. John played one of his 8" disc machines of which the discs are of coated zinc, Ruckert's being painted blue with gold lettering and with oblong holes around their periphery. At an auction, John bought two wooden items which had become separated. The larger was an empty wall clock case, the smaller its top decoration. Back home John fitted a small uncased Symphonion movement which had been lying around his hobbies 'shed', discs are displayed in place of the clock face. On a 22-note Mignon, housed in a black lacquered box with gold motifs, John played two paper spools: one air was "Daisy, Daisy give me ----", to which he had added extra bars, it being the favourite tune of his grandchildren.
A powder compact with a Thorens movement with 12 or 18 teeth, inscribed as a gift from Mr. and Mrs. McMullen to a nurse, was played by Roger Booty. He also showed a musical cigarette lighter, bought from a charity shop, which had a Sankyo movement with plastic gears and played, "Lara's Theme". Lastly, a nicely decorated toffee tin of 1818 gave a rendition of "Silent Night".

After lunch, Robert Ducat-Brown screened features of our newly designed website, although the Society has had one for 13 years. He explained that, as well as reviews of Society publications, material from the Journal is made public to entice new recruits: as many as 200 new members could have resulted from viewing the web site. Robert encouraged members to use the site message board and forum to bring ideas and information of interest to a wider audience. Later in the afternoon, Robert produced a 1880's Gem Roller Organ which has cobs with 3 turns per tune. He also showed a home-made drilling machine built in 1994, originally made for other purposes, but which can be used for drilling a cob, copying an original, working along the track one pin at a time. Finally, he played an original cob and its copy with, "There's a Long, Long Trail A-winding".

Cementing pins to a cylinder was discussed by Don Busby, from the viewpoint of someone starting from scratch with no knowledge of the topic. Samples of his melts of rosin and shellac alone and in various combinations with sand were exhibited, leading to him choosing a rosin/sand mix ratio of 2:3 (by volume) for his first cylinder, yet to be cemented. Don gave a slide show of melting his chosen mix in a small test cylinder with transparent end cap. This enabled him to determine shrinkage as cement formed on melting the powdered mix. Graphs and formulae for ensuring cement at least 1cm thick were tabled. He has yet to practise what he preaches!

Paul Bellamy showed and played a large 10-air bells, drum & castanet cylinder box by Charles Ullmann, with

a harlequin-type tune sheet used by Paillard and others. It had excellent arrangements and belonged to Anthony Bullcid. He was not a lover of drums or castanets but demonstrated it at one of Ted Brown's Chanctonbury Ring meetings to illustrate the exception, that the softly toned drum was well suited to the Militär Polka by an almost unknown composer, Kettering. Most airs were by other less known composers such R Genée (Nanon), Ganz (Wer da! i.e Who goes there?) and others with well-known composers such as Suppé (Dona Juanita) and Strauss (Myrthern Bluthern, meaning flowering Myrtle). The advantage was that the extras could be switched off in any combination. All agreed that the castanets were too noisy but the bells well suited. Secondly, Paul presented a fine petites musique ebony and brass musical casket with its movement removed to show how not to restore a rare instrument. The original missing governor had been replaced by a 'modern' one, circa early 1900's, resulting in such a speed that the 'minute waltz' would have lasted about ten seconds. A temporary repair showed that the 2-air movement with over 70 teeth had two very fine airs, worthy of correct restoration to the governor.

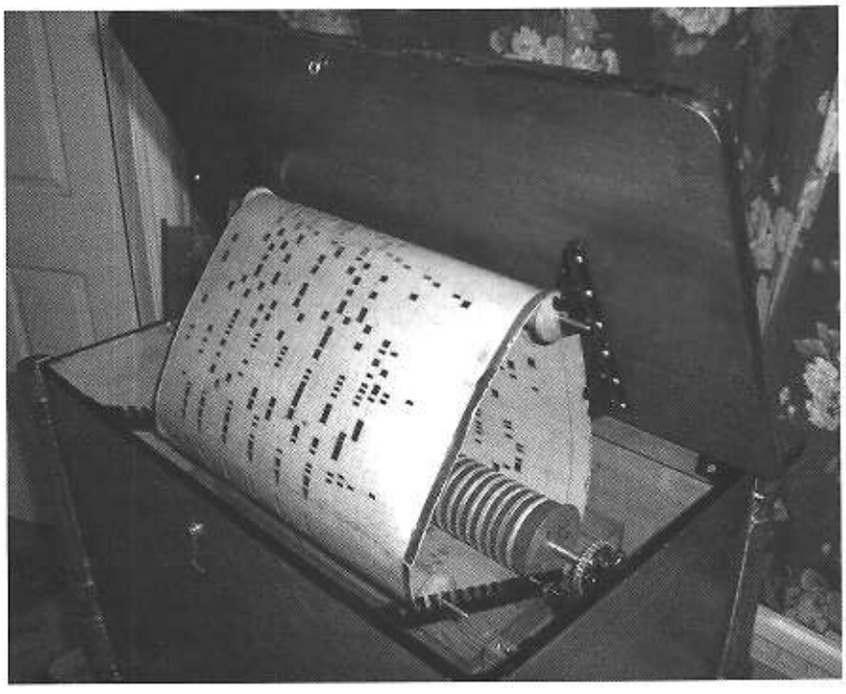
Three small to medium-sized manivelle boxes having 1, 3 and 4 tunes were played by Kevin McElhone. Another small movement, housed in a wooden box with a glass inset in the hinged lid, carried its drive spring within the cylinder and played 2 airs per turn. A further box played, "Rosemarie" on 30+ teeth, whilst a fine looking box housed a movement occupying only half the area of its container. Bringing up the rear, a large cylinder movement with 55 teeth was played by Kevin in an attempt to identify a couple of unknown tunes, without success.

Apologies are due to Terry Longhurst for misreporting of his presentation at our last meeting. The three boxes which he showed all had 2 1/8" standard cylinders, playing times being extended by gearing slowing cylinder speed. Today, Terry described his Organocleide, serial number 5959, housed in a highly polished box, made between 1855 and 1870. It has 165 teeth on a 17½" 2-part comb with many groups of notes similarly tuned for a mandolin effect which is carried well towards bass. Some airs were stated to be rather sombre, but those we heard were nice and melodious, including part of the William Tell Overture.

Appreciation was expressed for Bruce Allen's efforts in arranging yet another interesting programme. The next meeting has been confirmed as 22 October 2011, again at The Hullbridge Centre – postcode SS5 6JR.

Teme Valley Winders

Spring Meeting – 12th March 2011 from John Farmer



Nicholas Simonds' Ehrlich Orchestrionette

John Phillips welcomed 21 regulars to the Spring meeting and after cups of tea and coffee the meeting commenced with Kevin McElhone who had a cylinder musical box with no tune card. The 8 tunes were played and there was some discussion about the titles of the unknown ones, but few definitive decisions were forthcoming. Next up was Nicholas Newble who showed a series of video presentations starting with a brief history of J. P. Seeburg coin pianos, particularly the Seeburg KT Special, with a follow up on the reproduction KT Specials produced by Bill Eggerton in the 1970's. The presentation then concluded with video of several tunes played on Nicholas's recently acquired Eggerton KT special which now plays very well after some repair and adjustment.

Malcolm McDonald then demonstrated his Improved Celestina, bought at the Bonhmas, Knowle, auction a few months previously, by playing some endless rolls followed by the Hallelujah Chorus, which we had heard at the previous meeting played on John Harrold's Peerless. The two arrangements were very similar. Nicholas Simons was next to address the audience, firstly with some advanced details about the

Smoking automaton by Leopold Lambert. See also colour centrefold.

Spring 2012 extended meeting. He then gave an illustrated talk about the restoration of his 1879 Paul Ehrlich Orchestrionette. The instrument had required extensive cabinet repairs to deal with the ravages of woodworm. The four corner legs had large chunks missing which necessitated the making of new lower sections out of lime, and due to the extensive worm in the rest of the legs these were filled, and after consolidating, were finished in a painted grained effect to match the walnut veneered case. The inner workings had been fully restored, including a full re-leathering of the bellows. Nicholas then demonstrated the instrument with a number of endless bands, which is the format for all music for this machine. It caters for different sized bands by having a series of spool positions. It was a very short-lived instrument, due to its expensive construction and troublesome method of operation, and was quickly superseded by the famous Ariston.

John Farmer gave an illustrated presentation on the restoration of two rare organettes. The first was an Amabile 18D – a double reed 18 note German organette, of which this may be the only example now in existence. It was in very poor condition, having only two thirds of the case left, many other worm damaged parts, very rusty key components, and no top metalwork. New woodwork and many metal parts were made to complete the machine. The second machine was a 39 note double reed Manopan, not as rare as the Amabile, and a good deal louder!. Manopans are difficult to restore since after completion the whole of the instrument has to be made air-tight by application of reed-wax along the joints. Both machines were demonstrated with several tunes.

John Harrold gave the next illustrated talk on his work to restore a smoking Automaton from around 1890. It was made by Leopold Lambert, of Paris and measures 25 inches high, and has its original fitted carrying case. Although most of these are rather ugly monkeys, this one is a very elegant gentleman with a Simon & Halbig porcelain face and original silk clothes made by Eugenie Lambert (Simon's wife). Many years of tar and nicotine had taken their toll on the smoking mechanism which required new tubing and bellows, and further work was required on the motor and animation mechanics. Access holes had to be made in the laminated card body to deal with the piping and linkages. John finished by demonstrating the doll smoking a cigarette (very quickly to avoid setting off the smoke alarm !). Bernard North followed by reading the Telegraph's obituary for Gerald Stonehill, the well know Duo-Art expert, who died in January. Kath Turner then played her recently acquired musical box, possibly by Bremond, and hoped to identify tunes. However, it was felt that the box needed some work on dampers and registration to make the tunes clearer before they could be properly identified.

An Alexandra No.7 belonging to John Phillips was the subject of a talk by Alan Pratt, who had pointed it out to John at the Knowle auction The machine is an unusual type of interchangeable cylinder box which uses sleeves over a fixed mandrel, rather than full cylinders. Alan pointed out that it has several design faults – no autostop, so the operator has to stop it at the right position, no register on the mandrel to make sure it is in the right start position, a spring loaded tune indicator which is difficult to set when a sleeve is inserted, no protection for the pins when the sleeves are removed. The sleeves have no cement, so it is only the 0.5mm. of brass sleeve which holds them in place. However, it does play quite well despite its shortcomings and has 6 sleeves with 6 tunes each.

Several of the ladies present had helped to provide tea, coffee, cake and biscuits during the break, and were thanked by John Phillips. The next meeting of the Teme Valley Winders will be on Saturday 18th June 2011, starting at 1:30p.m. prompt. 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 Orchestrionette closed.

DOTS

Edward Murray-Harvey looks at popular sheet music of the past

Recently David Clarke the bookseller rang to tell me that he has just got for sale a box of dots; popular songs from the 1940's, 50's and 60's, was I interested? So I told David that I would go into his bookshop tomorrow and have a look. As I expect you know, "dots" is the showbiz term for sheet-music, something which I collect.

So this morning, a gloriously sunny day, I got up early and went into Norwich, where I visited David Clarke's bookshop. I was very pleased to find that the sheet-music was popular songs largely from the 1930's, with one or two Music Hall numbers from Edwardian times and one or two from the 1920's and the 40's and 50's.

David declared that it was worth his having telephoned me yesterday to tell me about them, and I hope he will do the same next time a pile of dots comes in. There was now another customer in the shop, who wanted sheet-music by Benjamin Britten, and wondered whether I had found any and bought it? I told the man that he needn't worry - there was no danger of my having wanted to buy any of that stuff.

I refrained from telling him my low opinion of Benjamin Britten's so-called music. Actually I almost never buy sheet-music of classical items, and I will tell you why not. It is because classical sheet-music is still in print; and if you want it, it is still easily available. The dots that I buy are items of an ephemeral nature, which have long since vanished, and if I don't save them, they may perhaps have gone for good. And many vanished ephemeral items do not deserve to be forgotten.

Then I caught a 'bus back to Hellesdon where Maggie and I live. Both going to and returning from Norwich I rode on double-decker 'buses and sat upstairs. It really was very nice to see the familiar landscape bathed in the unusual very bright sunlight, and I thoroughly enjoyed my journeys. Maggie looked through the dots I had just bought; something she likes doing, and she said she thought they were a very nice lot.

Later I walked home to Wood View and began repairing those of the dots which were torn. I counted them and found that I had bought close to fifty items of sheet-music altogether, but a lot of them needed repairing; (in fact I didn't finish the job until the following day).

One song I bought was a copy of "My very good Friend the Milkman", from 1935. I had always thought that it was written by Thomas "Fats" Waller, with whom the song is in my mind associated. But no, it was written by Johnny Burke and Harold Spina. Which goes to show how little I really know about popular tunes.

Another of the items which I bought was the words and music of "A Little Love, a Little Kiss (Un Peu d'Amour)", first published in 1912. That number was recorded on a 78 r.p.m. disc which I was given, among others, by a great-aunt and -uncle when I was ten years old. I still have that record after sixty-five years.

The interesting thing about it is, that on the record the number is played by an orchestra with no voice with it, and it wasn't until many years afterwards that I realised that the piece was in fact a song which should have words. Such a record is quite rare, the idea being that the gramophone would provide a musical accompaniment for anyone who wanted to sing the song but who didn't have a piano or a pianist to play it for them.

As it seems to be such a good idea, you may wonder why such records are rare, and I will tell you what I think. In the early days of gramophones and phonographs such instruments were called "Talking-Machines", because they reproduced the sound of the human voice, which was something that musical-boxes (another way of providing music in the home) cannot do. And so if a talking-machine played the record of a song without any human voice on it, people would perhaps have felt cheated, and I think that is why so few such voiceless song-records were produced. The dots of "A Little love, a little Kiss" show both the English and the French versions of the words, and one of these days I shall have to try singing the song with gramophone-accompaniment. You'd better buy some ear-plugs now!

Editorial Note: *Edward has a very extensive collection of Dots covering both before, during and after the Victorian era, including many of the 'lighter' pieces found on musical boxes. If you have a title you would like to know more about, Edward may well have a copy of the sheet music, generally showing the composer, publisher and date. He can be contacted through the Editorial office .He is always generous with his time and pleased to help.*

Restoration *Matters!*

6 – Glue

Before we progress on to restoration techniques that involve sticking things together I thought it would be a good idea to discuss the various glues used in restoring old musical instruments, specifically those used in player pianos, organs and organettes. Glues have developed greatly since the days when our beloved instruments were built so it is natural that we should investigate modern glues, and restoration materials, alongside those traditional glues which are still available. The correct use of glues can be a very emotive subject and create great controversy amongst restorers of different schools of thought, and indeed, different techniques may be required depending on whether you are rebuilding, restoring or conserving.

Glues can be divided into two main categories, those that will never need to be dismantled and those that will. The former category includes structural joints in instrument cases. The latter covers the majority of joints used in restoration, such as those involving leather, felt, rubber cloth and the like. These materials have a finite life and will need to be replaced in the future, hopefully long after the current custodian has passed on but replaced nevertheless. It is our duty to ensure that any future restorer is able to carry out his job with ease. We know that glues used at original manufacture are quite capable of being removed during restoration but are modern glues equally capable of the same, or are you leaving a terrible legacy to the future restorer? There is no such thing as 'old is good and new is bad'. Modern glues are good, but only in the correct application. Let us investigate the two categories of joint.

Permanent Joints

Our instruments would have been assembled using animal glue, commonly known as hot glue. This is available today as 'pearl'glue, which needs to be soaked in cold water and then heated in a water bath up to around 150deg F or 66deg C. Its consistency can be altered by adding water, or adding more pearls. Hot glue is very cheap and with a bit of experience is easy to use. It has many good characteristics, which I will discuss later, and is the most widely used glue in restoration, although these days it is not the best for permanent joints.

At this point I would like to suggest that there is rarely a place in restoration for epoxies and cyanoacrylates (super-glue). Of course there will always be a few special cases where metals and glass will need to be joined but these glues have no place with wood.

The most prevalent wood glues found today are the 'white glues'. Much confusion exists in that PVA (polyvinyl acetate) has become a generic term for all white glues. This is not true. There are also glues known as PVC-E (polyvinyl chloride emulsion) and although these are water soluble when wet, they becomes insoluble when dry. By all means use this glue when assembling joints that will never need to be taken apart. Real PVA glue will usually be described as such on the container and one of the most popular makes is 'Unibond'. There is some confusion over the true nature of one of the most popular wood glues in GB. This is Resin-W. Some say that this is a PVC-E but this is not true. The Bostik (who own Evo-Stik) datasheets clearly state that this is a PVAc glue, ie, it is a cross linking PVA and as such is stronger than a standard PVA and is suitable for exterior use but not permanent immersion in water. PVA, PVAc or PVC-E glues can be used for permanent joints, or alternatively you can use hot glue. The main problem with using hot glue for structural joints today is where you have a large jointed area and traditionally you would have warmed the entire workpiece in a warming cupboard prior to gluing. Few, if any, workshops have such facilities today so modern glues are used instead. There is no point sticking to traditional glues for authenticity of in so doing you cannot reproduce the original quality of joint due to shortcomings in the process. Just use modern glues instead. It is worth remembering that even PVA, contrary to what is said by some people, is not totally water soluble. By personal experiment and as stated in the Bostik datasheets, PVA and PVAc will loosen from the wood with the application of water, especially boiling water, but the body of hardened glue remains as a jelly-like mass. One must also not permit any overspill as this can affect the quality of subsequent finishing such as the ability to take a stain and many types of finish. Hot glue has none of these affects.

Finite Joints

Hot Glue vs PVA

The majority of joints in restoring mechanical musical instruments can be categorised as finite, that is, they need to do their job for a finite time only and then be reversible. These include sticking rubber cloth and leather to bellows boards, felts

to wooden action parts and leather to valve faces. Another debate can be had discussing modern rubber cloth and its life expectancy, but the recommendation here is always to use the best materials available and to take advice from experienced restorers in the MBSGB as to suppliers. Remember that the cheapest materials will probably be the most expensive in time. The cost of good materials is insignificant when compared with the amount of time it takes to do a good restoration.

The best glue for these applications is hot glue. This has an ideal two stage setting process. Firstly it cools and as it does so it gels and holds the cloth or leather firmly in place. Secondly it hardens over the next few days resulting in a hard durable joint. Any trimming of excess cloth can be easily done a few minutes after gluing. The great advantage over other glues is that the finished joint can be reheated with a domestic iron to allow slight changes in position to be made or, on long joints with a heavy cloth, to allow full penetration of the glue into the cloth.

Some people prefer to use a PVA glue for fixing rubber cloth or leather onto bellows boards. This may be considered acceptable in that it is reversible but is more troublesome than hot glue as it requires extensive holding or clamping. Hot glue really is the quickest and easiest. The original is best so why look for anything else? Hot glue also has the advantage that it can be mixed to any thickness. It can be used thick for gluing a heavy cloth to pedal bellows in a player piano or it can be used very thin when gluing zephyr in a singing bird. The thickness can also be adjusted to get the correct degree of absorption when gluing felts. In conclusion, hot glue is recommended but novices might prefer to use PVA, however it is worth experimenting with hot glue until you become proficient. On no account should any other type of glue be used in these applications.

Burnt Shellac

Burnt Shellac is one of those old mysteries, but once mastered it is invaluable. What is it and where can you buy it? Well actually, you make it yourself with French polish and a match. Burnt Shellac is the only glue that sticks anything to anything in our instruments, and is reversible 100 years later. It is made by taking a small amount of French polish in a metal container, say, a small aluminium dish (individual mince pie) and setting it alight to burn off the meths. French polish is a mixture of shellac flakes in methylated spirits, the shellac being made from the secretions of the lac beetle, a native of India and Thailand. Shellac is also edible and is used widely in the food industry as a gloss finish (food additive E904). It takes some practice to know how much meths to burn off. The flame must be put out so that the remaining liquid, when cooled, has the consistency of lightly whipped cream. Obviously as it cools it thickens, so practice is necessary. It can then be applied to the joint with a small brush, assembled, and left to harden. This brush can be cleaned with meths. Initial firmness of the joint can take a few hours and full through-hardness about a week. This is the only glue that should be used when sticking metal tubes into wood. Lead tubes in 100 year old German player actions can be removed simply by placing a warm soldering iron against the tube for about 30 seconds and the tube can then be pulled cleanly out. Beginners may be tempted to use epoxy in these applications but that will make any future disassembly impossible. It is said that burnt shellac has superior properties to thick shellac which is simply shellac flakes mixed in a reduced amount of meths. Having never done the experiment I cannot comment on this.

It is not within the scope of this article to discuss every glue available today and its suitability to our hobby. You just need to search 'glue' on Wikipedia to discover how many different types of glue exist. By following these guidelines however, and with experience, you should be able to produce a quality restoration and avoid the pitfalls of others. In conclusion I will discuss one particularly controversial glue.

Silicones

Silicones, or more correctly RTV Silicones (Room Temperature Vulcanising) are found everywhere today, from bathtub caulks to fish tank glue, car windscreens and 'no nails' glues for incompetent tradesmen. Some restorers are promoting their use in our hobby, particularly in player pianos. There will always be the caveat that you must use the correct specification of RTV which can be confusing for the beginner as hundreds exist. It is a fact that RTVs pollute the surface of the wood and make it impossible for the future use of anything but more RTV. Sealing the wood first with PVA is suggested, but even this has the same effect for future restorers. In its favour is that it is an excellent gap filler, but so is hot glue to the extent required by any competent restorer, and hot glue has the advantage that it clamps the joint together as the water is lost during the second stage of hardening. RTV is messy to use, requiring special solvents to clean any over-spill, whereas hot glue is easily cleaned off with a damp cloth. It also smells terrible and prolonged exposure cannot be good for your health. Hot glue is a totally natural and organic material. Never use RTVs.

Nicholas Simons

One Hundred Not Out

A Hupfeld Phonoliszt Expression Piano

By Nicholas Simons

One of my favourite pianos is my Hupfeld Phonoliszt, which I have owned for more than twenty years. I am only the third owner of this piano, and possibly because of its stable past the piano is still in excellent condition, both inside and out. The external finish is still bright and glossy, and internally it is clean and still playing on its original cloth. It is this last point that is the main cause for celebration. This is a one hundred year old piano that is still playing, and correctly expressing, without any major restoration during its long life. This is testament to the excellent design, manufacturing and quality of the cloth used in its original manufacture, and clearly a good reason for celebration.

Fig 2 Interior view of upper action.

Hupfeld had a long history of making non-pneumatic automatic instruments, prior to 1900. Their first pneumatic player used a scale of their own design, called the Phonola, which played 73 notes and incorporated two expression tracks similar to the Aeolian Themodist system. Hupfeld called this Solodant and placed the expression tracks near to the centre of the roll, rather than in the margins. Another important difference was that Hupfeld chose to have their rolls travel upwards rather than downwards. As you can appreciate, Hupfeld got this right and the Americans got it wrong, as it is much easier to read the words on a song roll when the roll is going upwards. Unfortunately, the Hupfeld system didn't catch on worldwide, so they changed to the conventional layout for their later reproducing system, the Triphonola, which is based on the conventional 88-note scale.

The Phonoliszt is an expression piano, built from 1904 onwards for around two decades, designed for use predominantly in public places such as hotels, restaurants and cafes. The full reproducing piano of Welte was being introduced at around this time, but Hupfeld believed that their simpler system was adequate in public places, where the full reproducing capabilities of the Welte Mignon would not be fully appreciated. Hupfeld did develop their own reproducing piano, the DEA, in 1905, to great acclaim. These pianos are particularly rare today.

The Phonoliszt expression system is very simple, but can be very effective when playing well arranged hand-played rolls. My experience is that the majority of Hupfeld-made rolls are well arranged, whether drawing board rolls or hand played, and some even rival a reproducing piano in their performance. All Hupfeld rolls contain a Phonola and date watermark, and many also have a manufacturing date stamped just behind the label. The paper is 11 5/8 inches wide, with pin-ended spools similar to 65-note rolls. The Phonoliszt plays 72 notes and the scale is as follows;

1	F
2 to 34	G to D#
35	Sustain
36	E
37	Soft
38	F
39	Mezzo Forte
40	F#
41	Crescendo
42	G
43	Bass hammer rail
44 to 77	G# to F

The operation is similar to half of the Welte Mignon system, that is, a floating vacuum level with three fixed positions, and the ability to move either rapidly or slowly between all three. The hammer rail is split into a bass and treble half, with the pedal operating conventionally on both halves but hole 43 only operates the bass half. This is a rudimentary method of

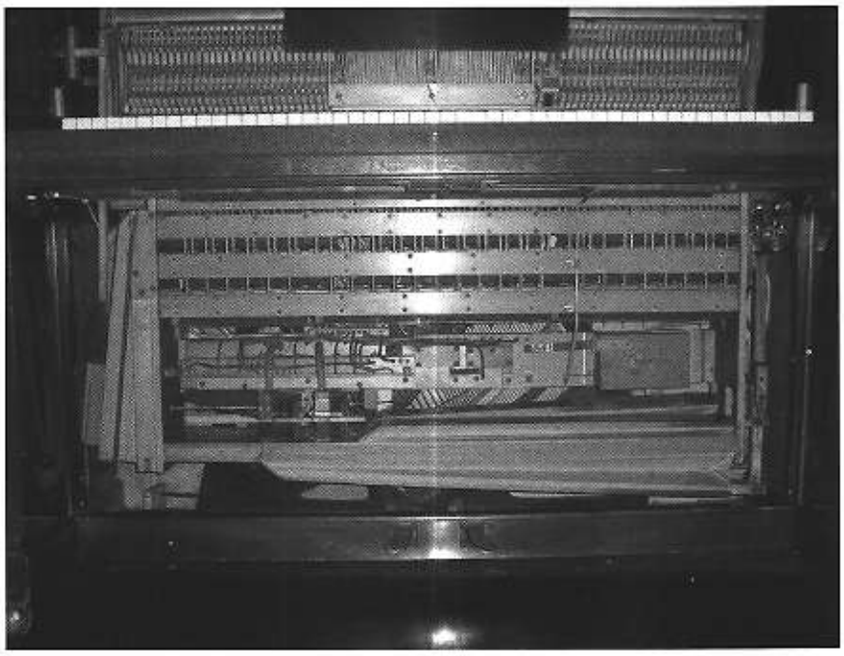


Fig 3 Interior view of lower action.

allowing a melody in the treble to stand out. Another simplicity is that the expression controller operates on the main reservoir, rather than on an intermediate regulator. In such a piano there is no need for a vacuum level higher than any current requirement, so no need for a reservoir set to the maximum possible requirement.

The five control holes are operated by chain perforations, rather than lock-and-cancels and to this end the tracker bar holes are elongated to give a continuous opening from the chain of holes.

The 'zero position' of 37, 39 and 41 sets the vacuum to maximum, i.e., *f*. The floating expression lever is sprung over to this position. 37 operates a pneumatic that pulls the lever to minimum vacuum, i.e., *p*. 39 sets a halfway stop giving *mf* if 37 is not punched. 41 causes all movement of the lever to be slow, to a single preset speed. It is therefore possible for the lever to move either rapidly or slowly between any of its three preset positions. Also, by the use of careful pulsing of the various controls intermediate positions can be obtained. Careful adjustment of the three preset positions and the crescendo rate allow the piano to be adjusted to ones own tastes and to the room.

Rewind and Shutoff are achieved by multiplexing the expression holes. Rewind requires holes 43, 41, 39 and 37 to be opened in that order whereas Shutoff, used between tunes on a multi-tune roll, requires holes 41, 39 and 37 to be similarly opened. After rewind, the roll remains attached to the take-up spool, as is usual in electric pianos used in public places. This allows a multi-tune roll to be played again by simply inserting a coin into the remote coin box.

The piano, itself, is built into a striking 'Art-Nouveau' case with extended sides, sweeping up from the keyboard ends, and including raised sides around the top. The back of the piano still has the original shipping label, dated 1909, and this corresponds with the last date on the list of patents labelled inside. The piano is of Hupfeld's own manufacture and has the serial number 16885. This is also stamped on the player action, along with the action's serial number P224. The internal mechanism is built to the high standards one expects of these early German pianos. The upper action consists only of the roll box, roll motor and gear shift, and all tracker bar tubes are taken down to a multi-way manifold just above the keybed. All of this upper action can be easily removed with the loosening of five wing nuts, for access to the piano for tuning. The lower action is all mounted as a single unit and comprises the triple layer pneumatic stack, four long thin exhausters, expression controller

Fig 4 View of expression controller.

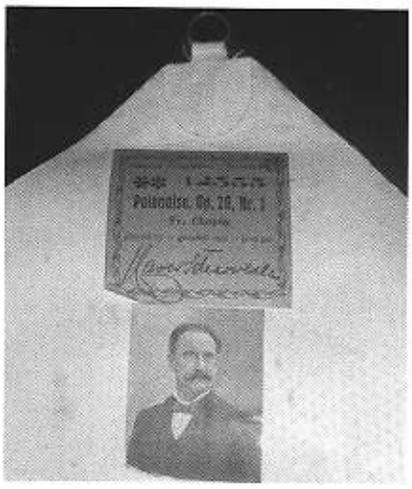


Fig 5 View of leader on hand played roll.

and reservoir. The crankshaft is just below the key bed at the treble end and is operated by a double reduction belt drive on the back of the piano. The original switchgear still remains on the rear of the case, comprising two mercury switches, control bellows, and a power resistor for slowing the drive motor on rewind. Much of this has been retained for functionality requirements, but with a micro switch and relay, to comply with modern safety standards.

The stack is of the conventional double valve design, with all pneumatics and valves being untouched since manufacture. The exhausters, also, are running on their original cloth, and there appears to be no loss in performance, with heavily winded ff passages still not missing a note. There is no rubber tubing anywhere within this piano. The tubing is predominantly lead, with some brass on the lower action. The crankshaft bearings are lubricated by spring loaded greasers located just below the key bed, with the rear bearing connected by a tube. These grease pots can be reloaded with grease when the plunger runs out of travel.

Music rolls are difficult to find these days, but with luck and vigilance I have acquired over 100. Rolls are either drawing board arrangements or hand played. Phonoliszt rolls can be differentiated from other 11 5/8 inch rolls by the label either stating Phonoliszt or being marked Pt. They will not play on the foot pumped Phonola, or the Clavitist or Helios, which all use rolls based on a similar musical scale and tracker layout. Similarly, Phonola rolls will not play on the Phonoliszt. The hand played rolls are of particularly high quality and always include a photograph of the performer immediately below the roll's label. Rather annoyingly, the label never includes the name of the performer, just a facsimile signature which is sometimes impossible to decipher.

I look forward to many more years of Phonoliszt music before I have to carry out its first rebuild. Maybe it will even outlive me!

Web Site Forum

From Robert Ducat-Brown

Owing to lack of support by members, the committee has decided to close down the web site forum. Several new members have been disappointed to find that the forum is seldom used and it will save embarrassment if we do not have one at all.

Machining Endless Screws

By John Moorhouse

First published in the Horological Journal February 2010 and reproduced with permission.

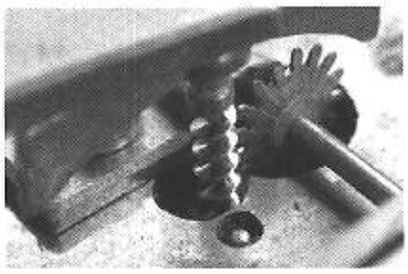


Fig 1. Endless as used in a snuff box type movement.

A worm driving a wheel finds many applications in engineering but in horology we find it in a different form where the wheel drives the worm. It is found in clocks such as cheap pin-lever alarm clocks and also in various items of mechanical music such as musical boxes and singing birds. The worm is commonly referred to as 'the endless'. They are of the single start type in cylinder musical boxes, **Figures 1 and 2**, but can be of single or double start type in singing birds, some disc players (notably those made by Mermod Frères under the Stella name) and clocks, **Figure 3**. Automata almost always used a double start endless, possibly to ensure a reliable start under the heavier loads associated with these mechanisms. A worm and wheel is very convenient form of gearing because it provides a large step up in ratio in a single and compact step. Where the wheel is driven by the worm there is a step down in the ratio and conversely where the wheel drives the worm there is a step-up in ratio.

Other types of clocks using worms and wheels include musical clocks and those with rotating moons. The worm in such cases is generally much larger and more robust, **Figure 4**. To allow the wheel to efficiently drive the worm the helix angle of the thread is necessarily large. A double start endless gives the benefit of a larger helix angle and therefore easier running and starting but a halving of the step-up ratio. The endless rotates quickly and a fly is mounted on the arbor to act as a speed governor. Because of the fine proportions of the pivots on the endless, the fly and the 'stop' or arrest mechanism are usually friction mounted so that some of the kinetic energy of rotation can be dissipated when the mechanism is stopped. Without this friction mounting the pivots would be at severe risk of breakage under the shock loads imposed by stopping the mechanism abruptly. Typical values of the key measurements of the endless are given in the table below. The size and rigidity of endless in musical clocks is such

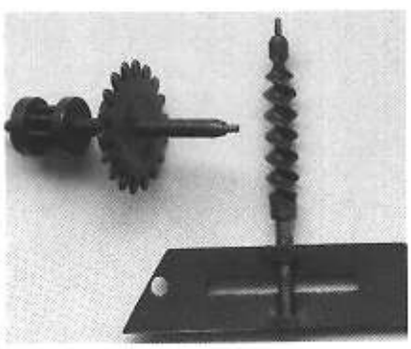


Fig 3. Double start endless as used in a clock.

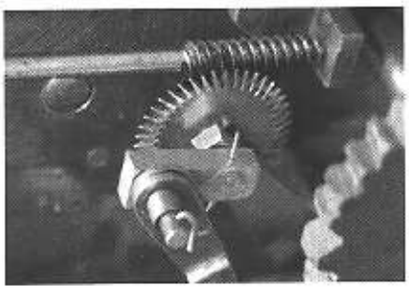


Fig 2. Single start endless.

that they can be cut by conventional screw cutting and they are therefore outside the scope of this article. I wished to be able to make small single start endless to match existing worm wheels for the restoration of mechanical musical items as well as in my other projects.

The potential problem with these small endlesses is that after cutting away the material they are thin and slender at the root. For this reason I resisted the idea of mounting a small diameter blank between centres and then cutting the helix since it would deflect under the cutting loads. This method is described by Ken Fritz[1], using a grinding wheel to make a series of shallow cuts on a hardened steel pin held between centres, for which a small very high speed grinder is required.

After much deliberation I decided to try two different methods for which I was equipped and to compare the benefits of each. In both methods I opted to use a Thornton's musical box worm cutter since these are available in 6 different sizes. Each

Type	Diameter	Pitch (or lead)	Starts	Helix angle	Wheel to worm step-up ratio
Bird box – tabatiere	1.5-2.0mm	0.7-1.0mm	1	25 degrees	20 to 1
Musical snuff box	1.7mm	0.8mm	1	25 degrees	16 to 1
Bird in cage	3.7mm	1.20mm	1	18 degrees	40 to 1
Pin-lever alarm	3.5 mm	4.2 mm	2	31 degrees	9 to 1

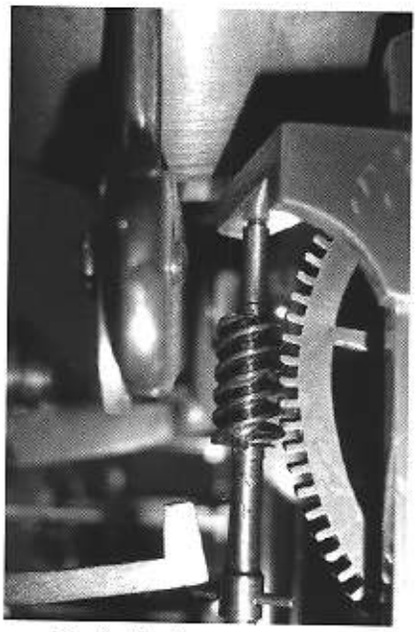


Fig 4. Endless as used in a musical clock.

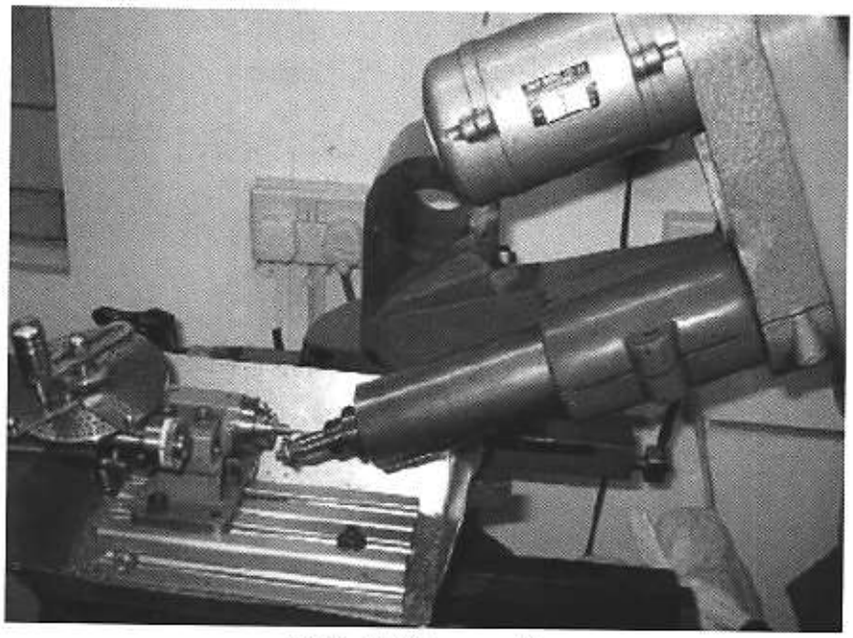


Fig 5. Milling an endless

size can be used for a reasonable range of pitches but the greater the pitch the deeper is the cut and the more slender is the remaining root.

Method 1

The first method was to use the milling machine. The blank to be machined, a little over final size, was held in a collet in the dividing head on the milling table, as shown in **Figure 5**. The milling spindle was set over from the vertical to 90 degrees minus the helix angle. I use EN8 steel for these endless which is the same as I use for watch and clock pinions because it cuts easily and hardens well. Generous amounts of cutting fluid were applied during all cutting. Care was taken that the long axis of the blank was parallel to the feed direction of the main table and in addition that the centre of the cutter was in the same horizontal plane as the blank. This ensured that the cutter was presented at the helix angle on the centre line of the blank and when the cutter is fed in, using the cross feed, it moves along a radial line towards the central axis of the blank. The principle of operation chosen was to use the milling machine in a similar way to a CNC machine except that each step of the cut was fed in by hand. Each rotation of the endless was split into 40 parts and the feed of the main table was also split into 40 parts.

The method was therefore to set the cutter running and plunge it to full depth, and then rotate the blank by 1/40th of a rotation using the dividing head followed by traversing the main table by 1/40th of the pitch. For an endless with a pitch of 1.0 mm this equals 0.025 mm of traverse per cut. On the milling machine with a 4mm pitch feed screw and 80 divisions on the micrometer dial this represents half of a division. A series of 40 cuts were made in this manner for each pitch of the thread and about 5 pitches in total were cut. This is more than enough because the working part of the endless is only two pitches. The procedure required careful setting up but the cutting was easy to carry out albeit a little laborious. All of the cutting in the step-wise mode was therefore towards the supported end and no load was placed on the previously cut portion. In this way there was always plenty of rigidity to support the cutter. The direction of rotation of the cutter was so that the face of the cutter tooth was facing the radius of the uncut material. No distortion was observed after cutting was completed.

The depth to which the cutter is plunged is important. With the blank being a little oversize the cutter was fed in until the external surface of the blank was just cut away, leaving the thread with a pointed crest. The external diameter of the thread should now be equal to the final diameter, and if not the depth was adjusted. This is a consequence of the type of cutter used, which has an included angle of 25 degrees. It does not cut to a fixed final diameter, but it cuts a groove whose depth can be chosen to determine the overall diameter of the endless. Ideally the two sets of cutting movements should be made simultaneously and the cut surface would then show no signs of the stepwise mode. Because the movements are made sequentially the surface has a series of facets and the cut is slightly wider than the cutter. Neither of these presents a problem, as discussed below.

One important step before cutting the thread was to mill, using the same cutter, an oversize pivot on the free end of the blank. This pivot was then true with the thread. It had to be done at this stage whilst the blank had adequate rigidity. Once the cutting of the endless screw was completed a further pivot can be machined in the same way at the

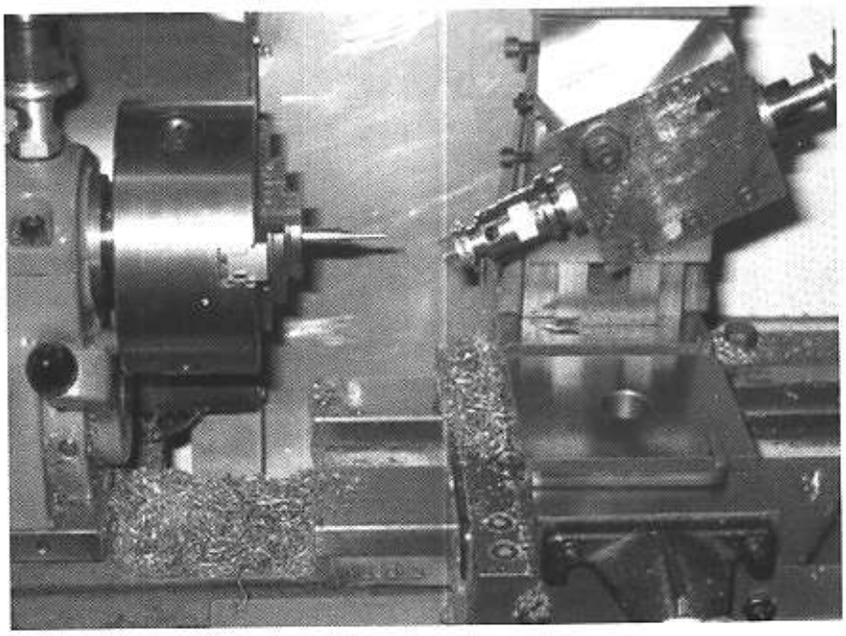


Fig 6. Machining using a lathe.

supporting end. This ensured that there were two pivots each of which could be used for final finishing and polishing whilst maintaining the endless to be perfectly true. The blank was then parted off using the rotating cutter.

Where the endless is required to have a large fly mounted on it the length of the arbor may be much longer than the thread. In such cases I machined down the arbor, in situ, to close to the finished size before milling the final pivot. Machining from the solid in the way described is termed 'peeling', as in bananas.

Method 2

The second method was carried out on the lathe and is similar to screw cutting on the lathe but using a rotating milling cutter instead of a single point tool. The set up on the Myford is shown in **Figure 6**. For a 1mm pitch the lathe screw cutting change gears were set up exactly as for cutting a 1mm pitch screw thread, or for whatever pitch is required. The milling spindle was mounted on the lathe cross slide and again set to be normal to the helix angle with the cutter centre in the same horizontal plane as the axis of the blank.

The first step was again to machine an oversize pivot on the end of the blank with the cutter. **Figure 7**. The actual cutting of the endless was very simple. The drive motor for the lathe was not used. The lathe leadscrew was engaged to link the traverse of the saddle along the bed with the rotation of the blank. With the milling cutter rotating it was fed in to full depth. To cut the thread the hand wheel on the leadscrew was slowly rotated to move the cutter towards the headstock. This served to both traverse the cutter along the blank and also rotate the headstock via the change wheels in correct synchronisation to form the thread. Alternatively, I could have achieved the same result by turning a hand wheel fitted to the rear of the headstock. Cutting was therefore achieved in a single pass and was very quick, taking less than two minutes to cut the whole of the thread. Deflection of the cut thread was again avoided since the cutting was always into the solid blank.

Fig 7. Machining a pivot.

The set up shown in the figures ensured that a right hand thread was cut on the blank, **Figure 8**.

Left hand threads cut also have been cut if required. These would have required the cutter to be set at the correct helix angle and the blank to be rotated in the opposite direction.

The final procedure of cutting an oversize pivot at the end of the endless and parting off were the same for both methods. The two pivots took a little longer to cut than the thread. If the final length of the endless is not fixed or known then a parallel arbor can be cut suitable for holding in a collet, for final machining. Examples are shown in **Figure 9a and b**. It was noticeable that the machined endless had fine cutting marks along its surface. These were very similar in depth to those achieved using the first method except that they were less regular, being caused by variations in the rate at which the leadscrew was hand turned.

Method 2 could also have been used with a grinding spindle and profile dressed grinding wheel in place of the milling spindle with Thornton's cutter, but this would require a profile wheel dresser and flood coolant which is not usually available in the home workshop. One advantage of grinding however is that hardened material could be used avoiding risk of distortion in heat treatment.

Finishing

Hardening and tempering is important to give strength and adequate life. To avoid distortion during hardening the endless was wrapped in fine wire, coated in soft soap to minimise oxidation, and whilst heating up to red heat it was rotated in a hand held electric drill. It was then quenched vertically in oil with the drill still turning.

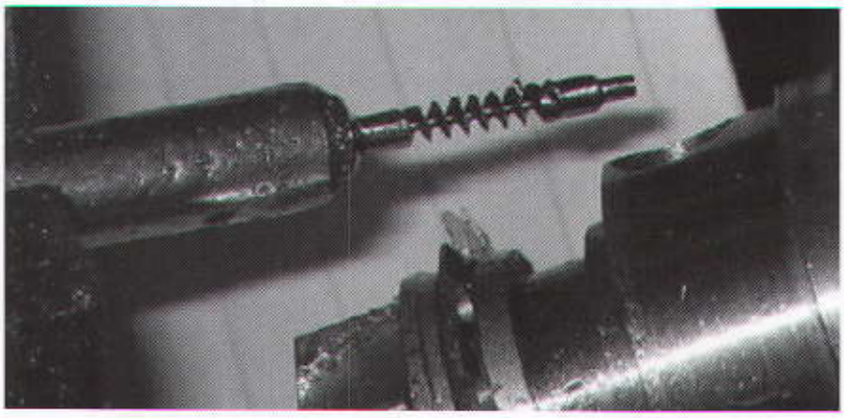


Fig 8. Machining a thread.

After initial polishing the endless was tempered to blue by slowly heating up in a blueing tray. In use the endless needs to have a mirror finish for minimum friction. After blueing, the surface was therefore polished to remove the facets. The cutting marks produced by either method were easily polished out, initially with some oil-stone dust or similar and final finishing with finer abrasives such as Autosol. A rotating wooden disc loaded with polish was useful for even polishing. This can be as simple as a thin circular disc held by hand between two male centres, which allowed the thread to draw the disc along. The pivots were then turned to final dimension and polished, taking care to ensure that concentricity was not lost during these finishing processes. For final turning one pivot was held in a collet and the rigid end of the endless was held in a small scale adjustable fixed steady, made specially to hold slender items in the 8mm lathe, leaving the pivot free for careful turning. Alternatively, if the pivots are only slightly oversize they can be finished using the Jacot drum. Only the surface and end of the pivot need to be finished; there is no need for square shoulders on the arbors. This is because in use, with the wheel driving the worm, it creates an end thrust onto the end of the pivot and therefore an end-stone or hardened steel end-piece are provided to take the thrust.

Conclusions

Both methods of cutting the endless thread were equally effective. Accurate setting up took the largest time. Changeover to another diameter or pitch was easy, not forgetting to calculate the new helix angle. The lathe method was the better of the two since the feed along the work was easy and quick, and with a set of previously prepared blanks a number could be cut in a short time. Accurate holding of the blanks was however important. If collets are not available then an alternative method is to turn the blank in situ in the 3-jaw chuck and then mill the thread and the two pivots without removing the blank from the chuck.

No attempts were made to cut a double-start endless. It may well be possible using these methods, but when cutting the second start of the thread the blank will not be quite as rigid as when cutting the first start.

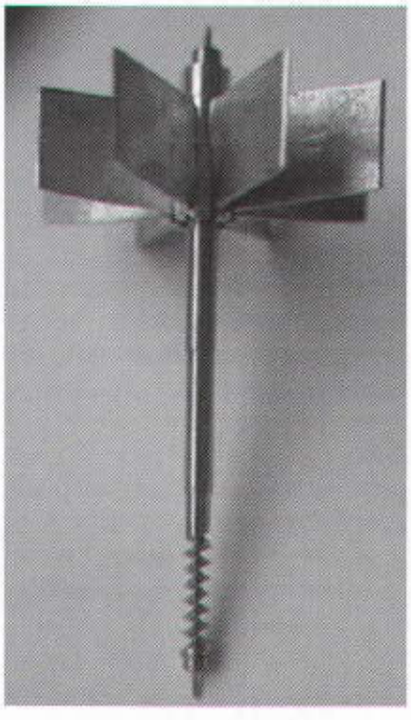


Fig 9a. Example of finished endless.

1. Worm wheel and 1.7 mm diameter single start endless in a small cylinder musical box.

2. Wormwheelandsinglestartendless in bird-in-cage movement.

3. Worm wheel and 3mm diameter double start endless from pin lever alarm clock.

4. Double start endless screw in a clock with a musical movement by Samuel Deacon.

5. Milling spindle set over to match helix angle.

6. Milling spindle mounted on lathe cross slide.

7. Cutting the pivot at the start of the endless.

8. Thread milling completed.

9a and b: Examples of work in progress on endless of 1.8 to 2.1 mm diameter.

Acknowledgements

Thanks to John Phillips, Jim Arnfield and Alan Pratt for their advice and review.

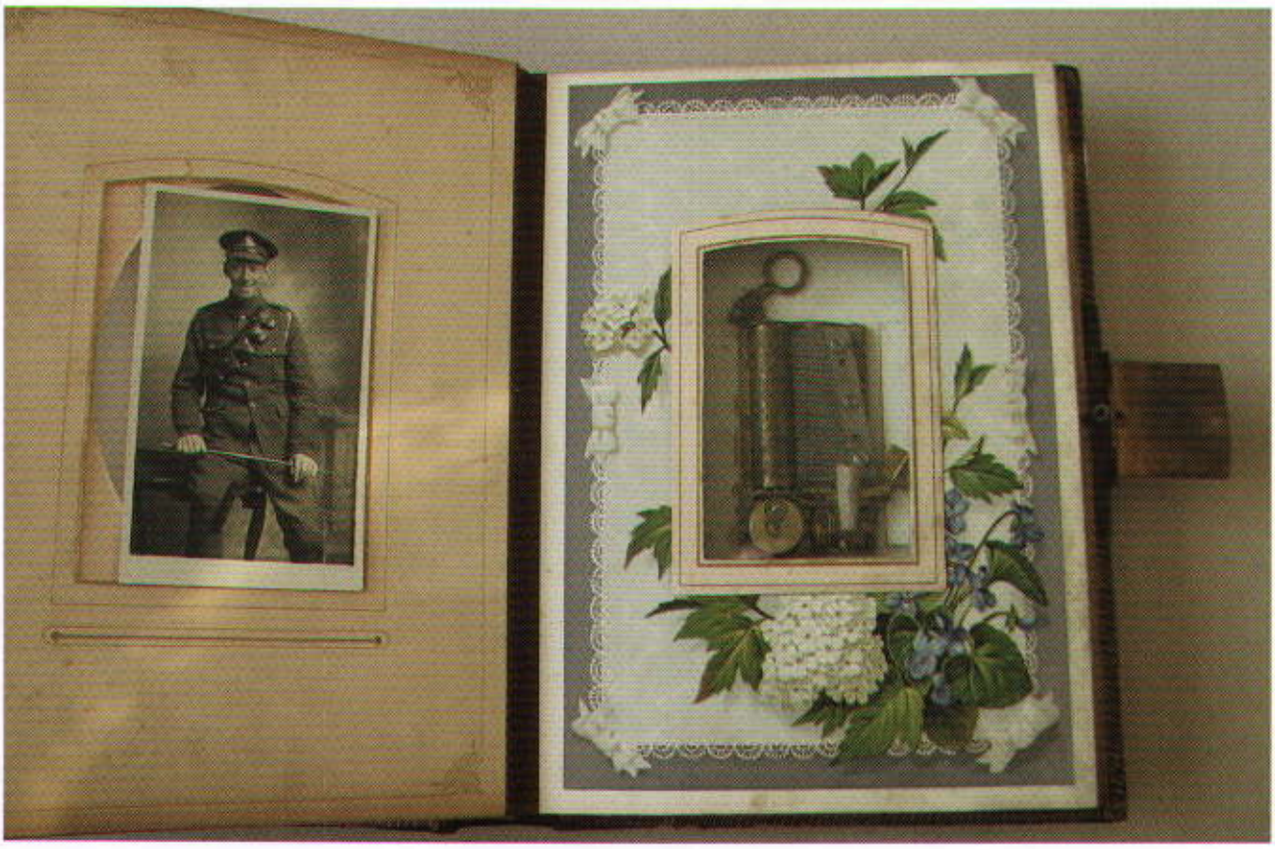
1. *The Endless* K. Fritz, Vol 7 No 1 pp33-36 Spring 1975, The Music Box, (Journal of the Music Box Society of Great Britain).

See also, *The Governor* Vol 7 No 2 pp68-70. John Moorhouse MBHI

Fig 9b. Part-finished endless screws

Exterior view of Nicholas Simonds' Hupfeld Phonoliszt piano.

Below: The fine Leopold Lambert automaton smoker seen at the Teme Valley Winders meeting - see article on Page 49.



Interior view of a good photograph album - see article on Page 46.

Two decorated 'advertising' envelopes - see 'Stray Notes' on Page 68.

The origins of the musical box?

by Paul Bellamy

This account is bound to be contentious. It challenges accepted orthodoxy concerning Antoine Favre and his claim to be the inventor of the 'carillon without bells'. He applied his invention to small snuffboxes and it took about ten more years before it was applied by others to a variety of musical novelties such as watch keys, wax seals, etc. His invention may have led indirectly to the development of the Swiss musical box industry when clock makers turned their attentions to musical novelties such as the musically sophisticated snuffboxes and then to larger clock-type cylinder musical boxes that were known as cartels.

The use of the word cartel is no surprise because it derived from clock manufacture. Nowadays it is limited to French antique wall clocks. In the past, where a predominant industry was clock manufacture, groups with common commercial interests formed, i.e. cartels. For carillon clocks, a musical ancillary may simply have been accorded the epithet 'cartel'.

Alfred Chapuis[1] wrote that musical box development took two paths. The first was as an adjunct of the watch-making industry with its musical watches, miniature novelties and small snuffboxes (all relatively un-musical). The second path was an offshoot of that industry by makers such as Francois Nicole, Francois Lecoultre, his sons David and Henri Lecoultre and other early musical box makers. The snuffbox-type movements had a distinctly different layout to the clock-type cartel movements, the main difference being the alignment of the spring motor (vertical axis for snuffboxes, parallel to cylinder axis for cartels). The musical box 'cartel' movement soon displaced the snuffbox-type, becoming fashionable about 1828. The question remains: Was there a separate path to the development of the cartel movement and were clock-type cartel movements the precursors of the musical box cartel? Christian Eric[2] and many others believe that this was the case. His article: 'Carillon, Immediate predecessor of the musical box?' is summarised below.

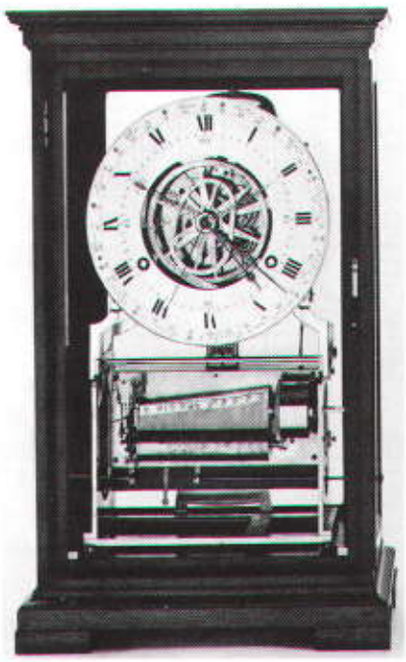


Fig 1. Musical equation clock by Janvier, the musical part dated 1775. Photo from Hayard, by kind permission of the publishers.

Musical cartel movements using directly plucked tuned teeth by means of a pinned cylinder, compatible with the description of the Favre invention, seem to be around much earlier than those of Nicole and Lecoultre, but there is little dating evidence to say they were post- or pre- the Favre invention. There is one exception, a carillon clock made by Frenchman Antide Janvier[3], which is purported to have a dated musical movement with a comb plucked directly by a pinned cylinder. If this evidence is true, it predates the Favre Invention by about 21 years. It is at this point that contention starts and why this article has been published.

Why? The Janvier clock was referenced by a number of writers, including Chapuis and Tardy. Of course, one could have been copying the other but neither referred to the date stamped on the musical movement, with one exception, Hayard. In his first edition he wrote the details of the Janvier carillon clock, which were brought to this author's attention. By strange co-incidence, in a second Edition by Hayard, he was persuaded by another eminent and respected historian to expunge all reference to Janvier's dates because of the apparently incontrovertible evidence by Chapuis that Favre was the inventor in 1796!

This author believes that it is wrong to suppress information in this way. It has to be subjected to the scrutiny of a much wider and informed audience. If the Janvier dating evidence was false, explanations are called for. If true, they need to be substantiated. If Darwin had been persuaded to bow to religious orthodoxy, his Origin of the Species would not have seen the light of day, but he might have had a quieter life!

Thus, in preparing this article, I have referred to the work of other musical box historians, assembling their observations and dating information in such a way as to

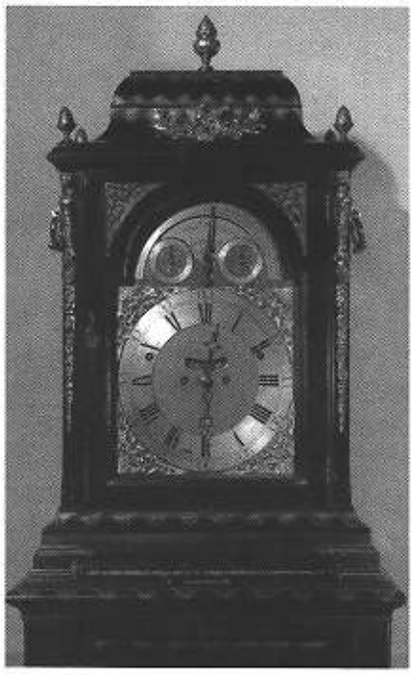


Fig 2. English musical bracket clock by Stephen Rimbault, London, circa 1790. Photo courtesy of the Ashmoleon Museum, Oxford.

demonstrate the doubts expressed by myself and others about Favre's invention. Responses that support or counter these doubts with verifiable information are welcome. If neither is forthcoming, let the Janvier dates stand as an unexplained fact.

Paul Bellamy.

Few now dispute the evidence expressed by Alfred Chapuis that Antoine Favre (1734-1820), by replacing carillons (bells) with tuned steel teeth, deserves to be considered as the 'inventor' of the musical box. Chapuis called this 'comb music'. Favre was born in Geneva. His wife was Marie Salomon and he took the wife's family name as Favre-Salomon. *The Register de la Société des Arts de Genève*, dated February 1796, gives details of his invention, quoted as a carillon without bells or hammers. This fits the description of a directly plucked tuned steel tooth (i.e. not struck by a hammer or by a striker as in carillon clock practice). Despite this strong evidence by Chapuis, there is further evidence that the tuned steel comb, plucked directly from a pinned cylinder, was in use as a cartel musical movement at an earlier date. Only one dated example seems to have been recorded and this was attributed to a Frenchman, Antide Janvier, as illustrated in **Fig 1.** He was the son of Claude-Etienne Janvier, born in1751 at Lavans-lez-St-Claude, located in the French Jura, only about 25 miles from Geneva. The work of Janvier is described later, below.

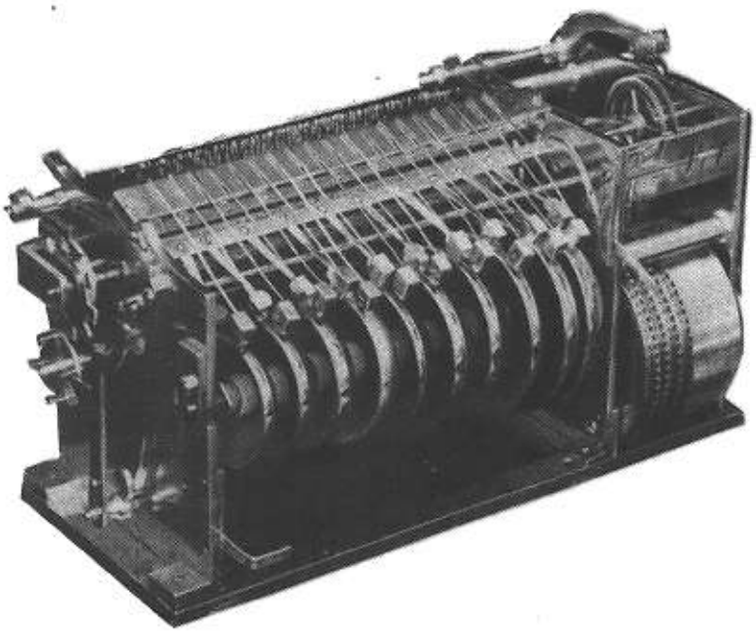


Fig 4A. Nine-air, ten bell musical movement for a clock, unsigned, circa 1790. Photo courtesy of Christian Eric.

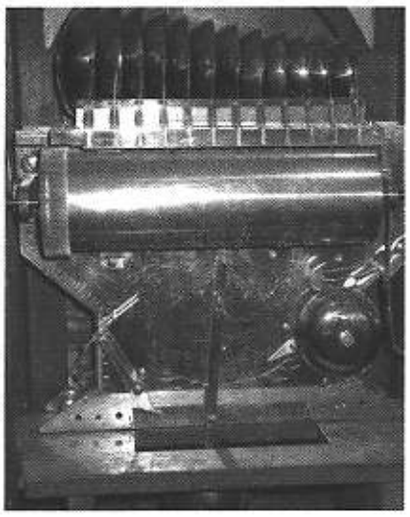


Fig 3. Movement of 10-air 10-bell musical carillon bracket clock by Thwaites and Reed, London, circa 1802. Photo courtesy of the Editors.

Chapuis suggested that **Pierre Jaquet-Droz**, followed by his son **Henri-Louis**, were probably the first to produce musical (carillon) clocks at la Chaux de Fonds, c1753. Perhaps this is correct for Switzerland but Chapuis also acknowledges that others made carillon movements such as Nicholas Vallin of London. He does not, rather surprisingly, refer in his text to the date but the illustration (Piguet, MBSI version, ps14 &15) seems to show 1578. The thirteen-bell clock was formerly in the Ilbert collection, now in the British Museum, and is illustrated in *A Book of English Clocks* by R W Symonds, Penguin, 1947 amongst other sources.

English carillon clocks were thus in the forefront of production, another fine example being a clock by Stephen Rimbault[4], **Fig. 2**. The actual date is unknown but he was a maker between 1744 and 1835. It has all the elements of the cylinder (cartel-type) musical box but with 12 tuned bells, each with two strikers (hammers) activated by a pinned brass cylinder, playing 12 airs. The cylinder (not shown) is almost identical in diameter and length to the standard 13inch

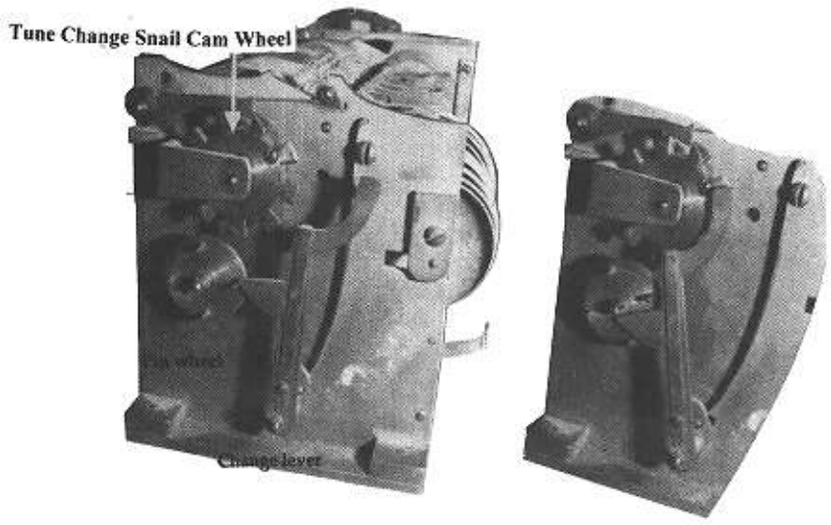


Fig 4B. The tune change system on the 9-air musical movement. Photo courtesy of Christian Eric.

models that became so popular in Switzerland. What is more, it is known that practically all clock steel used in Switzerland was English steel and one can legitimately assume that Swiss comb components were made of English steel. Other English makers, such as Thwaites & Reed of London, **Fig. 3**, c1802, made similar 12-bell musical carillon clocks.

The history of non-domestic carillon clocks, operated by pinned barrels, appears to start in the mid 1300's. These were large instruments, conforming to a musical scale, used mainly for religious purposes such as cathedral clocks. By the 1600's the first domestic carillon clocks came into vogue. As they developed they became popular in England, Northern France and the ancient Countship of Flanders (now divided between Belgium, France and Holland). The scale was not necessarily chromatic but tuned to suit a tune or selection of tunes. Carillon clocks were also equipped with other musical instruments such as organ pipes (known as flute clocks or *flötenuhr*) and stringed instruments.

Christian Eric's article[2] demonstrates the transition from carillon bells-with-hammers clocks to those with a directly plucked steel tuned comb. He showed how the basic components of an unknown maker's nine-air musical carillon clock movement with ten bells, c1790's, conformed to the basic layout of an equivalent comb-type movement, **Fig. 4A**. The bells were tuned to the following scale, bass to treble: C, D, E, F, G#, A, B, C#, D#, F. Each bell has two strikers except for the tenor C, which has one striker. The motor is a fusee-wound arrangement that delivers constant power as the motor spring unwinds. The chain-driven take-up drum has a spur gear that engages with a larger gear on the shaft of the cylinder. The governor is typical of later cartel movements, having a two-vane 'fly' acting as an air brake. The pitch of the vanes is adjustable, thus giving coarse adjustment to the speed of rotation of the fly and hence to the surface speed of the cylinder. The cylinder has brass pins whereas later cartel movements had steel pins. Axial displacement of the cylinder, to effect tune change, is by a stepped snail cam similar to those used on later musical movements. A spring-actuated lever rotates the snail cam in nine steps, giving instant tune change at the cylinder's tune gap (its unpinned area, at which point the cylinder moves to its next tune position). This does not conform to later practice where the tune-change lever is either disengaged (to repeat the tune) or left engaged (turning the cam slowly to the next tune track but within the space of the cylinder's tune gap). The operation of the tune change lever is shown in the two views of **Fig. 4B**. It is lifted against the action of its spring by a wheel with four pins. As the wheel rotates, it lifts a cam attached to the lever (left view) and then releases it suddenly at the tune gap (right). The lever strikes one of the nine square-cut limbs of the snail cam to rotate it to the next tune track. The next pin, on the 4-pinned wheel, starts to lift the cam ready for release after the pinned cylinder has rotated another full turn.

Fig 5A. Empire period mantel clock with detachable pocket watch and musical movement by Breguet. Photo 'La Pendule Francais', Tardy, 1965.

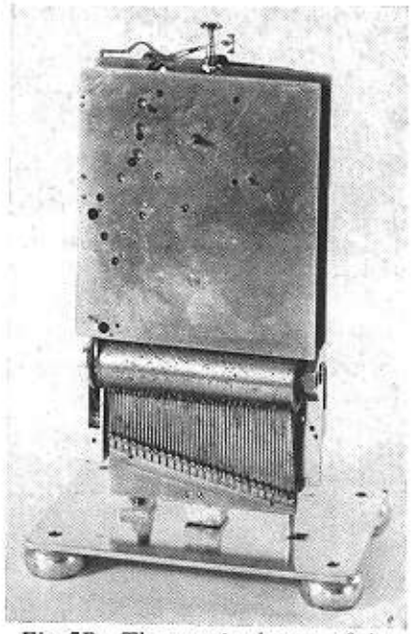


Fig 5B. The musical part of the Breguet mantel clock. Photo 'La Pendule Francais', Tardy, 1965.

David Evans brought the author's attention to the work of Frenchman ***Antide Janvier*** (1751-1835). He produced the *musical equation mantel regulator clock*[3], as shown in Fig. 1. It dispenses with bells and strikers, having a tuned comb actuated directly by a pinned cylinder. It was his opus 181, started in Verdun in 1775 and completed just before his move to Paris. It is signed and dated, as were all his pieces: ***Janvier No. 181 9/1784*** (i.e. September 1784) on the back plate of the clock movement, and ***Janvier 1775*** on the base of the musical movement. The musical mechanism is in the style of a cartel-type musical box and its comb has 75 teeth in 8 sections, the numbers of teeth varying from a few up to about 16 or so. He didn't assign a serial number to the musical movement, probably (as indicated by the two slightly different dates) because he hadn't completed the whole clock at that time. The movement is activated on demand or left to the clock's count-wheel, which operates between 8 o'clock in the morning and 10 o'clock at night. Two pieces of music play alternately. The two dates also reveal that this clock was a work of his youth, made in Verdun and returned to in 1784 (just before his arrival in Paris) perhaps for the purpose of adapting the movement to a cylindrical music box for which he had not until then found a use. It is worth noting in passing the precise way in which the date is given, with the month (September) as well as the year. The date on the movement pre-dates Favre's 'invention' by 21 years!

If the dating information is true, it is hard to reconcile it with the Chapuis account for Favre.

Janvier learned the basics of mechanics from his father and continued his studies with Abbot Tournier in Besançon. The family moved to Besançon in 1762, but returned to Lavans in 1771. At the age of 15 he built an astronomical sphere, which was presented to the Academy of Sciences at Besançon when he was 17. He was then apprenticed as a watchmaker, later moving to Paris in 1771 where he constructed a large planetarium, which was presented to Louis XV in 1773. He returned to Verdun, in the French Jura, by 1774 and constructed astronomical machines. He was undoubtedly one of the world's most innovative and important clock makers, the equal of ***Abraham-Louis Breguet*** in the allied field of watches.

Janvier was highly educated in Latin, Greek, mathematics and astronomy. He gained a reputation for his inventiveness in respect of astronomical clocks and developing accurate 'resonance' double pendulum clocks. He was a royalist, becoming the Royal clockmaker to Louis XVI and hence a victim of the French Revolution. He was imprisoned and, when released, suffered poverty and hardship. His wife died in 1792 and, as a consequence, he sold his

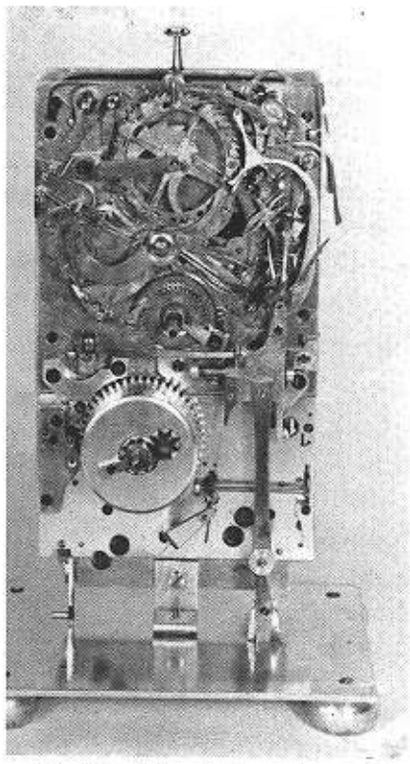


Fig 5C. The strike and repeat work of the Breguet mantel clock. Photo 'La Pendule Francais', Tardy, 1965.

goods, equipment and designs to Breguet. When the monarchy was restored, he was rewarded with a small pension but died in obscurity and poverty.

His lifetime's work was not lost but survived through his written works:

- *Essai sur les horloges publiques, pour les Communes de la campagne, published by Doublet in Paris in 1811.*

- *Des revolutions des corps céléstes par le mécanisme des rouages was published by P Didot the Elder in 1812.*

- *'Manuel Chronometrique ou précis de ce qui concerne le temps, ses divisions, ses mesures, leurs usages, etc.'* published in 1821 by Firmin Didot of Paris.

- *'Recuil des machines composees et executees'* published by Jules Didot the Elder in 1828.

Copies of all these are in the library of the Worshipful Company of Clockmakers of London in the Guildhall.

Ord-Hume[5] wrote that the use of 'steel springs' in music work had been known in Paris for at least fifty years before Favre applied it to the watch but did not identify sources to back this statement. For evidence, he also wrote an article: Who invented the musical box[6]? He pointed out, correctly, that the pinned cylinder: 'was the natural means of providing a musical programme'. There are references back to Tardy[7] in which he remarks on two clocks illustrated in 'La Pendule Français'. The first, illustrated in the Louis XVI section, is in fact Janvier No. 181, although Tardy did not credit it to Janvier or give its dates. The second, he wrote, is clearly of the Empire period (circa 1804-5), a glazed clock by Breguet. It is controlled by a detachable pocket watch, which has Turkish market chapters, **Fig. 5A**. **Fig. 5B** shows the 50-toothed comb, each segment with two teeth. **Fig. 5C** shows the clock's mechanism. Evans thought that it is improbable for Breguet to have made the musical movement, since he was tone-deaf; even his repeater gongs sound out of tune and he made no claims to have produced music work. Neither, apparently, did he make any musical watches. Ord-Hume makes the point, possibly correctly, that Favre may have been the first to miniaturise the 'steel springs' so that they would fit inside a watch or similarly sized object.

One has to ask the questions: Why did it take so many years for the carillon-type of clock musical movement to shed its hammers and bells to be replaced by the musical tuned comb and did this precede the 1796 date of the Favre invention?

The advent of the tuned steel (segmented) comb, coming towards the end of the 18th century, whether by Favre or someone else, may not have been widely known or capable of being developed with any certainty that a market existed for this 'improved' version of carillon. The idea that an 'improved' carillon' might have a life of its own as a musical instrument in its own right, seems to have been deferred by the early cartel musical box makers for a number of years. Was the idea and application of weighted teeth and spring dampers a necessary precursor? If the innovation was due to one person, let us say Janvier, was the fact that he was French and virtually destitute a barrier to the Swiss getting to know or even appreciating its market potential? All those who claim that Favre was the inventor certainly had a vested commercial interest, leading to the acclamation: 'Musique de Genève', which became a worldwide marketing term. Who would dare to contradict these eminent Swiss gentlemen? Did Favre become aware of Janvier's comb-type carillon? After all, they were only a few miles apart? Would Favre then have informed the *Register de la Société des Arts de Genève* claiming the idea as his own? The musical watch and other small but costly musical novelties had existing market potential and may have led him, as Ord-Hume thought, to its miniaturised use rather than as a musical instrument in its own right.

Further, can we speculate that the cartel movement had a distinctly separate lineage? The clock-type cartel cylinder movement appears quite early as a separate entity to its former mantel-type carillon clock and seems to parallel the snuffbox versions. It was not long before the layout of the cartel movement was modified to suit its purpose as a musical box, thus challenging its highly musical but smaller and quieter cousin, the snuffbox type. Musical programs for carillon movements were much simpler than those for the same sized 'standard 13inch' movements. Perhaps it needed the musical programming skills to grow first, through the development of the snuffbox-type movements? However, very complex programmes were written for organ clocks, which tend to dismiss this thought. Was it more a matter of technology rather than the skill of an arranger, needing, perhaps, the development of larger dividing engines and gearing for the pricking and drilling machines of these large cartel movements? The idea fits well with François Nicole's unique graphic-patterned cylinder and the fact that he was probably the first to exploit the full musical potential of the cartel musical box.

One can only speculate until more evidence is forthcoming. So, let Janvier and his dates remain alongside all these questions until rational and evidential explanations provide the answers.

1. Chapuis, The History of the Musical box and of Mechanical Music, MBSI version, ps128-131.

2. Eric, Christian, MBSI Journal Vol.XXXVI/2.

3. Hayard, Michel, Antide Janvier, 1751 – 1835. L'Image du Temps, Villeneuve-Tolosane, 1995

4. 'The Music Box', Vol. 23/8, ps253/4.

5. Ord-Hume, 'The Musical Clock' – 1995 p199.

6. Ord-Hume, 'The Music Box' Vol. 7/2.

7. 'La Pendule Francais' by Tardy

Stray Notes

A new occasional series by Luuk Goldhoorn

1. Musical boxes conquer the world
As the first musical snuff boxes appeared around 1810, isn't it remarkable that already in the New Revue of September 1831, (Volume 1 Issue 3) only just over twenty years later, a poem was devoted to this new invention?

2. Store your discs
We may assume that from the very beginnings of the disc musical box the necessity for the storage of discs was realised. We know, of course, the disc bins which were put below the upright machines, but albums for the discs are scarce. One is depicted in Ord-Hume's Musical Box book (1st edition p. 178). But also the stand depicted here existed.

3. Tin boxes for the tourists?
In the mid forties of the 19th century the miniature musical works found a different housing, Until then almost all were built into snuff boxes, but now the tin plate box came in vogue. Mostly they were decorated with lithographs of Swiss towns and villages, and looked like souvenirs bought as a memento of a voyage to Switzerland.

But this example shows that another market was also available for these valuables. On the tune card the dealer stamped his name and town. Bautzen is in the southeastern part of Germany, in the neighborhood of Dresden.

Why was a German person interested in a box with a view of the town of Zürich? And what other views had this dealer in stock?

THE MUSICAL BOX.

My little friend, 't is a stormy day,
But we are left together;
I to listen, and thou to play,
So we 'll not heed the weather!
The clouds may rise, and the tempest come—
The wind and the rain may beat—
With thee to gently play "*Sweet Home!*"
I feel that home is sweet!

The yellow leaf, from the shivering tree,
On Autumn's blast is flying;
But a spirit of life, enshrined in thee,
While all abroad is dying,
Calls up the shadows of many a year,
With their joys that were bright as brief,
And if, perchance, it may start a tear,
'T is not the tear of grief.

'T is a hallowed offering of the soul,
From her richest fountain gushing—
A warm, live drop, that has spurned control,
To the eye for freedom rushing—
As Music's angel, hovering near,
To touch thy tender key,
The numbers of a higher sphere
Is pouring forth from thee.

And while I feel his powerful hand
O'er the chords of Memory sweeping,
To waken, and bring from a spirit-land
The things that had else been sleeping,
It lifts my thoughts to a world to come,
Where the parted here shall meet,
Secure from the storms of life, at home,
And sing that home is sweet!

Fig 1. From the New England Magazine, Volume 1 No. 3, September 1831.

The two songs by von Suppé and Offenbach betray the year of manufacturing: about mid sixties of the 19th century.

4. A Dutch contribution
Although a François Nicole overture box exists with the old Dutch National Anthem, comb musical boxes particularly

Fig 2a. A special stand for storing your discs.

were not very popular in the Netherlands. Nevertheless a certain Mr. Henry Oltmans of Amsterdam invented in 1912 a musical box housed in a brush. With the assistance of a chartered Patent Agent in England he patented it, and the pictures which were part of that patent are published here.

It is known that these kinds of novelties exist, but it is not known if they are based on this patent. Most probably it seems that Mr. Oltmans sold his patent to a manufacturer.

He also patented a similar invention: a musical work housed in a holder for toilet paper. The difference with toilet holders then existing was that those were for paper on a roll. His invention was also applicable for loose papers.

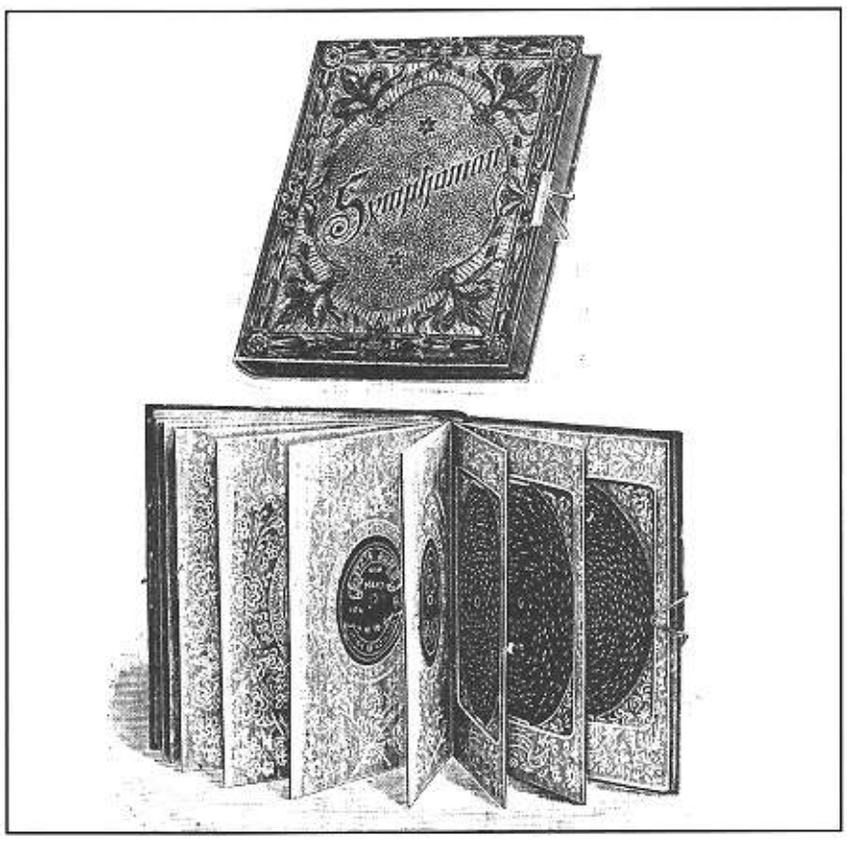


Fig 2b. Another form of disc storage.

5. Stationary with ads

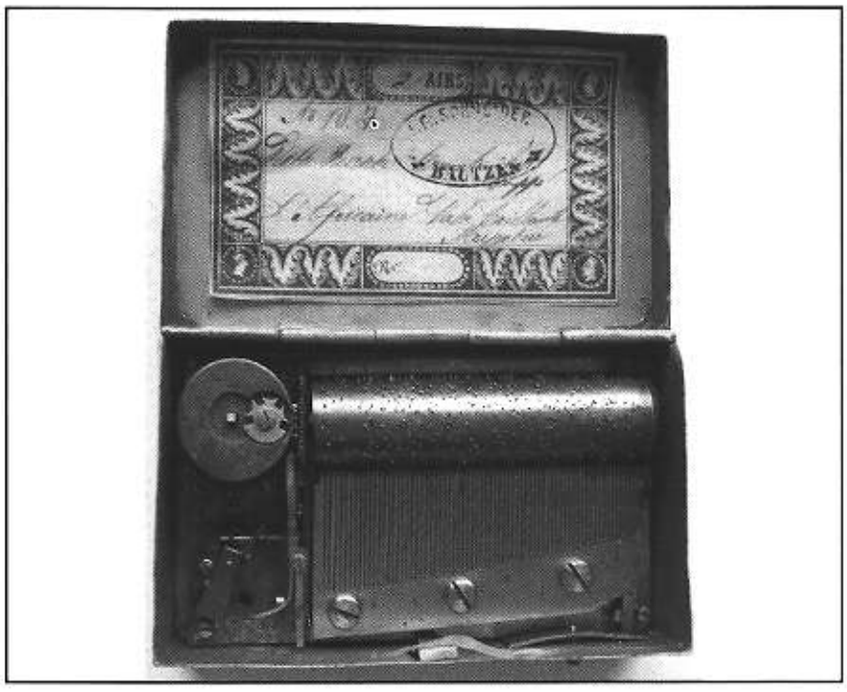
Around 1900 many firms had their envelopes and post-cards printed with at least their name and address but also quite often with a picture of their plant. You have more chance to find a card than an envelope, for most of the latter were thrown away.

But not only the manufacturers decorated their envelopes, some dealers did so also. In the figures two examples of Dutch dealers are shown. (See colour section on Page 62.) The later

Figs 3a & 3b. A musical box in tin case.

is from the firm of Guldemond, a shop which existed until the end of the last century. In this shop a Savoyard Symphonion box was on show which, after the closing of the shop, moved to our Speelklok museum in Utrecht. The musical box which is depicted was most probably no longer available when this envelope was used in 1912.

The other envelope is earlier. It was sent in 1895. On the reverse was the Vorsetzer (push-up piano player) made by Ehrlich. But also this machine was no longer available in 1895.



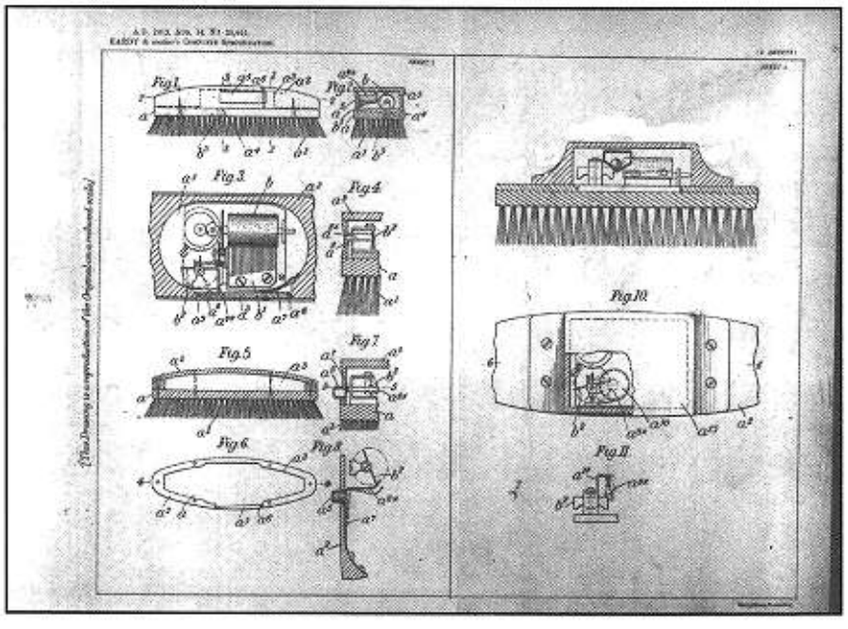


Fig 4. Henry Oltmans' Patent Musical Brush.

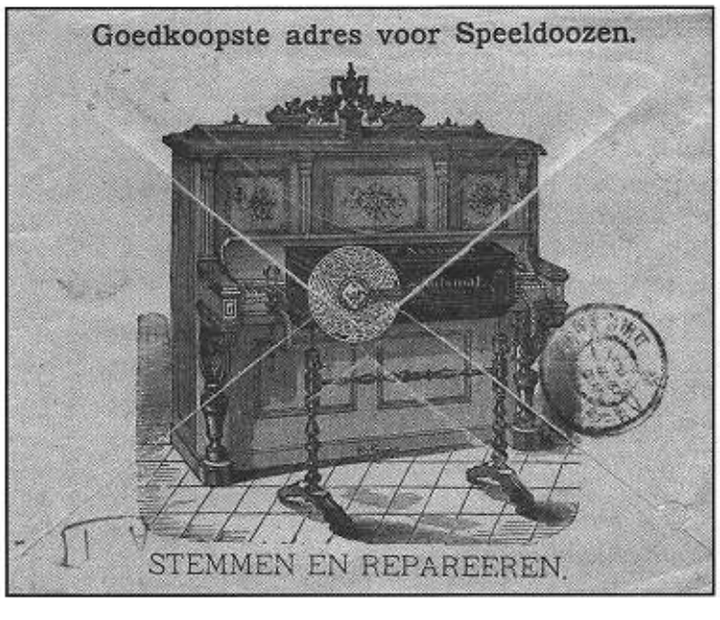


Fig 5c. The reverse of a decorated advertising envelope.

FIRE AT WINDSOR STATION

Organette involved in arson?

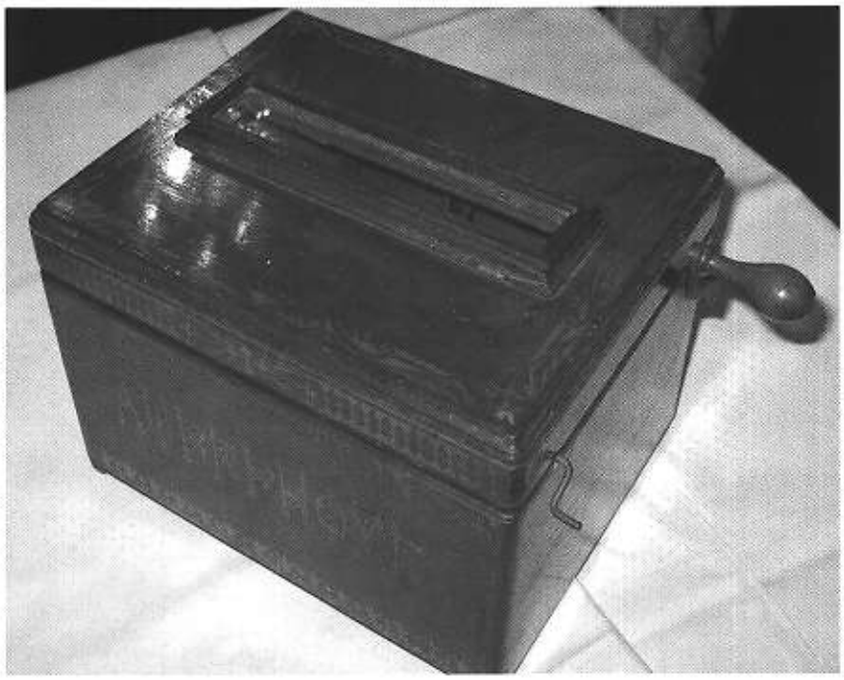
Roger Booty reports:

An interesting letter was published in the January 1st 1885 edition of the Musical Opinion and Music Trade Review, under the title, 'The Recent Fire at Windsor Station.'

> *'Sir,- It has been so much the custom of late to ascribe every dubious affair to American agency, that perhaps you will kindly permit us to state that the reeds and some other "suspicious looking articles" found after the recent fire at Windsor station were portions of a musical aurephone, consigned by us to Mr. Goldstone of Windsor. The aurephone was certainly invented by an American, although not for the purpose of blowing up her majesty's subjects, but rather for enhancing their pleasures by the harmony of sweet sounds which it produces.*
> *Yours etc., Geo WHIGHT & CO.*
>
> *Holborn, Dec. 24, 1884.'*

'To ascribe every dubious affair to American agency', 'suspicious looking articles', and 'blowing up Her Majesty's subjects' are strong comments to be connected with the little 17 note Aurephone organette which George Whight was selling through his company. Fortunately the edition of "The Times" for Monday 22nd Dec. was able to help explain these thoughts in an article entitled, "Fire at a Railway Station".

The fire had started the previous Saturday, Dec. 20th, between 3 and 4 a.m. in the cloak room and parcel office at the Great Western Railway Station at Windsor. The article stated: 'Fortunately, the structural damage is not great, the chief loss arising from the destruction of parcels and luggage deposited in charge of the company. A package of a suspicious character has been found among the debris, and has been sent to Paddington for investigation... Mr. Lailey, the stationmaster, being under the impression that the disaster had resulted from the ignition of the contents of some of the packages, made a minute investigation of the charred fragments on Saturday, when a clockwork apparatus, supposed to be the remains of an infernal machine, and a small tin filled with chemicals and tow were discovered... The theory is that the machine was not intended to destroy the office which has been wrecked, but was sent to the station for the attainment of such ulterior design... It may be mentioned that between 5 and 6 o'clock on the Friday evening preceding the fire a smartly dressed man with sallow face, moustached, and having the aspect of an American, was noticed in the first class waiting room of the station. His movements, which seemed rather suspicious, attracted the attention of the attendant, and seeing that he was watched the stranger hurriedly quitted the apartment, and was not again observed at the station.'



Aurephone Organette.

The next day's edition of the paper had a follow up piece: 'There is no evidence to show that the fire in the Windsor Railway Station on Saturday was maliciously caused, as the articles which excited suspicion have been satisfactorily accounted for.' The chemicals, clockwork apparatus and wheels that were found turned out to be horse liniment, the bottles containing which were packed in tow, the Aurephone remains and parts of fishing reels. The true cause of the fire was not discovered and all the excitement in the initial Times article was for nothing.

Making a Musical Box

by Don Busby

Adding Dampers and Fine Tuning

The initial concept of a musical box having a comb with 125 teeth to be tuned in pairs to give a range over 5 octaves has, in the light of experience, been changed to a final design having 150 teeth, being tuned in pairs, some in triplets, over the 5 octaves. A previous article described initial tuning of the first 125 teeth to tonal values just below the notes required. This current paper details fitting of damper wires and subsequent final tuning of the increased comb, including introducing dissonance between similar noted teeth to provide for Sublime Harmonie.

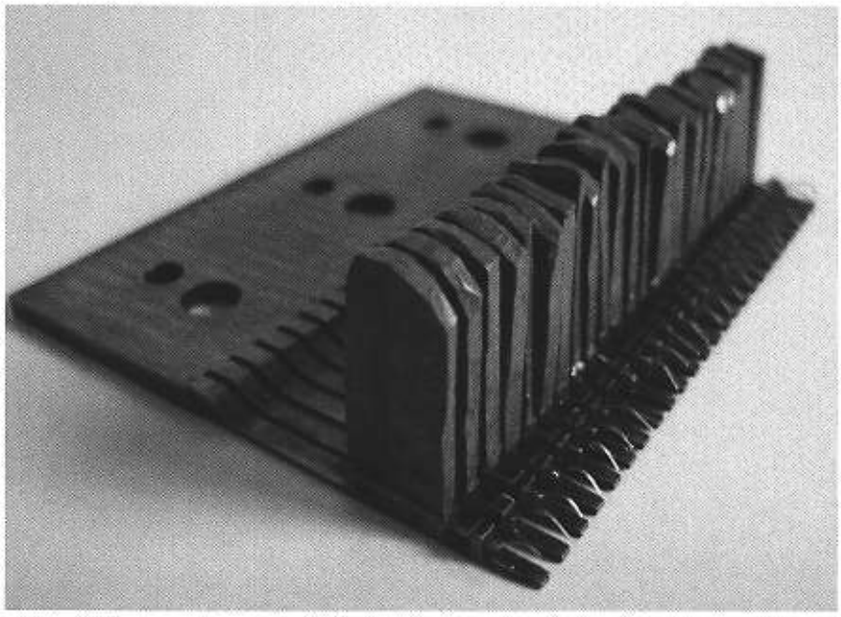


Fig 1. A segment fitted with damper wires.

It was necessary at an early stage in this musical box development to drill holes for damper wires in all but extreme treble teeth of the comb, prior to the hardening and tempering stage. A drilling jig and its use in drilling holes is described in the article "Drilling Damper Wire Holes". This detailed sizes of damper wire to be used and hole diameters required for different wire sizes and associated fastening pins. Then, the topic was covered only in general terms in order to decide what size of hole to drill in each comb segment, depending on size of damper wire to be fitted. Data on wire and pin sizes and information resulting from trials to decide hole sizes and which pin(s) might be suitable for each wire size are now presented in tables 1-3.

Table 1

Segment	1	2	3	4	5	6
Wire	0.12	0.10	0.08	0.08	0.08	0.08
Hole	0.6	0.5	0.5	0.5	0.5	0.5

Table 2

Wires	DW08	0.08 x 0.335	
	DW10	0.10 x 0.310	-Nancy Fratti (NF)
	DW12	0.12 x 0.375	
Pins	TP15	10 x 0.38-0.58	-Nancy Fratti
	No. 1#	10 x 0.30-0.60	-Meadows & Passmore (M&P)
(# Gauged brass pin)			

Table 3

Wire	Hole	Pin(s)
0.12	0.6	NF or M&P
	(0.5)*	(M&P)*
0.10	0.5	NF
0.08	0.5	NF
	(0.4)*	(M&P)*
* In brackets, not used, but suitable.		

Table 1, which includes the additional segment (S6), shows damper wire size and diameter of hole drilled prior to hardening and tempering. **Table 2** gives measured details of sizes of wires and pins considered for this exercise. **Table 3** defines which pins were found most suitable for fastening each wire size to be incorporated in this musical box comb. In practice, given that there is some slight variation in actual sizes of drilled holes of a nominal diameter, selection of pin for each tooth was

a matter of trial and error. It was also necessary to cut pins down in length to achieve a good fit in most cases. References 1 and 2 give detailed information about dampers and how they should be fitted and shaped. This author was guided by these works in his own development and would not presume to give advice other than - read the references and try your hand if you wish to fit steel dampers to the teeth of your musical box. His own efforts on one segment of his comb are shown in the figure.

Having fitted, shaped and cut to size your damper wires, all that remains is to tune your comb to its final state for the type of harmonious music which you intend to pin on your cylinders. The final status of tuning for the author's musical box comb is as set out below.

Adding leads and initial tuning has resulted in a comb with 125 teeth (T1-T125) and a musical range from 2C through to 7C. Each of 5 comb segments (S1-S5) has 25 teeth and covers 1 fully chromatic octave, all notes being duplicated. Starting at bass end of a segment, the first two notes are C, the second pair C#, through to the final pairing B; the 25th note is a single C of the next octave, matching the first pair of the next segment. For example, tuning of S3 which carries the middle octave is as shown opposite:-

Subsequent to the initial tuning exercise, the comb has been increased by a further segment (S6), carrying teeth T126-T150. With the experience of a trial pinning exercise, the following tuning was chosen for S6 to provide for more rapid repetition of notes of the octaves embracing Middle-C:-

Thus, with the double notes of S1-S5 and the additional single notes of S6, it should be possible to

S3:	Tooth	51	52	53	54	...	73	74	75
	Note	4C	C	C#	C#	...	B	B	5C
(M) Tuning of S3									

S6:	Tooth	126	127	128	...	138	...	148	149	150
	Note	3C	C#	D	...	4C	...	A#	B	5C
(M) Tuning of S6										

Discord 1						
Section	**2/6**	**2/6**	**3/6**	**3/6**	**4/6**	**4/6**
Teeth	26/126	27/126	51/138	52/138	76/150	77/150
Note	3C	3C	4(M)C	4(M)C	5C	5C
Discord-%	0/+2.5	0/+2.5	0/+2.5	0/+2.5	0/+2.5	0/+2.5
Beat-Hz	3.2	6.4	6.4	12.8	12.8	25.6
A Section 6 Note (Notes 126-150) combined with a note from other sections						

Discord 2			
Sections	6/2/2	6/3/3	6/4/4
Teeth	126/26/27	138/51/52	150/76/77
Note	3C	4(M)C	5C
Discord-%	-2.5/0/+2.5	-2.5/0/+2.5	-2.5/0/+2.5
Primary	3.2 3.2	6.4 6.4	12.8 12.8
Beat-Hz	6.4	12.8	25.6
Secondary			
Beat-Hz	3.2 3.2	6.4 6.4	12.8 12.8
Triplets sounded together			

Discord 3						
Section	**1**	**2**	**3**	**4**	**5**	**5**
Tooth	1/2	26/27	51/52	76/77	101/102	125/ghost 125
Note	2C	3C	4(M)C	5C	6C	7C
Freq-Hz	64	128	256	512	1024	2048
Discord-%	0/+2.5	0/+2.5	0/+2.5	0/+2.5	0/+2.5	0/+2.5
Beat-Hz	1.6	3.2	6.4	12.8	25.6	51.2
Beat frequencies for paired teeth						

introduce a slight mandolin effect when pinning music.
Advice from another member of the Society was that the comb should be tuned for Sublime Harmonie by providing a degree of discord between paired notes of S1-S5, also within the triplets arising from S6. It was therefore decided to modify final tuning to this end and the following dissonances have been set to facilitate Sublime Harmonie.

At segments S1-S5, the first of a pair of teeth was tuned as the pure note and the second pitched 2½% higher. The tooth of S6 for the equivalent note is pitched the same amount lower.

Ref 1 gives a discourse on Sublime Harmonie and tells us that the beat frequency resulting from the sounding of two teeth of nearly equal frequencies is the difference in frequency of the two teeth. Applying this to the frequency differences which have been set produces beat frequencies for paired teeth along the comb, as in the discord 3 table opposite:-

It can be seen that values of beat frequency increase from bass to treble, as expected when dissonance is set as a common percentage of note frequency.

Turning again to ref 1, we are told that dissonance is not needed at the lower bass end and, that Sublime Harmonie is ineffective at top treble end, where the after-sound is very short. However, it is also a fact that pianos are usually tuned by ear, resulting in note frequencies not being precisely at theoretical values, otherwise the instrument would sound tinny. For this last reason the author decided to tune for discord within pairs of notes over the whole of segments S1-S5.

Let us consider now the effect of combining a note of S6 with a single equivalent note of S2, S3 and S4, shown in discord 1 opposite:-

Values of beat frequency are of course similar to those from only S2-S4.

What happens if triplets of the same note are triggered? We now consider pairs of notes of S2, S3 and S4 with their equivalent on S6, shown in discord 2 opposite:-

We now have 3 primary beat frequencies which are independent of each other, produced by the different note frequencies of each tooth couplet within the triplet. It is unlikely that these beat frequencies will be in phase; further, tooth frequencies will differ slightly from listed target values due to small errors whilst tuning. A second pair of lower frequency beats will therefore be produced by interactions between the primary beat frequencies. It remains to be seen, *indeed heard*, what quality of music will result!

Harmonics from individual teeth have been ignored in order to simplify this explanation of how and why the author tuned his comb as set out above.

Further stages of this musical box build include making cylinders and pinning them; developing a bed plate and; adding a spring power unit, governor and associated controls. The next article will describe formation of cylinders from brass sheet.

References

1 "Cylinder Musical Box Design and Repair" HAV Bulleid ISBN 0-930256-16-6 (pp 2-3,119,135 and 138-141)

2 "Restoring Musical Boxes & Musical Clocks" Arthur WJG Ord-Hume ISBN 0 9523270 2 3 (pp 49-51)

Daily Express Piano Playing Contest 1928

By David Evans

In 1928 the British Pianoforte Publicity Committee ran a national piano competition in association with the Daily Express. One of the adjudicators was **Frederick Haggis**, the founder conductor of the Goldsmiths Choral Union, who claimed to have taught about 2000 of the 20,000 entrants. In 1919, following the end of World War I, Frederick Haggis had founded the Streatham School of Music and remained its director for ten years. During this time, he conducted the Streatham Philharmonic Choir and Orchestra, and with this Society produced and conducted the first performances of Rutland Boughton's Nativity play *Bethlehem* in London in 1924.

Duo-Art roll no. 0337

Some of the test pieces were:

Grade A – "Reverie" by Bowen, "Primrose Mount" by George Dyson and Rondo from "Sonatina for Piano" by John Ireland. All three pieces were released on an Aeolian piano roll.
"Primrose Mount" by George Dyson was also issued as a gramophone record, played by William Murdoch, on Columbia 4945 2.

Grade B – "*Serenata*", by Felix *Swinstead*

Grade C – "*Legend*" by E Markham Lee

Grade D – "*Miniature Scherzo*" by Adam Carse & "*Sun & Shade*" by Walthew.

The Grade D pieces appear on Duo-Art roll number 0337, played by William Murdoch.

One of the contestants was Stanley Richard Bate, then 17, and later known as the forgotten International composer. This was recalled by fellow competitor, Lilian Russell Martin, a piano teacher living at Yelverton, Devon. Bate was a good organist and pianist but did not do as well as Miss Martin and so lost the opportunity of gaining the regional prize of a Broadwood piano. This went instead to Eileen Tombe, former leader of the Plymouth Symphony Orchestra. Miss Martin recalls Bate's consideration in telling her "You could have won on the way you played in the morning." The adjudicator was John Ireland.

Another contestant destined to become famous was Kathleen Ferrier, (1912 – 53), the singer, perhaps the best-loved British singer of the first half of the twentieth century. She was the daughter of a schoolmaster. As a schoolgirl she learned the piano, passing examinations and winning Festival prizes, but in the school choir she was told to sing softly. In 1928 she entered the Daily Express National Piano Competition. She won the prize in her local section

Continued on Page 78...

The label on the box roll no. 0337

News from Other Societies

compiled by Alison Biden and Nicholas Simons

Mechanical Music, Vol No 57, No 2, March/April, 2011
(See also www.mbsi.org)

The first article, translated by Tom Meijer from his own originally published in *Het Pierement*, is a portrait of Eugène Peersman, Belgian musical arranger and book marker for dance organs. Peersman worked sometimes for Mortier, where he produced what is now considered his best work, in around 1947. Adapting to changing musical tastes through the '50's and '60's, he then worked for himself. When organs went out of fashion in Belgium, he found a new market producing concert music for owners in Britain, including Charles Hart at the St Albans Museum. His music was always recognised by its characteristic idiosyncrasies, and eventually his British customers looked to other markers. In his declining years he suffered from bad health and on his death alone at home, few people attended the funeral of this once well-known man.

Another translated article is Vincent Thebault's on Charles Marenghi of Paris, also published in *Vox Humana*, reviewed below.

In contrast, Frank Metzger writes a fourth in a series of articles about the rare Courvoisier bird cage automata, of which he currently estimates at least six were made. The remainder of the article describes the restoration of one of them.

In an on-going project on cylinder box tune sheets, ten more examples are illustrated and discussed by Tim Reed.

Larry Karp devotes three pages to describing the ingenious recycling by Dan Brown of various second-hand items into original and unique musical gifts. Highly recommended to any creative reader with fairly basic DIY skills.

An update on the Chaillet and Brachhausen family tree is followed by accounts of recent chapter meetings.

Knowles Little neatly captures the essence of Coulson Conn in his obituary of this past President of MBSI, and late Vice President of our own MBSGB. The issue closes, appropriately, with an item by Coulson's son, Kevin, entitled 'Music Box Memories – Growing up with a Collection' which is as much an introduction to mechanical music as it is a memoir.

The Key Frame (Issue KF4-10)
(See also www.fops.org)

The majority of this issue is filled with the very detailed article by Fred Dahlinger describing the life and work of Luigi Bacigalupo, who emigrated from Germany to the USA in 1907. There, he became a major player in the importation of European organs and a restorer and builder in his own right. Later, he was to become an arranger and producer of music rolls for a wide range of organs and orchestrions.

Andy Hines provides more brief histories of the people behind well known tunes, this time Felix Bernard who wrote Dardanella and Winter Wonderland, and Thomas Bidgood who wrote many good marches including Sons of the Brave and Vimy Ridge.

David Smith continues reporting his recent American holiday with a well illustrated article on a large collection of European organs, and elsewhere there is a report on the recent forest fire in Israel which devastated the collection of Nisan Cohen. I am pleased to report that Nisan has already reopened his museum with the help of friends and donated instruments.

The Key Frame (Issue KF1-11)
(See also www.fops.org)

Hot on the heels of Issue 4-10 comes issue 1-11 bringing the issue dates back into line. Jonathan Holmes, who recently wrote about the history of the Wilhelm Bruder Starkton organs now gives us a detailed report of his restoration of his own organ of this type. This is profusely illustrated with the inner workings of the organ and much detailed advice is given.

Andy Hines this time gives us brief histories of Ron Goodwin and Edwin Bagley. The former is well known for having written Those Magnificent Men In Their Flying Machines and Aces High amongst many other film tunes. Bagley, like many others, is remembered for one tune, National Emblem March and this possibly because he borrowed part of The Star Spangled Banner.

The third Octoberfest in Woking is reported. This autumn event promotes mainly German organs and this year was host to an 83 key Wellershaus which had come over from Germany especially. This is clearly an event that will attract enthusiasts of the German sound, and each year it is planned to host a different visiting organ.

Vox Humana
(See also www.moos.org.uk)

Due to the infrequent publishing of this journal and the transition of MBSGB archivist, by the time you

read this some of the news will be almost two years old! The editor of Vox Humana refers to this issue as 'The Mammoth Marenghi Edition,' containing as it does the first publication in English of Vincent Thébault's fascinating research on Charles Marenghi, as well as other items on various Marenghi – built organs. In his address the editor encouragingly observes that he noticed an increased interest from younger members of the public at a number of events. The journal also contains a report on the MOOS' 2010 AGM; amongst the business items discussed were the position regarding MOT exempt vehicles and proposed changes to the Performing Rights fees – of interest to anyone who regularly transports their organs and plays them publicly. There is an eight-page detailed report on the 2010 MOOS trip to Belgium and the Netherlands, including several photographs of participants being entertained as well as of some of the instruments they heard, and a shorter report of the Veurne (Belgium) Organ Festival of June 2010, in which three MOOS members participated. In complete contrast is an article about the Holguin (Cuba) *Fabrica de Organos* (organ factory) – which nicely complements our own Roy Evett's article on Cuban organs (*The Music Box*, Vol 23 No. 8) An illustrated article on the only known surviving large Marenghi dance hall organ, now in the Cushing collection at Thursford, and an item about the Paris Flood of 1910 round out the 'news.'

In a separate MOOS newsletter of Autumn/Winter 2010 there is an account of a number of steam/organ events attended in the latter part of 2010, as well as our own MBSGB visit to East Kirkby Aviation centre, and an exhortation for any users of large diesel fuelled lorries or vans to check proposed new Low Emission Zones and regulations at www.lowemissionszones.eu.

Reed Organ Society Quarterly, Vol XXVIV, No.4, 2010
(See also www.reedsoc.org)

It seems some things are universal: in his address the Editor laments botched repairs, urging people to do nothing if they don't know what they're doing. Starting on the same theme, Gerald Dumount, now a Roman Catholic priest in New York, recounts the quaint, fairy-tale-like story of a Debain harmonium from his childhood church in Haiti, its subsequent replacement by a Mustel Art harmonium, and his ensuing life-long dream to own one of the latter – a dream which is unexpectedly fulfilled in Wales. This is followed by another instalment in the history of the Clough & Warren Organ Company, and possibly the last on the history of the Story & Clark Organ Company, by Charlie Robison, an addendum to a previously published history by David Knowles. There is a report on society member Keith Heiss being honoured by the Lee Conklin Reed Organ Museum in Michigan for his contributions to ROS and the Museum. Other articles concern the restoration of a Chaplain's organ for the Military Aviation Preservation Society Museum, and a preview of the October 2011 ROS Conference in Moline, Illinois. Finally, 84 footnotes relating to primary and secondary sources testify to the scholastic approach of Janusz Musialik's account of Polish Reed Organ Building, amounting to a detailed chronology.

Player Piano Group – Bulletin No 197, December 2010
(See also www.PlayerPianoGroup.org.uk)

Frank Holland was one of the biggest names in Mechanical Music, having founded the Musical Museum in Brentford. The centenary of his birth was recently celebrated with the restoration of the museum's Grotrian Steinweg Ampico Grand and a special concert to showcase this restoration and remember Frank. The piano will remain on the main stage

and it is hoped that it will soon be joined by a similarly restored Duo-Art.

Elsewhere, an amusing article describes a mystery find by the Antarctic Heritage Project in the preserved 1910 Cape Evans base of Captain Scott. Most player piano enthusiasts know that Captain Scott took a player piano to the South Pole but the researchers were mystified by the discovery of a few spare unit valves for an early Broadwood player.

A major article discusses the use of 'modern' materials in restoration. Whilst it is wrong to use original materials solely for the sake of originality, if better materials are now available, it is also wrong to use modern materials if they make future restorations impossible. The article makes a thoughtful read, but possibly there is too much emphasis on using modern silicones in certain applications, and confusion about attributing a well performing restoration to modern materials alone.

DasMechanischeMusikinstrument (Gesellschaft fur Selbstspielende Musikinstrumente), no 109 December 2010
(See also www.musica-mechanica.de)

This would appear to contain, amongst others, articles on the phonographic recording of piano interpretations; the Paul Erlich mechanical instrument known as the Daimonion, the organ-builder Johann Baptist Kaut, reports on several gatherings and events, including the exhibition at the Utrecht 'Speelklok' Museum of treasures from the Forbidden City in Beijing, news from other societies and some technical articles relating to restoration.

Newsletter from Schweizerischer Verein der Freunde SFMM 109, December 2010
(See also www.sfmm.ch)

Subjects covered in this issue include the 55th Anniversary of Musee Baud, 50th Anniversary of the organ builder Raffin, the Zurzach organ grind, Fredy Kunzle's museum in Toggenburg, an exhibition of musical boxes and curiosities held last year in Waldkirch, and highlights from various organ collections.

Daily Express Piano Contest

Concluded from Page 75.

but was not among the six winners, who included Phyllis Sellick and Alec Templeton as well as Cyril Smith .

The winner of the Welsh regional final was Harold Julius Reuben, aged 9, son of Mr & Mrs Eli Reuben of 9 Glosdale Terrace, Cardiff. The competition took place on July 16th 1928 at YMCA Cardiff, at which young Harold won a Rogers piano.

The overall winner was 19-year-old Cyril Smith, then a student at the Royal College of Music.

The test pieces appear to have been available on Duo-Art rolls and standard Aeolian piano rolls as well as on gramophone records, presumably to demonstrate to potential entrants the techniques professional pianists used when playing the items.

The pencil inscription on the roll illustrated reads: "26/11/1928 from Mr & Mrs Eli Reuben, 9 Glosdale Terrace, Cardiff. A memento of their son's (Harold Julius Reuben age 9- July 16th 1928) success in having won a Piano under the London Daily Express in Cardiff at YMCA Cardiff on Nov 22nd 1928. Rogers Pianos."

Cyril Smith (1909 – 1974), concert pianist, Professor of Pianoforte at the Royal College of Music 1934 – 1974. A stroke during a Russian tour in 1956 paralysed his left hand, but he made a notable recovery, continuing his playing career with his wife, Phyllis Sellick, in duets for three hands.

Frank Pratt

28 Feb 1921 - 21 Feb 2011

Frank Pratt, a member for almost thirty year's died recently just one week prior to celebrating his ninetieth birthday. Frank joined the society in 1982 and, with his wife Phyllis and young son Keith, was a regular attendee at meetings. At that time, Keith was the youngest person to attend meetings regularly. Frank spent his life working in the motor industry and enjoyed travelling, walking and, of course, music. Frank had become rather frail in recent years and found attending society meetings difficult, but remained a member. We send our condolences to Phyllis and Keith.

Letters to the Editor

From: Gorden Bartlet

Dear Editors,

How nice to read technical articles in The Music Box, aimed at those of us who can't resist having a go and pointing us in the right direction.

Two particular articles in the current vol. 25 no. 1 remind me of a couple of instances that have come my way. My comments are not original, but worth repeating.

Don Busby describes how he adds leads to his comb teeth. I used similar techniques when replacing leads on a 13 5/8" table model Symphonion some years ago. For some reason four leads on the bass end of one comb were badly corroded. The end lead actually had a hole right through the middle, and the dreaded white sulphate attack was in evidence on three others. Beyond this the leads were OK and the teeth were in tune. I replaced the leads on six teeth to be on the safe side. I was not too fussy about my source of lead (no, not from the church roof!) and all went well until around six months later the box started to make dull thumping noises. My new leads had already started to corrode and the corrosion products were creating interference between the teeth! Luckily this had not progressed too far and it was possible to scrape it away. The tuning remained OK. The reason, I believe, was acid attack from the oak case which, I guess, had been varnished originally, but the varnish was no longer providing an effective barrier. I re-varnished (actually with Danish Oil, including the leads themselves). This was some years ago, and so far all remains well (fingers crossed).

The second instance relates to the splendid Restoration Matters series. Stripped screw holes in wooden cases are bad news. Worse still when a broken-off piece of screw remains in the bottom of the hole. How to drill for the dowel without the drill going off course on hitting the offending piece of metal? The answer is given in Arthur Ord-Hume's Restoration book, certainly in the 2005 reprint (pps. 285/6) and probably in earlier versions. It relies on a clamped-on drill guide and Arthur Ord-Hume's book provides a very clear illustration. I have used this technique a number of times to get out of awkward situations.

Good luck to all those willing to have a go, so long as we are aware of our limitations. It's good to learn from experience. Better still if it is someone else's!

From Bill Cooper

Dear Sir,

Recently I bought three so-called snuff boxes at local auctions. I would be pleased to know how the teeth on these small boxes were cut. Were they cut with a slitting saw or a fine saw? I have often used a jewellery saw, mostly on brass. I know the teeth were cut before being hardened. On counting the teeth they are mostly about 62. No modern saw blade today would be able to cut these. One must think there was not anything electric in 1840 times! Then again, the pins on the cylinder are so fine. What a beautiful job was done in that period. One rarely finds teeth missing so the workmanship was first class.

Proposal to Amend the Constitution

The Committee have proposed that the Constitution be amended to take account of the Register and the post of Registrar. Over 30 members have added their support for this move. The proposal as outlined in the Agenda for the 2011 AGM will be put to members at that meeting for their consideration and approval.

If the post of Registrar is established and the Register formally recognised, both will become officially part of the Society. In the future the Society will be able to decide how to maintain and run the Register for the benefit of all whilst keeping overall control within the Committee.

Arthur Cunliffe. (President.)

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@hotmail.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.

3099 Philip Brown, Berkshire
3100 David Henthorn, Shropshire
3101 Eric Rowlands, Somerset
3102 Mr. & Mrs. C.Fynes, Sussex
3103 Rob Barker, Lincs
3104 Denis Walker, W.Midlands

CLASSIFIED **SALES**

New stock of binders: pack of 2 for £12 + £2.50 P&P GB. Postage to Europe £3.20. Airmail postage to elsewhere £7.95. Single binder £6 plus same postage.

Society Badges: only a few left. £1.30 + 50p P&P. US $3 including P&P. Contact Ted Brown on 01403 823533.

Musical Box Restoration

Lifelong craftsman restores musical boxes and mechanical antiques. Re-pinning, comb repairs, full restorations.

Max Plummer

Tel: (Bristol) 01179 701631

Restoration Supplies. EVAPO-RUST non-acidic, non-toxic rust remover now available in UK (as featured in Mechanical Music). Also, 4 grades of rubber cloth (pianolas, organettes etc), 14 sizes of silicone tube (pianolas, organs, orchestrions), leather and other items. John Farmer, 01562 741108, e-mail info@musicanic.com. Web: www.musicanic.com

Musical Box Repairs Gears, comb work etc. Small repairs to full restoration. Arno van der Heijden, De Ruijterstraat 10, 2161 TB, Lisse, the Netherlands. Holland Web: www.arnovanderheijden.nl

Discs: 40 x 17 1/4" discs for Stella, 23 x 12 1/8" discs for Regina, 10 x 13 5/8" discs for Symphonion, Phone Roger Brooks, 0141 881 0303 for condition & price.

CLASSIFIED **WANTS**

Wanted: Miniature British barrel organs, serinettes and chamber barrel organs. Any condition considered.

Michael Macdonald, Tel: 0141 637 1014

The Mark Singleton Collection:

I am currently looking to purchase high quality items of mechanical music and Black Forest clocks from single pieces to whole collections. Top prices offered for top pieces. Please call Mark for a chat. 07905 554830 or 01253 813128 or email fantissimoto@aol.com.

Ariosa organette twin reed, model 3, tuned 'celeste' would be my first choice. Arthur Cunliffe email: adcunliffe@btinternet.com

Montel Orchestrone rolls, originals or re-cuts.01403 823533

To purchase: 58-note Orchestrelle rolls, especially classical. Not cut down or new copies. Also 31-note Maxfield rolls or strips, which look like Celestina music but with round holes. Bruce Allen. Tel: 01702 232040.

RATES FOR DISPLAY ADVERTS

SPECIAL POSITIONS (offered as available)

Outside back cover (tone or two colours) Full page only £249

(full colour, one photograph to maximum size of 8" x 6") Full page only £560

Inside covers Full page £218

POSITIONS INSIDE JOURNAL (as available)

Full page £150. Half Page £86. Quarter Page £54. Eighth Page £36.

5cm box in classified area £32, 3cm box in classified area £22

These charges include typesetting, but are exclusive of any artwork which may be required. Half tone, artwork and design can be provided at additional cost. Black and white half tones £15 each. Design and artwork quotes on request.

DISCOUNTS (applicable only on accounts settled within 30 days, otherwise strictly nett). Four or more consecutive insertions: Area rate less 20%.

A further 5% discount is given if payment is in advance.

MECHANICAL DATA TYPE AREA

Full page 10 5/8" x 7 1/8" (270mm x 180mm), Half page 10 5/8" x 3 1/2" (270mm x 88mm) or 7 1/8" x 5 1/16" (180mm x 135mm), Quarter page 5 5/16" x 3 1/2" (135mm x 88mm).

Looking for something special - or have some items for sale? Remember, Music Box goes to over 600 enthusiasts worldwide.

At present you can advertise FREE to these people! Contact Ted Brown for details.

Closing date for the next issue is

1st July 2011

Deadline dates for Display Advertising Copy

1st April; 1st July;
1st October; 1st February

Editorial copy **must** be submitted at least 8 days prior to above dates

Posting of magazine:

27th February; 27th April;
7th August; 7th November

CLASSIFIED ADVERTISEMENTS

LAST DATE FOR RECEIPT OF ADVERTISEMENTS FOR INCLUSION IN NEXT ISSUE:

1st July 2011

Minimum cost each advertisement £5.00.

Members: 16p per word
(bold type 8p per word extra)

Minimum cost each advertisement £9.50

Non-members 32p per word
(**bold type** 16p per word extra)

CASH WITH ORDER PLEASE TO:

Advertising Secretary Ted Brown,
The Old School, Guildford Road,
Bucks Green, Horsham,
West Sussex RH123JP
Tel: 01403 823533

NOTICE

The attention of members is drawn to the fact that the appearance in The Music Box of an advertiser's announcement does not in any way imply endorsement, approval or recommendation of that advertiser and his services by the editors of the journal or by the Musical Box Society of Great Britain. Members are reminded that they must satisfy themselves as to the ability of the advertiser to serve or supply them.

Printed by Flo-Print Colour Ltd
www.floprint.co.uk

Fine Early Miniature Musical Gold Snuff Box, c. 1810
With very early musical movement.
Estimate: € 9.000 – 12.000 / US$ 12,000 – 16,000

'Crying Girl with Polichinelle' by Leopold Lambert, 1895
With Jumeau character head.
Estimate: € 4.000 – 6.000 / US$ 5,000 – 8,000

Gold Repeating Pocket Chronometer with Musical Movement, c. 1820
Estimate: € 5.000 – 7.000 / US$ 7,000 – 10,000

Gent's Verge Pocket Watch with Automaton, c. 1810
Probably from Geneva, Switzerland
Estimate: € 3.000 – 5.000 / US$ 4,000 – 7,000

Rare Musical Automaton »Lady with Parasol«, c. 1890
By Louis Renou, Paris, 49 cm (19 in.) high.
Estimate: € 6.000 – 8.000 / US$ 8,000 – 10,000

Musical Automaton »Smoking Marquis«, c. 1895
By Roullet & Decamps, Paris. With Jumeau bisque head. 55 cm (21 in.) high.
Estimate: € 6.500 – 9.000 / US$ 8.500 – 10.000

Extremely Rare Mandoline Musical Box, c. 1895
Estimate: € 5.000 – 8.000 / US$ 7,000 – 10,000

French Automaton »Surprise Flower Seller«, by L. Lambert, c. 1890
Estimate: € 5.000 – 8.000 / US$ 7,000 – 10,000

German Advertising Automaton »Cycling Santa Claus«, c. 1925
Estimate: € 7.000 – 9.000 / US$ 9,000 – 11,000

'Lady Drummer' by Roullet et Decamps, c. 1895
With Jumeau head.
Estimate: € 4.000 – 6.000 / US$ 5,000 – 8,000

»Nickelodeon Pianola-Orchestrion«, c. 1920
Coin-operated automatic musical instrument in a class of its own!
Estimate: € 7.000 – 10.000 / US$ 9,000 – 13,000

»Regina Style 9 Disc Musical Box«, c. 1900
Estimate: € 6.000 – 8.000 / US$ 8,000 – 11.000

Large Interchangeable Musical Box by Bremond, c. 1875
Estimate: € 8.000 – 12.000 / US$ 10,000 – 16,000

»Mechanical Music Instruments & Automata«

May 28, 2011

Large Swiss Railway Station Automaton
With superb merry-go-round and 5 dancing dolls. Based on the system August Lasseur.
Estimate: € 10.000 – 15.000 / US$ 15.000 – 20.000

Trumpet-Barrel Organ by »Adolf Holl, Berlin«, c. 1910
With 2 additional barrels! Plays fantastically!
Estimate: € 15.000 – 25.000 / US$ 20,000 – 30,000

Swiss Musical Box by »Jean Billon Haller, Geneva«, c. 1885
With 18 (!!!) interchangeable brass cylinders. – **Plays absolutely perfect!**
Estimate: € 10.000 – 15.000 / US$ 15.000 – 20,000

Swiss Cylinder Musical Box by »Paillard«, c. 1885
In unusually attractive case!

Large Singing Bird Automaton probably by Phalibois, Paris, c. 1880
Estimate: € 3.000 – 5.000 / US$ 4,000 – 6,500

Barrel Organ »Cocchi-Bacigalupo & Grafigna, Berlin«
Excellent sound!
Estimate: € 4.000 – 7.000 / US$ 5,000 – 9,000

»Regina Style 35 Automatic Disc Changer«, c. 1899
For 12 Discs (15 2/5 in.). Excellent condition!
Estimate: € 9.000 – 15.000 / US$ 12,000 – 20,000

Rare Coin-operated Hall Clock by »Wurlitzer«, c. 1900
Estimate: € 8.000 – 12.000 / US$ 10,000 – 15,000

All items illustrated are part of our May 28, 2011 sale!

☛ Consignments are welcome at any time ☚

– Next closing date: Sept. 1, 2011 for the Nov. 19, 2011 sale –

For confidential consignment inquiries, please feel free to contact us directly in Germany or via one of our international representatives (pls. see below)!

If you live in the U.S. or in Canada, please make use of our own convenient container shipments **free of charge** from our Long Island (N.Y.) location direct to Germany.

Free shipping for any major consignment from the U.K.! ***You just pack – we do the rest!***

Orchestrion »Lochmann Mod. 450«, c. 1900
Coin-op machine for 25 ½ in. discs. Plays excellently! – Very rare.
Estimate: € 10.000 – 15.000 / US$ 13,500 – 20,000

AUCTION TEAM BREKER

– The No. 1 in »Technical Antiques« worldwide–

P. O. Box 50 11 19, 50971 Koeln/Germany · Tel.: +49 / 2236 / 38 43 40 · Fax: +49 / 2236 / 38 43 430
Otto-Hahn-Str. 10, 50997 Koeln (Godorf)/Germany · e-mail: Auction@Breker.com · www.breker.com
Business Hours: Tue – Fri 9 am – 5 pm

PLEASE FEEL FREE TO CONTACT OUR INTERNATIONAL REPRESENTATIVES:

England: Tel: (07779) 637317 * *Brian Chesters*, Tel. 07970-004774 or: 01253-734622 * g4nxw@hotmail.co.uk
France: *Pierre J. Bickart*, Tel. (01) 43 33 86 71 * AuctionTeamKoln@aol.com
U.S.A.: *Lee Richmond*, Tel. (703) 796-5544 * Fax (703) 766-0966 * BREKER@TheBestThings.com · **Japan:** *Murakami Taizo*, Tel./Fax (06) 6845-8628 * murakami@ops.dti.ne.jp
Australia & New Zealand: *Dieter Bardenheier*, Tel./Fax -/64/(09) 817-7268 * dbarden@orcon.net.nz · **China:** *Jiang Feng*, Tel. (0086) 13862062075 * jiangfengde@gmail.com
Russia: *Polyguide Ltd. Moscow*, Tel. (925) 740-66-03, Tel/Fax (985) 999-93-55, ml.mediaservice@gmail.com

Bonhams
Knightsbridge

Mechanical Music Sales at Bonhams

The Leading Mechanical Music Auctioneers in the UK

Entries now being consigned for our remaining 2011 sales

2011 sales calendar

Knowle	17 May
	29 December
Knightsbridge	19 April
	9 November
New York	6 December

Single-owner sale likely in October.

Bonhams provides a special seller's commission discount for MBSI, MBSGB and BVWS members - total discretion assured.

Illustrated
A rare Autophone automatic phonograph console, by The American Phonograph Co., Circa 1910, with a good selection of 4-minute Amberols.
Estimate: £12,000 - 18,000

Offered in the 19 April sale of Fine Mechanical Music in London.

Enquiries
Laurence Fisher
+44 (0) 20 7393 3984
laurence.fisher@bonhams.com

Catalogue
+44 (0) 1666 502 200
subscriptions@bonhams.com

Bonhams
Montpelier Street
London SW7 1HH

Bonhams
The Old House
Station Road
Knowle