

Issue 37, Autumn 2024

MECHANICAL MUSIC WORLD



HMV's Biggest Ever Radiogram
- See article on Page 7

An Association of Musical Box Collectors Publication



A Modern Musical Pocket Watch

See the item on page 22

From the Editors' Desk

Well, it is called Mechanical Music World and, living up to its name, it does try to cover the range of boxes, instruments, pictures, recorded music and all the peripherals which comprise our wide ranging interests under its umbrella. The variety of topics reflect the diversity and interests of our members. From the innovative watch and clockmakers the musical box evolved. They were often very imaginative and creative, not only making time keepers but musical time pieces and time pieces with movement - automata. At one end of the scale were the grand automaton pictures with their moving water, waterwheels, trains, hot air balloons and anything else they could incorporate together with the musical box mechanism. At the other end they were making musical watches, and some of these had moving figures such as Jacquemarts apparently striking bells, water wheels etc and then there were the 'bedroom scenes' which we won't go into here! See page 22 for a modern version.

In this issue Juliet Fynes has continued to share her thoughts and research work on 'snuff boxes' - i.e. small musical boxes. Considering the numbers of these boxes in captivity there is surprisingly little in the archives about them, so this is a very welcome addition.

Paul Bellamy has written a very practical piece about his restoration of an automaton picture - lots of useful tips and avenues of thought here for the aspiring (and perspiring!) restorer. He also has illustrated and described a musical box in his collection and shed light on its rather uncommon programme

of opera music.

David Soulsby has contributed a most thought provoking article on what constitutes an automaton, or indeed automata. (With or without music, these are always interesting - Ed).

We are also covering the further development of HMV record players up to 1950, particularly concentrating on radiograms as well as other electrical and acoustic record players. This issue also includes some history regarding the foundation of the British Broadcasting Company, which affected the price of any electrical player that included radio.

We are delighted that as more and diverse meetings of the Association are planned in the wake of Covid that these will continue as 'Chanctonbury Ring' meetings. It would be sad to lose this connection with the past. What's in a name? Well, in this case for many of us a lot of memories and connections in past times with fellow collectors and their collections.

As the Chairman remarked recently, we can always do with fresh articles. If you are not keen on writing an article yourself, just send photos and text and we will do it for you. Nothing is published without your consent and it can be done anonymously if so wished.

Let us know your particular interest, via Letters to the Editors, email or whatever works best for you.

Once again we thank all our contributors, Paul Bellamy, David Evans, Juliet Fynes and David Soulsby on this occasion.

CONTENTS

Chairman's Report, Officers of AMBC, AMBC Meeting Dates	2
Meeting to be held at Coultershaw , near Petworth, Sussex.....	3
La Cracovienne - Paul Bellamy examines a musical box with an uncommon programme	4
Development of HMV record players, 1930 - 1950	7
Automata or not? - David Soulsby addresses what are and what are not	17
Composition Snuff boxes - Juliet Fynes continues her research.....	23
A Toy Automaton Picture - Paul Bellamy repairs a rare survival	26
Classified Advertisements	Inside back cover

Chairman's Report

I have not been able to hold many meetings recently due to some medical Issues. However, I was able to hold a committee meeting at The Old School on 30th July. Hopefully these issues are coming to an end and we can return to holding more regular Chanctonbury Ring meetings at The Old School. Also, more meetings are being planned elsewhere so that we can meet more often.

On Saturday 5th October I have arranged a meeting in conjunction with the British Horological Institute in Caterham. Why not come along and bring family and friends? There is no entry charge. We will display a variety of musical boxes, automata and other self-playing instruments.

The cost of running the Association has increased due to the cost of postage. My committee will have to increase subscriptions for the year beginning March 2025 to end of February 2026. We will keep the increase to a minimum and publish details in later Issues of this magazine and on the website.

Finally, please do go regularly to our website, which is constantly being updated with fresh news and information.

Ted Brown

Chanctonbury Ring – 17th August 2024

There will be a Show & Tell meeting of the AMBC Chanctonbury Ring on Saturday 17th August.

The venue will be *The Warehouse* at [Coultershaw Heritage Site](#) a mile south of Petworth on the A285.

There is ample parking and level access.

Drive right to the end of the track as the room is out of sight of the other buildings.

Postcode for SatNav is GU28 0JE.

Members, friends and guests are welcome. £5 per person.

Agenda

10.30 for 11 a.m. - drink and biscuits on arrival
11 a.m. Morning programme - details will be posted on the website
1 p.m. lunch- **bring your own lunch**. Tea/coffee and cake provided
2 p.m. Afternoon programme - details will be posted on the website
3.30 p.m. drink and biscuits
4 p.m. Carriages

Please call or text 07879 472353 or email Bernard Novell secretary.abmc@gmail.com if you wish to attend so that we know how many to cater for.

Ted Brown & The Committee

Officers of the AMBC

Chairman Ted Brown, 01403 823533

Deputy Chairman & Treasurer: Paul Bellamy
01634 252079

Email: bellamypaul@btinternet.com

Membership Secretary:

Kay Brown 01403 823533

Webmaster, Systems manager: Bernard Novell
07879 472353

Committee:

Paul Baker

Juliet Fynes

Ingvar Svenson

Research & Publications Advisor:

David Soulsby

dave-soulsby@sky.com

Editors:

David & Lesley Evans

001 250 746 5652

mechmusicmuseum@aol.com

4920 Bench Road,

Cowichan Bay BC,

V0R 1N1 Canada

AMBC website: www.ambc.org.uk

AMBC Email: secretary.ambc@gmail.com

Publication Dates for "Mechanical Music World"

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

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

AMBC MEETINGS

Chanctonbury Ring

There will be a meeting on 17th August 2024 - see page 3.

The committee is planning to hold two meetings in 2025.

Details will appear here as soon as they are agreed.

If you have a new purchase or have a mechanical musical item or automaton that you would like to bring along to show please let Bernard know so we can add it to the programme.

We do hope that you will come and join us.

MEETING AT COULTERSHAW HERITAGE SITE

11a.m. SATURDAY 17th AUGUST

The Coultershaw Heritage Site is a visitor attraction on the A285 one mile south of Petworth. GU28 0JE

It is open to the public on Sundays during the season and is well worth a visit. There was a corn mill on the site for centuries. The last one, an unattractive concrete structure built in 1923 when the previous mill burnt down, was demolished in 1972 when milling ceased.

The site sits at the confluence of the River Rother and the short-lived Rother Navigation (now derelict), which was superseded as a means of transporting goods by the nearby railway line, itself a victim of the Beeching cuts. The pretty wooden Petworth station building, with a number of restored Pullman carriages, is now a hotel.

The main attraction is an 18th Century beam pump built to pump water from the river up to Petworth. It is now harnessed to a fountain which can be seen in operation on open days. There are several original buildings housing exhibitions on water power, transport, rural crafts, local wild life and Petworth



history.

The meeting will be an informal "Show and Tell" for members to participate.

Doors open 10.30 for coffee/tea/soft drink and biscuits.

Bring your own lunch – coffee/tea/soft drink and cake provided.

Ending 4 p.m.

There is ample parking, just follow the track down to the parking area at the end and you will see the old stable, where the meeting will take place, on the right.

All are welcome. If you can, bring your friends and something from your collection to share.

There will be a charge of **£5 per head** to cover expenses.

If you intend to come it would be helpful if you would let us know – we don't want to run out of cake! Also information about any instrument you are bringing. Please contact Juliet Fynes on 01798 342353.

If you can't be sure until the last minute do please come anyway.



La Cracovienne

Paul Bellamy

The musical programme of a musical box can often be overlooked or misunderstood but sometimes there is a wealth of historical information behind what may appear to be an innocuous piece of music.

I acquired one of my earlier musical boxes for several reasons, one being an unusual tune sheet that had not been recorded by the late HAV Bulleid. The other was because it was by an unknown maker. There were, of course, other reasons such as the good musical arrangements played on a finely cut 114 toothed comb and the fact that it was a key-wind movement and therefore pre-1860, the date after which most movements were ratchet-operated lever-wind movements.



Fig 1: the case

Fig. 1 shows the case in its unrestored condition. Whilst in my possession, it will stay that way because it has honestly earned its slightly stained lid. No doubt a glass of wine stood upon its lid whilst the owner and family listened as it played. The lid's inlay is very simple, in plain white wood displaying leaves and flowers surrounding a horn, trumpet and triangle, a nice subject for a musical box.

Another sign of quality is the triple boxwood stringing to the lid although it surmounted what appeared to be a cheaper decorated case with scumble finish, simulating the mahogany veneer on the lid. That in itself was surprising because Fig. 2 shows the substantial structure of the case which, unlike many made of fruit wood, seemed to be solid mahogany throughout.

The three controls, tune change, start and instant stop, are covered by a fold-down end-flap held closed by a hook and peg, just visible at the left of the fixed inner panel. The movement has no comb markings and the only other marks are the serial



Fig. 2

number, 6829, stamped at the top left side of the smooth brass bedplate and repeated on the tune sheet, Fig. 3.



Fig. 3: The unusual tune sheet

The tune sheet is in almost perfect condition and worthy of close inspection. Its floral border is entwined with numerous images of children apparently at play but closer inspection shows they were industriously at work! The top cartouche has the image of a hammer and compass. On either side are children with measuring instruments. At the bottom left corner are two children forging iron and in the opposite corner two children, surrounded by machinery, looking through a telescope. All quite extraordinary!

The tune sheet is nothing like the patterns found in Geneva but more like the images found on later musical boxes in Saint Croix. Mermod, Cuendet, L'Épée and others used similar images of children at play but usually with musical instruments, not tel-

escapes and hammers; also these were dated in the late 1800s, not pre-1860. This sheet appears in *Tune Sheets, Makers, Agents and Dates* as Fig. 5-5B, where it is suggested that it could be by Ducommun, though the date would seem to be incorrect.

The tune entitled *The Cracovienne* refers to a person performing a popular Polish dance of the era called the *Krakowiat*. It was a popular two-step folk dance that originated in Krakow at the end of the 1700s in the south of Poland. Now a city, it still retains its pretty medieval architecture and was once the former capital of Poland. The dance was performed at a rapid pace consisting of square, diagonal and star-shaped patterns interspersed at the corners and ends with fast circular movements.

A French dancer, Joseph Mazilier (1801-1868) choreographed the dance in 1839 for a Grand Opera called *La Gypsy*, which was composed by N C Bocsha. It premiered in 1839 at the Paris Opera and the dancer was Fanny Elssler (1810-1884). Fig 4 shows Mazilier.



Fig.4: Joseph Mazilier



Fig. 5A: Fanny Elssler

Fig. 5A shows Fanny Elssler (born Franziska Elssler in Vienna) on the cover of sheet music. For some unexplained reason she wore a costume comprising a military jacket for her dance routine. Not always though; Fig. 5B shows her in a more traditional dress dancing the same part. Tune 4 is another tune from the same opera.

Tune 2, *My Beautiful Rhine*, was a popular ballad called *Die Wiener* from a musical operatic drama called *Spirit of the Rhine*, written in 1840 for an opera.

Tune 3 is another romantic ballad, *Meet me by Moonlight*. It was written and composed in 1812 by Joseph Augustine Wade. He was born in Dublin and became a surgeon before moving to London in 1821. For a short time he was a conductor at the King's Theatre. He was also a composer who wrote an oratorio called *The Prophecy* and a comic opera, *The Two Houses of Grenada*. He also wrote popular songs such as *I've Wandered in Dreams* and *A Woodland Life* but his most famous song was *Meet me by Moonlight*.



Fig. 5B: Fanny Elssler in a different costume.

Meet me by moonlight alone
And then, I will tell you a tale
Must be told by the moonlight alone
In the grove at the end of the vale.
You must propose to come for I said
I would shew the night flowers their Queen.
Nay turn not away thy sweet head
'Tis the loveliest ever was seen.
[REFRAIN]
Oh! meet me by moonlight alone,
Meet me by moonlight alone.

Daylight may do for the gay,
The thoughtless, the heartless, the free
But there's something about the moon's sky,
That is sweeter to you and to me,
Oh! remember be sure to be there
For tho' dearly a moonlight I prize
I care not for all in the air
If I want the sweet light of your eyes
[REFRAIN]
So meet me by moonlight alone,
Meet me by moonlight alone.

The owner of my musical box must have been a passionate opera lover in his or her day. To know something about the music that was popular at the time it was made adds to the pleasure of what might otherwise be regarded as quite an ordinary musical box of the period.

The Netherlands Pianola Association (NPV)

unites Pianola and Mechanical music collectors. The Association was founded in 1975. For further information see our website mentioned below.

Hendrik H. Strengers was a well-known collector and a valued author. He published many mechanical music articles in all international Journals. In 1987 he was granted a Q. David Bowers Literary Award and in 1998 honoured with the President's Award of the MBSI. Hendrik passed away in October 2018.

His collection will be auctioned on September 22, 2024 at Auction-house Peerdeman, Utrecht, the Netherlands.

<https://veilinghuispeerdeman.nl>

Calendar :

<https://veilinghuispeerdeman.nl/p/18/veiling-agenda-utrecht>

The items that will be auctioned are : Music boxes, 19th and 20th century, Phonographs, Gramophones, Dictaphones, Wire- and Tape recorders, Radios, TVs, speakers, Walkman's, CD players, a Reed organ (Harmonium) and a Piano Melodico.

Next to that, antique Posters, Music Industry shares/stocks (1907-1931), discs (music box discs as well as 78rpm), sound boxes, books etc.

You could also visit the splendid mechanical music museum in Utrecht whilst you are visiting - Ed.

The Development of HMV's Record Players 1930 to 1950

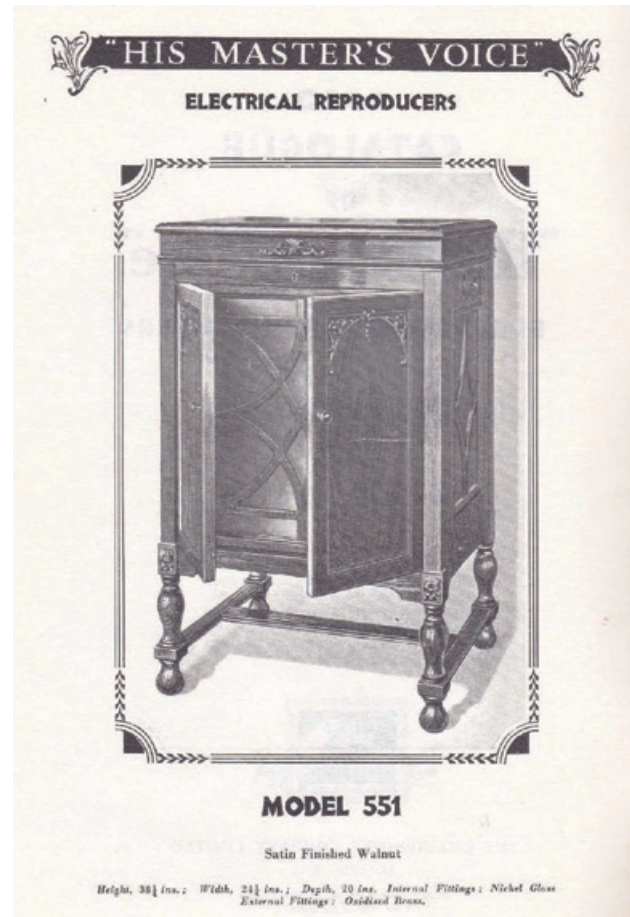
Back in Mechanical Music World Issue 20 for Spring 2020 I included an article about the race to play gramophone records electrically. We also covered HMV's first combined gramophone and radio (Fig 1) in Issue 29.



Fig. 1: HMV's first combined gramophone and radio.

Electrical record players after 1930 did not replace acoustic spring-driven ones immediately, but those did eventually divide themselves into two basic categories – specialist types and portables. HMV issued two catalogues in 1930, the earlier one (January) listed two electrical reproducers - Model 551 for domestic environments (Fig 2a and 2b) and Model 600 “Concert” for hotels, cafés, dance halls etc (Fig 3a and 3b).

Details of the Exponential Re-Entrant tone chamber system followed and the listing included the Automatic Model 1 (Fig 4), 202, 203, 194, 193, 163 that used it, and 157 (saxophone horn), 145 and various table models that didn't. The later version of the catalogue listed four electrical reproducers: 600, Automatic Model 15 (the electrical version of the Automatic No 1, and using the same case and auto-changer, Fig. 5), 551 and the Model 520 radiogram, also for the domestic market. There was also the Moving Coil Loudspeaker No. 4 extension speaker that could be attached to any of the forementioned. There were also nine acoustic machines – models 203, 193, 163, 157, 145, 130, 104 and the portable 101 as well as the last of the horn models, 32. The model 145 was still available in the c. 1934 cata-



Figs. 2a (above) and 2b (next page) - HMV 551

logue and a new Modern Lowboy acoustic gramophone Model 152 was shown in the 1936 catalogue, as well as a variety of table machines, but their popularity was diminishing by this time.

HMV advertised their Models 531 (Fig 6) and 532 radiograms in the 1931/32 machine catalogue. There was a radiogram catalogue from c. 1935-6 that features Models 545, 622 and the enormous multi-valve Models 800 and 801 (Figs 7 – 9).

The Post Office, which in 1922 was the official supplier of licences to operate a radio transmitter, started to receive increasing numbers of applications, some twenty three by May, and was forced to organise broadcasting more efficiently. A small committee was set up do this. Members included the Marconi Company, Metropolitan-Vickers, Western Electric, General Electric Company,

...Continued on Page 11

"HIS MASTER'S VOICE"

ELECTRICAL REPRODUCERS

MODEL 551

The latest development of the Electrical Reproducer, and as far superior to other instruments of its type as the "His Master's Voice" Exponential Gramophone is to the old-fashioned gramophone. The quality of reproduction is perfect and can be controlled from a whisper to full volume, and it reproduces the *full* recorded musical scale.

Used in conjunction with an existing wireless set it gives a new conception of broadcast music.

This Electrical Reproducer is self contained. The Cabinet is in the best satin finished walnut and the design is handsome and unique. It is entirely driven from the mains, no batteries of any sort being required. Adjustments are provided for the motor and amplifier to suit Alternating Current, 200-260 volts and 100-130 volts 40-60 cycles, and the machine can be run from any plug point on these voltages. For direct current supply a separate motor generator is required.

"His Master's Voice" No. 7 (Electric) Sound Box fitted with turnback crook on the arm for convenience in changing needles.

Two-Stage Super Power Amplifier having 3 valves only (including one rectifier). A plug-in Jack for wireless is provided which can be used in conjunction with sets having one stage of low frequency amplification.

Loud Speaker of the moving coil cone type.

"His Master's Voice" electric induction disc Turntable Motor giving perfect speed regulation even on the loudest of records.

External volume control panel with Volume Control and Motor Switch sunk in flush and containing also the Radio Jack.

Fitted with self-setting Automatic main Switch to motor and amplifier actuated by eccentric groove on record, Speed Regulator, Automatic Lid Stay allowing lid to be operated by one hand, clips for "Tungstyle" needles and bowl for used needles. Full instructions are provided with each instrument.

For Alternating Current - Price £105

Where direct current is employed a convertor can be supplied by placing a special order with your dealer.

Price £18 : 10 : 0 extra.



"HIS MASTER'S VOICE"
ELECTRICAL REPRODUCERS



**"CONCERT" MODEL
600**

	Height	Width	Depth
1. Playing Desk	43in.	34in.	23in.
2. Amplifying Unit	44in.	23in.	21in.
3. Loud Speaker	48in.	37in.	22in.

THIS equipment offers to proprietors of Hotels, Cafés, Dance and other Public Halls a wonderful opportunity for providing their patrons with musical entertainment of the most varied type. Where this Electrical Reproducer has been installed, it is definitely established that increased business has resulted from the attraction.

Fig. 3a: HMV Model 600

“HIS MASTER’S VOICE”
ELECTRICAL REPRODUCERS

“CONCERT” MODEL 600

**PERFECT MUSIC FOR HOTELS, CAFES, DANCE
HALLS AND OTHER PUBLIC BUILDINGS**

(This apparatus is not licensed for use in theatres, motion picture theatres or other places where motion pictures are regularly publicly shown, or as a part of a public address system or of a radio receiving system.)

“His Master’s Voice” ELECTRICAL REPRODUCER No. 600 is designed on a system of units which consist of a Playing Desk, an Amplifier and a Loud Speaker. Only the Loud Speaker need be seen by the public. All sense of illusion is destroyed if someone has to change the record in public, however neatly it may be carried out. The Amplifier and the Playing Desk can be

kept in a small room or office adjacent to the main room. There are no batteries, it is entirely mains driven, and the current consumed is very small, in some districts working out to just over 1d. per hour. Any to whom the provision of musical entertainment presents any difficulties will find “His Master’s Voice” Electrical Reproducer worthy of their earnest attention.

This Amplifier is of a powerful type and is capable of supplying two or more “His Master’s Voice” loud speakers.

The Loud Speakers, mounted in handsome cabinets, are also connected by electric cables to the valve amplifier. Wiring between these three units is of a simple, straightforward type, and arrangements can be made for any distance to be covered.

PRICE OF MODEL 600 COMPLETE

For Alternating Current - - - - -	£250 : 0 : 0
For Direct Current (including Motor Generator) - - - - -	£285 : 0 : 0
Additional Loud Speakers (each) - - - - -	£70 : 0 : 0

Full Particulars on Application

The above prices do not include the cost of any labour or material for any additional house wiring which may be necessary to link up the Electrical Reproducer with the purchaser’s electricity supply or for any extra connecting wires between the units of the Electrical Reproducer made necessary by local conditions.



Fig. 3b: HMV Model 600

"HIS MASTER'S VOICE"

EXPONENTIAL GRAMOPHONES



AUTOMATIC MODEL 1

Height, 40½ ins. Width, 43 ins. Depth, 21½ ins.
Distant Control Pedestal supplied with 30 ft. of flex and plug. Height 18½ ins.

Plays 20 records, 10 or 12 inch, in any pre-arranged sequence, and stops itself at the finish.

Two forms of control are provided: (1) Direct control from the instrument itself, (2) "Distant" control by means of the Portable Switch Pedestal forming part of the equipment. This is connected to the instrument by means of a flex and plug, which are also supplied. The mechanism is driven by a universal electric motor, and is fitted with an adjustable resistance, which allows it to operate on voltages ranging from 60 to 250 volts, either direct or alternating current of any frequency up to 100 cycles. It is fitted with a new "His Master's Voice" PATENTED EXPONENTIAL RE-ENTRANT TONE CHAMBER, ball bearing tone arm with No. 5A SOUND BOX, all of which are designed on the scientific principle of MATCHED IMPEDANCE. The Cabinet is in best satin finish with automatic lid stays operated by one hand; lid lock, clips for holding "Tung-style" needle tins, together with bowl for used needles. An electric lamp is fitted to provide direct illumination. The internal and external fittings are finished in Florentine design, bronze colour.

Mahogany £140 : 0 : 0 Walnut £125 : 0 : 0

Panelled doors can be fitted in either Mahogany or Walnut, to Special Order £10 extra.

Fig. 4: The acoustic Automatic No. 1

British Thomson Houston and the Radio Communication Company (a specialist in marine radio), all large electrical manufacturers. A much smaller company, Burndep Limited, was included to represent the interests of small makers.

The committee decided to set up a company to be known as the British Broadcasting Company. It was to build eight transmitting stations, six with Marconi transmitters, located in the main centres of population. Capital would be provided by the 'big six' companies as above, who would also provide further funding as necessary. Any bona fide British manufacturer could join by purchasing one or more £1 shares in the BBC and listeners were required to purchase an annual licence costing ten shillings, which only permitted the use of receivers made by members of the BBC. Such receivers themselves would carry two tariffs at the time of sale – one, based on the receiver's components, would go to the BBC, the other, amounting to twelve shillings and sixpence on each valvholder in the receiver, would be payable to the Marconi Company, which held the

"HIS MASTER'S VOICE"



AUTOMATIC MODEL 15

Height 40½ in. Width 43 in. Depth 21½ in.

This Automatic Electrical Reproducer is self-contained. The Cabinet is in the best Satin-finished Walnut. It is entirely mains driven on voltages from 200-240 volts and 100-120 volts, 40-60 cycles, alternating current. For Direct Current a separate motor generator is required.

The equipment includes: "His Master's Voice" No. 7 (Electric) Soundbox and a 2-Stage Super Power Amplifier having 3 valves only (including one rectifier). A plug-in Jack for Radio is provided.

Loudspeaker of the moving coil cone type with electro magnet. External control panel with Volume Control Button and Change-over Switch. Main Switch sunk in flush and containing also the Radio Jack. The instrument can also be operated from a "distant" control pedestal, which may be placed up to 30 feet from the instrument.

This Model is entirely mains driven. No batteries of any kind are required, and its action is smooth and silent in working.

Fig. 5a: The electrical Automatic No. 15

British patents on all aspects of valve manufacture in the UK. This was agreed upon by 1922, when the first BBC transmitter went on the air. The royalty payments to Marconi had the effect of minimising the number of valves in a receiver to keep the cost down, and British circuit designers became amazingly inventive at producing good results from a minimum of valves, unlike their American counterparts, who had no such restrictions. It should be remembered that in 1922 a railway locomotive driver, for example, earned £3/10/- per week, or about 10/- per day, so the royalty to Marconi was more than a day's pay for a well-paid worker.

This agreement was maintained until 1928, and in 1929 a new agreement was drawn up and the royalty payable to Marconi's was reduced to five shillings per valvholder and it was to run for five years, until 1934, by which time most of the Marconi patents would have expired.

After 1931 a great many makers jumped on the radiogram band wagon, as it were. The larger cabi-

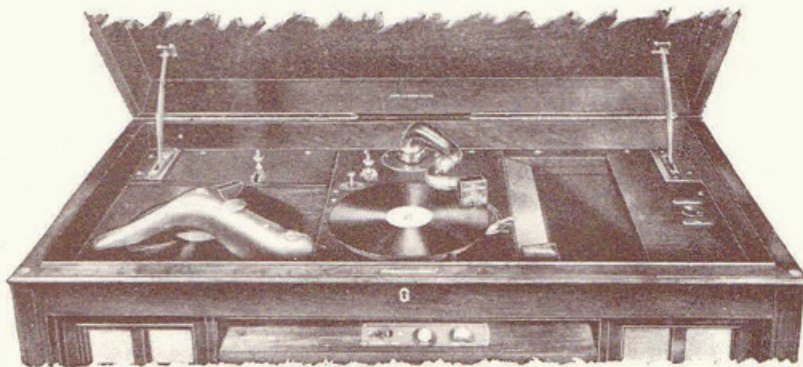
GRAMOPHONES *with* VALVE AMPLIFICATION

YOU have an ideal, doubtless, of what musical reproduction should be. You will find it realised in this wonderful "His Master's Voice" Model 15, in which the perfection of tone and correctness of balance from the low bass notes to high treble give a quality of realism that is amazing.

AUTOMATIC RECORD CHANGING. Apart from its musical qualities, Model 15 is also a marvel of mechanical ingenuity. It changes the records automatically and a complete programme of 20 records, ten or twelve inch, intermixed, can be played in any pre-arranged order without further attention, once the Starting Button has been pressed.

DISTANT CONTROL. Nor need one leave the comfortable armchair, since the instrument can be started or stopped from a "Distant Control" Pedestal that can be operated from any position up to 30ft. away.

AND FOR RADIO. The magnificent quality of the "His Master's Voice" Moving Coil Loud Speaker is also available for wireless, with such results as give one a new conception of radio reception. All that is necessary is to plug in an existing wireless reception unit (having one stage of low frequency amplification) to the Radio Jack which is provided in a sunk panel on one side of the cabinet. An added advantage of this arrangement is that the radio may remain permanently plugged in, the alteration from gramophone to wireless, or *vice versa*, being effected by the use of a change-over switch on the Control Panel.



Open View, showing External Mechanism

PRICES

	FOR ALTERNATING CURRENT			Walnut
With panelled doors and distant control
Without panelled doors
Without panelled doors or distant control

Where Direct Current is employed a convertor is essential and can be supplied by placing a special order with your dealer. (Installation extra)

Fig. 5b: Automatic No. 15 details

nets for these machines generally improved the sound quality compared with table radio/record players, so were quite popular with people interested in good reproduction of their favourite types of music.

HMV produced a wide range of machines as indicated above, but three stand out as top of the range instruments – the Model 800 (Fig. 7), developed in 1935 and first mentioned in HMV literature on March 1st 1935 (this may be the subject of a future article), the 801 (Figs. 8 and 9) and the Model 1612, developed in 1949 for the 1950 season, and specifically for their stand at the Festival of Britain exhibition in 1951. All these machines were enormous in several ways – physical size, number of features, price and number of valves – they both featured fifteen valves, at a time when most radios and radiograms had perhaps five or six. HMV would most probably not have considered such a large machine as the Model 800 if the valveholder royalty ‘tax’ had not been reduced the year before.



Fig. 6: HMV Model 531

**ALL-WAVE “HIGH-FIDELITY”
AUTORADIOGRAM**

PRACTICALLY every known refinement of radio and gramophone research has been incorporated in this 15-valve superhet autoradiogram, thus making it the finest instrument it is possible to buy. Besides catering for transmissions on the medium and long wavebands, this peerless five-waveband instrument receives stations broadcasting on short waves. Special devices are incorporated to ensure best possible reproduction of radio and record programmes.

These include silent neon light tuning, variable selector ensuring the best reproduction compatible with selectivity, contrast control placing pianissimo and fortissimo passages in their true proportions, twin dual-diffusion loudspeakers distributing the sound equally, synchronous electric clock and automatic mechanism which changes eight records. The cabinet is of choice figured walnut with cross-banding and is fitted with casters.

MODEL 800 A.C. 110 GUINEAS
OR BY HIRE PURCHASE

Fig. 7: HMV Model 800 Radiogram

It should be noted that Model 801, in spite of its magnificent cabinet work, was actually less expensive than Model 800. The latter had a very highly developed radio amplifier circuit using 15 valves, whereas the 801 only used 10. In 1949 HMV embarked on the design and development of their only other huge radiogram – the Model 1612. It was to have the best possible performance, even though the setting up instructions still included a long and high aerial wire some 60 to 80 feet long and as high as possible. It had an RF amplifier stage before the frequency changer – for details of the Superhet circuit principle see Mechanical Music World Issue 20 page 13 note 8 – which increased the sensitivity as well as its ability to select a weaker station adjacent to a stronger one, and two IF amplifier stages. It’s audio amplifier utilised six valves, including push-pull (see MMW Issue 20 page 13 note 7) KT66 valves – designed by Marconi-Osram valve company in 1936 and so successful that they were still being used in specialist high fidelity amplifiers until well into the 1950s and in retrospective ones to this day. This gave it the high output power of twenty Watts – which doesn’t appear very much by today’s standards, but bearing in mind back then, the Watts specified were true continuous RMS

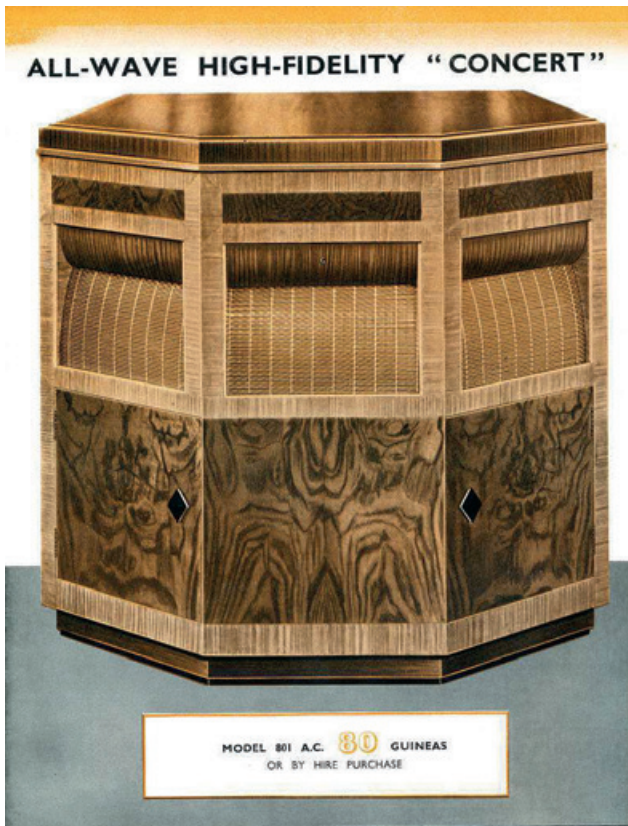


Fig. 8a: HMV Model 801 Radiogram



Fig. 9a: HMV Model 1620 radio section

Watts rather than today's peak power instantaneous figures and twenty watts would easily fill a small public hall!

The radio section had 14 push buttons that could be pre-set to one's favourite stations and a pair of electric motors operated the tuning system to get where it was wanted, together with a manual tuning knob of course. There were five frequency bands – Long Wave, Medium Wave (Broadcast Band for our American readers) and three short wave bands, se-

lected by a switch on the control panel. There was also the option of connecting a free-standing VHF FM tuner via sockets at the back of the machine, even though FM broadcast stations did not appear in UK until 1955. HMV tried to cover all eventualities!

The massive cabinet, measuring four feet wide, two feet deep and three foot nine inches tall and splendidly veneered in matched grain walnut, had two pull-down compartment doors (Figs. 9a, 9c and front cover), the right one pulling the radio forward to its operating position. The left compartment was "flood-lit" and could be set up as a cocktail cabinet or the HMV automatic record changer could be fitted there as required. The flood-lighting did make it easier to see to add the records. There was also a timer clock so that it could be set to turn on the machine ready for your favourite programme, and record storage cupboards.

The cost when new was 328 Guineas, amounting to approximately £13,580-00 in today's money. It is understood that very few of them were sold, which really is hardly surprising!

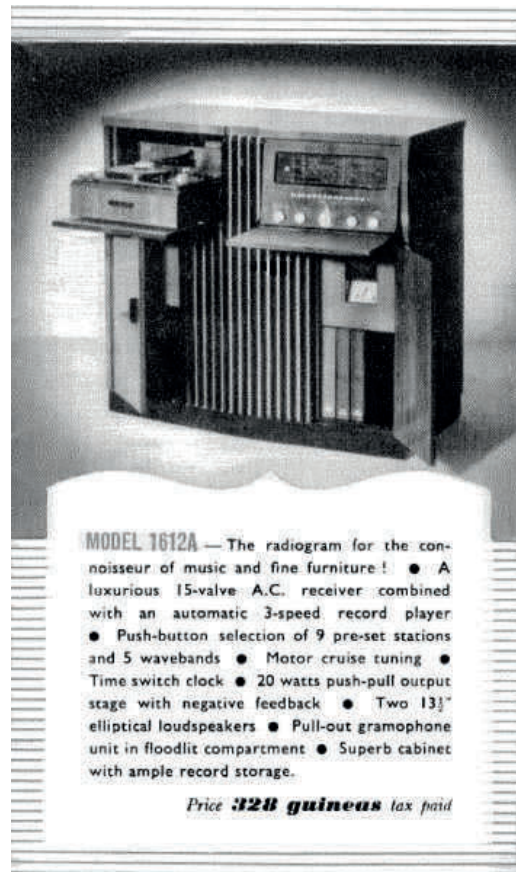


Fig. 9b: HMV Model 1612 catalogue entry

AUTORADIOGRAM

Model 801 A.C.



Fifty records, 10-in. and 12-in., and five 12-in. albums can be accommodated in the cupboards.

A high-fidelity counter-weighted pick-up is fitted. The short-wave chart has spaces for the Vernier readings to be filled in.

THIS superb instrument, fitted with three speakers, provides high-fidelity reproduction of both radio and records, with sufficient volume, if need be, to fill a small hall.

The powerful 10-valve circuit enables short-wave programmes of wavelengths between 7 metres and 140 metres to be received from all parts of the world, besides those of European stations broadcasting on the medium and long wavebands. Coloured indicators show which waveband is in use.

A two-speed tuning knob, large scale marked in wavelengths and bearing the names of many of the stations, separate bass and treble tone controls, and the new type fluid light, which indicates visually when the instrument is tuned to a station, are some of the devices incorporated in this luxurious instrument to ensure ease of operation.

A 24-hour electric clock and short-wave guide mounted on the control board will be found to be of assistance when listening to programmes from distant quarters of the globe.

The gramophone equipment is just as extensive and includes an eight-record automatic changer and high-fidelity counterweighted pick-up. Provision is made in the handsome six-sided figured walnut cabinet for the storage of records. Five luxuriously bound albums are supplied with the instrument.

Fig. 8b: HMV Model 801 details



Fig. 9d: The timer clock, inside the record storage cupboard below the radio pull-down



Fig. 9c: Showing the 'floodlit' record player compartment

MODEL 1250

14 Valve Frequency Modulation Receiver

Designed to provide interference-free high fidelity reception of the B.B.C. experimental F.M. transmissions in the frequency range 87.5-94.5 Mc/s, this receiver incorporates many special circuit features, including automatic frequency correction to eliminate oscillator drift and the provision of separate chassis for R.F. and A.F. units. The audio amplifier embodies a special treble tone filter, and a push-pull output stage delivering 10 watts to a special 13½" elliptical loudspeaker. Operates from A.C. mains supplies.

It's "H.M.V." in every detail

It could be connected to the 1612 Radiogram, though was a fully functional radio in its own right.

The Hallmark of Quality

"HIS MASTER'S VOICE"

MODEL 1612, 14 VALVE DE-LUXE RADIO CONSOLE

NEVER put a vase of flowers on a valued piece of furniture!

Automata or not?

By David Soulsby

What is an automaton? a question often asked, but perhaps more difficult to answer! The dictionary definition certainly does not come close: a *moving mechanical device made in imitation of a human being*. Obviously automata are not limited to depicting humans, there are a number of famous pieces representing birds and animals such as the Bowes' Silver Swan (see MMW Issue 34) and the magnificent mechanical elephant made by Henri Martinet, in residence at Waddesdon Manor (Photo 1).



Photo 1: Mechanical Elephant by Henri Martinet

In the international Automata magazine (Issue 2 - 2019), the Editor considers: "an automaton seems more difficult to define today than ever before. Perhaps it all comes down to personal preference". With that in mind I paid a visit to several *automata* and posed the question – Automata or not?

In the UK apart from street clocks (see MMW 24), there are few automata that are erected outdoors. Weather conditions here are not the most favourable to allow the regular operation of moving parts. However, Falmouth, home of Britain's automata

renaissance in the 1980s boasts three of these at Kimberley Park not far from the town centre. They were created by a trio of local renowned automata makers, Rob Higgs, Paul Spooner and the late (great) Keith Newstead. The designs are a tribute to Falmouth's maritime history of 'Packet Ships' that transported mail worldwide for over 150 years until 1850.



Photo 2: Paul Spooner's Mechanical Goat

Paul Spooner's animated goat (Photo 2) is a tribute to the gallant crew of the packet ship *Antelope*, Keith Newstead's 'Magic Postbox' (Photo 3) contains a secret model clipper and letters from packet ship sailors, written by local school children. Rob Higgs' 'Sunken Submarine' (Photo 4) is constructed from scrap metal and contains a working ship's bell and moving cannon balls. All three were promoted as celebrating the automata heritage of Falmouth. They are indeed engineering masterpieces overcoming the many challenges of moving parts in an outdoor environment, but the submarine in particular is more akin to Kinetic sculpture, some might say?



Photo 3: Keith Newstead's Magic Postbox



Photo 4: Rob Higgs' Sunken Submarine

A few years back, I travelled up to Liverpool to see the “Giants”, who were making their third and final visit to the city. These massive figures are constructed by the Royal de Luxe company from Aix-en-Provence in southern France. Two of these on show at the street-theatre event that year were “The Giant” and “Xolo the dog” shown in Photos 5 and 6. The “Giant” is constructed from poplar and lime wood, 33 ft. tall and weighs 2.5 tonnes, Xolo is 9 ft.

tall made of steel and papier-mâché, so somewhat lighter. Their heads, limbs, fingers and even mouths and eyelids are tied by ropes and pulleys suspended from a metal frame. They are pulled by a mix of company members and volunteers, called “Lilliputians”, standing on a platform below the frame. They steer and manipulate the figures by adjusting the pulleys, tugging on the ropes then jumping in synchronisation from the platform on to the street. It requires 44 Lilliputians to animate the Giant and 23 for Xolo.



Photo 5: A Giant roams the streets of Liverpool

It takes a huge effort to move them a single short step forward, building this up to achieve speeds of around 1 Km per hour. The Giant can move his eyes, smile, rotate his head, wave, beckon and even grasp objects. His chest rises and falls as if he is breathing and Xolo’s tongue moves as if he is panting and he stops at intervals to drink from a large bowl. Watching from the sides of the street, the crowds were totally mesmerised by the parade. They only had their eyes on the giants; no one saw the huge framework or even the Lilliputian army carrying out their tasks. Everyone there believed a Giant and his dog were *alive* and stalking the streets of the city. These larger-than-life figures surely

can't be called puppets or even marionettes but, are they automata? (Ask anyone who's seen them - they're for real!).



Photo 6: Xolo the dog wows the crowds

Ghost trains are popular rides in the UK and I regularly look out for one, when the Fairground comes to town (Photo 7). A train carrying passengers is guided along rails in a pitch-black building, triggering levers on the track at intervals to make moving ghoulish figures 'jump out' from the darkness. Are they automata? (Stretching things a bit maybe!). They are however the early predecessors of the animatronics rides in theme parks today such as Disney's "The Haunted Mansion" in Florida.



Photo 7: A macabre figure invites you into the Ghost Train

Several companies manufacture a collection of models, depicting illuminated houses and scenes of Christmas merrymaking. The Lemax company, founded in 1990, creates a popular range of miniatures scaled at around 1:48. They have more than 2,000 items in their product line and some of them are enhanced by the introduction of sound and movement into the designs. An example is a Christmas model of a carousel (Photo 8) incorporating poly-resin figures that move up and down as they rotate. (Pretty basic, but some of these models do incorporate very sophisticated movement as shown in the *Spooky Town* model described in MMW 25



Photo 8: Christmas model with moving carousel

Summer 2021).

Seaside piers in the UK used to be alive with Penny-in-the-slot machines, sadly these days they are mostly video games. But it is still possible to find some mechanically operated ones, and among the most popular are 'Fortune Tellers', often housed in glass fronted cabinets (Photo 9). Insertion of your 'Penny' or more likely 50p coin (Inflation is rampant everywhere these days!), starts the figure slowly moving, as if writing a note. After a suitable pause a hand-written card drops out of the slot allowing you to eagerly grab it and find what your future holds. A notice on the side of the glass in these days of 'political correctness' suggests that the predictions should be taken with a *pinch* of salt (Photo 10). Should Madam Zara or even the famous Zoltar from the movie "Big" be classed as automata? (The one in Photo 11 is actually on the



Photo 9: A Fortune Teller predicts your future

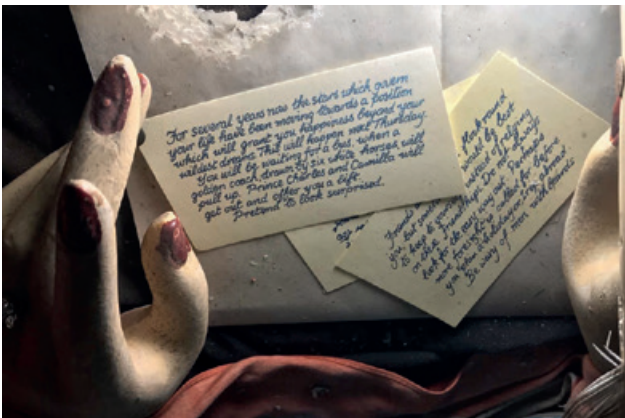


Photo 10: Unlikely predictions!

pier at Eastbourne!) Although only minimal movement of the hand perhaps but should this disbar them from being included in the automata club? After all, Tipu's *Tiger* in the V&A Museum, South Kensington (Photo 12) is described as a *bone fide* Automaton but only has a soldier flopping up his arm as the tiger "attacks" him.

I paid a visit to the Beatrix Potter Attraction at Bowness on Lake Windermere which houses a collection of characters from her well-known children's books, which she wrote whilst living in the area. "Scenes from all 23 of her stories are brought to



Photo 11: Zoltar, as in the movie "Big".

life" states the promotional material. Peter Rabbit, Jemima Puddleduck and Squirrel Nutkin are amongst the mainly static models here, but there are a few which incorporate basic movement, such as Jeremy Fisher the frog (Photo 13). He is shown punting his lily pad boat with his reed pole across a small pond. Other representations of Jeremy in the same scene show him eating a butterfly sandwich and fishing for minnows. Too simple to be called an automaton? Well, maybe!



Photo 12: A Soldier "savaged" by Tipu's Tiger



Photo 13: Jeremy Fisher and friends

I travelled to Hastings in East Sussex to view the latest creation from the renowned automatist, Paul Spooner, entitled “The English Spring” (Photo 14). The model stands 2 metres high and has a hundred beautifully carved wooden figures set out on six levels. After the insertion of a coin to start it, the groups of figures turn dramatically to right and left, before the assembly divides. Enigmatically the French words “Que Voulez-vous? Netê vous pas content?” are revealed in the chasm formed by the split, translated as: “What is wrong with you? Are you not happy?”.



Photo 14: The English Spring, by Paul Spooner

The display is accompanied by bouncy tempo organ music. The carvings are individually painted and include an incredibly diverse group (Photo 15), but how much movement do they make? - Just a 90-degree rotation. Is this *really* an automaton? Well Paul is one of today’s most celebrated automatists and has created many sophisticated and amusing pieces.

My final consideration is the work of Rowland



Photo 15: Some of the one hundred wood carvings on The English Spring.

Emett, much of it based on the machines and characters from his elaborate cartoons, published in the humorous magazine “Punch”. Many of his machines have unfortunately been exported overseas. However, I believe his crowning glory is still in the UK, the structure entitled “A Quiet Afternoon in the Cloud Cuckoo Valley” (Photo 16).

I went to view it at Bonhams Auction Rooms in London. No! Not to make a bid (it was later sold for a six-figure sum); Just to admire it! This incredible and intricate work was completed in 1984 and is the last and largest of Emmett’s work. It depicts the story of a pleasure trip on the “Far Tottering and Oystercreek Railway” which was the first rail line that he constructed in 1951 to transport visitors round the Festival of Britain at Battersea Park on the south bank of the Thames. The work is comprised of eight single units all contributing to the whimsical nature of the scene. The locomotive, “Wild Goose” nearly 9 feet long, trundles along a raised railway line. It is ‘driven’, by an innovative driver who toasts tea-cakes on the firebox as the train sets off on its journey. In the next carriage is a lady and her companion attempting to catch butterflies with nets tied to sticks. The places along the route have quaint names, such as ‘Cowparsley Meadow’, where a farmer plays his harp to a herd of cows, who nod their heads in appreciation.

A water wheel turns at ‘Far Tottering’, while at the next stop, ‘Wisteria Halt’, there is a beautiful flowering tree with a clock on top. At ‘Shrimphaven Sands’, a fisherman can be seen out at sea, in a boat named ‘Nellie’ struggling with a mermaid in his fishing net.



Photo 16: "A Quiet Afternoon in the Cloud Cuckoo Valley" by Rowland Emmett

As 'Wild Goose' rolls past 'Twittering Woods', a bird-watcher rides past on a bicycle, he is camouflaged as a tree and has a bird nesting in his bicycle lamp. On the open carriage at the back of the train is an attendant playing birdsongs on an old gramophone player.

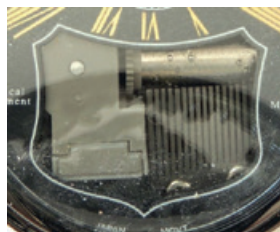
On the beach at 'Oystercreek', a bathing hut is occupied by an elderly gentleman dressed in a full-length Victorian costume, who dives head-first into the water.

All the individuals are part of, and react to, their surroundings bringing to *life* their quiet afternoon in the English countryside.

Many of the characters in the scene are, for the most part, two-dimensional, and are straight from the pages of Emmett's cartoons. The auction catalogue describes the masterpiece as a kinetic sculpture while referring to the individual sections as automata. (Obviously trying to attract bidders from each side of the divide).

Well, that completes my rather irreverent tour round some moving constructions built by both engineers and artists, some fairly basic, others more intricate. But are they automata or **what?**

A modern Chinese musical pocket watch available on eBay for around £15. It has a small 1/18 cylinder musical movement and a quartz timekeeping movement.



COMPOSITION SNUFF BOXES REVISITED

by Juliet Fynes

I read with interest Paul Bellamy's article in the last magazine, in which he referred to mine of Issue number 6 (2016). Since then I have seen and acquired more snuff boxes and formed a few more theories (not too half-baked I hope).

In that article I concentrated mainly on the nature of the composition materials used and the decoration on the lids. Paul has raised some other design points. He mentions piano hinges, which, as I said, were mainly used in the earlier, smaller, shinier, better-quality boxes. The later, somewhat larger French souvenir boxes seem to mostly have had Laurencekirk hinges. Classifying composition snuff boxes as two distinct types is an oversimplification as there are inevitably boxes that have characteristics of both.



Fig. 1: The top of Fig. 2



Fig. 2: Early snuff box with segmental comb

I have a pretty little early box with segmented comb and a Laurencekirk hinge (Figs 1 & 2) but it also lacks the horn inner cover that would define it as a snuff box. The later souvenir box of London, depicting the Royal Exchange and Mansion House (Figs 3

& 4), has a piano hinge. Although an English scene this must have been intended for the French market as it is captioned "Vue de Londres". Similarly the view of Milan (Fig 5) is captioned in French. Laurencekirk hinges were invented well before the earliest musical boxes so I surmise that the choice of piano hinges was for aesthetic reasons, as they gave a neater appearance in the small boxes. These I believe to have been sold as Bijouterie or Objets de Vertue (the French always have the "mot juste" to describe such things) in jewellers or other high-end shops alongside the costlier tortoiseshell and silver boxes.



Fig. 3: The top of Fig. 4



Fig. 4: Later snuff box with piano hinge

Paul goes on to discuss tune sheets or the lack thereof. The floral tune sheet illustrated, similar to some found in cartel boxes, is in a wooden box. Only three composition snuff boxes in my collection have tune sheets, very plain with just an edging; the

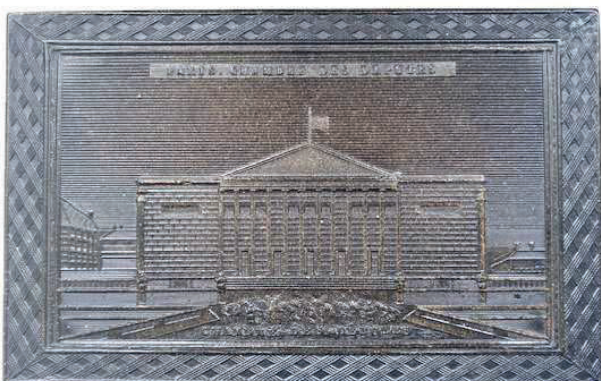


Fig. 5: View of Milan, captioned in French

one with the view of the Chambre des Deputes (Figs 6 & 7) and two with pretty floral designs (Figs 8 & 9) and (Figs 10 & 11) which also has a retailer's label, my only bit of evidence that these earlier boxes were expensive gifts rather than tourist



Figs. 6 & 7: Box with Chambres des Deputes on lid



Figs. 8 (above) and 9: Box with floral decorated lids

souvenirs.

It cannot be certain that so many tune sheets have been lost. A few of my boxes have marks on the underside of the lid where a tune sheet may have been but most are so clean that it is unlikely there ever was one. Perhaps the outward appearance was of more importance to the purchasers than the actual tunes.

There is not a great deal of literature about small musical boxes but mention in books and articles often casts doubt on whether any were actually intended for use as snuff boxes, as the compartments, so useful for housing the key, usually have no traces of snuff. Could they have been designed for the key all along? There is however evidence for the existence of snuff boxes in two pieces of music of the era. The Scottish musician and dancing master, John Hall (1788-1862), composed "The Musical Snuff Box" quadrille. The tune "A Musical Snuff Box" by the Russian composer Anatoly Lyadov (1855-1914) was a Valse-Badinage. The scores for both can be found online and there are YouTube versions of Lyadov's piece.



Fig. 10: Snuff box with original tune sheet and Wales & McCulloch retailer's paper stamp appended

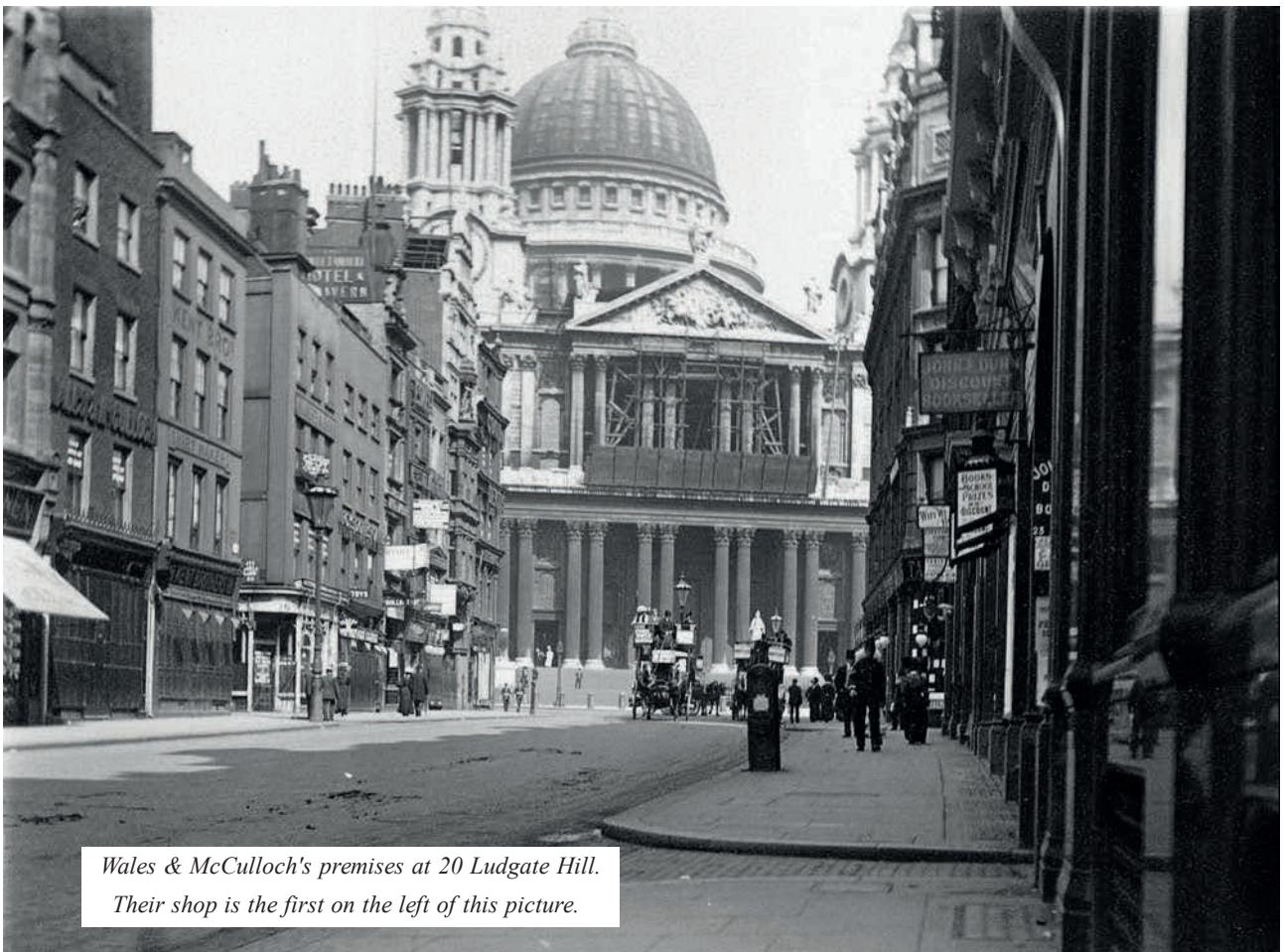
Figure 10 bears the paper label of Wales & McCulloch, who were established circa 1853 and operated until 1908 when they incorporated as Wales & McCulloch Ltd, trading until 1934.



Fig. 11: The top of Fig. 10

Henry Charles Wales was first recorded at his 'manufactory', 32 Ludgate Street, City, EC, from where in 1854 Wales & McCulloch advertised as a musical box repository, direct importers of Nicole Frères celebrated musical boxes.

By 1897 Wales & McCulloch, whose partners are recorded as Henry Charles Wales and Walter Wales, are listed at 20 Ludgate Hill and 56 Cheapside, EC, where they are listed as watch manufacturers, jewellers, diamond merchants, silversmiths and importers of French musical boxes. H.C. Wales died in 1906 leaving an estate of £10,645.



Wales & McCulloch's premises at 20 Ludgate Hill. Their shop is the first on the left of this picture.

A Toy Automaton Picture

by Paul Bellamy

I sometimes wonder if children's toys are bought by adults not so much for their children but as an excuse for indulging in memories of their own childhood. Parents buy model trains, airplanes, dolls, Teddy bears and whatever else stirs their memories. As a pre-war child who had very few new toys, those I had still evoke fond memories.

Thus, when a childish automata picture of the late 1880s was demonstrated to a group of enthusiasts and was also available for sale, it was a temptation difficult to resist. This example was typical of its type, quite rare to have survived the nursery. It had lasted far more years than was its due but it is still capable of entertaining both adults and children. Its only defect was that, being well over 100 years old, many of its musical movement's teeth were missing.

The picture is that of a cat playing a fiddle (violin) to three dancing kittens. As the cat plays, its head and the violin's bow moves and the kittens, with pivoted arms and legs, perform their jolly dance. The frame was in poor shape, Fig. 1, with open joints, splits, pieces of the mouldings missing and crudely repaired with nails and screws.

The music is produced by a small 40-note musical movement of unknown make. A gear on the end of the cylinder shaft (see Fig. 6) engages with and rotates a wooden disc. Pins on the disc's surface actuate a lever which in turn connects with threads that actuate the cat and its kittens.

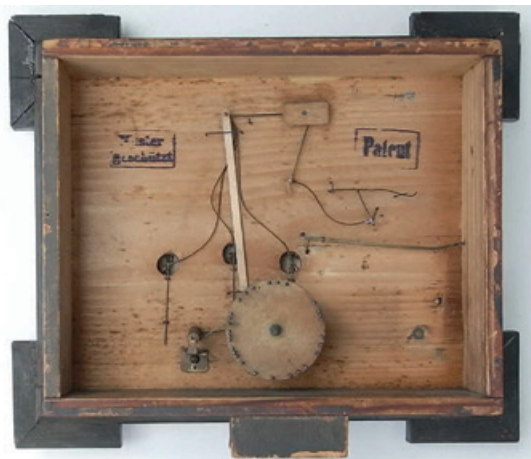


Fig. 2



Fig. 1

Fig. 2 shows the mechanism in its original poor state and with the movement removed. The stop/start lever is a wire that protrudes from the side of the frame. The bend at its end engages the movement's governor fly and releases it when pulled sideways. The two blue printed stamps show that the item was patented and the pattern registered. One states 'Muster Gischutzt' meaning registered design. The other indicates it was patented.

The movement's comb had suffered the loss of ten teeth at the treble end. Small movements are difficult to repair, especially replacing missing teeth. My 'cummins' box, (bits and pieces that 'come in' handy), had an orphaned comb with teeth of similar size and spacing. It was easier to use the treble part this to replace the missing teeth.

The first task was to record the pitch of all known teeth including the remaining two at the treble end. The pitch was close to the modern piano scale, which made it easy to find teeth tuned to the base note, called the tonic or root, of the comb's musical scale. There was only one pair of pins on the cylinder that matched teeth of the same pitch on the comb, which was the root of the scale.

When identifying the pitch of the intervening missing teeth it helps to study the cylinder pins to find octaves and chords. Pairs of teeth of the same pitch played simultaneously are often used to play the 'strong' beat in a musical bar, particularly the first note in a musical scale but also one of the more dominant notes in the scale such as 'thirds' and 'fifths'.

To cut a segment of 10 teeth from the orphaned comb required a very thin slitting disc. A miniature electric drill was set up on a lathe. The cutting disc needs precise movements in the order of just a few 'thousandths' of an inch. Fig. 3 shows a crude but effective set-up fitted to the vertical slide of a Myford ML7 lathe. It comprises a wooden clamp, which holds a standard, variable speed mini-drill. It can be moved with great accuracy vertically and in both horizontal planes. The lathe's vertical slide has to be adjusted so that the disc is parallel to the lathe bed.

The comb also needs to be clamped with teeth parallel to the disc. Fig. 3 shows a fabricated bracket clamped onto



Fig. 3

the lathe bed and mounted with a block of wood. The comb to be cut (not shown) was attached to the wooden block. Cutting was carried out by manual traction of the lathe's saddle, back and forth, to start and then to develop a slit or to separate a damaged part of a small comb.

First, a slit was cut parallel and close to the first of the 10 chosen teeth using plenty of coolant. The depth of the cut was increased by very small steps of a 'thou or two' inches until it was parted. The original comb was treated in a similar manner to remove its top 10 teeth. Fig. 4 shows the two result. The root of the replaced segment



Fig. 4

had a screw hole that did not match the original. The normal practice is to solder replacement teeth but there is a risk of overheating the comb and damaging its 'temper' (i.e. springiness) or melting its lead weights. Instead, the segment was glued using Araldite, a mixture of resin and hardener. It sets slowly and therefore aids accurate positioning plus the fact that the bond does not impede the transmission of teeth vibrations via the comb base and hence to the soundboard. Fig. 5 shows how the two parts were accurately aligned and held in place using a piece of brass shim as a spacer. The tips of all teeth were kept in alignment against a piece of tool steel as the Araldite hardened. Next, a cover plate was shaped to cover the joint and to reinforce it, Fig. 6.

The final task was to tune the replacement teeth. This



Fig. 5

followed standard practice, namely removing metal near the tooth to raise the itch and to add metal such as a drop of solder near the underside of the tooth tip to lower the pitch. The replacement segment had some treble teeth with parallel sides and some with tapered tips, which did



Fig. 6

not match the shape of the original comb. They were tuned as found because there was little point in trying to hide the type of restoration carried out. Simple cleaning and lubrication was sufficient to give perfect musical quality.

The moulded wooden frame comprised 17 pieces of wood, Fig. 8. Tools used to dismantle it are shown in Fig. 7. The old 1930s knife, with its composition yellow handle, has a blade of high quality English steel of Birmingham manufacture. Unlike modern knives the blade is thin and flexible. By warming the blade on a gas flame it can be slipped into the old glue joints, which gradually part. The blade may have to be cleaned and reheated several times. Any thin, springy steel will do but suitable old knives can still be found at car boot sales and second-hand-goods stores.

First, though, was the task of removing rusted screws and nails. One of the tools in Fig. 7 is made from a large nail turned to a narrow point about the diameter of the pin

and nail heads. When gripped in a hand clamp and heated cherry red, the narrow end is applied to the head of screws and nails. Heat gets transferred to the pin (or screw) to expand it and break the rusty interface between it and the wood.

The pair of cutters in Fig 7 is old with blunted cutting edges, ideal for levering out the nails and pins. The narrow points have to be pressed into the wood under the head of the pin. This can damage the wood slightly but that can be remedied later. A piece of thin metal shim such as an old feeler gauge, placed between cutters and wood limits damage whilst levering the cutters down in the manner of a crowbar. Once the head lifts, the grip is easier to apply and the pin can be drawn out in a succession of leverages. Slight wood compression can sometimes be restored by a drop of water, which swells the wood fibres.

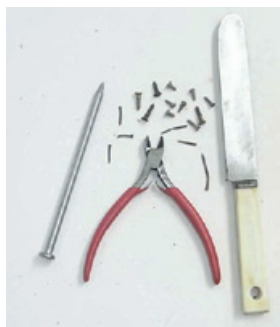


Fig. 7

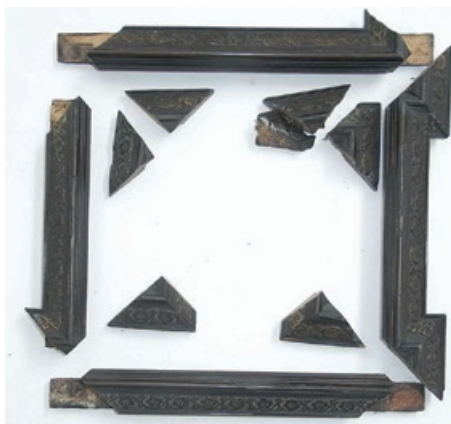


Fig. 8: The frame dismantled

The moulded parts of the wooden frame were made of gesso, a material used for all sorts of purposes. Gesso is made from a mixture of chalk, gypsum, a suitable pigment and a binding substance. All pieces were cleaned of old glue, degreased and the mouldings repaired.

A wooden jig was made with accurate 90 degree angles to support the bits when re-glued. Cling film was used between parts and the rig to make sure only the bits became glued. When all four corner parts were re-glued, another wooden jig was constructed to support the whole frame assembly. Some corner joints needed thin strips of wedge-shaped wood to fill the gaps and to achieve 90 degree angles.

Once restored, the frame was treated with polish reviver, remaining damaged parts of the mouldings restored and the gilded surfaces of the mouldings re-gilded, Fig. 9.



Fig. 9

Association of Musical Box Collectors

Aims and Objectives:

- To promote the enjoyment of mechanical music in all its forms.
- To provide opportunities of social interaction to members through meetings and outings of musical and other historical interest.
- To establish formal links and working relationships with other national and international organisations in the field of mechanical music.
- To encourage research and publication of articles and books on the subject.
- To reach out to the public and foster a wider interest in mechanical music.

AMBC & Editorial Policy

The AMBC Editors welcome articles, letters and other contributions for publication. They expressly reserve the right to amend or refuse the foregoing if not in compliance with editorial guidelines. Opinions expressed by an author do not imply those of the editors or AMBC who disclaim any liability for errors, omissions, inaccuracies or the consequences thereof.

The AMBC and its editors disclaim responsibility for advertisements, product information, warranties and endorsements that are the sole responsibility of the advertiser or contributor to whom representation must be made.

Committees/Boards of other Societies may reproduce or edit AMBC publications subject to the permission of the Editors or in lieu the Executive and as confirmed in writing or by email. AMBC welcomes reciprocal arrangements. Constructive comments, including the identification of errors, additional material, correspondence, etc. are welcome for publication under AMBC editorial guidelines. Contributors should ensure that such material does not breach copyright of a third party or that, where appropriate, the copyright holder gives Rights to Publication in whole or part.

An author's contribution as published by AMBC in any form, including the AMBC website (ambc.org.uk), will be the copyright of AMBC. Contributors have absolute right to retain their intellectual property rights to the material contributed.

AMBC will make available any of its published material, subject to the above conditions, for the use of other societies and organisations provided that does not involve a profit motive. AMBC therefore wishes to collaborate with other like-minded organisations in research and publication to encourage interest by members of other Societies and of the public at large.

*Note: As an Association AMBC does not give valuations or take responsibility for advice or guidance nor imply any form of guarantee for the accuracy or consequences arising from information so given.

AMBC sale items

The following items are for sale to AMBC members and those of its associated organisations. Surplus from sales will fund AMBC administration costs. The primary allocation will be towards research and further publication for the benefit of AMBC members and that of associated organisations.

Contact P. Bellamy or Ted Brown for P&P details: bellamypaul@btinternet.com or 01403823533.

A Passion for Barrel Pianos by Milly & Colin Williams. (See illustration)

This delightful and informative limited edition has over 60 illustrations and charts, most in colour. There are 12 sections dealing with aspects of casework, barrels, gearing, musical arrangement, marking and pinning.

The booklet is A4, ring-backed binding for easy use, with 40 pages of information between the covers.

UK price: £10 + P&P with comparable European and overseas costs to be negotiated.

Cylinder Musical Box Design & Repair by HAV Bulleid. £10 + P&P.

Cylinder Musical Box Technology by HAV Bulleid. £10 + P&P.

***Disc Musical Box Book** by K. McElhone. £50 + P&P.

***The Nicole Factor in Mechanical Music** by Paul Bellamy and contributing authors Cunliffe and Ison. £35 + P&P.

***Musical Box Tune Sheets** (The Tune Sheet Book) and three supplements, by HAV Bulleid.

***The Organette Book** by K. McElhone. £35 + P&P.

***Street musicians on Postcards** by Paul Bellamy. £8 + P&P.



Members' Sales & Wants

I have spares for Reuge, Thorens, and Guisnez movements up to 31 notes. These include endlesses, combs, cylinders, stop/start levers, springs, spring barrels and even the knobs for the stop/start levers on mugs.

Call Ted Brown: on 01403 823533

AMBC Books for Sale

Collecting Affordable Musical Novelties £5

An Introduction to Mechanical Music £5

AMBC CD - Berman's Music Boxes £5

plus P & P

*In future editions of
Mechanical Music World
we shall be pleased to accept
advertisements from members,
both display (contact Ted
Brown for details) and
classified (contact the
Editors). Let us know if we
can help.*

