

THE MUSIC BOX

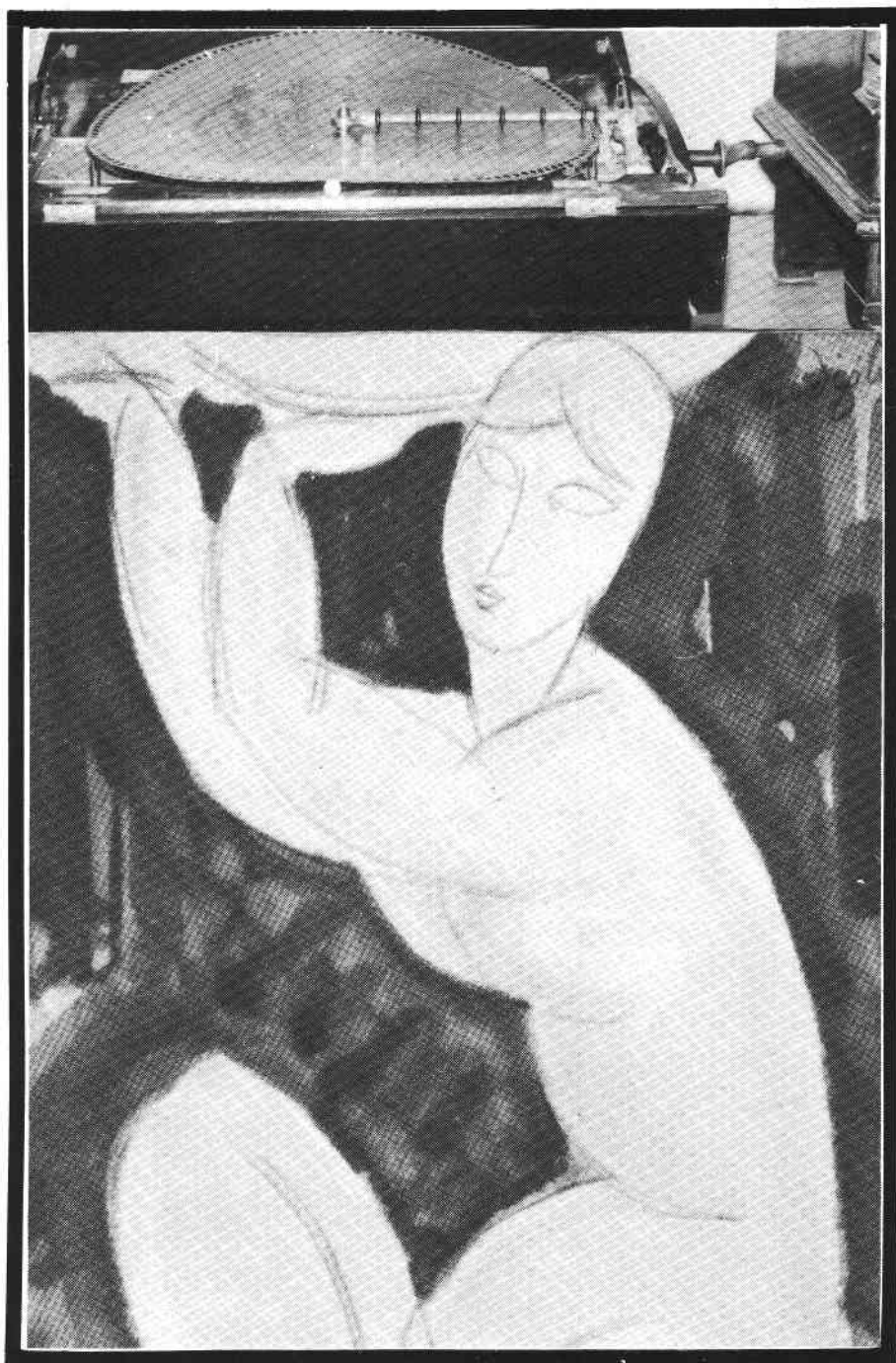
an international magazine of mechanical music

THE JOURNAL OF THE MUSICAL BOX SOCIETY OF GREAT BRITAIN

Volume 10

Number 6

Summer 1982



(Modigliani)

PRICE £1.75 (\$3.50 USA). AVAILABLE FREE TO MEMBERS ON SUBSCRIPTION.

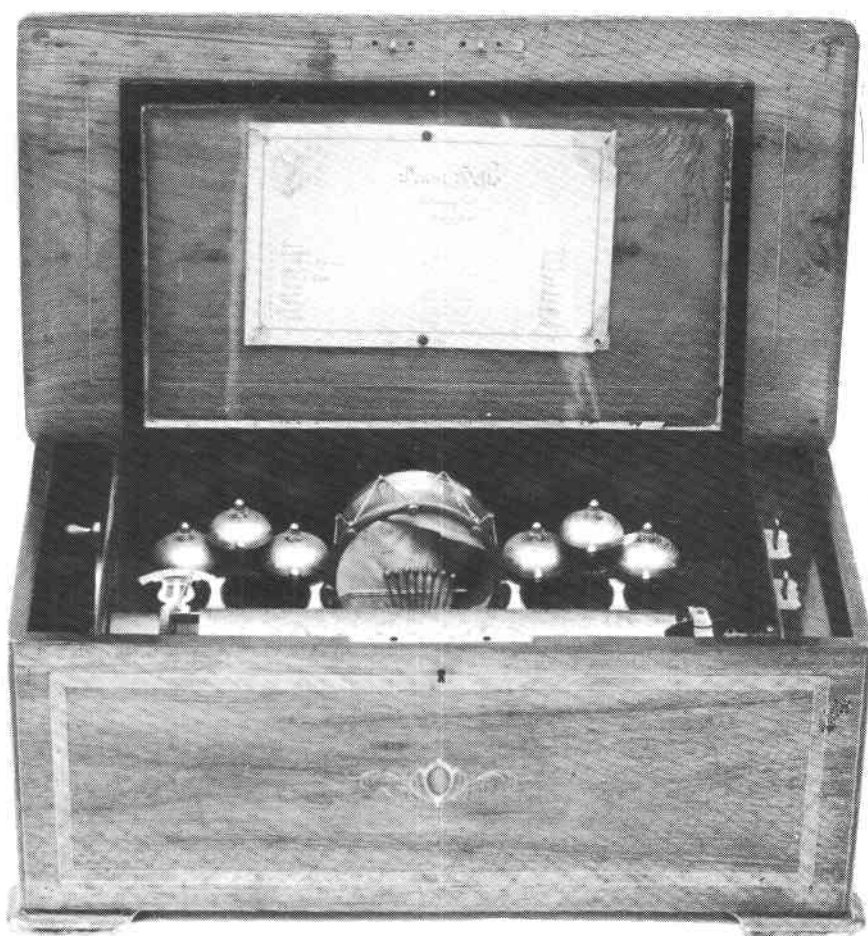


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SALES OF MECHANICAL MUSIC



Among early entries for our July 29th sale are this drum and bell musical box,
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OUR SALES ARE BI-MONTHLY

Projected dates for 1982:

June 3	September 23
July 29	November 18

Entries close nine weeks prior to sale dates. For further Information please contact
Christopher Proudfoot.

THE MUSIC BOX

an international magazine of mechanical music

THE JOURNAL OF THE MUSICAL BOX SOCIETY OF GREAT BRITAIN

OFFICERS OF MBSGB AND THEIR DUTIES

PRESIDENT: **Jon Gresham**, Westwood House, North Dalton, Driffield, North Humberside.

VICE-PRESIDENT: **Stephen Ryder**, 495 Springfield Avenue, Summit, New Jersey 07901, USA.

CORRESPONDENCE SECRETARY: **Christopher Proudfoot**, The Hoo, Hook Green, Meopham, Gravesend, Kent, to whom all general and policy matters should be addressed.

MEMBERSHIP SECRETARY: **Reg Waylett**, 40 Station Approach, Hayes, Bromley, Kent, BR2 7EF, to whom all applications and queries relating to **new** membership should be addressed.

MEETINGS SECRETARY: **Alan Wyatt**, The Willows, 102 High Street, Landbeach, Cambridge, CB4 4DT.

SUBSCRIPTIONS SECRETARY: **Ted Brown**, 207 Halfway Street, Sidcup, Kent DA15 8DE, England.

TREASURER: **Bob Holden**, The Firs, Pool Meadow Close, Solihul, West Midlands, B91 3HS.

RECORDING SECRETARY: Vacant.

AUDITOR: **Stephen Cockburn**, Marshalls Manor, Cuckfield, Sussex.

EDITOR: **Robert Clarson Leach**, 31 Perry Hill, London, SE6 4LF. Responsible for the editorial content and production of all our publications.

ARCHIVIST: **Keith Harding**, 93 Hornsey Road, London, N7 6DJ, to whom all contributions to the archives should be sent, and at whose address the archives are housed.

AUCTION ORGANISER: **Roger Kempson**, 32 Woodleigh Gardens, Whitchurch, Bristol, BS14 9JA. Responsible for the organisation of all auctions at Society meetings.

ADVERTISEMENT MANAGER: **Arthur Heap**, "Riversway", 7 Victoria Crescent, Queens Park, Chester, CH4 7AX (retiring June 1982).

COMMITTEE MEMBERS: **Hilary Kay**, c/o Sotheby's, London.
Tony Maslen, 17 Walmer Gardens, Ealing, London, W13.
Bill Nevard, The Armoury, West Bergholt, Colchester, Essex.

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Society Affairs

Front Cover.

Amedo **MODIGLIANI**, 1884-1920, was born in Leghorn, his parents belonging to a distinguished Italian-Jewish family. In 1906 'Modi' went to Paris and spent the rest of his life there. He was initially influenced by Toulouse-Lautrec, and later by Cézanne and Picasso. His Italian upbringing never deserted him and this influence is evident in his work.



He was handsome, a great lover of women, but even so he stated that he was going to drink himself to death... and he did!

Auction Fever.

Alan Wyatt asked **ROGER KEMPSON** for a short article publicising the Auction. Here is the report;

Those members who regularly attend the Society's June meetings will already be familiar with the Auction. We hope that the following information will tempt new members to come along and participate. The aim of the Auction is to raise funds for the Society. Ten per cent of the total money received is donated to Society funds. It is the only fund-raising meeting organised by the Society. Vendors bring along items on the morning of the meeting (in this case, June 5th 1982, to the *Churchill Room* at The Press Club,

London, from 9.00 am). for inclusion in the afternoon sale. Viewing takes place during the morning and also during the lunch break. However, all viewing must be completed by 2.00 pm to allow the Auction Organiser and the Auctioneer time to arrange the lots for selling.

Entry forms are available from the Auction Clerk, and reserve prices can be set by the vendor. There is a fixed reserve whereby the lot will not be sold until that figure has been reached, and the discretionary reserve, which allows the Auctioneer to knock down the item at one bid below the reserve set by the vendor. Members' attention should be drawn to the fact that there is no Buyer's Premium at the Society Auction, thus making prices even more attractive.

The success of the Auction depends upon the generous support of members, so if you have any orchestrions, reproducing pianos, musical boxes etc., which are surplus to your requirements please bring them along to the **SOCIETY AUCTION** on **SATURDAY JUNE 5th** at the Summer Meeting held this year at the London Press Club, Shoe Lane, near Ludgate Circus at the top of Fleet Street.

Southern Chapter.

This cheery group of enthusiasts Press-ganged Cyril Hess into becoming their secretary. Cyril has dutifully sent in his first report;

The meeting was held at Washington (Sussex) on 5th December 1981. This (second) meeting of local members of the MBSGB was held at Longbury House. Bearing in mind the time of the year it was decided to keep the meeting short, 11 am until early afternoon. However, there was ample time for **TED BROWN'S** entertaining and instructive talk on portable organettes and to enjoy listening to the good instruments which he brought for us to hear. An excellent lunch was provided by **LILY BYRON**, laced with several bottles of wine (the lunch, not Lily!).

In the afternoon several musical boxes were presented by **JOHN MANSFIELD** and one by **CYRIL HESS**. It was a pleasure to sit back, well wine and dined, to hear the story and music of each box. At the end of the meeting the 16 present decided that this 'South of England Group' should have the name **THE CHANCKENBURY RING**. (If this is spelt incorrectly blame Cyril's handwriting. Ed.).

We look forward to future meetings.

Mortier Magic.

ROGER and **PENNY BURVILLE** present Volume Two, in cassette form, of the music of their famous Mortier Organ. The choice of music reflects the worthy present trend for a return of the nostalgic music of 'The Thirties', the Dance Band era, including; *Petite Fleur*, *Copacabana*, *Love Letters in the Sand*, *Stranger on the Shore*, (put these two tunes together and you have a novel!), *If I were King*, and many others. See the illustrated cassette cover herewith.

Address: Roger Burville, 1 Baytree Cottages, The Street, Preston, near Wingham, Canterbury, Kent.

Dammed Clever These Chinese!

In this case, Japanese. The following is published by kind permission of **WEEKEND**.

HOW TO PLAY THE PIANO WITH GLOVES ON.

'They laughed when he sat down to play... because there was no piano in front of him, just a bare table top.

But as he moved his fingers the pianist produced a simple electronic tune. The secret was in the gloves he was wearing. Inside each finger was a pressure-sensitive switch which sent signals to a concealed generator. The notes produced varied according to the amount of pressure on the switches. Each one could produce four different notes.

The musical gloves were demonstrated to a private audience in Japan.

RULE BRITANNIA, BRITANNIA RULES THE WAVES (ELECTRONIC).

The 1982 Daily Mail Blue Ribbon Award at the *Ideal Home Exhibition* was won by 'Omnichord', a unique new musical instrument, and one which lovers of mechanical music might enjoy playing. You can become a maestro in minutes. It is completely portable, can be strummed like a guitar (even though it has no strings to tune or break). 'Sonic Strings' are activated by the touch of your fingers. Omnichord can play like a piano or organ by pressing any of its 27 chords. It automatically plays the correct bass note, and... drums can be brought in.

By wagging your fingers you can become a one-man band. Does this qualify the Omnichord to be mechanical music?

Omnichord is available through local music shops, department stores, at £99 (incl. VAT).

For further information contact CRAFTMASTER (UK) Ltd., Tower House, London N18 3HR. Tel: 01-803-8941.

Who made it?

Suzuzi..... I might have known!!!

Ritz Cinema, Pocklington, Yorkshire.

A telephone call to **JON GRESHAM** confirms that despite delays the cinema project is going ahead. The following is an extract from the *Yorkshire Evening Press*.

An Amusement Machine Museum is being set up in the Ritz Cinema, Pocklington, North Humberside. The town will become the home of a permanent exhibition of rare coin-operated machines, which could attract visitors from many parts of the country and abroad.

The new owner of the cinema is Mr. Jon Gresham, who will use it to house his private collection, which he believes to be one of the largest and most representative in the world.

Mr. Gresham planned to open the exhibition in time for the Spring Tourist Trade but, as always, delays have occurred. The work of converting the premises to provide a smaller cinema upstairs, and exhibition

space downstairs, is a mammoth task. Mr. Gresham is the current president of the Musical Box Society of Great Britain, and he is an authority on the slot machine industry. His collection numbers over 300 machines.

The oldest machine goes back about 90 years, the youngest to around 1940. Some came from America, where Mr. Gresham has made several buying trips. There are also French, German and many British examples.

The collection includes gambling machines, automatic music machines, games, working models and 'what-the-butler-saw' attractions. Mr. Gresham said, "Buffs will travel enormous distances to see machines". He will give demonstrations and there will be an audio-visual show.

Stolen.

Stolen from the home of Dr. N de M Rudolf on March 12, 1982. The Music Box was made by Nicole Frère, Geneve, Serial No. 44108. The instrument had Bells, possibly 9 in number but one or two were missing. The bells were surmounted by doves with garnet eyes and rings in their beaks. Strikers with garnets inset. Some teeth of the comb were broken. The box had zither-effect but leather missing. It contained an interchangeable brass cylinder, 14 inches (35.5 cm) long, numbered 2 and D81, Serial No. 44108. Dr. Rudolf has the remaining five cylinders. The box is lever-wound. The case is inlaid wooden with non-pictorial designs, approximately 33 inches (84 cm) long.

Anyone coming across information of this box please contact either the Editor or Ted Brown and the information will be sent immediately to Dr. Rudolf, who lives in South East London and who works at Charing Cross Hospital. Dr. Rudolf has become a member of our Society. We welcome him cordially, and we hope that the stolen box is recovered.

Mappin and Webb's Exhibition, 30th April — 17th May, 1982.

Anyone shopping in this famous London store between the above dates will have seen many items supplied by **KEITH HARDING**. These include; a Rochat Frères miniature singing bird, c. 1815, a Japy Frères No. 131 Carriage Clock, Two train carriage clocks, Junghans musical clock 'Offenbach' model No. 4262, Four glass musical mantel clock by Symphonion Leipzig c. 1905, Nicole Frères key wound musical box c. 1850. A rare Mandoline Organocleide musical box by Bremond, No. 10160, A 12-tune Nicole Frères box, c. 1885, and so on. The value of the 18 listed articles (12 April list) comes to:- £28,900 plus VAT £4,335.

The Ronald Leach Museum.

The article on Ronald's Museum (Spring Journal, 1982) gave much enjoyment to our readers and the Editor wishes to apologise for not giving the address of the Museum. MBSGB members who visit the West Country (Cornwall and Devon) will always be welcomed if they pop in to see Ronald and his wife at the museum. The address is: **MILLHEAT, THORNBURY, near HOLSWORTHY, DEVON.**

Sorry, Ronald, for the omission, and we all hope that you do good business this summer.

The Long Distance Runners.

At the Committee Meeting on April 26, 1982, the members present totted up a total of 1,362 miles. Our Chairman and President, **JON GRESHAM**, left home at midday and arrived back in the early hours of the following morning. He does this for every Committee Meeting held in London. The round-trip mileage of the committee members present is as follows:- Jon Gresham (North Humberside, 400 miles), Christopher Proudfoot (Gravesend, 60), Reg Waylett (Bexhill, 140), Alan Wyatt (Cambridge, 130), Ted Brown (Sidcup, 30), Stephen Cockburn (Sussex, 90), Bob Leach (London, 12), Roger Kempson (Bristol, 240), Hilary Kay (London, 20), Bob Holden (Solihull, 240). The Editor's journey is a mere nothing, but look at the others! How about a round of applause!

As we reported at the time, our American Vice-President **STEVE RYDER** flew from the States to attend the Christmas Committee Meeting. At the March Meeting he telephoned from his home and was thus able to take an active part in the business of the Committee.

We hope as many British and European members as possible will attend the **SAN FRANCISCO** meeting in September (3rd-6th) 1982, at the Jack Tar Hotel. Steve will be sending a report of the American Meeting for inclusion in the Journal. Members who take pictures there are invited by the Editor to send a copy for use in the Journal (All photos are returned to owners, but please put name and address on the reverse side).

The Committee have decided to change publication dates of the Journal. Hitherto it has come out in March, June, September and December, i.e., 3rd, 6th, 9th and 12th month of the year with appropriate deadline dates. In order to fit in with our regular meetings, which traditionally seem to be held the same month as the Journal publication, it has been decided to publish the Journal **BEFORE** the meetings, i.e., 2nd, 5th, 8th and 11th months of the year. Accordingly the Deadline dates for copy will now be:-

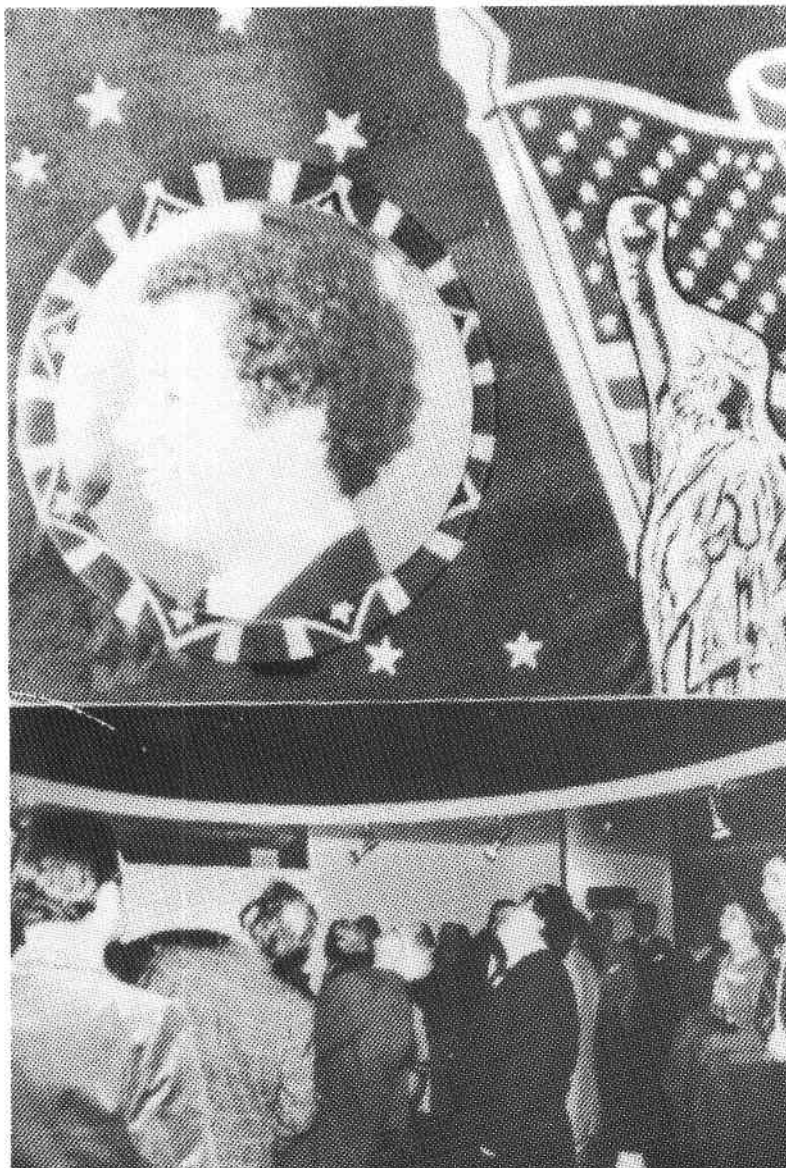
15th January for Spring edition (Feb).

15th April for Summer edition (May).

15th July for Autumn edition (Aug).

15th October for Christmas edition (Nov).

These are *closing* dates so please get your copy in well beforehand. Articles are set up in the order they are received and there might not be space for late arrivals. We keep the Journal to 48 pages per issue because this, with envelope, comes to just under 200 grams. A couple of extra pages would bring the weight up to "under 250 grams" with corresponding increase in postage, estimated at (2nd class) £70 plus, or, £300 per annum.



All eyes on San Fransisco...

Cost of Meetings.

HILARY KAY, and latterly **ALAN WYATT**, have got the costing of the area meetings under control after a certain disastrous meeting where we lost almost £600. It is not the idea to make a profit, but it is certainly not the idea to make a loss. Meetings must fund themselves. It is not considered fair to use the subscriptions of overseas members to subsidise meetings in U.K. It was, therefore, indicative of careful housekeeping by the Meetings Secretary when he reported that the **ARUNDEL** meeting in March, 1982, had made a profit of £14. This shows that Hilary and Alan have got it just right when they charge a fee of £5 for these meetings. Meetings are very costly these days; hire of hall, postage, telephone, coffee and biscuits and, in some cases, hire of equipment. Please send your £5 Registration **NOW** for

the Summer Meeting, and also for the September meeting in Leamington Spa. Alan Wyatt sends us this information reference the Summer Meeting, June 4 and 5, 1982, at the London Press Club:-

KEITH HARDING 93 HORNSEY ROAD LONDON N7 6DJ.

Members in London on Friday 4th and Sunday 6th June will be welcomed by Keith Harding and Cliff Burnet at their new workshops, 93 Hornsey Road, London N7, between 10.30 am and 4 pm.

We congratulate Keith on celebrating 21 years of specialist work and research associated with Musical Boxes, Clocks etc.

It is a tribute to him and his team of highly skilled craftsmen that items which have been through his workshop are now to be found in some of the most important collections and museums in the world.

Our Meetings Secretary sends this latest information about the **SEPTEMBER MEETING** to be held at Leamington Spa, and is locally being arranged by **GRAHAM WHITEHEAD**.

HOTEL BOOKINGS need to be made as quickly as possible.

The **CLARENDON HOTEL**, Manager Mr R Twigge, The Parade, Leamington Spa, Warwickshire CV32 4DJ. Telephone: 0926 22201/2. Room Tariff per night per person is £16. The Hotel is a Trusthouse Forte. Our date of arrival is Friday 17th September.

On page 218 of the Spring Journal the Leamington dates were given as September 16-18. This is incorrect, the dates are; Friday 17th September to Sunday 19th, 1982. The rest of the information is correct.

SUMMER MEETING

SATURDAY 5th JUNE.

- 9.00 am Registration and entry of items for **AUCTION**.
- 9.45 am Coffee and Biscuits.
- 10.15 am Talk by **DR. ROBERT BURNETT**. 'Some Rare Items'.
- 11.15 am Talk and Practical Demonstrations by **JIM COLLEY**. 'Tuning of Musical Combs in Theory and Practice'.
- 12.30 pm **LUNCH**. Bar facilities available for drinks. Viewing of Auction Items until 2.00 pm.
- 2.15 pm Talk and Practical Demonstration by **TED BOWMAN**. 'Musical Chips'. i.e. how a digital computer can be programmed to generate an electrical signal to drive a loud-speaker and to draw comparisons between electronic and the traditional ways of producing sound. **WOW!**
- 3.30 pm **TEA and BISCUITS**.
- 4.00 pm Society Auction. Conducted by **ROGER KEMPSON** and **CHRIS-TOPHER PROUD-FOOT**.

SINGALONG ???

Press-Club Pianist, the legendary **NORMAN HOSKINS** will be in attendance!!!!

6.00 pm Do you wish to stay on for a drink and sing-along in the evening? If so please let Alan know when you send your Registration Fee.

REGISTRATION FEE FOR THIS MEETING £5 PER PERSON TO INCLUDE TEA AND COFFEE. PLEASE SEND NOW.

There is a Trust House Forte Hotel, 'The Kingsley' in Bloomsbury Way, a few minutes walk from Shoe Lane that does a Week-end Break of two nights, to include Saturday for £17 per person per night.

Contact the Hotel direct on 01-242 5881 for reservations.

Please Reply To: Alan W Wyatt
The Willows, Landbeach, Cambridge.

FRIDAY AND SUNDAY (SUMMER MEETING)

These two open days will give visitors a unique opportunity to see craftsmen at work at Keith Harding's.
(Tel: 01-607 6181/2672).

THE SUMMER MEETING TO BE HELD AT THE PRESS CLUB 76, SHOE LANE, LONDON on SATURDAY 5th JUNE, 1982.

Dear Member,

The Committee are pleased to have the facilities of the Press Club for this meeting. With the attraction of three well known speakers, also the Society Auction, it is hoped all members will do their best to attend and why not bring a friend along as your guest.

As a very attractive and varied buffet lunch has been arranged in the snack bar, priced £1 — £3, according to choice. It is assumed all members will wish to lunch at the club. A more sophisticated lunch will also be available priced £4 — £5.

AUTUMN MEETING

Please contact **GRAHAM WHITEHEAD** for the finer details of the Meeting, **AND PLEASE SEND YOUR £5 REGISTRATION FEE TO ALAN WYATT NOW**,

Alan Wyatt, The Willows, 102 High Street, Landbeach, Cambridge, CB4 4DT.

Graham Whitehead, The Malting, Napton, Nr. Rugby, Warwickshire,

Both addresses are, of course, in England.

Alan Wyatt adds, "The organiser has negotiated a very keen price for the hotel, so please book **NOW**, and mention the *Musical Box Society of Great Britain*.

This might be the final notification of the September Meeting so contact Alan and Graham and the Hotel **NOW**.

The Summer Meeting on Saturday June 5th at the London Press Club, 76, Shoe Lane, London (near Ludgate Circus at the top of Fleet Street) is being preceded on Friday Evening June 4th with the AGM, at 7.30 pm, also at The Press Club, in "The Churchill Room", Admission Free. Any problems about getting there please ring the Editor 01 291 2076 or 01 690 4616. Make sure your £5 Registration Fee for Saturday has gone to Alan Wyatt. The Press Club is a Private Club and only members properly booked in can be admitted.

From Our President

One of the duties which causes me mixed feelings is recording the retirement from office of members of the Committee combining the sadness caused by the loss of valuable and congenial officers with the pride and pleasure in what they have achieved for, and contributed to, our Society.

Steve Cockburn has held the office of Honorary Treasurer for six years. He took over this position at a time when the Society's finances were, I believe, in some disarray but since his taking office they have been conducted with the efficiency one would expect from a professional banker. The Committee have always



Some of Keith Harding's staff at work, 1979. Remember the invitation to visit his new workshop, on June 4th and 6th 1982, extended to those attending the AGM and Summer Meeting. 93, Hornsey Road, London N7.

SUMMER MEETING : LONDON PRESS CLUB. JUNE 4-5. ALAN WYATT.
AUTUMN MEETING : LEAMINGTON SPA. SEPTEMBER 17 - 19 Details below;
LOCAL ORGANISER : GRAHAM WHITEHEAD.

Attractions include: Street Organ Festival – Saturday morning
 Visit to Warwick Castle,

Visit to Napton Museum of Mechanical Music,
 Society Dinner Saturday evening,

Entertainment by the WINDMILL SINGERS.

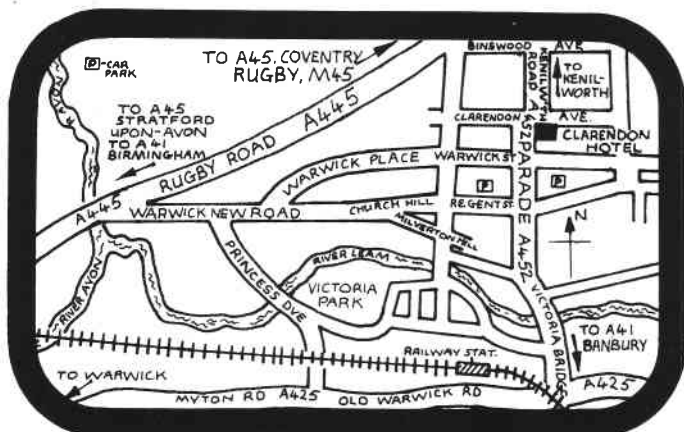
REGISTRATION FEE £5 (MBSGB) to:

Alan Wyatt,
 The Willows,
 102 High Street,
Landbeach, Cambridge CB4 4DT.

Special terms at:
THE CLARENDON HOTEL, The Parade,
 Royal Leamington Spa, Warwick CV32 4DJ

BOOK ACCOMMODATION DIRECT:-
 1 Night. B & B. Lunch etc. £16 per person.
 2 Nights (Fri to Sun a.m.) + dinner £32 per person.
 Sat eve dinner non-residents. £6.50 per person.

Further Details: Graham Whitehead, The Malting, Napton, Nr. Rugby, Warwickshire.



been kept fully and promptly aware of the state of the Society's finances and he has managed our financial affairs with great tact and diplomacy. Stephen has been wanting to resign as Honorary Treasurer for some time, owing to increasing pressure of other commitments, and I greatly appreciate his holding the office longer than he himself wished. His resignation takes effect from our next Annual General Meeting. His fellow Committee members will miss the clarity of his contributions to our discussions as well as the excellent and convenient facilities he has generously made available to them for their meetings.

Arthur Heap, our Honorary Advertisement Manager, is not a member of the Committee, by his own choice. Living in Chester he has handled all details of the advertisements in our Journal for over eight years.

Although the advantages of advertising in our Journal and thereby reaching so many collectors of mechanical music at an economic cost should be self-evident, Arthur Heap has had to convince our advertisers of this, secure their copy and ensure that they pay their accounts. During his tenure of office he has been responsible for over 270 pages of display advertising and the income from these advertisements is second only to the annual subscriptions in revenue for the Society. A modest man, Arthur has never complained about the amount of work involved, he has quietly and efficiently got on with it. It would be easy for an insensitive Advertisement Manager to upset our advertisers, our printers, our Honorary Editors or all three. Arthur Heap's relations with everyone seem to have been quite exceptionally harmonious and of enormous financial benefit to your Society. His resignation takes effect from the end of this year.

It will be difficult indeed to replace these two officers with people of equal excellence but that is one of the tasks facing us at our Annual General Meeting.

Jon Gresham

STEREO

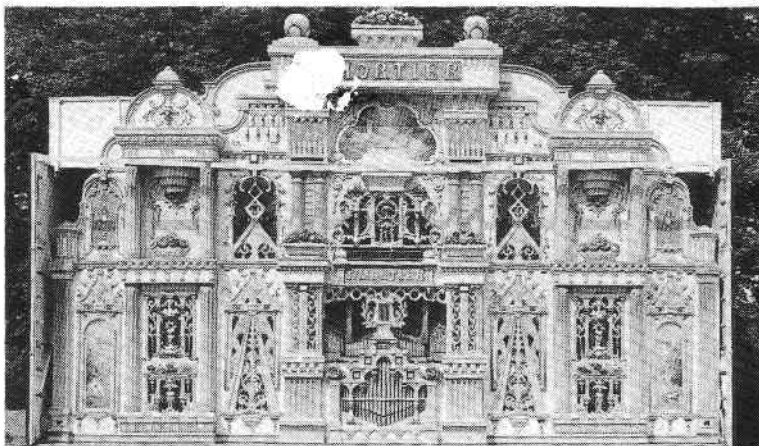
MORTIER MAGIC

Vol. Two
RBC 1002

ROGER AND PENNY
BURVILLE PRESENT

MORTIER MAGIC

Volume 2



SIDE A

1. The Sun has Got His Hat on, (Comp. N. Gay; Arr. T. Meijer) 2. Petite Fleur, (Comp. S. Bechet; Arr. T. Meijer) 3. Boogschutter March, (Comp. T. Meijer; Arr. T. Meijer) 4. Boogie Woogie Baby, (Comp. R. Vaplas; Arr. J. K. De Ruijter) 5. Copacabana, (Comp. B. Manilow; Arr. J. K. De Ruijter) 6. Semper Stourpaine, (Comp. T. Meijer; Arr. T. Meijer) 7. Czardas No. 1, (Comp. Monti; Arr. G. Razerberg) 8. Der Vogelhandler, (Comp. Zeller; Arr. G. Razerberg) 9. Hommerson March, (Comp. C. Frei; Arr. G. Razerberg) 10. Kunkels March, (Comp. C. Frei; Arr. G. Razerberg).

SIDE B

1. Quickstep Medley:— (a) Love Letters in the Sand, (b) Goody Goody, (c) Stranger on the Shore, (d) Play a Simple Melody, (Comps. Coots, Kenny, Mercer, Malneck, Acker Bilk, Irving Berlin; Arr. T. Meijer) 2. If I were King, (Comp. Adam; Arr. G. Razerberg) 3. Waffen Ehre March, (Comp. C. Frei; Arr. G. Razerberg) 4. The Old Rustic Bridge by the Mill, (Comp. J. S. Kelly; Arr. G. Razerberg) 5. Sun and Sea, (Comp. R. De Waard; Arr. R. De Waard) 6. Turkish March, (Comp. W. A. Mozart; Arr. A. Prinsen) 7. Carousel Waltz, (Comp. R. Rodgers; Arr. G. Razerberg) 8. Espana Cani, (Comp. P. Marquina; Arr. T. Meijer) 9. National Emblem March, (Comp. P. D. Bagley; Arr. G. Razerberg) 10. With Sword and Lance, (Comp. Starkes; Arr. G. Razerberg).

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The Kensington Close Hotel

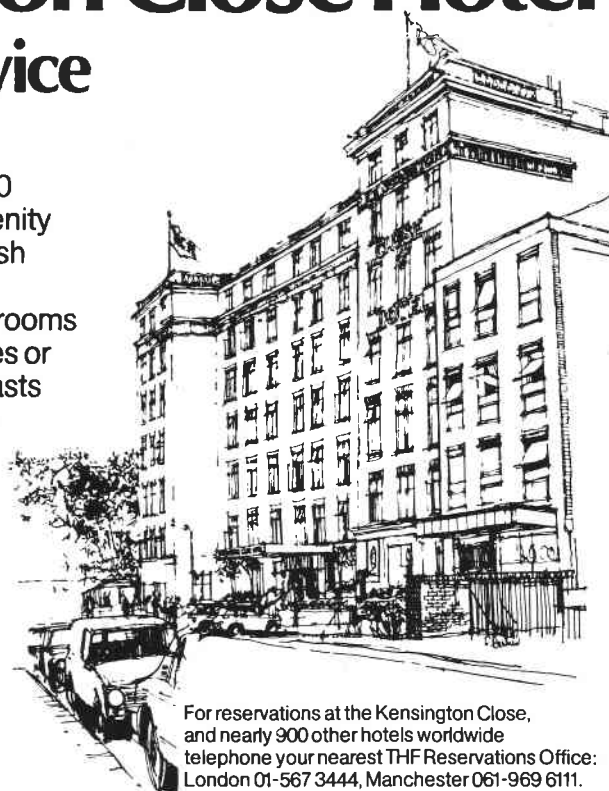
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For further details contact
The Manager,
Kensington Close Hotel,
Wrights Lane,
Kensington W8 5SP
Tel: 01-937 8170



Selected by the Musical Box Society of Great Britain as the venue for its London meetings.



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&c

STUART HALL OPENS HIS PRIVATE MUSEUM

By Jack Tempest

DISSATISFACTION with museums in Britain is rife – I haven't yet been able to discover who should be blamed and, to be fair, I suppose many of our city museums have been over-endowed with so many items over the years that the problems of storage and display must be enormous. I do have a nagging feeling that museum officials tend often to be more professional in their plausibility than in their ability.

Some years ago I mentioned, in an article in these pages, two Manchester brothers who had accumulated a house full of precious treasures – they virtually possessed a mini – Victoria & Albert of their very own. They made it quite clear to me that, such was their faith in museums – they had suffered personal experience of a fine collection of clocks bequeathed by a relative to the Victoria and Albert Museum, being untraceable – that they would make sure that nothing of their's would enter such a place if they could help it. It didn't!

Cyril De Vere Green had similar feelings when his collection went off to Holland – see our last journal. And, in Manchester there have been two incidents of missing items at one of the city's museums. One is a collection of juvenalia, much of which has been unaccounted for, and the rest has been displayed under adverse conditions with resulting damage to such delicate articles as wax dolls, etc. The other was the collection and trophies of the city's own Manchester Regiment. The Regiment's Commanding Officer, on a visit of inspection, was amazed to find the state of the display and the number of missing items. One excuse from an official was that shortage of money was the trouble – the recession of the '20's, the war years, and the present recession! Not much hope!

Whether the privately owned museum is the answer to all this, I don't know, but Stuart Hall has been drumming up interest in his own museum up here in what was

Lancashire and is now Greater Manchester. Stuart Hall is he of the infectious laugh who chuckles through TV's "It's A Knockout" and reads out the BBC's North-west News over television. He is primarily a clock enthusiast but is interested in all kinds of by-gones. His collection of clocks, said to be valued at £350,000 has been moved from his home in Cheshire to form the basis of his Museum at the "Last Drop Village" complex on the outskirts of Bolton. To date the museum contains, apart from his clocks, vintage motor cycles and cars – including the Rolls "Silver Ghost" which won the London-Edinburgh race of 1911 (top-gear all the way) as well as some vintage racing cars. Stewart tells me he has plans to extend the museum to include everything from old gramophones to real trams – not forgetting steam engines and fairground organs.

Indeed, a nice Marengi organ provided music at the opening ceremony which was dutifully – and



Lady Pilkington & Stuart Hall. Lady Pilkington performed the Opening Ceremony.



Marion Tempest examines the museum's one & only musical box - to date. A table-top Polyphon.

humorously – performed by Lady Pilkington, whose family are already into the private museum business with their famous Glass Museum.

Amongst the fine display of long-case, bracket, and carriage clocks I spotted only one musical clock – by Jonathan Barnish of Rochdale –

which offered a selection of four tunes. And, believe it or not, only one musical box in the shape of a table-top Polyphon. Stuart tells me that, since the opening of his museum last November, the Polyphon has proved one of the major attractions and that moves are

afoot to implement this side of the business!

“The Last Drop” is well worth a visit if you are in the area and the complex offers excellent accommodation, restaurants, shops, and a weekly Sunday ‘Flea Market.’ And, of course – The Stuart Hall Museum!

WITCHES GALORE – AUTOMATA WITH THE “ANTIQUE” LOOK

by Jack Tempest

FOR almost five years exiled Yorkshireman William Summerbell – he hails from Sheffield and now resides in Selsey, on the South Coast – has occupied himself as a professional of automata.

In 1977 William, who was a

draughtsman and compression engineer by profession, decided to become a full-time toymaker, urged on by his successes in this field and by his friends, who recognised his model-making abilities.

“I said that I would try it for a few

weeks,” he told me, “And here I am, still turning out models and plenty of orders in hand.” William has an obvious weakness for witches and his better-known models include a witch in a rocking-chair and one on a rocking horse.

"My toys have an 'antique' finish – not with the intention of misleading anyone – but because I feel that their appearance is improved by this," William explained. Nevertheless, I have personally seen William's witches offered in London auction houses as genuine antiques – placed there by unscrupulous dealers who have, I know, also passed them off as genuine antiques on the London markets.

The models are hand-carved and the mechanisms which give them movement are taken from old alarm and mantel clocks. They are realisti-

cally dressed by Clover, William's wife. His designs have an international appeal and the toys – there is a range of 22 – have been exported world-wide. All the designs are original and William's works have made quite a few appearances on TV.

One of his recent commissions was from the artist and book-illustrator Jan Pienkowski who took an immediate liking to William's automata when he came across them on display at a charity show. Mr Pienkowski, you may remember, is the designer of those amazing 'pop-

up' books "Robbt" and "Haunted House" as well as the "Meg & Mog" children's books. William tackled the not-too-easy task of producing an automata in which cats bob up and down in a cauldron stirred by a witch whilst another witch circles round on a broomstick. The whole thing is built on to an old hand-wound gramophone base, which provides the clockwork power. "The main difficulty lay in translating the characters into a moving three-dimensional image," William informed me, "Jan Pienkowski's drawings in the Meg and Mog series are very much silhouettes."

© Jack Tempest, 1982.

DUTCH STREET ORGAN IN CANADA

by Jim Marke

I FIRST became aware that De Cello was in Canada when I read R DeWaard's book "From Boxes To Street Organs in 1977." Thinking it would be in Eastern Canada I forgot about it. However, sometime after moving to Alberta in 1978 my family visited the Edmonton Zoo and brought home a postcard showing the organ.

Finally, early September 1981 we travelled to Edmonton in order to record the sights and sounds of the machine.

De Cello was brought to Edmonton in 1967 by members of the Dutch community and presented to the city as part of Canada's 1967 centennial celebrations. Perhaps a zoo is an unusual setting for a Dutch Street Organ. However, it is magnificently displayed in a humidity controlled building built especially, and opening, via large sliding doors, onto a miniature amphitheatre. Perhaps the location is close to ideal inasmuch as it is now exposed to large numbers of young people.

We had made an appointment to visit the machine and arrived close to the appointed time. As we made our way past the monkeys, giraffes,

elephants caged, I supposed, as in a circus or fairground, through the air floated the unmistakeable sounds of the organ. I had never before heard a Dutch Street Organ, or for that matter, any organ played outside. As I rounded the last corner my eye travelled directly to the machine. With tunnel vision I was transported in time and space to another world. Vaguely I sensed other people. The atmosphere was, at least to me, electrifying.

Gradually I came back to reality and hastily switched on the tape recorder. Ken MacKay, our guide, nodded to me and we introduced ourselves. "We usually only play it for about half an hour on Sundays," he explained, "but if someone is particularly interested we'll play it for them anytime."

I checked through the music books, about 20 all told, as Ken proceeded to play them through. Briefly he expressed their pride in this unique and quite well maintained machine. "The city has a contract with a fellow from Vernon to maintain it and when he started a few years ago he did a lot of work on it, generally tightening up and so

forth." Surprisingly I noted one of Perlees books was almost $\frac{3}{16}$ inches narrower than the others. Trying it, the book played properly for a few bars then slipped out of registration!

The organ has recently been repainted, although the picture scenes have not been touched. An electric fan has been removed (thankfully) by the Vernon technician and the organ is driven by an electric motor spinning the original hand wheel.

The organ sits on its proper street cart and Ken assured me that due to various problems it was no longer paraded about.

Perhaps the best tune to my ears was 'Silver Threads Among The Gold' and Perlees arrangement, particularly of the counter melody and judicious use of the tremolo, is really stirring.

We thanked Ken for a wonderful experience and discussed returning with a better tape recorder to make a complete uninterrupted record and note down technical details for our archives. Should anyone be interested in this recording project they can write me for copy.

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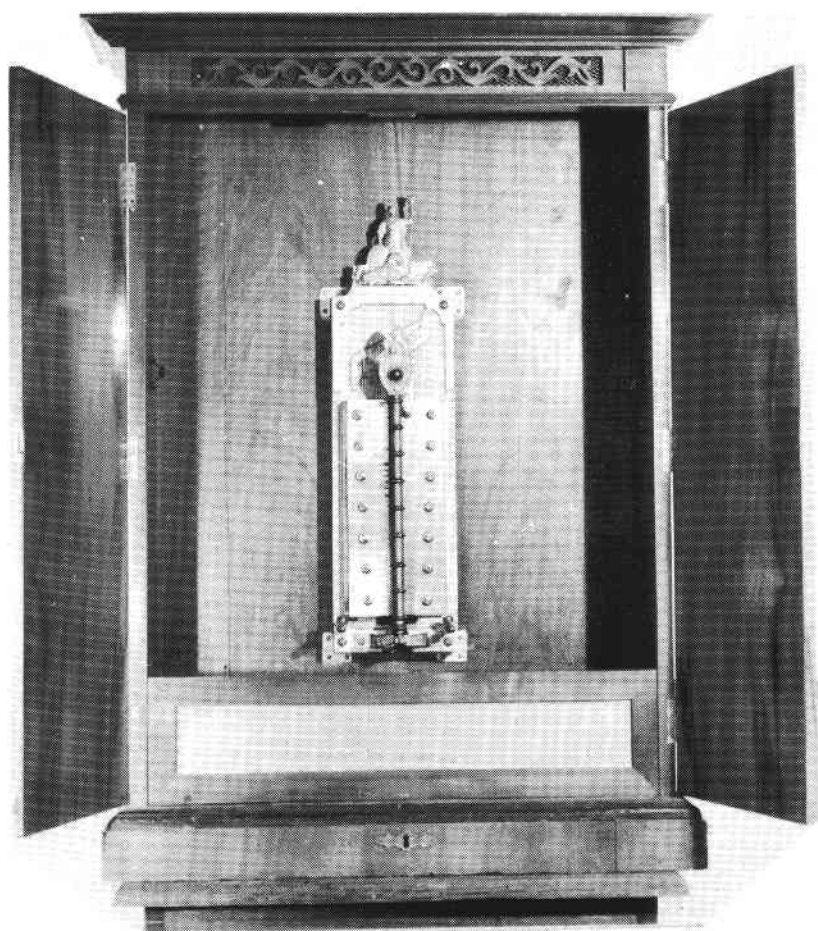
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MUSICAL BOX ODDMENTS

By H.A.V. Bulleid

ROSSINI, Donizetti and Bellini are often bracketed together by lovers of Opera because they were contemporaries and because in their operas Italian melody and singing reached a peak. It is fortunate that so many of these melodies, famous and less famous, are preserved for enjoyment on musical boxes.

Bellini

Vincenzo Bellini was born at Catania, Sicily, in 1801, the son of an organist. A local nobleman admired his youthful talent and paid his expenses at the *Real Conservatorio* in Naples. Young Bellini was lucky again that his first opera, in 1825, was heard by Barbaia, the manager of La Scala, Milan and of many lesser opera houses. Barbaia commissioned Bellini to write an opera for Naples and, when in 1826 it proved a success, to write another for La Scala. This was *Il Pirata* and its enthusiastic reception made the name of the young composer. He wrote in all only ten operas, those often noted on musical boxes being....

Il Pirata	1827
La Straniera	1829
I Capuletti ed i Montecchi	1830
La Sonnambula	1831
Norma	1831
Beatrice di Tenda	1833
I Puritani de Scozia	1835

Bellini was not a pioneer; his genius was all for lyrical expression and this explains the wide popularity of Bellini tunes on musical boxes. He fell seriously ill soon after the London premiere of *I Puritani* and died in Paris in September 1835, aged 34. Though obviously liked and admired by his friends he suffered severely from an inferiority complex and from imagined persecution, as can be seen from a typical letter of his in December 1831 to a friend in Catania....

"In spite of a formidable cabal against it, worked up by one powerful and one very rich person,

my *Norma* astounded the public even more last night at the second performance than at the first. Yesterday's official gazette at Milan had announced a complete fiasco, because at the first performance the opposing party had sat in silence while the well-intentioned applauded; and because the powerful person is in command and can order the newspaper to write whatever she likes... The public is cursing the journalist, my friends are jumping for joy, and I am most satisfied, doubly pleased because I have discomfited so many of my mean and powerful enemies..."

It is very revealing to contrast that Bellini letter with one written the day before by Donizetti to a friend in Naples...

"*Norma*, which had its first performance yesterday evening at the Scala, was not understood, and was judged over-hastily by the Milanese audience. For my part I should be most delighted to have composed it, and would willingly put my name to that music. The introduction and the last *finale* of the second act are enough in themselves to establish the greatest musical reputation; and the Milanese will soon relise how foolish they were to pass premature judgement on the merits of this work..."

In 1837 six famous pianists including Chopin and Liszt played their own variations on Bellini's march from *I Puritani* at a charity concert. The series, later orchestrated by Liszt, came to be known as the Hexameron – a neat and lasting tribute to a famous composer.

Nicole dating

The accompanying chart, which is a plot of serial numbers against years, is my suggested ready-reckoner for the manufacturing dates of Nicole boxes up to the closure of the Geneva business in 1880.

I think it incorporates all published fixes, and no amendments were suggested when I showed it at our London meeting on December 12th, 1981.

The shape of the curve is characteristic for almost every enterprise; lower output at starting, maximum output during hey-day, and a tailing-off towards the end. It is surprising how quickly the output accelerated; but this is strictly a chart of serial numbers and we cannot be certain that every serial number meant a box actually manufactured or that the numbers ran in strictly numerical order. Also, there may have been many smaller boxes in the early days.

The maximum rate of output, about 1000 a year, was achieved from 1830 till 1860, or even later if the shut-down occurred earlier than shown.

More firm dates are needed to refine this chart; if you hear of one please advise our Archivist, Keith Harding.

Cylinder/Comb Geometry

An important detail of cylinder musical box design is that the cylinder pins are moving towards the tips of the comb teeth throughout their contact. This obviates any reciprocating motion of pin on tooth which would increase wear and cause stray noises and damper troubles. It is achieved by placing the tooth tips considerably above the axis of the cylinder as shown in the large-scale drawing herewith.

All cylinder boxes are set up in the same way, with an angle of 15° between the plane of the comb and a line from the tooth tips to the centre of the cylinder. This important angle is usually achieved by setting the comb at an angle of 7° to the bed plate and with the tooth tips about 1/4 inch above the axis of a 2 in diameter cylinder, and rather more for a larger cylinder. The same basic principle is applied in disc boxes.

The intermesh of the cylinder pins with the bass tooth shown in the drawing is 0".025 giving a lift of about 0".07. If a shorter treble tooth had the same intermesh it would have the reduced lift shown of about

0".055, which explains why the bass end tips should be set a good 0".01 below the treble tips – “about half a dot” is the classic advice. But note also that the lift at the treble end should be restricted to a maximum of about 0".04, so the treble end of the comb is set to a reduced intermesh of about 0".015.

The cylinder pins do not “strike” the teeth; they gently lift them – at a speed of about a tenth of an inch per second which equals 30 feet per hour. It would take two hours for a single run at cricket, not fast. What matters in a musical box is a clean, sudden release of the lifted tooth. I have shown a radical and a raked pin in the large scale drawing and it is easy to see that the release is cleaner from the raked pin, as was described by Alfred Thompson on page 28 of *The Music Box* Vol 6 no. 1. The thinner the pins the less this matters, and it is also debatable whether it makes much practical difference despite the undeniable theoretical advantage of raking, which also reduces the bending moment on the pins as they lift the teeth.

Judging by the innumerable tune sheets proclaiming “Spiral Steel

Dampers”, (which persisted long after it had become a Blinding Glimpse of the Obvious) the musical box makers must have been very well pleased by this notable improvement; and the spiral shape is technically well described because in a spiral the radius of curvature is proportional to the distance measured along the curve. In a damper the sharp curvature of the bottom loop gradually eases till the end near the tooth tip is almost straight – it presents just a slightly convex surface to the cylinder pin which first touches it at the point marked X on the drawing and then pushes it inwards and upwards to touch and then slide along the tooth. Dampers at the bass end need not be quite so close to the tooth tip as at the treble end where the intermesh is less.

It is easy to visualize, from the large-scale drawing, that a damper with less slope is liable to be nipped between pin and tooth, resulting in no damping and a metallic click. Conversely, if the damper end is too curved it will not slide easily along the tooth and may cause premature lifting of the tooth and more

unwanted noise. The normal practice of applying a touch of oil to all cylinder pins by means of a card lightly smeared with oil is an important aid to the sliding actions.

It can also be seen from the drawing that even a correctly-shaped damper can be nipped if the comb is too close to the cylinder. This emphasizes the importance of making certain that the comb is completely overhauled and has then been correctly positioned and firmly dowelled, before fitting the dampers.

The damper ends slide easily along the teeth if cleanly cut and I think stoning of the ends is unnecessary. Nor is it necessary to test that every damper will slide along its tooth; but when so testing an occasional damper it is well worth remembering the first point made in these notes, namely that the cylinder pin is moving *towards* the tooth tip throughout its contact with the damper.

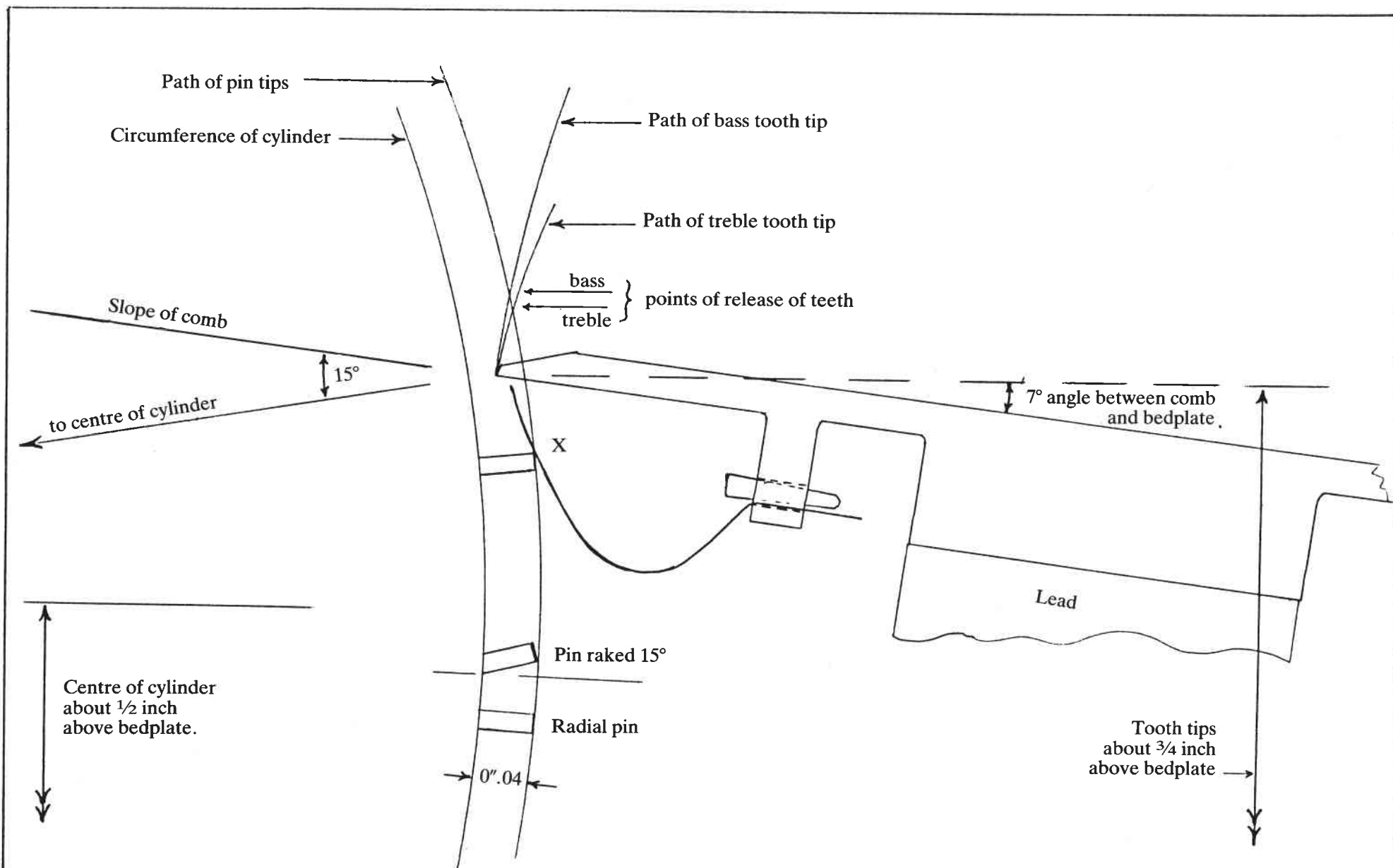
H A V B

Feb '82

Type of Music Box	Early – 10in to 11in cylinder	Early – 4 overtures 11in cylinder	Typical drum & bells 13in cylinder	Late 3-bell 6in cylinder	Typical large, late interchangeable 11in cylinders	15½in coin-slot Polyphon
Sounding board dimensions, inches	15 x 15	17½ x 17½	21½ x 11	16 x 9	30 x 9	19 x 23
Sounding board periphery, inches	40	50	65	50	78	84
Longest wavelength effectively radiated, inches	80	100	130	100	156	168
Lowest frequency effectively radiated, Hz	165	132	102	132	84	79
Lowest musical note effectively radiated	e below middle c	c below middle c	g sharp below middle c	c below middle c	f two octaves below middle c	e two octaves below middle c
Radiation efficiency of C, 2 octaves below middle C (65½Hz, wavelength 201in)	4%	6%	10%	6%	13%	15%

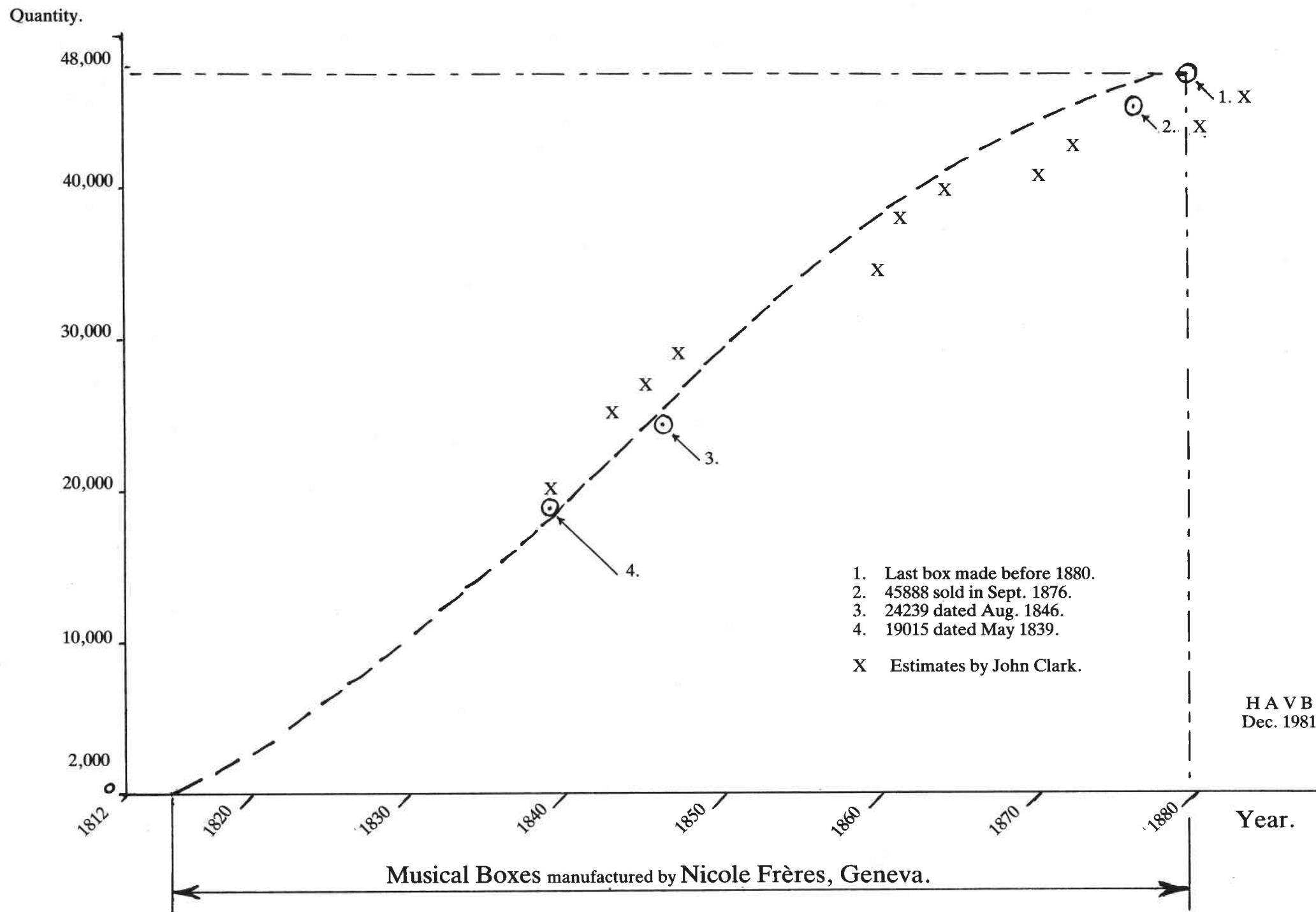
Table showing the improved radiation efficiency of bass notes in larger boxes. The low limit of fully effective radiation efficiency is generally taken to be 20%

(This table should have accompanied the Acoustics section of Musical Box Oddments on Page 155 of *The Music Box*, Vol. 10 no. 4, Christmas 1981).



Geometry of teeth, pins, & Cylinder — Scale : TEN TIMES FULL SIZE.

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MUSICAL EXHIBITS AT THE INVENTIONS EXHIBITION

By R Booty

The Victorians had a love for exhibitions of all kinds and the Music Trade Review section of the Musical Opinion had an equal love of recording any that contained musical instruments.

The main purpose of the International Inventions Exhibition held in 1885 was to illustrate inventions in general since 1862, and to show the development of musical instruments, and their manufacture, since 1800. Officially opened by the Prince of Wales on May 4th., with the main entrance in Exhibition Road, South Kensington, it proved extremely popular with the music trade, a total of two hundred and eighty firms applying for space. The Musical Opinion stated that, "manufacturers' exhibits will occupy the so called central gallery, a building sufficiently spacious, it was thought, to afford room for all applicants. The response to the invitation of the committee, however, proved embarrassingly great". There was also, "the historical portion of the exhibition, for which the galleries of the Albert Hall have been reserved."

CLASS 172.
Automatic and barrel instruments.
Manger & Co., J.
Vaucher, P.
Imhof & Mukle.
Hodgson, H. P.
Rebicek, C.
Chiappa & Son, G.
Nydpruch, Count.
Slocombe, R. H.
Nicole Frères.—A selection of operatic, oratorio, and other musical boxes. A feature in the exhibits will be an entirely new arrangement of the mechanism of the musical box on the interchangeable system.
Gillett & Co.
Wier, M. A.
Bretner, Kuhn & Co.
Tournaphone Music Co.
Karra & Wöhrlich.
Rebicek, G.
Langdorff & Fils.
Perrelet & Co., A.—Collection of musical boxes, including some mounted on ornamental tables.

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Comments on exhibits at the International Inventions Exhibition in South Kensington

Another passage or corridor (leading into the spinning and weaving department) has, on each of its sides, stands devoted to the display of music publishers. Messrs Home & Son, of Edinburgh, show various specimens of music printing. Next in order are the tonic sol-fa publications of Messrs Curwen & Sons. The British and Foreign Blind Association show several specimens of printing for the blind. We fear the grand work this society is doing will be liable to be overlooked. To those with eyes the embossed plates of paper

and brass do not absorb interest: and so the stand gets passed by. All honour, however, to those who have in this way endeavoured to mitigate the sad lot of the blind. Messrs Augener, of Newgate Street, send specimens of their music and printed books; so do Messrs Morley & Co., of Regent Street, and also the City Music Store. Mr W Augener, the music printer, sends very creditable specimens of his craft; likewise do Messrs Henderson & Rait, who have a large stand containing samples of their letterpress and lithographic sheet music, and specimens of some of the hymn and service books which they ever turn out so creditably. A curiosity is exhibited at their stand. It is a "press proof"

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MUSICAL OPINION & MUSIC TRADE REVIEW.

[MAY 1, 1885.]



Musical Exhibits at the Inventions Exhibition



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Stall No. 111.
Miranda Pianistas, American Organs,
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Terd. Monti's Ivory Sets. [Fittings].
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SAHL & CO.
36, Basinghall Street, E.C.
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[Highly commended by the Profess]

259

returned for printing by M Gounod. It is quite clear what is wrong — but something has gone awry; and the mighty Frenchman in his rage writes indignantly on the top, in blood-red ink, "What does all this mean?" What, indeed! It is hard to say, exactly; but it appears that one or two crotchet stems and quaver-tails have been omitted by the compositor, and M Gounod is angry. Another incident has occurred in the same proof. The words are in Latin; and the always intelligent and careful printer's reader has "queried" the case-ending of one of the Latin words. On this M Gounod forwards a little note — which Messrs Henderson have pinned on the proof — in which the writer argues the point, gives his reading of the sentence, and maintains that he is right. You should not miss seeing this curiosity. On the other side of the corridor, the first stand we meet is that occupied by Messrs Weekes & Co with a selection of their musical publications and also some music cases and "carriers". Next is Mr Pitman, who submits to public notice a good selection of the publications for which his house is so highly popular.

From "Musical Opinion & Music Trade Review", May 1st, 1885.

But what about the automatic exhibits, first the musical boxes. John Manger and Co. had, "Several new inventions in Musical Boxes, most beneficial to the trade." Unfortunately the Musical Opinion reporter neglected to describe these inventions. "Messrs Paillard & Co's specialities in Musical boxes are the 'plerodiennique' and the 'inter-changeable barrel' musical boxes: a fine show." Also exhibiting were, "Messrs Perrelet & Co of Geneva, Mr. Rebicek of Prague, Messrs Langdorf & Sons of Geneva, and from Messrs Karren & Wohnlich (the agent for the latter being Mr P Borne)." Musical boxes in carved cases were shown by Mr Hunter-Slocombe, and lastly, Messrs Nicole Frères had, "boxes of various shapes, designs, and sizes."

The exhibition was thought to have the largest display of musical instruments brought together up to that date with piano manufacturers having the most space. In 1885 the pneumatic player as we visualize it now was not yet on the scene, but one of the earliest piano players on the market was demonstrated. It caused quite a stir, with "The Times" reporter making special mention in his short report on May 28th. He wrote, "an ingenious substitute for a pianoforte player, which might serve well at small carpet dances to find occupation for the neglected and apparently useless 'masher' who does not dance. The machine is placed in front of an

ordinary piano, so that its long fingers project above the keys of the piano. A perforated roll of cardboard, punctured like the paper used in an American organ, is placed on top, and a handle being turned the fingers of the pianista, as the machine is called, strike the keys of the piano." Offered by Thibouville-Lamy, winners of two gold medals at the exhibition, the Pianista was an early hand cranked piano player that used folding card music books. Also on show was the Miranda Pianista, a similar instrument from the then recently formed Automatic Musical Instrument Company.

Back now to the Musical Opinion and its tour of the pianos. "At this point you cannot help being interested in the mechanical pianos shown by Mr Chiappa. These instruments are the finest and most finished of their class, and are well worthy of attention. They are suitable for drawing room use." I assume these to have been barrel pianos of a very refined style! Another mechanical piano, "Hodgsons' Patent", with unfortunately no further details, was shown by Messrs Dove & Son.

Ellis Parr, — who by December 1886 was asserting himself on the disc musical box patents for the symphonium, which had been seen in Germany in June 1884 but was not apparently exhibited here, — had three stands showing pianos, non-automatic, and one stand with the Miranda Pianista. Also shown were, "some patent 'hygenic' music stools", and, "the non-revolving seat of Mr Peddle!"

Messrs J G Murdoch & Co Ltd did not, it seems, demonstrate a mechanical instrument but were present with, "the E P Carpenter 'Angelus' organs, a good selection of the various styles, designs and sizes being here shown." Also listed under Class 167, Harmoniums etc, were, Mechanical OrguINETTE Co, Gavioli Fils and Ellis Parr. M Welte & Son (Baden) displayed an electric organ and, "a large show of reeds and fittings made by the Munroe Company is also shown by Messrs Erhardt & Co." Gavioli was said to have sent a 'harmonisateur', but at present I have not been able to trace what this instrument was.

Bells were also shown with a small carillon of twelve coming from Messrs Gilletts' Croydon foundry. This played "God Bless the Prince of

Wales" for the Royal party on the opening day.

Messrs George Whight & Co sent, "an automatic piano, a cabinet organ, a mantel orchestrone, and a variety of automatic instruments and perforated paper for performing them." They also had the Tour-naphone, an American organette more usually known here as the Cabinetto. Mr A P Hodgson exhibited an automatic 'Melodia', — most likely the organette of that name — Messrs Beutner Kühn & Co showed the Ariston while Mr Farmer had an autophone, again probably the player-piano was not yet ten years old and the player reed organ had only just made an appearance in basic form. It is quite likely that there were more of each exhibited than there are listed here, especially organettes.

Lastly we come to what must have been the largest musical instrument on show, Messrs Imhof & Mukles mighty orchestrion. It was suggested that it would, "be very useful in swelling the volume of sound to be heard on those Fridays which are to be called 'play-as-you-please' days."

The exhibition must have been a success as by the closing date of November 9th there had been 3,760,581 visitors. Many of these people would have arrived by the Underground at South Kensington Station and walked the then newly opened, but now well known, subway. This now gives easy access to the various museums in the area, but was built with the intention of giving easier access to the exhibitions and of removing the apparently annoying large crowds that would throng Cromwell and Exhibition roads.

I have only found one note of dissent on the mechanical music exhibits and that was in a preview in the Musical Opinion. It read, "The large number of seventeen exhibitors are entered in a class for automatic and barrel instruments. Considering that these mechanical contrivances have little or nothing to do with music as an art, it is questionable whether a portion of the space they will occupy might not have been utilized to greater advantage." Oh what joy if we could only transport ourselves back ninety seven years to ogle at all that wasted space!



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FROM CARILLON TO MAGNETIC TAPE

The Development of Sound Recording in Berlin.

Dr. Walter Bruch.

(Translated from the German by David Snelling).

From Carillon to Magnetic Tape.

It is not only nostalgia, a home sickness for the old times with the music of our grandfathers and their ancestors that motivates us to restore self playing musical instruments of those times and to allow their music to play once again. History comes to life from the melodies for which pinned cylinders, pinned discs and perforated rolls were once programmed.

In this fashion the old turret carillons in Berlin and in Potsdam draw attention to the rulers who had erected them to the honour of God or their own fame for centuries until they were destroyed by bombing. Old pipe and flute organ clocks from Berlin carry us back to the salons of the Biedermeier time. We learn about the life of ordinary people from the pleasures they experience from the barrel organ. Heinrich Seidel (1842 - 1906) the author of a book entitled 'Leberecht Hühnchen', called it 'music of the poor people' in a poem.

However in the age of the barrel organ it was already possible to record music and the human voice on cylinders, records and tapes. The playing of these recordings as well as the music stored on mechanical musical instruments in the same era gives us a particularly vivid reflection of the life of the last hundred years.

No other German town is so closely connected with this development as Berlin. Soon after the Elector Friedrich III assumed the crown as Friedrich I in 1701 he wished to ring in the new Prussia with carillons.

They rang out for 250 years until shortly before the end of the war. Destroyed by bombs they disappeared with Prussia which they had accompanied virtually from its birth.

Berlin rose again but it was no longer a centre for mechanically reproducible music. Sadly we think back to the times when records and sound films went out to the whole world from Berlin. Berlin was its capital. It is this Berlin I wish to recall.

The First Bells Played in Berlin and in Potsdam.

The ascendancy of Berlin which had become the capital of Prussia began with King Friedrich I.

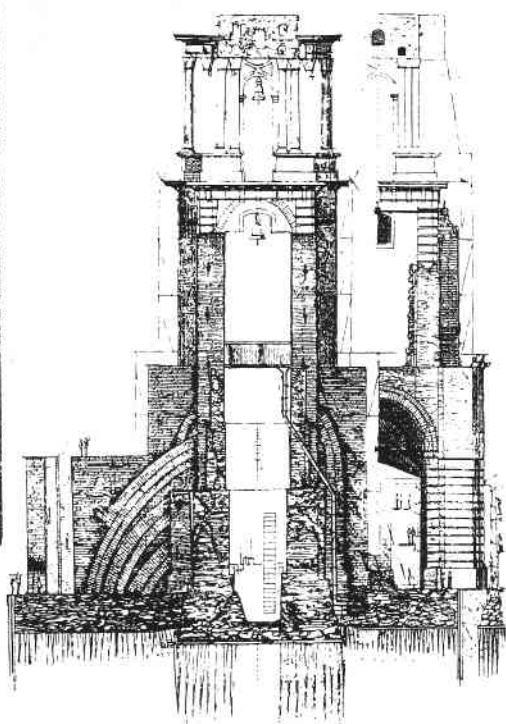
The sculptor Andreas Schlüter, a 'Michelangelo of Baroque Berlin' worked in this town from 1694. Whilst he was still Elector the King had developed a pinned cylinder and the mechanism for a turret carillon in Holland. It was intended that the bells to go with it should be cast in Berlin and that the carillon should ring out from a very high tower. Although he was no architect Schlüter was created Court Architect on the strength of his plans. It was intended that the Schlosplatz would be redeveloped in a generous manner. J C Broebes had made an engraving in 1702 which showed a high tower in the shape of a needle to the north of a splendid church which was intended to have a glockenspiel at the very top. In the same place there was already a somewhat rotund tower which served as the water reservoir for the water displays at the pleasure garden, which at the time also contained the Mint. For this reason it was known as the Mint Tower.

Schlüter designed a new tower which was to be built on the old foundation to the enormous height of 95.7 metres. He built round the old plinth to strengthen it. In addition he proposed an airy construction of columns culminating in a richly profiled summit of a Guardian Angel carrying the Royal crown. The open upper levels were intended for the carillon.

Due not only to the uncertain foundations consisting of sand and bog but also due to technical mistakes by the sculptor Schlüter, who had never been trained as an architect, and his foreman completion of the work was placed in question as early as 1704 when the height of the tower was still very low. Cracks developed in the foundations. According to a second design by Schlüter it was intended to build buttresses around the tower that would hold the weight of the tower in the middle and stabilise the construction by removing the weight from the foundations. Pile upon pile was driven into the ground and giant quantities of bricks were built around the tower.



Draft of the revised layout of the Schlossplatz in 1702; A 100 metres high mint tower and to the right of it — the only real building — the arsenal.



The strengthened foundations were not able to hold the tower.



Schlüter's plan for the mint tower. (In the right hand plan are side additions intended to support the tower.)

But everything was in vain. In order to calm the distant King, who had become aware of rumours about the delay in completing his tower Schlüter wrote to him in the middle of 1706 stating that he would, with god's help, hear the carillon play in the tower in August. But God could not help; the tower continued to lean further and the danger of collapse appeared likely a few days after the despatch of the letter. In great haste, at 1 o'clock in the morning, Schlüter ordered work to commence on the removal of the upper portion of the tower. His architect friends spoke behind their hands of a Tower of Babylon. The angry King let it be known that the ill-advised building was to be demolished quickly as he did not wish to see it again upon his return to Berlin.

Not only was the dream of a campanile, a free standing tower over Berlin, not realised but the fate of Schlüter was also sealed.

The mechanism of the carillon which had been bought in Holland was put into store as were the bells which had in the meantime been cast in Berlin by Johannes Jacobi. In 1713 King Friedrich Wilhelm I gave the whole carillon to the reformed Berlin parish church and an approximately 90 metres high tower was prepared by and by in which to build the carillon.

However when the carillon played on New Years Day 1715 for the first time it became clear that the tone of the bells was not pure. It is a pre-condition for a carillon to produce artistic music that the tone of each individual bell and of the whole carillon should be pure. All

attempts by Jacobi to render the tone of the Berlin bells pure failed. With heavy heart it became necessary to turn to Holland and order the casting of a new set of bells from the experienced bell founder Jan Albert de Grave. The Dutch carillon master who undertook the work delivered 35 bells to which he added the two smallest of the bells cast in Berlin. The carillon operated faultlessly with these 37 bells from 1717 until it was destroyed during the bombing in the Second World War.

they could not turn were attached to the cylinder which had a thickness of 11 millimetres around its periphery and secured by a nut from the inside.

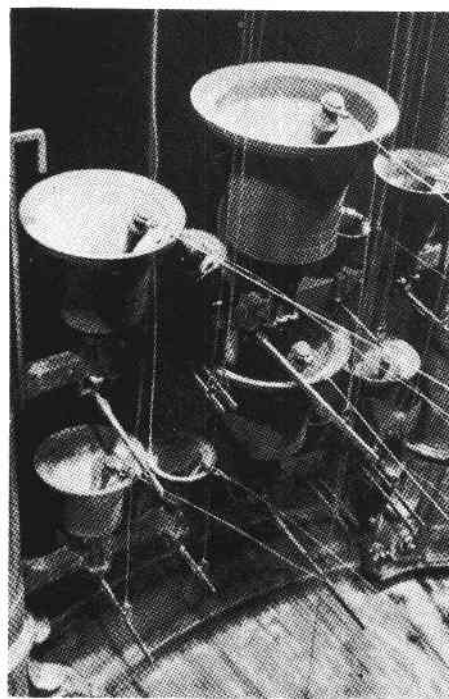
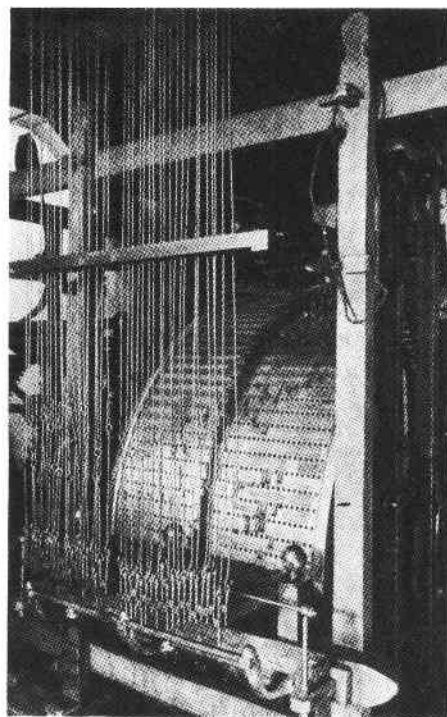
The cylinder was driven by a 20 hundredweight weight which had to be wound to the top of the tower twice a day despite the fact that it descended through several stories. An automatic electrical winder was installed in 1905. The rotation of the barrel caused the 'pins' to strike levers from which steel cables led to hammers which activated the bells.



The parish church in Klosterstrasse; in 1930.

Driven by a clockwork the cylinder played a choral melody every half hour and every hour. The quarter and three-quarter hours were signalled by a short prelude of a few notes. The choral melodies changed every month. The pinned cylinder which was made from cast iron had a diameter of 1.66 metres and a circumference of more than 5 metres. It had 4,800 square holes to receive the "pins", 74 "pins" for the hourly melodies and 34 "pins" for the half hourly melodies.

The construction of the 'pins' on the cylinder was an art. Hardened steel parts were made in eight different shapes which, when fastened to a hole on the cylinder, allowed different variations of the strength of striking and of the beat. The pins which were rectangular so that



Inside the tower of the church: Pinned Cylinder, and Carillon.

The pinned cylinder not only permits the playing of high and low notes, long and short notes, harmonies and melodies but also permits the sounding of chords which two hands could not play. "Manual" playing of the carillon is via a keyboard and a foot pedal board. The manual keyboard consists of turned staves which are sounded by the fists of the carillon player.

Strangers to the city also found the parish church attractive as will be clear from this poem of 1727:

'What is most attractive about this tower is the widely famed carillon, which I will not attempt to describe visually because it stimulates only the ear.'

The King also wanted a carillon in Potsdam. The first garrison church was consecrated there in 1720/21. It was of open work construction with a rectangular ground plan, and held a carillon at the intersection of a dormer roof. It was also built by Jan de Grave. But this church was again built on sand. After a few years significant cracks in the walls showed that the construction had subsided. In 1730 it was necessary to remove the carillon and to destroy the building. The architect Phillipp Gerlach then built a new church

The foundation of the tower was especially well secured on piles and stones so that it could be built to a height of 90 metres. The carillon was rehung there. The installation was under the direction of the Dutchman Arnoldus Casseboom who had been in charge of the glockenspiel at the Berlin parish church since 1716 and who was also the organist and cantor there from 1730. To the 35 bells of de Graves in Berlin he caused 5 new bass bells to be cast (C, D, E, F sharp and G sharp).

These additional bells weighed 113 hundredweight which was heavier than the 35 Dutch bells which weighed 90 hundredweight, so that the tower had to carry over 200 hundredweight of bells.

Instead of the first barrel from Holland Casseboom arranged for a more accurate barrel to be constructed in Berlin out of bronze with a diameter of 1.85 metres and a width of 90 centimetres which weighed 26 hundredweight. The 5,280 holes in the cylinder were very carefully positioned and took six workmen half a year to complete. 16 different types of steel 'pins' were available to allow fine nuances of programming.

The bells in the garrison church were struck by hammers pulled by ropes when the cylinder rotated. The mechanism was so arranged that the hammers immediately lifted from the bells after striking so that the bells could ring out. The fist keyboard, on the other hand, worked clappers which rendered possible a softer and different type of playing.

In its completed form this carillon played from 1735, during the life of Friedrich Wilhelm I, until the day when the army report of Sunday 15th April 1945 about Potsdam recorded 'numerous historical buildings, including the garrison church, have been destroyed'. The ruins of the tower were blown up and removed on 25th June 1968.

Let us turn back to the beginnings of the garrison church. Initially the cylinders of its carillon were programmed with tunes which had been left by the

Dutch. These were followed by the special arrangements of the carillon player of the day which were designed to reflect the capabilities of the carillon.

Friedrich the Great, who was not so religious as his Royal predecessor, made the parish church in Berlin subject to the following order:-

'.....that in future no psalm or song of the Potsdam type, namely harmonies and preludes, should be set on the music cylinder, nor be played on the manual keyboard of the same instrument.'



The garrison church in Potsdam. (Section of a painting by Hasenpflug in the Berlin museum).

He also forbade the carillon player from playing funeral songs at funerals which had been the custom of wealthy people until that time: however the Governor did permit the playing of funeral music on the grounds that this could be allowed during the absence of the King. From 1780 we have evidence that the carillon broadcast choral tunes above the streets of old Berlin in accordance with long established custom.

The Potsdam carillon is particularly well known to people today from one melody which it played every day:

*'Be faithful and upright until your death
And do not deviate from God's ways by as much as a
finger's breadth'.*

This was reputed to be the favourite tune of Queen Luise, and before the Second World War it was the signature tune of the Deutschlandsender. Most people did not realize that the tune came from Mozart's 'Magic Flute':

*'Papageno a girl or young wife desires
Yea such a sweet dove would for me be happiness'.*

The "Treu-und-Redlichkeit" words were written to the melody in 1793 two years after the first performance of the 'Magic Flute' by Hölty (1748-1776). The grenadiers of Potsdam, on the other hand, sang altogether different words:-

*'Practice marching in straight lines until your death
And do not deviate from the man on either side of you
by as much as a finger's breadth'.*

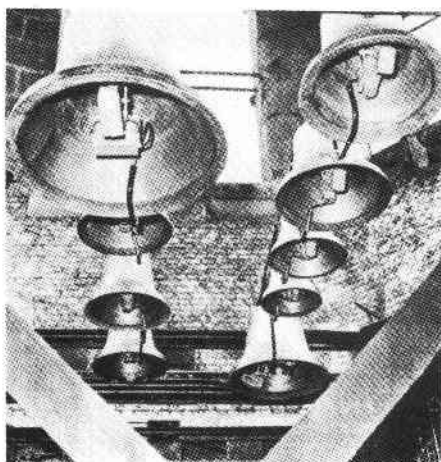
The carillons which were destroyed in the war cannot be reconstructed. The original Potsdam 'Treu-und-Redlichkeit' still rings out from a tape recording every day over the Wannsee from the tower of the church of St. Peter and Paul in Nikolskoe.

Small carillons which have been erected in memory of the dead or of the good old days try in many towns to sound out over the noise of the traffic. As in the ruins of the Agidienkirche in Hanover a carillon with 25 bell sounds, a carillon also rings out from the ruined tower of the Kaiser Wilhelm memorial church in Berlin. Nine bells have been installed. One serves to mark the hour, eight play a simple melody composed by the then head of the house of Hohenzollern, Prince Louis Ferdinand of Prussia.



The old Carillon of the Potsdam garrison church,

and the new carillon in the old tower of the Kaiser Wilhelm memorial church in Berlin.



Berlin and its Carillons

The clockmakers who were in Berlin at the beginning of the 18th Century belonged to the Locksmiths Guild. For their qualifying examination in 1788 they were required to produce a practical example of their own skill which might, for example, be a turn spit.

Pocket watches constituted expensive imports in Prussia. Friedrich II wished to change that. An advantageous circumstance helped him.

The Canton in Switzerland which is today known as Neuchatel, in which the greater part of the Swiss clock industry was concentrated, was once Brandenburg-Prussian and known as Neuenburg. Neuenburg, which was recognised as a sovereign dukedom in the Westphalian peace, fell in 1707, when the house of Orleans-Longeville died out, with all its three states into the ownership of the equally Protestant house of Hohenzollern in accordance with the wishes of its inhabitants. It remained under the patronage of the Prussian king for nearly 150 years until 1848 apart from a short interlude in Napoleonic times.

By and by Friedrich II obtained 40 specialists for the clock industry from the dukedom. He installed the Geneva clockmaker Huguein as the manager of his first factory in Berlin which he equipped with the most modern machines at the expense of the state. In the process he created a second project, he founded Friedrichsthal bei Oranienburg in which were built 20 colonial houses for the clockmakers and their families—the first industrial suburb in the region of Berlin!

Friedrich's wish to establish a watch industry in Berlin was not fulfilled. The Prussians were too poor to buy expensive pocket watches. Although the Royal factory still had 35 workers in the year in which the King died the clockmakers slowly went into business on their own. They were joined by wooden clockmakers from the Black Forest and specialist clock factories developed.

Although Frederick the Great had no great success with pocket watches in Berlin the music loving monarch settled for the manufacture of musical clocks in his capital.

As a sort of balance sheet of these activities the Berlin publisher and author Friedrich Nicolai summarised the position as follows in his authoritative "Description of the Royal Residence Towns of Berlin and Potsdam" in 1786, the year of the King's death:

"Musical clocks, as well as harp and flute clocks, which play through the medium of a cylinder, are manufactured in Berlin to such perfection the like of which is not seen anywhere else whether in or outside Germany; hence this industry is especially Berlin's own. The fine tone, the precision of the tempo and the finest musical nuances leave nothing further for an artist to desire in the best works of this sort. The finest Bravourarias and whole flute concerts are programmed on such clocks and the smallest musical graces are played with the greatest precision and expression. Subtleties of tone, the double tonguing of flutes, trill, pauses, are all



Parade March.

performed so cleanly that one would believe that one was listening to a flute virtuoso. The great skill of local artists, carvers, bronzers, gilders and so on has also given these clocks an external beauty, which is pleasant to the eye as to the ear...."

We will let J H Moritz Poppe explain in excerpts from his book of 1810 "The Clockmakers Handbook" the three sorts of musical clock of which the harp clock and the flute clock were specialities of Berlin:

Musical Clocks.

We mostly find these so loved artistic clocks in the homes of well to do and rich people, delighting their ears by their musical tones at a touch. It was really not a bad idea to combine the works of the ordinary clock which served so many useful purposes with another mechanism to enable melodious songs to be played without the assistance of a human hand, mouth or feet.

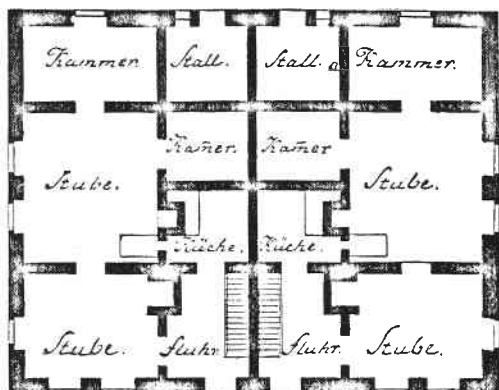
Not every clockmaker can make such clocks but, rather, only those that understand music; and such a clockmaker will be in a position to devise rules in accordance with which he can manufacture such clocks by his own methods to bring them nearer to perfection.



Oranienbourg, Berlin's first industrial suburb.

Harp Clock.

The mechanism of a harp clock must consist of four parts: 1. of the harp itself; 2. of the hammers which replace the fingers and activate the harp; 3. of the cylinder which is set with pins which lift the hammers with the beat of the music and let them strike the harp harmonically; and 4. of the clockwork which sets the tempo when the clock is played. The going train which gives the clock a regular tempo consists of a number of wheels and gears of which the main gear drives a cylinder over which is wound a string on which hangs a weight which acts as the driving force for the works of the harp clock. This weight normally weighs between 20 and 40 pounds. The large cylinder which is usually 11 inches long and 6 inches in diameter is turned either from wood or made from a thick sheet of hammered and soldered brass. The second method is preferred as the pins can be fastened much more firmly. A shaft goes through the centre of the cylinder which provides the bearing for the cylinder. The pins which lift the hammers are set around the circumference of the cylinder. There are as many hammers as there are strings on the harp and they all operate through a uniform set of hinges. The hammers serve the same purpose in relation to the harp as the hammers of a piano. They are fastened vertically with a bent point underneath them known as a tangent; this tangent or key sits between the pins. Therefore when the cylinder turns the keys are pressed down by the pins as a result of which the hammers move back above the hinges and a spring pushes them towards the harp so that they hit the strings...

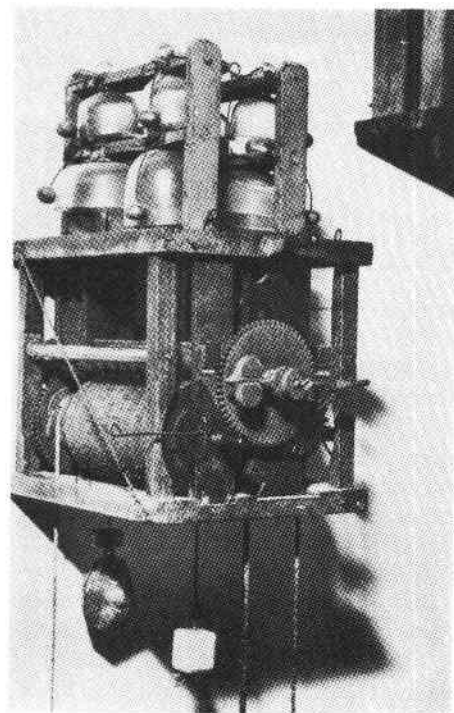


Site plan of the clockmakers colony at Friedrichsthal bei Oranienbourg and ground plan of the clockworkers' houses — 1780.

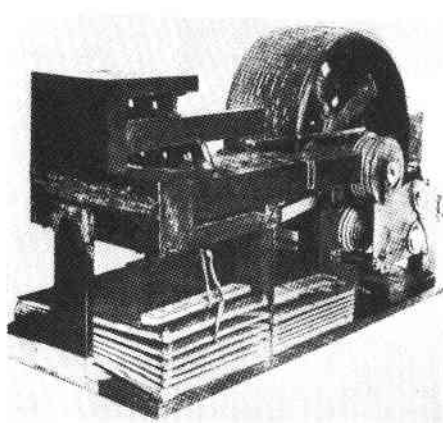
Flute Clock.

It is much harder to make a flute clock than a harp clock and a much more skilful and expensive exercise because of the diverse accessories... The cylinder of a flute clock looks very like the cylinder of a harp clock except that small brass hooks take the place of the pins on a harp clock in several places to stop the sound of the flute clock looks very much like the cylinder of a harp clock cylinder in a flute clock similarly actuate the tangents (keys) of which there are always 27. When a key is lifted by the pin of a cylinder a so called sticker—a brass wire which is connected with the key—is pushed down at the same time; this sticker opens the valve which is located in the wind chest of the flute work. The wind chest is set under the cylinder close to the reservoir. The flute pipes, of which only two in each register work, are located above the cylinder; the other flute pipes are there only for decoration.

The wind reservoir obtains its air through two wind bellows...



Musical work of a clock glockenspiel with 8 glass bells from the 18th century (Vienna Town Museum).



Organ work with pin cylinder the 'Art Cabinet' of 1617.

Glockenspiel.

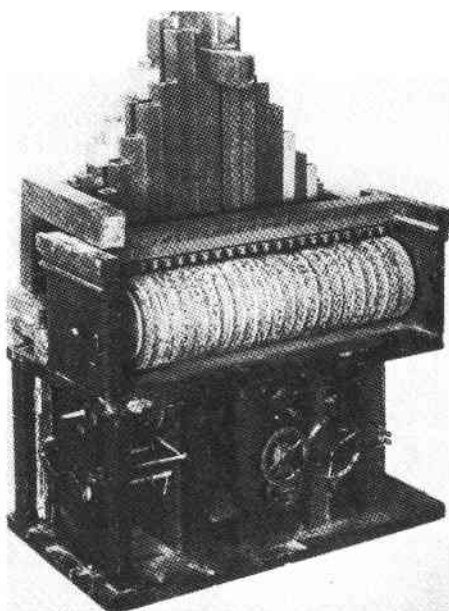
Clocks which produce harmonies by the use of various notes do not produce such fine music for the ear as harp and flute clocks; they are nevertheless very pretty if the bells are tuned to proper musical intervals and they are easier to produce and considerably less expensive.

The general description musical clock includes today not only clocks which are actuated at certain times to set in motion a cylinder set with pins which produces melodies through the sounding of strings, organ pipes or bells. The description also covers small mechanical music boxes without clocks.

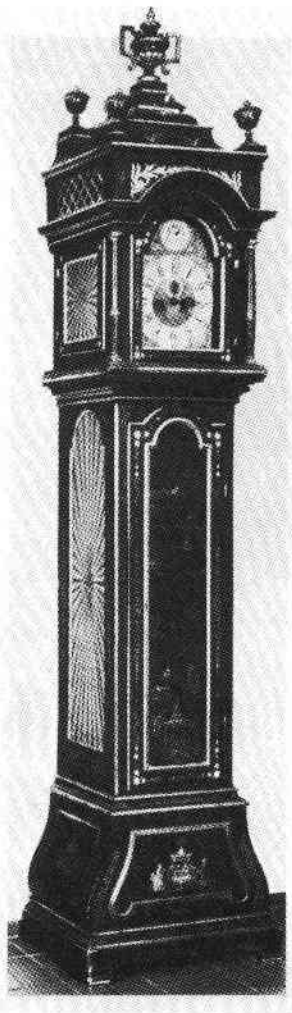
The Hohenzollerns possessed such a music box long before the time of "Old Fritz". Such an organ music box was built in to the finest art cabinet which Germany ever possessed. The cupboard which was delivered by the Augsburg Partrician in Stettin to Duke Philipp von Pommern in 1617 was inherited in 1648 by the Great Elector in Berlin. This music box was sacrificed in the Second World War together with the castle which contained the Hohenzollern museum then known as the Berlin Arts and Crafts Museum in Castle Monbijou.

Its small organ work had 21 pipes and 42 rows of pins on the cylinder and could play two pieces of music. It was therefore possible to hear music after 315 years exactly as it had sounded in the first instance. The only item which remains is a record of the notes which had been written down from the pinning of the cylinder.

Music work of a flute clock with 43 flutes circa 1800. (Deutsches Museum Munich).



After Frederick the Great had failed in his attempt to bring to Berlin the famous Parisian maker of automats, Jacques Vaucanson, Frederick the Great developed the Berlin craft clock industry in the direction of musical clocks as recorded by Nicolai. He records, amongst others, the names of Alfroth, Kleemayer und Ehrbar, artists from whom a few instruments have survived despite the hail of bombs on Berlin. According to Nicolai's publication the first known was the court and town clockmaker Christian Möllinger who was a master clockmaker in Berlin from 1780. His principal products included large upright clocks with the, typical for Berlin, hammer operated harp and flute clocks.



Berlin harp clock of C. Ehrbar of 1797 decorated with lacquer Chinoiserie. (Berlin Museum).

Friedrich II had set on musical clocks melodies of the then fashionable opera overtures, as well as compositions of his flute teacher and court composer Quantz, his court bandmaster Graun and his chamber cembalist Philipp Emanuel Bach. From his son Johann Sebastian Bach we know that he composed several pieces for harp and flute clocks as well as for barrel organs.

The successor to "Old Fritz", his nephew King Friedrich Wilhelm II was every bit as enthusiastic about musical clocks as his uncle. He ordered magnificent examples for Potsdam. They were even noticed by Goethe on his visit to Berlin. This is recorded in a letter to Frau von Stein on 17th May 1787:

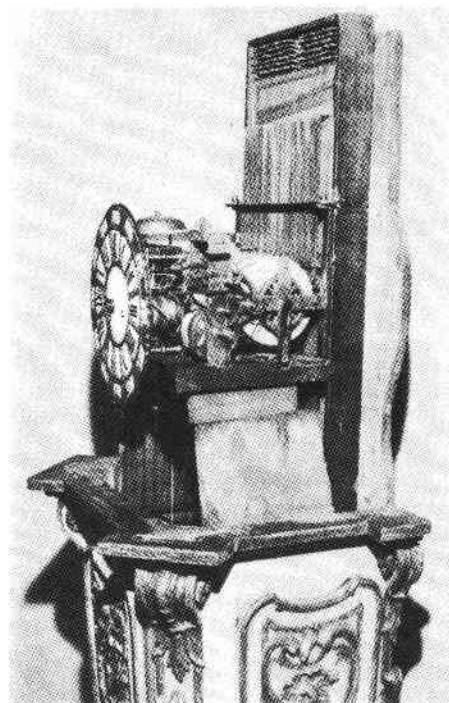
"If only I could adequately describe the large clock-work, which turns before one, the movement of the dolls by concealed gears, especially the large old cylinder which is engraved FR (Fridericus Rex) and set with a thousand pins, which produces one melody after another".

The external appearance of these large clocks altered with fashion. It was written about the clocks of C L Elfroth that they were no longer decorated in black with gold as in previous decades but in the white gold manner which conformed with the fashionable Peking wallpaper towards the end of the 18th Century.

We learn the following about an unusual upright clock which was manufactured in 1801 and bought and set up in Potsdam in 1825 by King Friedrich Wilhelm III:-

"Description of an astronomical work of art the like of which in perfection and beauty had never previously been produced.

It consists externally of a mahogany finished and tastefully decorated case 8 feet high containing at its front two white enamelled glass dials each of 18 inches diameter one above the other.



Musical works of a clock by J C Kruger, Berlin 1764 (Musical Instrument Museum, Berlin).

The top one is the numerical dial of an astronomical clock which, by means of different pointers shows the hours, minutes and seconds of astronomical time as well as the month and the day, the times of sunrise and sunset to the nearest hour and minute, the Sunday letter, the difference between clock time and true astronomical time, the apparent position of the sun as well as the degree of the ecliptic, and also the sign of the zodiac; finally the position and period of the moon, the lunar month and silhouettes of the waxing or the waning moon.

This perfect, beautiful and accurate clockwork is wound up once a year and regulated by a double pulley mechanism which is actuated by a weight weighing only 17 lbs”.

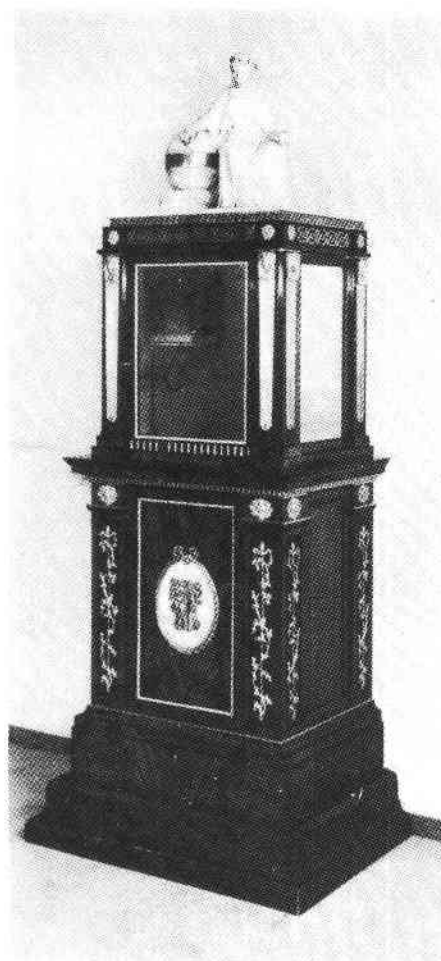
The hour dial which rotates on its axis in 24 hours shows the rise and fall of the sun and the moon through two openings. Everything is adjusted to the Berlin meridian. Hammers strike the quarter hours with a light tone and the whole hours with a deeper note. The striking mechanism automatically switches itself off in the evenings at 9 o’ clock until 5 o’ clock the following morning.

The sentimental use of the musical abilities of the flute mechanism with the use of morning songs at dawn and lullabies at sundown is characteristic of this time. Although the clockmaker is not known we know the composer of the Royal chamber music Johann Heinrich Rolle.

“A flute work is combined with this astronomical clock which plays a suitable symphony throughout the year at the moment of sunrise and sundown.

The Morning.

At the moment of sunrise the first flute sounds quietly as if awakened from slumber, the second flute joins in and both seek to arise from their slumber. The third voice joins them and all three fight the heavy slumber as the fourth happily joins in. With the entry of the stronger fifth flute inertia and slumber are overcome and the sixth voice leads all of them triumphantly in praise, which divides into two themes which alternatively answer each other until both join in ever ascending celebration then again soft, serious, in celebration now inter-woven in a joyous hymn at the sight of the full face of the majestic sun. Now the voices draw back—soon gathering in reverential worship in the form of a lively largo—overawed by the feeling of the Father above and the unworthiness of the weak flesh through the inner feeling of the indescribable benefits of God leading again to the anthem of the two themes, until all the voices combine in jealous unison to outdo or excell over each other. The hymn sounds in loudest jubilation to its harmonious end with a three part final trill leading into the choral *mein erst Gefuhl sei Preis und Dank* the first verse of which ends the composition.



Berlin flute clock by Christian Möllinger 1797.
(Berlin Museum).

The Evening.

Imagine a country scene in which the tired pilgrim hears the restful tones of a hunting horn accompanied by its echo at sunset: happy shepherd's pipes join in; he hears the horn of the herdsman driving his herd to rest; the invitation to evening pleasures of the bagpipes, the sound of the happy country dance.

A sight of the last rays of the setting sun draws him back from these thoughts, with solemn seriousness he perceives the total disappearance of the warming sun which is echoed by the descending chords of the flute in descant, as the secondary base voice craves attention with its loud melody.

Simultaneously with fading light the melody dies. Then the melody solemnly begins again and leads to the first verse of the choral *Nun ruhen alle Walder* with which this composition finally comes to an end.

MECHANICAL MUSIC AND THE GREAT COMPOSERS

ONE: IN THE BEGINNING

IT IS comparatively easy to understand the music-lover's desire for musical automata capable of providing music in the home.

Great composers and musicians also took a practical and enthusiastic interest in mechanical music.

A composer can, indeed, submit his notes to manuscript as an artist his colours to canvas. The artist, however, only needs to display his painting and it is there for all to judge.

The musician needs a live performance for his manuscript to be fairly judged by the public. The notes come to life when they are *heard*, but alas, once heard they are gone. As soon as the vibrations are stilled, the sound they made lingers on only in the memory of the hearer.

Music when soft voices die

Vibrates in the memory.

(Percy Bysshe Shelley)

The situation before the age of recorded music was that mechanical music might, perhaps, produce a permanent aural record of a composer's music, more, with the inventiveness of the player-piano even the subtle dynamics of personal performance could be preserved for all time. Mahler, Stravinsky, Grieg, Rachmaninoff, Dohnanyi,.... these are just a few of the great names in music who produced piano rolls of themselves playing their own music.

One further point regarding music on music-box cylinder, polyphon disc, or player-piano roll – is not the music selected a history of that era?

– what was popular in 1790? 1810? 1830? 1850?... the music arranged for automata would provide the answer for future generations.

Oh yes, the great composers were very interested in the development of mechanical musical instruments.

It was their canvas; their proof that they were lauded in their day, that they were known and appreciated, and that it was *their*



Tune Sheet in a Nicole Frères Music Box
The 'hit tunes' of the mid-19th century

music which devotees of the art wanted to hear in the privacy of their own homes or in the cafés and public places where music was welcome.

Would not music mechanically produced in the home, or the inn, stimulate an even greater public interest in music of all kinds? The larger the demand for music the greater the call on musicians. Would not this demand provide work for a new breed – the professional musician. Musicians centuries ago were only semi-professional because they had other employment.

In Bach's time it was commonplace to see on wage sheets; JOSEPH BROWN, violinist and gardener, or, FREDERICK JONES, footman and trumpeter, and did not Bach himself have to teach as part of his duties?

A larger demand for music could produce the freelance professional musician. Some say that Mozart was

the first professional musician, but he was never very rich. Never mind, the love of music was spreading to a widening audience.

This demand also encouraged the instrument makers. The music creators would have to work closely with the inventors and the technicians.

Musicians, even in the nineteenth century, did not consider any compensation for the use of their music.

It was not until later that the musicians began to assert their rights to compensation. The present-day laws on copyright are designed to see that everyone involved receives a fair financial return for the part played in the complete creation of a piece of recorded music.

This is a far cry from the sounds of the studded cylinder described by the Jesuit Father Kircher in the seventeenth century.

Further back, in the sixteenth century, the marriage between musician and mechanical-music maker is not so well documented, but there is sufficient evidence to show that the partnership existed.

ALESSANDRO STRIGGIO, 1535-1587, was born, and died, in Mantua. During his lifetime he travelled much, visiting London and Paris. His madrigal, *chi fara fed'al cielo*, was one of the earliest works to be mechanically reproduced. The arrangement of the madrigal was by PETER PHILLIPS, circa 1565 – circa 1630. Phillips was an English composer who lived and worked mainly in Europe. He composed and arranged music for the water powered barrel organ built by Salomon de Caus.

The Renaissance lifted the science of mechanics to an art. The invention of the spring was utilised to the full as a means of providing power. It was an era of inventions, many of great importance to music. At the end of the Renaissance (16th century) and into the Baroque period (17th and 18th centuries) and beyond there was hardly a home without mechanical music of some sort.

SALOMON DE CAUS was a famous inventor in his day (early 17th century) and a publication of his (in Frankfurt, 1615) was entitled, *Les Raisons des forces mouvantes avec diverses machines*. DE FLUCTIBUS was another writer-inventor who described his work in the book *De Naturae Simia* (1618).

HANS LEO HASSLER, 1564 – 1612. He was an organist and composer and was the first notable German composer to study in Italy. Between 1602 – 1604 he was chamber organist to the Court of Rudolf II in Prague. His interest in mechanical music was stimulated because at the same time he was busily engaged in the manufacture and installation of musical clocks.

Hassler was a Protestant but directed music for Catholic services in Augsburg. Later in his life he became organist to the Elector of Saxony.

The instructions on one of his compositions reads, "to be put on the barrel of an organ movement which plays without the help of any singers".



South African or Nigerian ZANZA.

25 tuned metal prongs activated by thumbs. (By permission Horniman Museum, London.

Photo: R Clarson-Leach).



Tuned teeth of metal comb struck by pins on revolving cylinder.

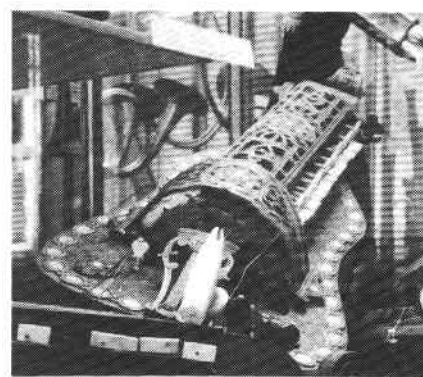
This is the basic principle of the Music Box.

JOHANN K KERLL, 1627 - 1693.

Johann was a German organist and composer who was born in Munich, although he studied in Vienna and Rome. Some of his music was specially arranged for music box movements, *Ricercata* being an example.

FRANÇOIS COUPERIN, 1668 – 1733.

François was the first great composer to write exclusively for the harpsichord (or clavecin). There were five generations of musicians in this Parisian family, extending over two centuries. Some of the music written by François (Couperin le Grand) was in sets, an example being the *Fastes de la grande et ancienne ménestrandise* (Records of the Great and Ancient Minstrelsy),



Vielle a Roue. France, 18th century. Collection Louis Clapisson. Paris Conservatoire de Musique.

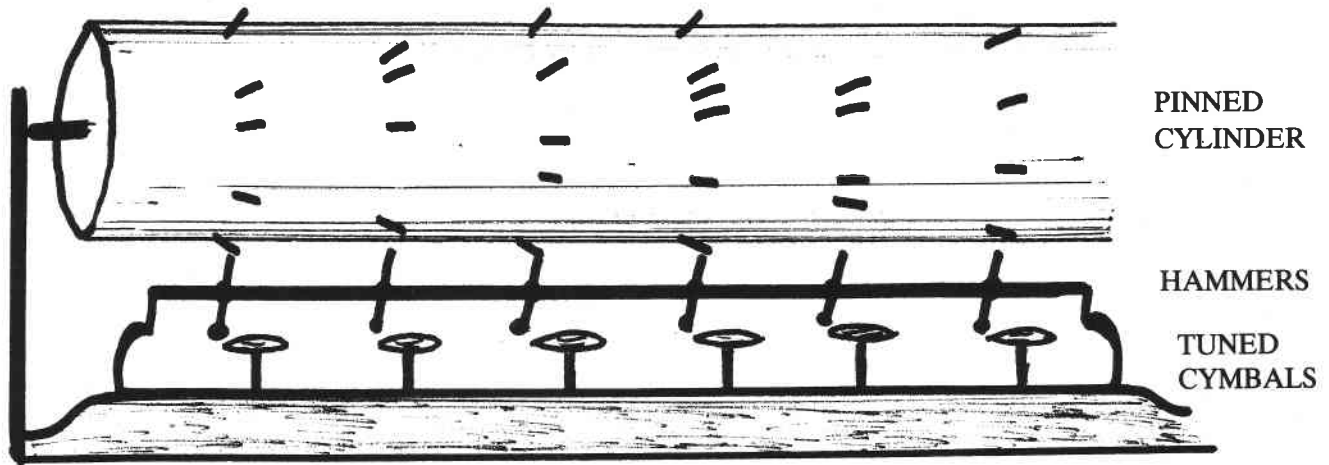
Photo: R Clarson-Leach

the second of the five parts in this set being *The hurdy-gurdy Players and Beggars*.

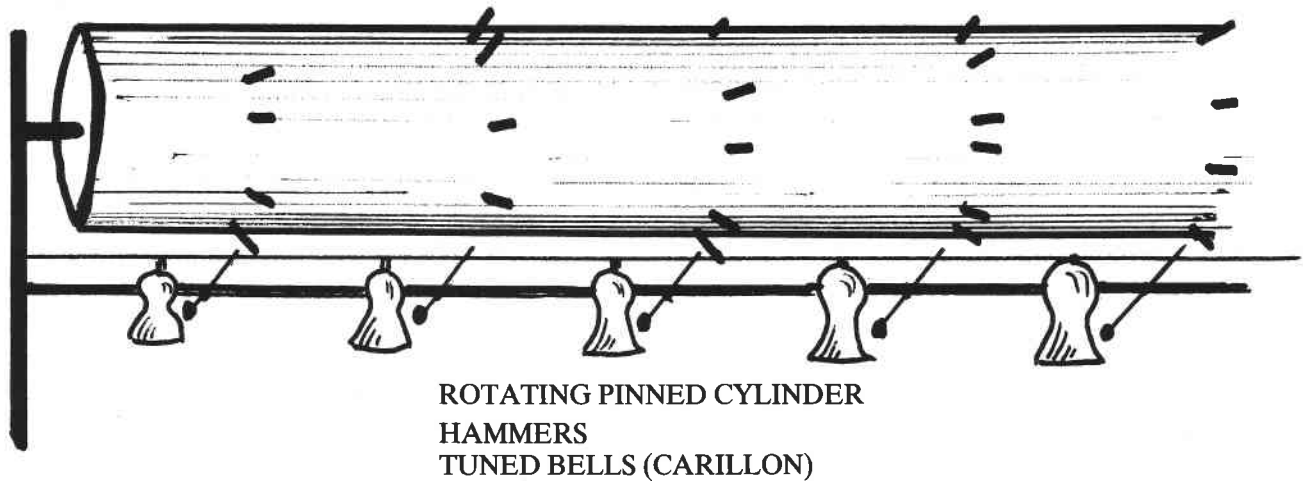
The hurdy-gurdy was played by both hands, one hand turning the handle, the other hand resting on the keyboard. The instrument is supported from the performer's shoulder by a strap. The internal mechanism is quite complicated. Many composers have shown that the instrument is suitable for solo work and for playing with other instruments. It is about the size of a guitar or lute. Wheels activate the strings. The French call it a *vielle à roue* (violin with a wheel. This principle is the forerunner of the mechanical violins invented in the late 19th and early 20th centuries).

500 YEARS OF MECHANICAL MUSIC-MAKING.

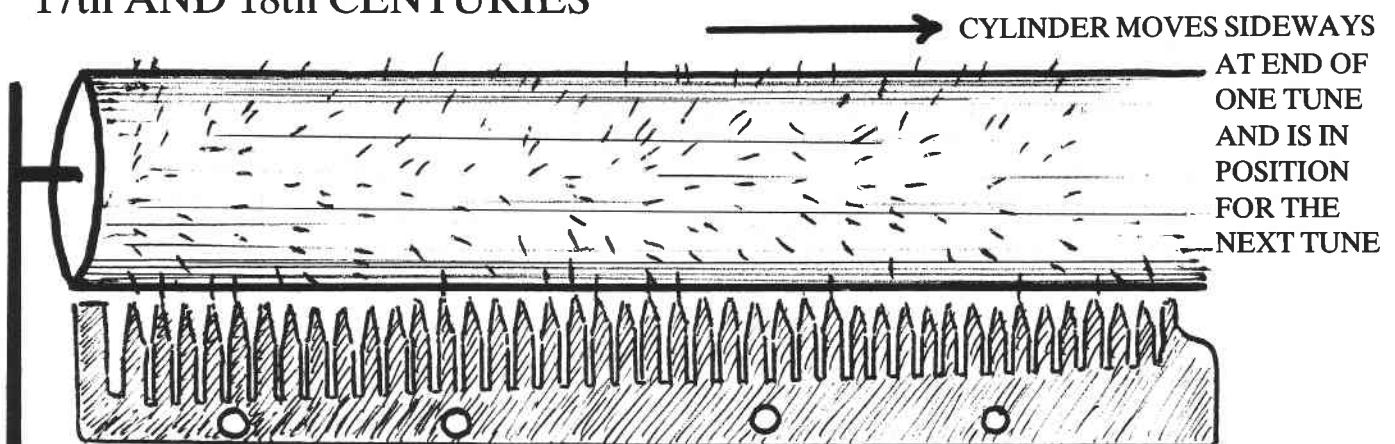
14th CENTURY



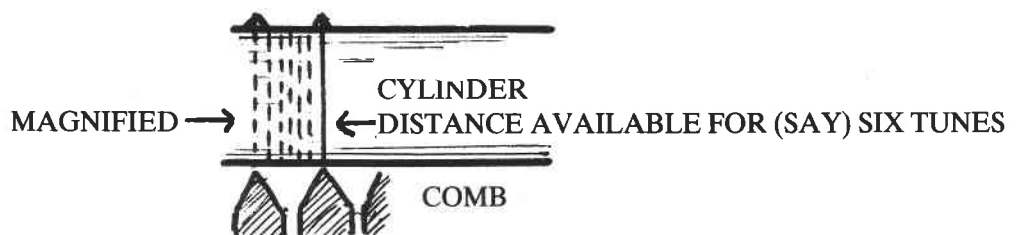
15th AND 16th CENTURIES



17th AND 18th CENTURIES



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THE CRAFTSMAN ONLY HAS THE DISTANCE BETWEEN TEETH FOR PINNING THE TUNES.



The hurdy-gurdy, barrel organ, and street piano suffered under the suppression of “street music”. Householders in Queen Victoria’s reign were given legal right to require street musicians to “move on”. These mechanical instruments became “déclassé”. Surely no *great* composer would write music for them!

ANTONIO VIVALDI

b. 1675 – 78? d. 1743.

Vivaldi was probably born in Venice, between the years 1675 to 1678, but he died in Vienna, in 1743. This prolific writer of some 150 violin concerti, 40 operas, and many other works, was not above writing for the hurdy-gurdy. His Opus XIIIa of *Il Pastor Fido* is written for this “street instrument”, and the piece is a fine example of Baroque music. It was published in Paris by Boivin in 1737. Vivaldi was a student of open-air music, and like the serinette (bird organ) composers he had a fine ear for the songs of birds. He wrote a “Cuckoo Concerto” to illustrate the changing year.

The hurdy-gurdy became associated with beggars, for example, the savoyard hurdy-gurdy street urchins described by Victor Hugo in *Les Misérables* (1862):

“... a small savoyard of about ten years, who sang, his vielle on his hip and his box with marmotte (Alpine rodent, kept for entertainment purposes) on his back see his knees through a hole in his pants”.

In his book, *Clockwork Music*, Arthur W J G Ord-Hume refers to the hurdy-gurdy as being “semi-automatic”. The reference goes on, “.... in the collection of W E Hill of London. This has a small wooden cylinder from the inside of which project long wire plectra. As this is rotated by the handle, the strings are sequentially plucked”.

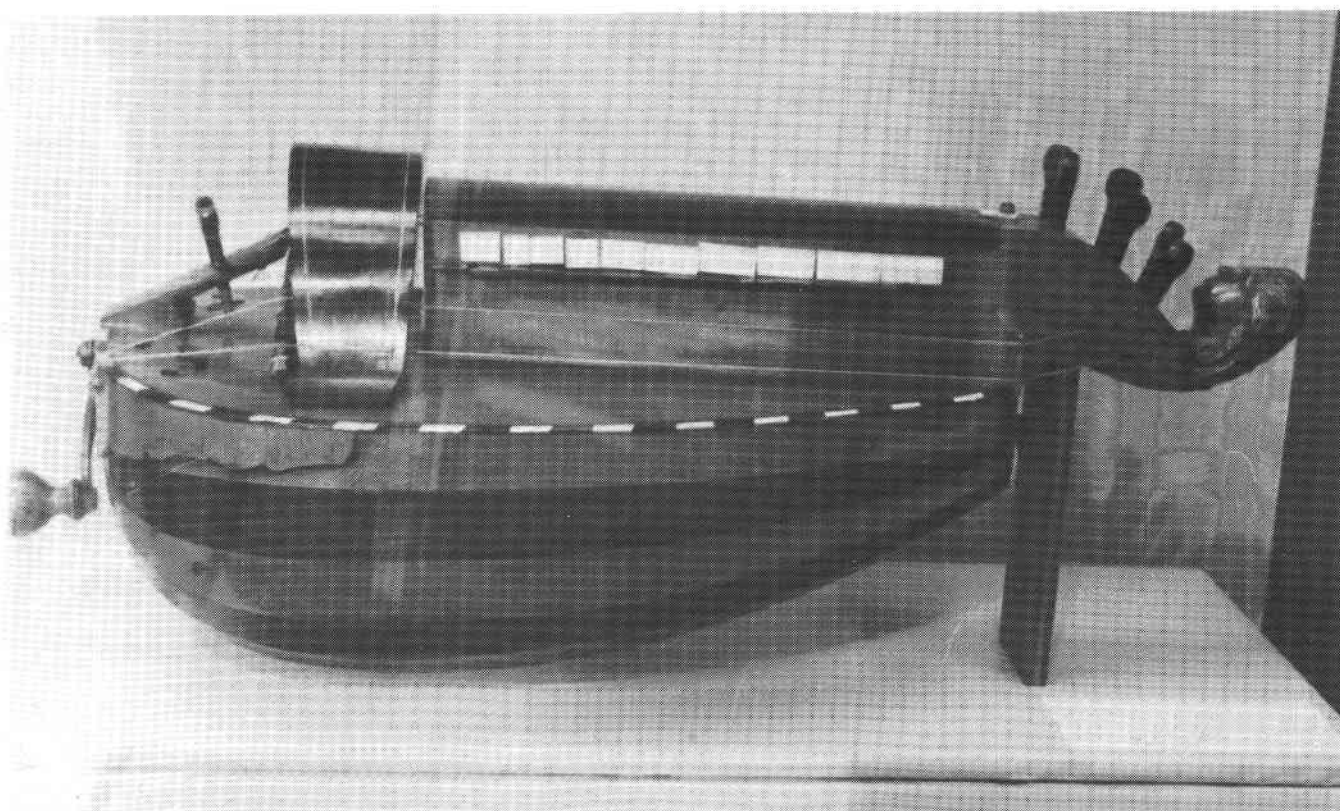
“Hurdy-gurdy” was the name Americans gave to “street pianos” or “barrel pianos”, and the term “hurdy-gurdy man” became synonymous with “organ grinder”. Because of this the genuine hurdy-gurdy is sometimes mistaken for the barrel organ.

About the year 1752 CHARLES BUTERNE published *six sonatas* for the hurdy-gurdy, to be accompanied by other instruments such as violins and flutes. He also wrote a



A savoyard hurdy-gurdy street urchin as described by Victor Hugo in *Les Misérables* (1862).

Picture by permission of Claude P Marchal, Paris.



Hurdy-Gurdy. Dolmetsch Collection. Horniman Museum, London. 1982 from the Dolmetsch handbook:-

“.....This instrument can best be described as a mechanical fiddle.”

(Photo R C L).

suite for concert performance by the hurdy-gurdy. JEAN-JACQUES NAUDOT, a popular composer of his day, and one of the best performers on the instrument, produced a collection of music, with pieces for the hurdy gurdy, entitled *Huitième Oeuvre de Mr Naudot*, circa 1725.

From *The Dolmetsch Collection of Musical Instruments* the Hurdy-Gurdy is described thus:-

“This instrument can best be described as a mechanical fiddle. Instead of a bow, the hurdy-gurdy is fitted with a wooden wheel set into the body and passing through a slot in the belly. The wheel is turned by a handle fitted to the end of the body. The melody strings are stopped by means of tangents which are pressed against them by a keyboard arrangement. There are also drone strings which play a continuous and unchanging accompaniment.

Because the wheel forms a bow of infinite length those essential ingredients of music; silence articulation and attack, are difficult to achieve. The effect of silence may be achieved by playing the melody strings in unison with the drone, articulation and attack are produced by passing one of the strings over a bridge with a vibrating foot. This can be made to buzz by irregularities in the speed of turning the handle”.

Thouvenel Henry described a hurdy-gurdy on exhibition in the Horniman Museum in these words:-

“The lute-shaped body is formed form alternating ribs of sycamore and kingwood.

The pine belly is edged with ‘barber’s pole’ decoration of kingwood and bone:

The pegbox which terminates in a carved finial in the form of a woman’s head, is decorated with a punched pattern of a traditional type.

The vibrating bridge for the *trompette* string is missing”.

JOHANN SEBASTIAN BACH, 1685 – 1750. Bach had a double connection with musical automata. There was the music he composed for mechanical instruments, and there was also the interest he shared with music box makers over the question of tuning.

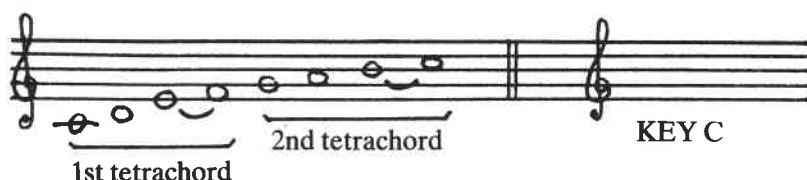
TWO: TUNING AND ARRANGING



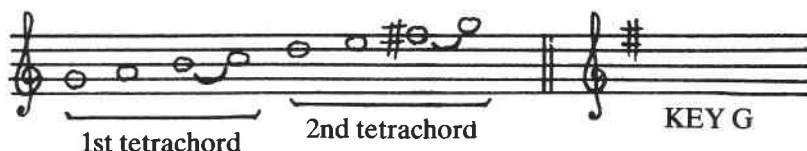
JOHANN SEBASTIAN BACH

During the sixteenth and seventeenth centuries musicians had been moving from the modal scales to the major and minor scales in use today. By using major and minor keys music could be transposed from one pitch to another. This is because every major scale has its tones and semitones in the same position. Likewise for melodic and harmonic minor scales. In all these scales the semitones remain in a constant position in that scale. This did not happen in the modes. Each mode had its semitones in a different position. Every major scale has its semitones in the same position. So does each harmonic minor scale. The melodic harmonic scale is slightly different in that it has one sequence of semitone positions ascending and a different sequence descending, but ascending and descending sequences are the same for all melodic minor scales.

An easy way to appreciate the differing semitone positions of the modes is to play any white note on the piano and then proceed scalewise on the white notes only. Each mode sounds different from the others.



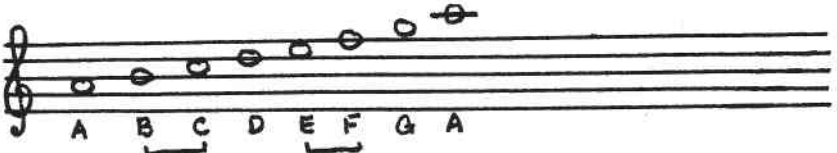
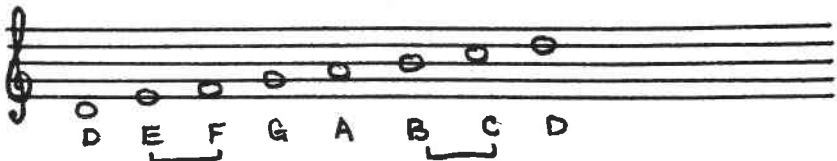
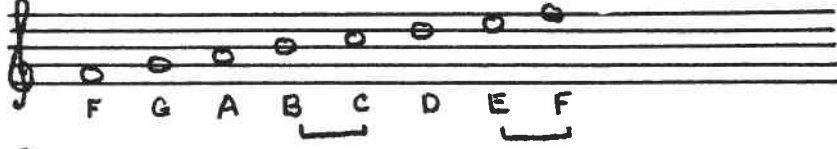
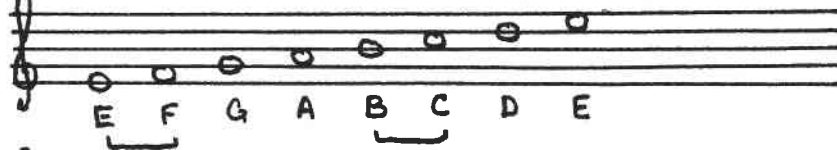

Each tetrachord of the major scale is made up of; tone-tone-semitone.



In this Key (G) in order to make the second tetrachord into the required tone/tone/semitone the F has to be sharpened. The Key signature indicates that every F has to be sharpened in the Key of G major. Every Key is given either sharps or flats to make the tones and semitones fit the pattern. These sharps or flats form the Key Signature. Key C signature is blank, requiring neither sharps nor flats.

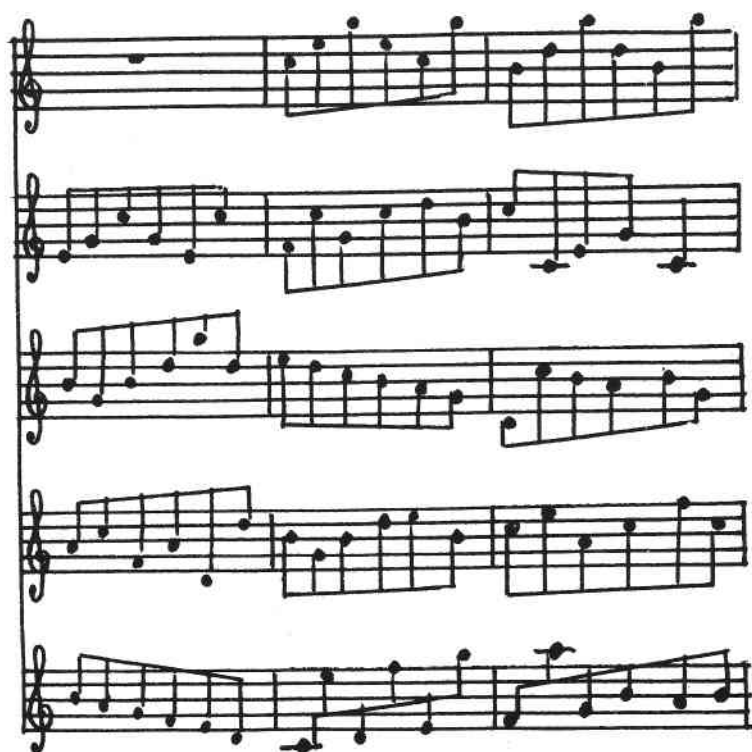
FIVE OF THE MODES

MARKS THE POSITION OF THE SEMITONES

	AEOLIAN MODE
	DORIAN MODE
	LYDIAN MODE
	PHRYGIAN MODE
	IONIAN MODE

SONATA FOR CHIMES.

HANDEL



In each mode the semitones appear at different places. Transposition from one mode to another is impossible.

From about 400 AD church music was based on modes. Music was harmonised, say from about 1000 AD, but it was not until 1500 AD that composers began to experiment with new tunings, and new scales, scales which could be "in a certain key", with the arrangements of tones and semitones being the same in each key.

When we play the Ionian Mode (the one which starts on C) we can hear that it is the one mode which sounds familiar to our twentieth century ears. It is the same as C major. No other mode is purely major or minor.

In this key (G) in order to make the second tetrachord into the required tone/tone/semitone the F has to be sharpened. The key signature indicates that every F has to be sharpened in the key of G major. Every key is given either sharps or flats form the key semitones fit the pattern. These sharps or flats form the key the signature. Key C signature is blank, requiring neither sharps nor flats.

In 1722 Bach produced his famous *Forty Eight*; two books of twenty-four preludes and fugues in the twelve major and twelve harmonic minor keys.

Bach was the first great composer to advocate equal temperament, that is, some uniformity in the tuning between tones. He did not do it in one stage, but created "well-tempered" clavichord tuning, a "smoothing over" of the existing mean-tone system which was bothering music box tuners too. Bach's son, Carl Phillip Emanuel Bach (1714-1788) carried on this work and achieved "equal temperament" in tuning.

As long ago as 1523 Aron had explained mean-tone tuning, with pure thirds and fifths flattened very slightly. The Spaniard, Salinas (1513-1590), blind from early childhood, studied the finer points of tuning, agreeing with Aron and with Zarlino (1517-1590) the Venetian Franciscan monk who published *Istituzioni harmoniche* in 1558, that a system of equal temperament should be universally adopted. Sadly

no one wanted to retune their virginals, clavichord, or organ pipes.

Even in those days there were efforts to make these instruments play mechanically. At his death in 1547 Henry VIII left, among his many musical instruments, a mechanical virginal; a keyboard instrument using barrel and pins. The description was "a virginal that goethe with whele without playing upon"

To make matters worse there was no international pitch. Some pitched A at 430 vibrations per second, and others as low as 415. The standard pitch today is 439. A "C" tuning fork is marked 523.3 vibrations. Today's tuning (of a piano) is a scientifically accurate procedure. It was not so in the past and it is no use today trying to tune a music box comb by using a piano.

Apart from his work to stabilise pitch and equal temperament, work which the music box makers fully understood, Bach also wrote for the automata of his day, a piece for a harp-playing clock, for example.

The Duke of Anhalt, in Dessau, possessed such a clock which had Bach tunes on the cylinders. Bach also wrote music of this type between 1717 and 1723 when he was in the service of Prince Anhalt-Kothen. He is known to have also written some pieces for a carillon clock

During the lifetime of Bach many households tried to teach birds, especially canaries, to sing simple songs. It is recorded that larks and starlings were able to remember the longest tunes (up to 16 bars). Bird organs, known as "serinettes", were manufactured and the music was played to the bird, in a darkened cage, several times a day. With the help of mechanical music it was thus hoped that the feathered singers would become reproducers of favourite melodies. There is a "serinette" in the Paris Conservatoire collection dating back to 1765, but there were earlier models.

GEORGE FREDERICK HANDEL, 1685-1759. Handel, unlike Bach, travelled outside Germany, finally settling in England. He died in London and was buried in Westminster Abbey.



Handel

GEORGE FREDERICK
HANDEL

This composer of the mighty work, *The Messiah*, was not above writing for mechanical instruments.

Among his compositions are a number of works for carillon, or chimes, some of which are in the Royal Music Library, housed in the British Museum, London.

The Earl of Bute employed an organist called Langshaw to add cylinders to a fine organ he possessed (this work took twelve years to complete) and the Earl engaged Handel to write some pieces specially for these cylinders. It is reported that "the barrels were set in so masterly a manner that the effect was equal to that of the most finished player".

Horace Walpole, a noted English collector of music boxes and other treasures, in 1737 wrote, "I am in the process of obtaining a music box that will play eight tunes. The great composer Handel says it will play music beyond his capabilities but the machine can be operated by the most ignorant person. When you become tired of the eight tunes you may have them changed for any other that you like". It is believed that this instrument was later put in a lottery and fetched £1,000.

Handel wrote and arranged many compositions for the mechanical musical clock movements designed by the English craftsman, Charles Clay (1716-1740).

The music was usually in two parts, but chords were inserted at appropriate places.

In November 1972 Christie's, London, sold a George II organ clock made by Charles Clay. It became the star feature in a Bond Street exhibition in 1973. This 18th century clock was sold along with a tooled and leatherbound book written in Portuguese but which also contained an English manuscript of the music played by the clock.

The original (newspaper) advertisement for the clock, 1743, refers to "eminent artists who collaborated in the production". George Frederick Handel's name is on this list. It is also reported that the clock originally had music composed by "three great masters; Geminiani (1687-1762), Corelli (1653-1713) and Handel, and properly adapted to the machine (musical movement of the clock) by Mr. Geminiani.

In the sequence of music played by the clock the 5th piece is the aria from Handel's opera, *Berenice*, and the 8th is a "Handel keyboard piece", which was not published in his lifetime.



Corelli

ARCANGELO CORELLI

FRAN GEMINIANI, 1687-1762

This composer and arranger of music for musical automata was born in Lucca, but died in Dublin. He was a very fine violinist.

CHARLES BATON, c 1710-1758

Charles Baton was especially noted as a composer for the hurdy-gurdy. The hurdy-gurdy was popular in France during the reign of Louis XIV (1645-1715), and a companion instrument was the *musette*, a bellows-filled bagpipes favoured by ladies, the Pompadour herself being a performer. The *musette* was not mechanical.

LULLY, 1632-1687, introduced it into the score of some of his operas.

Charles Baton also composed for the "organistrum", a large hurdy-gurdy operated by turning a handle.

THREE: AGE MUSICAL AUTOMATA

C P E BACH, 1714-1788. Carl Philipp Emanuel was not only actively interested in equal temperament tuning but he shared with arrangers of mechanical music a sense of exactitude in note ornamentation. Between 1746 and 1757 he was clavecinist to Frederick the Great who commanded him to write tunes for the flute-playing clock (listed now as 193/5-10). Whereas his father had only been able to move the world of music grudgingly into "well-tempered" tuning, Carl Philipp was able to keep this important feature moving and was able to introduce "equal-tempered" tuning. His studies of keyboard music, both mechanically (tuning) and musically (development of sonata form) caused Robert Hughes, compiler of the *Music Lovers Encyclopedia* (pub: Universal Text Books Ltd., London), to refer to C P E Bach as the "founder of modern school of piano playing".

LEOPOLD MOZART,

1719-1787. In 1502 Archbishop Leonhard von Keutschbach had a *Hornwerk* erected in Salzburg. It contained 150 organ pipes combined to an F major triad (three notes: doh, me, soh). It gave off a mighty roar, aurally reminding the faithful to come to prayer, and it gained the name the *Salzburg Bull*. In 1753 a large open-air organ was added. The cylinder operating the organ was 170 cm long with a diameter of 25 cm. There were two cylinders, each playing six tunes. This total of twelve was intended to represent the months of the year. Leopold Mozart was ordered to write this music. He composed tunes for February, March, May, June, July and October, and then invited ERNST EBERLIN, 1702-1762, to write a tune for each of the remaining months. Eberlin was the chapel-master. The organ was designed and built by Lorenz Rosenegger, a mine worker. He showed that he had both ingenuity and technical skill. The mechanism was water-powered, but

it could also be turned by a crank or played from a clavier. Today the Salzburg Organ has a large repertoire, including a piece by Leopold's son, Wolfgang Amadeus Mozart, and one by the French composer Daniel François Auber, 1782-1871.

In 1755 Leopold Mozart wrote *Die Bauern Hochzeit*, for strings, oboes, bassoon, horns, bagpipes, and the Mechanical hurdy-gurdy.

Montaigne's *Journal de voyage*, 1580-81, contains an entry describing how the water-powered organs worked: "the music ... is produced by means of water falling very forcefully into a round, vaulted chamber, expelling the air therein and forcing it to escape through organ pipes. Another stream of water turned a toothed wheel which activated in a programmed order the keys of the organ. I also heard there (Montaigne writes of the water-works at Tivoli, near Rome) the sound of artificial trumpets..."

MATHIAS VANDEN GHEYN, 1721-1785. He was a Flemish composer, and organist, who wrote many preludes and fugues for the carillon. This is not surprising, really, because he was the musician in a family of bell founders. In the city of Louvain he became known as the "town carillonneur". Whether this title affected his popularity in the city we do not know, but the sound of bell-ringing tunes did not please everyone, as a letter by the pianist Mark Hambourg indicates (written in 1907. Perhaps the 18th century public was more tolerant). "In 1907, just before my marriage, I toured Holland for the first time and found the Dutch musical public critical and undemonstrative. They must be fond of music as, even at the provincial towns where I stayed, I was kept awake most nights by the playing of the carillons from the tower of the Town Hall or Church. In one town especially that infernal invention of bells would play every quarter of an hour throughout the night... I thought it exasperating".

(To be continued).

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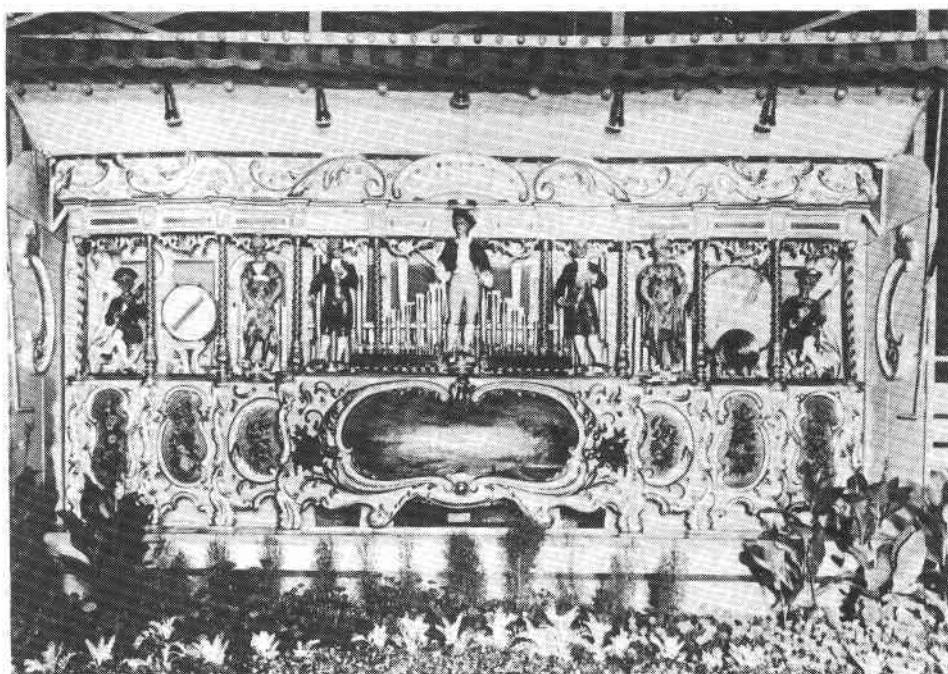
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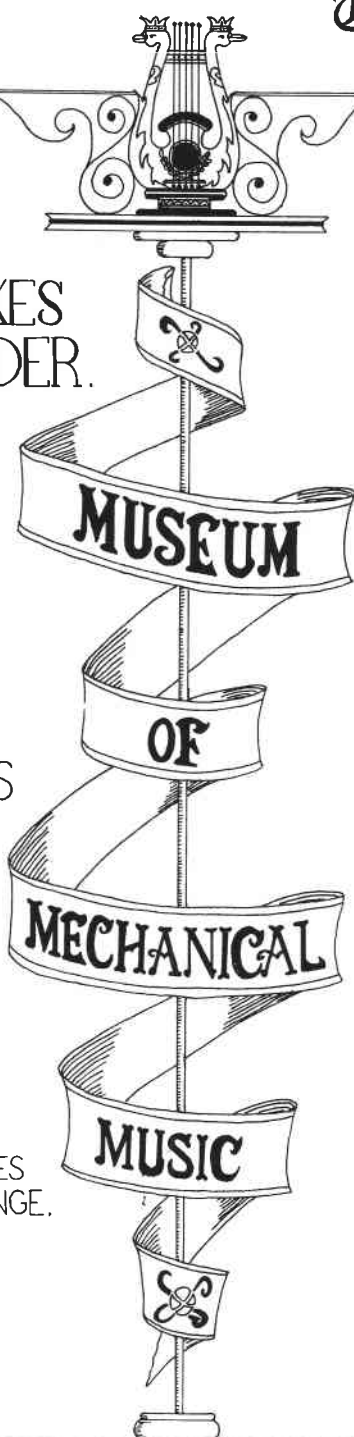
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BOOK and RECORD REVIEWS

Shane Seagrave

DÜSSELDORFER ORGELTONE.

While on the subject of German made organs the *Chor Music* label features a wide range of these distinctive instruments, with a consistently high recording and presentation format. What sets the German fair organ apart from its British counterpart is the large number of organs still owned by showmen against the handful remaining on 'tobers' here. A good example of the Ruth Model 36 (78 keyless) is featured in the ownership of Herr Willi Brunch. This organ was originally barrel operated and its proscenium gave Wurlitzers the inspiration for their Model 157. Here is a good cross section of the sort of music you can expect to listen to on the German fairgrounds.

Side One features that splendid compilation of Walter Kollo Hits (Germany's Cole Porter) no self-respecting Ruth organ should be without.

Side Two offers a lively arrangement of *Colonel Bogey*, followed by an equally enjoyable *Circus Polka*. Also deserving a mention, that enchanting song *When the White Lilac Blooms Again*, followed by another charming tune, *Sassa* (*Maske in blau*).

However, the final band on this disc does mar an otherwise excellent recital as the *Barber of Seville* overture is played much too fast!

MARCHING SONGS

Of those handful of organs still earning their keep on the British fairs up until recently the largest was a 98 key Gavioli residing in Coles grand old *Venetian Gondolas* ride. Now to be found in Cushing's Organ and Engine Museum, Thursford, Norfolk, the ride has retired from the hazards of the travelling life and the organ has had a long overdue renovation.

To hear it now I can hardly believe that it is the same old 'Gavi' that used to be such a feature of my local

fair in the early 1970's. Then, sixty odd years of showland use had taken its toll and it sounded like a weary old man playing a penny whistle. Indeed, when the gondolas were rumbling around the hill and dale track at full speed it was hard to discern whether or not the organ was playing at all, even from a distance of ten feet!

Now, after painstaking overhaul by the gifted young organ enthusiast TIM BLYTH of Kingsbridge, Devon, the voice of this great Gavioli is powerful and commanding just as it was sixty years ago. Some really fine arrangements including some characteristic 'riding tunes' from the famous firm of Chiappa, who are still making Music Books at their London works after 104 years in business.

Capturing the flavour of the English Fair are such gems as *Mister Moon*, *You've Got a Million Sweethearts*, *Oh Charley take it Away*, *I'll See you in my Dreams*, and the full verse and chorus version of *Oh I do Like to be Beside the Seaside*.

Eighteen tracks in all and the sensitive recording does full justice to this superb example of Gavioli et Cie's workmanship.

The sleeve notes, however, are an example of poor research, stating that the organ was 'probably cut down.... from a 110 key frame'. There is no 'probably' about it at all. It is a fact.

Also, the Gondola ride is described as having 'golden dragon cars' which is an extraordinary contradiction in terms, and this from the author of *English Fairs*!

ARIOLA (26399 XBU) presents a double album featuring some memorable music from this colossus and interspersed among familiar old standards such as *Entry of the Gladiators*, *Valencia*, and *Unter den Linden*, are 5 potpourris of Pop tunes of the 20s and 30s. The arrangements are superb and are in the style of **GUSTAV BRUDER**. The recording quality might not please some purists but without it reverberating naturally the organ would have sounded flat and given the listener less of an impression of its size. In all, a delightful recording, with enough variety of music to please most musical tastes.

On the book scene, one of the most important works on the study of fairground life is *Fairground Art*, by Richard Ward and Geoff Weedon. (White Mouse Publications. £39.50). The book traces the development of the art of fairgrounds and carnivals in Europe and America, and uses over 700 colour illustrations. It also contains many rare photos of rides and organs including one interior view of Gavioli's Paris works showing a 110 key bioscope organ set up prior to despatch to its new owner. The book contains interviews with former employees. I was disappointed to notice that the authors did not include a study of fairground organs because they believed it had been covered by other books, but in my opinion these other books have not given the subject the space it deserves. I was also concerned that the book gave the impression that the Limonaire Brothers were a major force in the British fairground scene circa 1900, with their short-lived Camden Town address being noted. The truth is that the Limonaire organs were not popular with the majority of British showmen, the sound being "too nasal". Very few were imported.

Anyone who has ever visited the famous October "feest" in Munich cannot have come away without a lasting impression of the sheer size of the fairground. Everything about it is large: the number of rides, the size of them, and the number of organs present. Among these there is a giant in the form of an impressive concert organ owned by the **POTZSCH** family.

The organ started life as an 89 key Gavioli but rebuilds and additions have turned it into a mechanical concert orchestra. **HEINRICH VOIGHT**, the organ builder and restorer from Frankfurt, enlarged the original scale to 100 keyless with the added feature of installing a tracker alongside the keyless frame. Thus, the organ can play from "book" music and paper rolls. The facade was enlarged to 36', accommodating the extra pipework complimenting the new scale and the whole makes a splendid sight, usually standing near the Potzsch's Dodgem car-ride.

Letters to the Editor

L'Epee Boxes

Dear Sir,

FOLLOWING my letter on this subject in the Christmas 1981 issue, I received a letter from Mr Frank Freedman of Caulfield, Australia, who has a similar box Serial No. 8267. He enclosed a photograph showing the "Nicole á Geneve" in a lozenge as described by Mr Colley in his letter (MB Easter 1982), but, more important, included a photostat of its tune-sheet. This is for the long narrow type typically used on Thibouville-Lamy boxes with no name on it at all, and no attempt to imitate Nicole Frères. (Tune sheet not clear enough to reproduce, but it measured 20 cms x 5.5 cms. Ed.)

Curiously, enough, yet another L'Epee box No. 11443, has just come into my hands, this one being a very heavy "fat" cylinder, two-per-turn box. Mr Colley will be interested to hear that it not only has the characteristic three screws through the bottom of the case, but two each on the back and front as well, seven in all, and undoubtedly original,—a real belt and braces job! It is an early lever-wound box with glass lid which covers the whole of the interior including the three control levers on the right-hand side, which are mounted on elegant brass pillars screwed to the end of the baseplate.

Yours sincerely,
Lyn Wright.



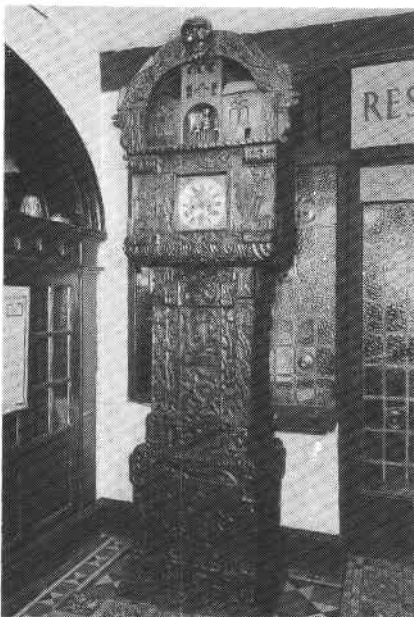
Dear Mr Leach,

A WEEK or so ago I stayed at the Red Lion Hotel in Salisbury (Milford Street) and was interested to see their Skeleton Organ Clock. I enclose a postcard, and a few details about it in case you thought it worth reproducing in the magazine. This is a very interesting old coach inn, and if any Music Box Society members were attracted to staying there, they would not be disappointed at the comfort, food and service.

Mr Maidment, the managing director, would, I am sure, tell you more about the clock if you so desired; in the meantime I am enclosing a few details, as given to guests. The clock, by the way, is a great attraction for younger guests, and Mr Maidment shows them how it works.

If you contact him, you are welcome to mention that John Lucas, of the Sunday Telegraph, stayed there recently and suggested you should. He was very helpful to me.

Yours sincerely,
John Lucas.



Mr Maidment sent the following information (Ed.).

Skeleton Organ Clock

THE carving is reputedly the work of Spanish prisoners in the original Dartmoor Jail, following the defeat of the Armada in 1588. The case was probably constructed, incorporating these carvings, in the early 1800's which is also the probable date of the movement and the organ.

The organ is a pin organ with wooden pipes similar to the barrel organ or hurdy-gurdy of years gone by. There are believed to be eight tunes which are used to play on the quarter hour.

Act of Parliament Clock

WE HAVE two of these unusual clocks situated in the Residents Lounge and the Dining Room.

In 1797 an Act of Parliament ordained that "For and upon every Clock or Timekeeper, by whatever name the same shall be called, which shall be used upon any dwelling house, office or building thereunto belonging, or any other building whatsoever, whether private or public, belonging to any person or persons, or Company of persons, or Body Corporate or Politick or Collegiate or which shall be kept and used by any person or persons in Great Britain there shall be charged an Annual Duty of Five Shillings etc. etc. and on watches worn or used etc. etc. an Annual Duty of Two Shillings and sixpence."

The result of this tax reduced the demand for clocks and watches to such an extent that in less than a year the general manufacture of these articles in the Kingdom was reduced by half and thousands of persons were deprived of their livelihood. The tax was also very difficult to administer and collect. It is not surprising that the Act was repealed in April 1798.

Although the imposition of this obnoxious tax paralysed the horological trade, it had the effect of creating a demand for this large type of mural timepiece as Tavern Keepers, anticipating a scarcity of watches and clocks, and with an eye to business, installed these large clocks in their public rooms for the benefit of patrons; hence the title "Act of Parliament" Clock, which if applied loosely is obviously a misnomer.

Dear Bob,

I HAVE a small complaint... but I'm having it treated!! Top of centre column on page 177 (Christmas Edition 1981) in my article you unfortunately added a little three letter word spelt, "t.h.e.". I'm afraid that "Now restored by Bishop of Ipswich" was correct. Although I cannot say whether *the* Bishop of Ipswich, if there is one, repairs barrel organs, I would imagine he doesn't, but then again you never know!

Best wishes to yourself and your wife,

Kind regards,
Roger Booty.

Dear Bob,

THANK YOU for your welcome letter of 7th April 1982. It only took the GPO a day to deliver it!

Actually you are slightly inaccurate in your estimation of the length of time ago that I promised you an article on **CANON WINTLE...** this was in fact 99 and not 100 years. You will be glad to hear that I have now run out of excuses. It really should be possible to get going with the article the more so as my wife is a shorthand typist. Thank you for the congratulations on our marriage.

During a talk I gave recently on music boxes a man came up to me and introduced himself as Mr Nicole. As you might have guessed he is one of the descendants of Raymonde Nicole who came over to this country in the 1900's. I have his address and telephone number and he has agreed that he will be quite willing for me to go and have a chat and sift out further details regarding his family.

I hope to be in touch with you in the very near future.

All the best, yours sincerely,
Dr Peter Whitehead.

from FRANK HOLLAND.

Dear Sir,

ON 15th August 1981 **ENA BAGA** played the Wurlitzer Organ at *The Musical Museum*, 368 High Street, Brentford (London) to a packed house.

During the interval her equally famous organist sister, **FLORENCE DE JONG**, noticed the Pasquale Barrel Piano and this led her to comment that her father used to pin the barrels for Pasquale in the 1920's.

Florence and Ena gave a repeat performance at the Museum on 24th October. Both sisters played the Wurlitzer and the 7 ft. Steinway Grand Piano linked to it. **PETER BORROWDALE**, a young BBC singer, sang two songs.

The Museum received from Seattle, USA, a rare instrument called a **PHOTO-PLAYER**, made by the *Fotoplayer Company* of New York and Berkley, California. The instrument weighs over a ton. These instruments were often used to provide sound effects for silent films. Thousands were made but today we know of only four in existence. Some restoration work is required before it is in full working order.

The morning after the famous Christie's Sale of the Claes O Friberg Collection on 14th November 1981 forty of the overseas visitors to the Sale attended a concert-lecture at the invitation of **FRANK HOLLAND**. Many stayed on until the late afternoon.

Frank is a loyal member of our Society and visitors to London *must* visit his museum (near the giant gas holder, by the Thames, not far from Kew Bridge). Telephone: 01 560 8108. The curator is **JOHNE TAYLOR**. (the normal charge for admission is 80p).

The Musical Museum,
Brentford, Middlesex,
England.

BRITANNIA DISCS

Coulson A Conn MD

The following are lists to date of Britannia discs. I would be happy to receive and compile any additional titles our members may submit. I would also like to begin similar listings of **TROUBADOUR** and **EUTERPEPHON** discs, and members are herewith invited to co-operate by sending me the disc make, size, number and tune title for compilation and publication.

(Presently I shall begin preparations for the 1983 MBSI National Meeting in **PHILADELPHIA** at the end of that summer. It will run for four days. I expect **NORMAN** and **JUNE VINCE**, **BRIAN CLEGG**, **JACK** and **MARION TEMPEST**, and others. I'd love to have **ROBIN TIMMS** give a talk, but he thinks he can't make it. Robin has inspired me to get new music arranged, first for the 15½" Regina/Polyphon, and hopefully other boxes later).

Dr and Mrs Coulson A Conn
432 Old Forge Road,
Media, PA 19063
USA.

BRITANNIA 9 1/8 INCH DISCS

(same as 83/8 inch center drive discs)

8660—Under the Double Eagle
8661—La Pouppee
8662—When we are married
8663—Don't be angry (waltz)
8664—She is the Belle of New York
8665—The Gay Tom Tit
8666—
8667—A Greek Slave
8668—Washington Post March
8669—My Girl Is a High Born Lady
8670—The Honeymoon March
8671—Cock O' The North
8672—A Runaway Girl
8673—A Greek Slave
8674—A Greek Slave "I Want to be Popular"
8675—Yolanthe #1 chorus Fa Bai La
8676—Yolanthe #2
8677—The Geisha "Mimosa Waltz"
8678—The Geisha #3 "Jack's the Boy"
8679—
8680—Circus Girl
8681—
8682—Morris Dance
8683—Shepherd's Dance
8684—Dance A Cachucha (from The Gondoliers)
8685—Take A Pair of Sparkling Eyes (from The Gondoliers)
8686—Cavalleria Rusticana Intermezzo
8687—Faust: Soldiers' Chorus
8688—
8689—Faust
8690—Rule Britannia
8691-8696
8697—A Life On the Ocean Waves
8698—Caster's Serenade
8699—La Pouppee duo
8700—The Gay Parisienne
8701—Orpheus aux Inferes quadrille #5
8702—
8703—La Grande Duchesse
8704-8705
8706—Genevieve di Brabant
8707—
8708—Falka Chorus of Soldiers
8709-8713
8714—Cloches de Cornville
8715-8717
8718—Mikado waltz
8719-8720
8721—Pinafore: He is an Englishman
8722-8726
8727—Blue Danube Waltz
8728—Estudiantina Waltz
8729—Delores
8730
8731—March of the Men of Harlech
8732-8734
8735—Percy from Pimlico
8736—Our Lodger Such A Nice Young Man
8737—Starring Me in the Face
8738—Auld Robin Grey
8739—Bonnie Dundee
8740—Oh Charlie is My Darling
8741—Blue Bells of Scotland
8742—
8743—Where A Noddin
8744—Within A Mile of Edinburgh
Town
8745—
8746—
8747—Highland Laddies
8748-8751
8752—Gary Owen
8753-8754
8755—Meeting of the Waters
8756—

8757—Kathleen Mavourneen
8758-8759
8760—The Harp That Once
8761—The Young May Moon
8762—The Heavens Are Telling
8763—
8764—Infalamatus
8765—
8766—I Know That My Redeemer
8767—He Shall Feed His Flock
8768—There Is A Green Hill Far Away
8769—
8770—If With All Your (Care)
8771—Priest March
8772-8775
8776—Just One Girl
8777—Sweet Rosie O'Grady
8778—
8779—As Your Hair Grows Whiter
8780—Patience #6 It's Clear That
8781-8784
8785—Freyschutz: The Huntsman's Chorus
8786—English Polka
8787-8788
8789—The Bienehaus March
8790—
9115—San Toy #7 duetto
9122—Last Rose of Summer
9128—Cloches du Monastere
9129—Bonnie Bouche Polka
9132—La Marseillaise
9147—Bohemian Girl
9184—Bravo Dublin Fusilliers
9190—A Frangesa March
9109—The Lost Chord
9111—Old Hundredth
9112—Sweet Bye and Bye
9114—It Is Well With My Soul
9115—El Capitan
9117—When Jesus Comes
9118—Oh Think of Here Over There
9349—The Mikado
9350—Floradora
9356—The Keel Row
9360—Peek A Boo
9366—Les Pauvettes Polka
9378—The Great Physician
9385—Shall I Be an Angel, Daddy
9389—Sweet Dreaming Faces
9425—Floradora
9427—Floradora: The Millionaire
9428—Floradora
9528—Drum Major's March
9532—Handel's Halleluah
9672—Because I Love You
9674—Good Bye Dolly
9676—The Honeysuckle and the Bee
9731—Daisy Belle
9743—The Lily of Laguna

BRITANNIA 11 3/4" DISCS

8800-8802
8803—The Absent Minded Beggar
8804—
8805—The Honey Moon March
8806—Washington Post March
8807—
8808—Madam Angot
8809—La Pouppee
8810-8814
8815—British Grenadiers
8816—All Along The Rails
8817—All Night Train
8818—Runaway Girl
8819—Circus Girl

8820—Madam Angot
 8821-8832—Geisha: Jack's The Boy
 8834-8840
 8841—Tommy Atkins
 8842—Last Rose of Summer
 8843—Rule Britannia
 8844—Home Sweet Home
 8845—Gary Owen
 8846-8851
 8852—Robin Adair
 8853—The Harp That Once
 8854—A Soldier Boy To War Has Gone
 (The Minstrel Boy)
 8855—Auld Lange Syne
 8856—Auld Robin Gray
 8857—The Campbells Are Coming
 8858—The Young May Moon
 8859—Believe Me If All Those
 8860—Bonnie Dundee
 8861-8863
 8864—The Little Widow
 8865-8868
 8869—Kathleen Mavoureen
 8870-8871
 8872—March Of The Men Of Harlech
 8873—Geisha #3
 8874-8875
 8876—Within A Mile Of Edinboro's Town
 8877—The Gondoliers: Cachucha Dance
 8878-8879
 8880—The Cock O' The North
 8881—
 8882—Under The Double Eagle
 8883-8885
 8886—Ollevette of Heart
 8887—Faust
 8888—Faust: Soldiers Chorus
 8889—Cavalleria Rusticana or Mikado
 Chorus (I have seen both one must be a
 misprint)
 8890—Yolanthe #1
 8891—Blue Danube
 8892—Blue Danube
 8893—The Heavens Are Telling
 8894-8897
 8898—Pirates Of Penzance
 8899-8903
 8904—Just One Girl
 8905-8906
 8907—The Gay Tom Tit
 8908—Life On The Boeam Waves
 8909—Costers Serenade
 8910—He Shall Feed His Flock
 8911—Pinafore
 8912—
 8913—La Grande Duchesse
 8914-8916
 8917—A Greek Slave
 8918-8924
 8925—Let Em All Come
 8926—For Old Times Sake
 8927-89830
 8931—Percy From Pimlico
 8932—
 8933—Sweet Rosie O' Grady
 8934-8936
 8937—Pirates Of Penzance
 8938-8941
 8942—La Marche des Pierettes
 8943-8944
 8945—There Is A Green Hill Far Away
 8946—As Your Hair Grows Whiter
 8947—Priest March
 8948-8950
 8951—If With All Your Heart
 8952-9105
 9106—La Marseillaise-French National
 Anthem
 9107-9151
 9152—Dolly Day Dream
 9153-9154

9155—My Queen
 9156—Cloches du Monastere
 9157—Bonne Bouche
 9158—
 9159—Norma Duet
 9160—La Marseillaise (#9106 May be a
 misprint on the disc)
 9161—Faust Up To Date
 9162—
 9163—Le Barbier de Sevilla
 9164—Le Regiment de Sambre et Meuse
 9165—La Retrait Federale
 9166—Poet and Peasant Overture
 9167-9180
 9181—Bravo! Dublin Fusiliers
 9182-9185
 9186—Soldiers Of The Queen
 9187-9190
 9191—A Frangesa
 9192-9218
 9219—Nearer My God To Thee
 9220—Jesus Lover Of My Soul
 9221—
 9222—Rock Of Ages
 9223—Old Hundredth
 9224-9226
 9227—Sweet Hour Of Prayer
 The rest are scattered numbers including
 the first strange number:
 3508—Happy New Year
 9338—The Banks Of Allan Water
 9404—Will You Meet Me
 9405—Under The Stars
 9406—O! What Shall Be My Song
 9410—Nancy Lee
 9411—Peek a Boo
 9414—Come To The Saviour
 9424—Floradora
 9487—San Toy #3 chorus
 9488—San Toy #2 song & chorus
 9491—The Casino #5
 9493—The Casino
 9495—Annie Laurie
 9497—Loves Golden Dream
 9505—The Holy City
 9507—Sunshine Above
 9509—Hands Across The Sea
 9510—Bid Me Good Bye
 9512—Dove's Dreamland
 9514—Smiling Merrily
 9515—In My Ansom
 9513—Play It Again
 9659—Because I Love You
 9661—Good Bye Dolly Gray
 9663—The Honeysuckle and the Bee

BRITANNIA 17¼" DISCS

8900-8908
 8909—My Girl is a High Born Lady (also
 listed 8009)
 8910-8918
 8919—Merrily the Quakers Wife (also listed
 8119)
 8920-8956
 8957—? Le Lorraine
 8958-8959
 8960—Washington Post March
 8961—? Cancan
 8962—Soldiers In The Park
 8963-8964
 8965—Cloches du Monastere
 8966—Bonnie Bouche Polka
 8967—Romeo and Juliette waltz
 8968-8975

8976—French National Anthem
 8977-8978
 8979—Poete et Payson
 8980—Stephanie Gavotte
 8981—The Honeymoon March
 8982-8984
 8985—Serenade Waltz
 8986—Faust: Flower Song
 8987-8990
 8991—San Toy #7 Duetto
 8992-8996
 8997—La Pouppee
 8998—Il Trovatore
 8999—
 9000—The Bell of Scotland
 9001—Come Back To Erin
 9002—The Gondoliers: Cachucha Dance
 9003—
 9004—Grande Valse Brillante de Scholhoff
 9005—Under The Double Eagle
 9006—When We Are Married
 9007—
 9008—The Gay Tom Tit
 9009—
 9010—Cock O' The North
 9011—A Greek Slave
 9012-9013
 9014—Yolanthe #2
 9015—The Geisha: Mimosa Waltz
 9016—The Geisha #3
 9017—A Circus Girl: A Simple Little String
 9018-9019
 9020—Morris Dance
 9021—Sk.... Danse (?Skirt Danse)
 9022—
 9023—Cavalleria Rusticana
 9024—Faust Waltz
 9025—Faust
 9026-9029
 9030—The Gay Parisienne
 9031—La Pouppee duo
 9032-9034
 9035—Genevieve de Italia
 9036-9046
 9047—HMS Pinafore
 9048-9050
 9051—Blue Danube Waltz
 9052—
 9053—Estudiantina Waltz
 9054—Delores Waltz
 9055—
 9056—Men of Harlech
 9057—
 9058—Golden Dostmann
 9059—For Old Times Sake
 9060—
 9061—La Grande Duchesse
 9062-9063
 9064—Bonnie Dundee
 9065—She Is My Darling
 9066-9067
 9068—Within A Mile Of Edinburgh Town
 9069-9078
 9079—The Harp That Once Through Tara's
 Halls
 9080—
 9081—The Heavens Are Telling
 9082-9088
 9089—Priest March Athalie Mendelsohn
 9090—See The Conquering
 9091—All Along The Rails
 9092-9094
 9095—A Greek Slave: I Should Rather Like
 To Try
 9096—Twenty One Today
 9097—Belle Of New York: They All Follow
 Me
 9098—La Pouppee
 9099—
 9100—Bimmel Bolle
 9101—Das Bienhaus March

9102-9103	9232—The Mikado	9273—
9104—The Star Spangled Banner	9233—The Mikado	9274—Play It Again (waltz)
9105-9107	9234—The Mikado	9275-9278
9108—The Geisha #3	9235—The Mikado	9279—Torreador Waltz
9109-9111	9236—The Mikado	9280-9281
9112—The Geisha	9237—The Mikado	9282—La Paloma
9113-9181	9238—The Mikado	9283-9288
9182—Bravo! Dublin Fusiliers	9239—The Mikado	9289—Floradora
9183—Soldiers Of The King (or Queen-I have seen both)	9240-9242	9290-9297
9184-9091	9243—Queen Of The Earth	9298—? Floradora
9192—A Frangesa	9244-9246	9299-9310
9193-9094	9247—The Holy City	9311—Sons Of The Sea
9195—The Lost Chord	9248-9249	9312—
9196—Rock of Ages	9250—Old Folks At Home	9313—The Sailor's Hornpipe
9197—	9251—	9313—Ipos Amsted
9198—Sweet Bye and Bye	9252—Sunshine Above	9315—
9199-9200	9253—Happy New Year	9316—In Deep Cellar
9201—El Capitan	9254-9256	9317-9324
9202-9203	9257—The Harmonious Blacksmith	9325—The Flower Polka
9204—Sweet Hour Of Prayer	9258—The Ash Grove	9326-9338
9205—When Jesus Comes	9259—	9339—March Hongroise
9206-9230	9260—Bid Me Goodbye	9340—
9231—Darling Mabel	9261-9271	9341—Lorelei Paraphrase
	9272—Oh Honey! My Honey	8062—Staring Me In The Face (This is out of sequence but is what was on the disc)

Material Supplied by ROGER BOOTY

THE MUSIC TRADES DIARY, YEAR BOOK, AND DIRECTORY 1925

The Care and Maintenance of Player-Pianos

By Willie Evans, of the Chappell, Pianoforte Co., Ltd.

In the first place it seems to have become accepted that the Piano Player has to work from recognised standard rolls, employing a partial vacuum (created by pedalling) for the purpose of operating the mechanism. Therefore, a few words as to the general characteristics. The underlying principle, whatever the name of the Player, being the same, the difference is only a modification of detail.

General Faults

Faults can be divided roughly into two classes: mechanical and pneumatic. The former will invariably indicate themselves in no uncertain manner, while the diagnosis of the latter will often call for the patience of Job. By mechanical faults one intends to indicate such things as spool, gearing, motor or pedal work, centres and bearings, which by process of use have become worn and enlarged, i.e., one of the most prolific causes of noise and unsatisfactory movement is a set of worn player pedalwork. Unfortunately in this country standardized production is practically *non-exist*, so that application to the makers for replacements would be futile, and all that can be done in this and other instances, where a certain amount of engineering work is necessary, is to withdraw the metal pedalwork from its wooden base, and take it to a local mechanic for re-centering. In this connection (i.e. pedalwork), and bearing on refinement of detail, the higher-grade player

makers mount the operating pedals on the Cone centres, while makers of the cheap variety are mounting theirs on an ever increasingly poor cylindrical bearing which, having a low ratio of length to diameter soon develops a characteristic "wobble." To sum up: my advice to the dealer is first of all to discriminate in purchase, and to deal only in the repair of those already on the market, in the manner I have suggested. The same advice will apply to all metal parts of the Player.

The Tracker Box

Another mechanical fault that has occasioned tremendous brain racking is the warped or twisted Tracker Box. This fault is unfortunately more prevalent than many imagine, and is the cause of much trouble, for which other parts of the mechanism are blamed. Much could be said of the abominably poor quality of paper and cutting in some Music Rolls. In many cases it is perfectly wonderful that the Player operates with them at all. At the same time, however, even the finest Roll will not function satisfactorily in a warped tracker box. So if there is trouble with this part of the Player, make first sure that the centres are right in their relation to each other. Warped tracker boxes can generally be corrected by the application of stays, one from each side of the box, screwed on to the frame of the piano. These can be made to push the sides more or less where you will.

Pneumatic Faults

Assuming now that you are in search of pneumatic faults, you will, of course, recognise that in using a partial vacuum, the first essential is that your Player should be relatively airtight, which can readily be ascertained in the following manner: Insert a roll, and bring the first plain part of it completely over the holes of your tracker bar; then, with the "tempo" lever at zero, operate the Player pedals. Any large leaks will be immediately apparent by the noise they make, while a collection of small leaks will be indicated by the fact of your being able to continue pedalling without a material increase in the resistance. Relative airtightness will be shown by a few strokes of the pedals, making it almost impossible to move them further.

A Large Leak

This may be due to main Indiarubber connections which have perished and lost their elasticity, and the best thing to do is to replace the section of tubing with a new piece; alternatively, a piece of thin leather attached to the nozzle should put matters right. Again, it may be that the Mackintosh of the main bellows or control members has, by wear or other cause, collapsed. Then the only remedy is "re-toshing," and here a word of advice: unless you have had some experience in this work don't tackle it yourself; it is not as easy as it looks. Withdraw the damaged member and send it to some recognised repair agent, or if it is British, to the maker.

Small Leaks

These will almost certainly be found to indicate valve trouble in the chest or striking mechanism, one of the most intricate and sensitive parts of the Player, where the slightest irregularity upsets the whole balance of the mechanism, and it would be folly to give any detailed advice as to dealing with the trouble. Once it is determined that you have a set of leaking valves, take the action out and deal with it in the manner recommended for "re-toshing". Of course there are other leaks which may be present in a Player which would not be indicated by the above test; for instance, leakage in the striking pneumatics of the chest, or the pneumatics of the motor. These will only be shown by the use of a tester. The notes with leaky pneumatics will either fail to operate at all but very faintly, while leaky motor pneumatics will be shown both by spasmodic impulses of the motor and consequent noise. Another part of the motor which occasions considerable trouble is the slides; whether they be made of metal or wood, the base on which they operate is almost invariably of the latter, and liable to twist, so that if the motor operates spasmodically you can be almost certain that the trouble is here. Take the motor down, and make first sure that the base is both flat and smooth, and then give similar attention to the slides. Reassemble, making certain that the slide setting is the same as when dismantled, and that there are no tight centres. Most important of all *do not apply any lubricating agent whatever to the slide surfaces*. The application of lubricants is a most frequent cause of trouble, a fact of which, if the owner has been experimenting, he should be clearly and emphatically informed.

The Bleed or Vent Hole

A dissertation on the care of the Player-Piano would be incomplete without reference to the Bleed or Vent Hole—probably the most unruly feature of the piano player. In withdrawing the air from the supply tube of the tracker bar, after the paper has once more sealed the opening, it also permits small pieces of paper, or grit, to be sucked or pushed through the openings of the tracker bar, and these often find their way to the Bleed Hole, and are the general cause of a note failing to repeat. The remedy is to withdraw the cover of the Bleed Hole, and clear it with a pin or similar implement, being careful not to enlarge the size of the hole. The clearance of the tracker bar can best be effected by the use of the "Vacuum Pump," which can be purchased from any supply house, and which should be applied to the tracker bar periodically. I cannot over-emphasise the value of keeping the Ducts clear by the use of this tool, and dealers would be well advised to ascertain that their men use them on every visit to the Player.

Regulation

Regulating the Player action in relation to the piano is, of course, a process of vital importance, as two perfect mechanisms by imperfect conjunction can each easily be rendered ineffective. Examination should always be made, to determine that there is a minimum of lost motion in between the attacking member of the Player and the piano lever. The method of taking up any lost motion will be obvious in any particular case.

The Set-off

Undoubtedly the right place for the Set-off is in the Player action itself, although a truly "commercial" method is to place a second Set-off rail immediately over the end of the piano lever. Wherever you find a Set-off, it is most important that it should operate at a point immediately coincident with the piano action. Failure to do this means a very serious contribution towards imperfect effects.

General Advice

Remember always in encountering a problem in the principles of which you are not entirely familiar, the best way of serving your customer, and saving your own dignity, is a prompt recognition. The alternative is to poke and turn about forces which may turn, and if not exactly rend you, at least make you feel very silly. The carpet of a drawing-room with somebody looking on is by no means the place to tackle work which should be done in the workshop. Non-observance of the advice contained in these few words will result in painful ignominy and the loss of others' confidence.

To conclude, make Service the watchword. Let the first duty be to secure an article at as reasonable a price as is consistent with first-class workmanship and material; a policy which allows for the purchase of articles below this standard means disappointment to the public, and ultimate personal loss. Having supplied an instrument which can conscientiously be felt to conform to this standard, persuade the customer of the necessity for maintenance of sound working condition. The writer earnestly believes that a more rigorous observance of these principles would result in immediate gain in the progress of the Player-Piano.

TUNE IDENTIFICATION

The Top 33 in Musical Box Opera

by Lyn Wright

As a musical box collector you will sooner or later be faced with a box that plays the most delightful music but, alas, has no tune sheet. It will undoubtedly have at least one tune which is tantalising in its familiarity but whose title temporarily eludes you, and this will provoke one of two reactions. Either you will shrug your shoulders, remark "Pretty, isn't it?" and go and watch television or you will be consumed with a desire to find out the name of the tune. If you come into the first category then read no further in case you, too, become as obsessed and frustrated as the second group, of which I am a dedicated member.

At present this obsession is confined to earlier boxes playing *operatic music*, which is just as well since I doubt if I shall live long enough to start delving into popular songs. When first struck by this disease I started off by going through about 500 cylinder box programmes, largely from old catalogues in past issues of the "Music Box", other musical box books, and as many actual boxes as possible. From these I tabulated all the operatic airs and the frequency with which they occurred. For the sake of sanity I included only operas up to about 1875, otherwise I would have been bogged down by Gilbert & Sullivan (which are easily recognised anyway) and the many later operettas and music hall songs, most of which did not appear on better quality boxes. This was rather a lengthy task as tune sheet titles are frequently vague, abbreviated or sometimes quite incorrect!

For the purpose of this article I listed the "Top 33" in popularity. Why 33? Well, these all appeared

ten or more times in my tabulation. Below this frequency the list lengthens to something like 400 titles (and is still receiving additions), a few so obscure that I cannot even trace the opera concerned. "Top of the Ops", of course, has to be *The Last Rose of Summer* whose origins are usually forgotten, but it must head the list as a true operatic aria.

A mere list of titles is not, however, very helpful unless you know what the tunes sound like. The next step, then, was to consult books like Kobbè's "Complete Opera Book" or the actual scores where available so that I could add the first line of each tune to my list and I am continuing to do this as far as possible for my much longer extended list. Fluent musicians would probably find these sufficient to match up tunes heard with those written but since I am not that fluent, I find it helpful to record the first lines by piano on tape, numbering them as on the list. If you don't play yourself you need a long-suffering wife (like mine) who will play them for you. It is easy then to run through the tape until (hopefully) you recognise your tune.

There is the snag, of course, that some of the operas are rarely performed nowadays and the music is hard to find, so another source of data is to record a similar list of arias from gramophone records and the BBC's excellent presentations of various operas, some of which are rare "one-off" performances. By keeping a spare cassette in the hack radio used around the house I can also get an occasional item from programmes such as "Baker's Dozen", David Jacob's Sunday morning *Melodies for You* and various Radio 3 programmes. This

method also has its pitfalls. Kobbè may mention a notable aria in Act 2 and give the opening words, but you can listen to Act 2 with the best of Hi-Fi and never distinguish the words at all since some opera singers show regrettable lack of clarity in their renderings.

By this time you might think I could identify practically anything operatic, but alas, not so! Apart from operas rarely performed, the disadvantage of having to make each air fit into a fixed number of revolutions of the cylinder tends to make them somewhat "edited" and not always immediately recognisable. For this reason I have not yet managed to identify any tunes by the method used in Denys Parson's *Directory of Tunes* which requires one to get the first sixteen notes exactly correct in relation to one another. It is also confused by the difficulty in distinguishing one long note from two successive short notes of the same pitch when listening to a musical box where continuous notes are impossible, though some mandoline boxes practically achieve it.

So far I have confined my efforts to operatic music which you might expect to hear on earlier good quality boxes. Unfortunately most makers had an exasperating habit of slipping in the odd tune completely unrelated to the prevailing popular operas, even on the best quality boxes. It might be a dance such as a polka, quadrille, waltz, etc., or a traditional air long since forgotten. To attempt a library of these would probably be a life's work and/or a step towards a mental institution. A good example of a mixed programme is Nicole Frères forte-piano box No. 39214 Gamme No. 2029 whose tune sheet gives:

1. Nymph de la Mer	Oberon	Weber	Nicole Frères orchestral box, 6 tunes out of 8; a large Bremond mandoline overture box 5 out of 6; and a rather pretty little key-wind box has proved so far to have 4 pieces out of 6 by Bellini. On the other hand, on three boxes I have a tune which sounds very like <i>Bless 'em all</i> which remains obdurate. Even ones you think you recognise may not be what they seem, such as the Tyrolienne Air from Rossini's <i>William Tell</i> which most people will swear is <i>The Scottish Soldier</i> .
2. Sempre libera	Trovatore	Verdi	
3. Casta Diva. Cavatina	Norma	Bellini	
4. God bless the Prince of Wales	Richards		
5. Carnaval de Venise			
6. Faust Valse No. 1.		Gounod	

Perhaps they wisely do not give an attribution to *Carnaval de Venise* but it was used in Massé's opera *La Reine Topaze* (1856) and Ambroise Thomas's opera *Le Carnaval de Venise* in 1857 although, in fact, the air was popular long before either, so I have not included in in my "Top 33". Going back to the subject, *God bless the Prince of Wales* happens to be very topical just now, but it might just as well have been some unknown air of the day. Another example is Nicole Frères Two-per-

turn box No. 36137, Gamme No. 1656, which has nine operatic airs, two dances and a *Dutch National Air*. Another pitfall is that a maker will sometimes put on an un-named excerpt from an opera, merely labelling it *Cavatina* or *Duetto* or some other vague description, with or without the name of the opera or composer. By listening to the complete opera you might just spot it!

Despite all these shortcomings I am having some successes, viz: a

For what it is worth, the "Top 33" are listed here complete with first lines (a few by courtesy of the Editor, Anthony Bulleid, Robin Timms, and Arthur Coombs.). It is unlikely to solve your identification problems but it might just happen to contain that one tune from your favourite box.

TOP 33

1. The Last Rose of Summer (Qui sola Vergin Rosa)	Marta	Flotow	1846
2. Grand Valse (Choral Waltz)	Faust	Gounod	1859
3. Ombra leggiera (Shadow Dance), from Dinorah (Le Pardon de Ploermel)		Meyerbeer	1859
4. Soldiers' Chorus (Gloire immortelle)	Faust	Gounod	1859
5. Brindisi, Libiamo me lieti calici	La Traviata	Verdi	1853
6. Com è gentil (O Summer Night) (Serenade)	Don Pasquale	Donizetti	1843
7. When other lips (Then you'll remember me)	The Bohemian Girl	Balfe	1843
8. Ah! Che la morte	Il Trovatore	Verdi	1853
9. Robert, toi que j'aime	Robert Le Diable	Meyerbeer	1832
10. Sweet Spirit, Hear my Prayer	Lurline	Wallace	1860
11. The Power of Love	Satanella	Balfe	1858
12. Ah! Per perche non posso	La Sonnambula	Bellini	1831
13. Tyrolienne (Tyrolese)	Guillaume Tell	Rossini	1829
14. Casta Diva	Norma	Bellini	1832
15. Marche du Sacré	Le Prophète	Meyerbeer	1849
16. Ciascum lo dice (Marche)	La Fille du Regiment	Donizetti	1840
17. Il segreto per esser	Lucrezia Borgia	Donizetti	1839
18. Il Balen del suo	Il Trovatore	Verdi	1853
19. Conspirators' March	Madame Angot	Lecocq	1872
20. La Donna è Mobile	Rigoletto	Verdi	1851
21. Stride la vampa	Il Trovatore	Verdi	1853
22. Suoni la tromba	I Puritani	Bellini	1835
23. Largo al factotum	Il Barbiere di Seviglia	Rossini	1816
24. Me protegge (Marche)	Norma	Bellini	1832
25. Ah! non giunge	La Sonnambula	Bellini	1831
26. La ci darem	Don Giovanni	Mozart	1787
27. Norma, vieni	Norma	Bellini	1832
28. Zitti, zitti, piano	Il Barbiere di Seviglia	Rossini	1816
29. Per me ora fatale	Il Trovatore	Verdi	1853
30. Coro di Zinari (Gypsies Chorus) (Anvil Chorus)	Il Trovatore	Verdi	1853
31. Parigi o cara	La Traviata	Verdi	1853
32. Ah! Bello a me	Norma	Bellini	1832
33. Bridesmaids' Chrous (Wedding March)	Lohengrin	Wagner	1850

GRAND OPERA, TOP 33.

- 1 MARTA. FLOTOW (1846)
- 2 FAUST. GOUNOD (1859)
- 3 DINORAH. MEYERBEER (1859)
- 4 FAUST. GOUNOD (1859)
- 5 LA TRAVIATA. VERDI (1853)
- 6 DON PASQUALE. DONIZETTI (1843)
- 7 BOHEMIAN GIRL. BALFE (1843)
- 8 IL TROVATORE. VERDI (1853)
- 9 ROBERT LE DIABLE. MEYERBEER (1832)
- 10 LURLINE. WALLACE (1860)
- 11 SATANELLA. BALFE (1858)
- 12 LA SONNAMBULA. BELLINI (1831)
- 13 GUILLIAME TELL. ROSSINI (1829)
- 14 NORMA. BELLINI (1832)
- 15 LE PROPHETTE. MEYERBEER (1849)
- 16 LA FILLE DU REGIMENT. DONIZETTI (1840)

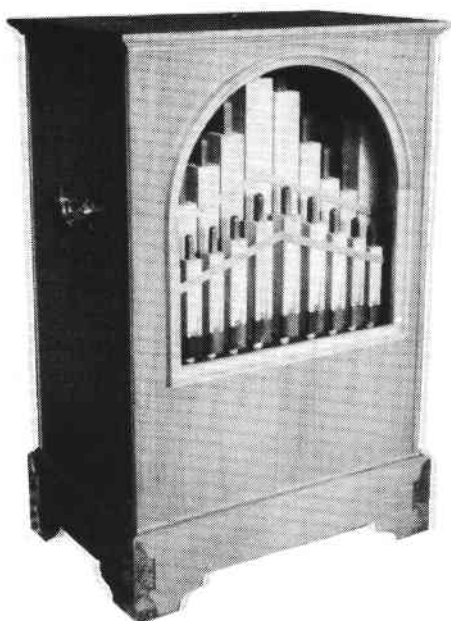
(RESEARCH: LYN WRIGHT, 1982)

- 17 LUCREZIA BORGHIA. DONIZETTI (1839)
- 18 IL TROVATORE. VERDI (1853)
- 19 MADAME ANGOT. LECOCQ (1872)
- 20 RIGOLETTO. VERDI (1851)
- 21 IL TROVATORE. VERDI (1853)
- 22 I PURITANI. BELLINI (1835)
- 23 IL BARBIERE DI SEVIGLIA. ROSSINI (1816)
- 24 NORMA. BELLINI (1832)
- 25 LA SONNAMBULA. BELLINI (1831)
- 26 DON GIOVANNI. MOZART (1787)
- 27 NORMA. BELLINI (1832)
- 28 IL BARBIERE DI SEVIGLIA. ROSSINI (1816)
- 29 IL TROVATORE. VERDI (1853)
- 30 IL TROVATORE. VERDI (1853)
- 31 LA TRAVIATA. VERDI (1853)
- 32 NORMA. BELLINI (1832)
- 33 L'OHENGRIN. WAGNER (1850)

P

(R.C.L.)

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The picture is of organ number one. Pipework consists of one rank of Stopped Diapasons. They are built in the traditional manner and voiced at 6ins. W.G. which gives mellow tone with ample volume. The organ case is wax polished Oak and stands 36ins. high. A hand crank is fitted at the rear.

An unusual feature of this organ is the 20 note book which is in the form of 30 metres of endless loop within a "cassette". It is thus similar in use to a barrel organ, in as much as the book is self-contained and can be played over and over. Books, however, are less expensive than barrels, easily changed, and unlikely to become damaged as they remain within a cassette. When out of the organ a lid is slotted into place to form a transport and storage box. Books can be made up from a selection of over 60 titles.

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THE 31 NOTE MAXFIELD ORGANETTE

By John Harrold

SEVERAL years ago my brother rang me up and said, "How would you like to come with me to visit a dealer friend of mine. He has acquired a funny paper organ and wishes to sell it".

Being keen on organ music, and mechanical instruments, my curiosity was aroused, so off we went.

On arriving at the dealer's house, and being taken to their garage, we were confronted with an instrument that neither of us had ever seen before, either in the flesh, or in any of the magazines and books that we had read.

Photograph of Machine

The only information that we could glean from this first investigation, was a name on the lid over the spools and tracker bar. This said "Grover and Grover".

This meant nothing to either of us, but something else did. The rolls that this machine played were of the same size and type as the Celestina and Seraphone 20 note portable organs, the difference being, that the perforations were smaller and closer together.

I attempted to play the organ, without much success, so I had a good look over the instrument, and said to my brother, "There are no reeds missing, and everything else appears to be here, except for a couple of driving springs".

There weren't many rolls with the organ, but the dealer said, "I know where there are some more rolls like these", so my brother bought the organ and, luckily, the other rolls turned up not long after.

The next step was the restoration of the organ. Before I attempted to do any repair work on this organ I read all that I could find on the subject of Harmoniums and

Organettes, and sought the advice of a friend whom I knew to be well-versed in the art of pneumatics, as he restored player pianos. What follows is a description of the restoration, and how the organ works.

There can be no better way of describing the organ, than to reproduce the manufacturers original patent specifications, copies of which were kindly sent to me by ROGER BOOTY, of Essex, who has done research into Alfred Maxfield. There are very slight differences between the drawings and my brother's organ, but I put these down to minor improvements, as problems came to light, in production.

Patents

It can be seen that 16,579 of these patent copies is of a later date and is for a version of an improved tracker bar. It can also be seen from the patent specifications that although a good drawing has been presented it does not really explain how the pneumatic part of the organ works. For this reason I have drawn a simplified version of the end elevation (Fig. 6) and explained, as well as I can, how it works.

The organ has harmonium type pedals, connected via joints to two exhausters (A), which are hinged to the fixed front board (G). This reservoir has several vertical holes along its top rail, which allow the depressions of the reservoir to be transmitted to the valve chest. In the valve chest, are primary valves of the same type as those used in the Celestina and Seraphone. These primary valves expand when a hole in the paper roll lines up with one of the windways in the tracker bar. Mechanical operation, and pneumatic action, is as follows:-

Exhauster "A" is pressed in and released several times, during this

operation. As the exhauster is pushed in against spring "E", leather flap valve "B" opens, and leather flap valve "C" closes. This allows the exhauster to collapse. Spring "E" forces the exhauster open, which closes flap valve "B", and opens flap valve "C". This creates a partial vacuum in the reservoir, and continuous pumping of the pedals produces a large depression in it. This causes backboard "H" to move in towards the fixed front board, under spring pressure "F". Backboard "H" is unable to exhaust, via the fixed front board, as flap valve "C" closes. This creates considerable suction in the valve chest "J". As the perforation in the paper roll "S" is lined up with a windway in tracker bar "M", pneumatic valve "K" expands, and is prevented from exploding by a bleed hole "T". The pneumatic valve "K" is so positioned, that it opens pallet valve "L", which is opened against its own spring pressure "V". The topside of the pallet valve is leather covered, and when it is open, it uncovers a hole, which is on the underside of the reed tongue "N". As there is considerable depression in the valve chest, the reed speaks, as long as the pallet valve is open. The reservoir is prevented from completely closing, by the spill valve "R", which is a leather backed, and spring tensioned, flat piece of wood. It is operated by the head of an ordinary wood screw, partially screwed into the inside of the fixed front board. When the hinged backboard is sucked in towards the frontboard, the head of the screw pushes against the valve, and releases a small amount of the depression, thus preventing the reservoir from completely closing, and helping to maintain an even depression.

The roll is actuated by turning a handle fixed to the right hand front of the cabinet (as can be seen in the patent drawing). This handle revolves and, via a system of pulleys and long spiral springs, turns the spool.

Restoration:-

After completely dismantling the organ, it was obvious that the exhausters, bellows and reservoir, would have to be recovered in a suitable cloth. The flap valves were also rotten, and needed replacing, and the same went for most of the primary valves.

With the guidance and help of my pneumatic friend, JOHN STANTON, I removed all of the old clothes, flap valves, screws, etc. When all of the boards had been cleaned off they were given a light coat of varnish and left to dry. This prevents the wood from taking in moisture to excess, which causes warping and swelling. The flap valves were next renewed, with thick white leather, as per originals, as the inside ones are hidden once the clothes are replaced. I did not use iron tacks, as in the originals, as these had gone rusty and swelled-up, but substituted bronze ones, which I hope will prevent it happening again. The tension that the flap valves are subjected to is critical for optimum performance, and only experience or testing will give satisfactory answers. The recovering of the exhausters and reservoir cloths was carried out with a cloth, similar to the original but a little bit stronger. To enable me to rectify any mistakes, or make any adjustments, only scotch glue was used, which I found perfectly adequate, and is as the original. All the corners and hinges that moved were covered in thick white leather, to copy the original, in normal pneumatic fashion.

The next step was to clean all of the primary valves and recover the leaking ones with a very thin white skin, to match the existing ones. The grubs had had a field day in this area and a lot of the skins had to be renewed. The pallets were next on the agenda, and the leather seals on the topside were renewed, if damaged. I brushed the nap of all of them, very gently, with a brass wire brush, to get them to seal effectively. Several of the pallet springs were found to have the "dreaded brass disease". I made some new ones with thin brazing wire of the same gauge, and worked out the average. I then reset all of the springs to this figure, and hoped that they would be all right.

One thing I have forgotten to mention; the primary valves are glued to the underside of the valve chest top board, and to remove these was a tricky operation, involving small amounts of warm water, pressure, and gentle persuasion with a thin sharp knife. I also had to renew several of the bleed hole papers, but this was accomplished without too much difficulty. Whilst the valves were removed I cleaned out all the windways from the tracker bar through to the holes which communicate with the primary valves.

Next, I reassembled the whole organ, renewing any seals that were faulty, and covering the screw heads with candle-wax to seal them, as had been done when the organ was built. The only things that I did not replace were the reeds. I cleaned these with soapy water with a small amount of ammonia added. The felts that the reeds are surrounded by, when they are *in situ*, were riddled with grub holes. I renewed all of these with material the same as the original. I then replaced the reeds, one at a time, and tested each one by pedalling the organ, and covering all the windway holes, except for the one where the reed had been replaced.

The first one that I tried worked, much to my surprise, but I wasn't to be so lucky with some of the others. About half of the reeds did not speak, and the fun really started. During my researches about harmoniums I came across a very small thick book in my local Library entitled *American Organs*. This turned out to be very useful because it told how to tune reeds. After many hours of practice on some spare reeds that I had, I felt the time had come to try my hand at those on the organ in question. I found it a good plan to look at the nearest speaking reed, to the one that I was trying to adjust, and check that the tongue was roughly the same shape, and had roughly the same clearances round it. I do not feel that I am competent enough to write an article on reed tuning - (hint - to someone who is!), but suffice to say, that eventually I was able to get all of these reeds speaking satisfactorily.

This only left the roll-playing mechanism to deal with. Several of the driving bearings were of black stained beech and needed to be replaced. The hardest part of finding 18" lengths of coiled spring wire, to use on the driving pulleys, (curtain wire was too tough). Eventually I found some and after several months of restoration, in fits and starts, I was able to play a tune!

It only remained to make various adjustments to the driving and re-roll mechanisms, to play some reasonable length tunes. The only disadvantage that I can find with small perforations, on the Maxfield, is tracking. This is very critical on this organ and took a lot of adjustment to get "just right".

These organs could not have been very popular, judging from the surviving numbers that I have managed to trace, (just 3 identical models, plus one more, with two banks of reeds, and an air motor to drive the rolls). I have also seen one table model, (not in its original casing), with horizontally opposed reeds. Apart from these, I have had described to me one partly-completed one, with a more complex arrangement of pallets, two banks of reeds, and some unexplained holes, and pitman type fittings, to accommodate a keyboard. I have also heard about a complete 61 note harmonium with a keyboard which plays the middle 31 notes on a Maxfield paper roll, presumably, the same as those above. Music rolls seem to be pretty scarce and if anyone knows of any I should be glad to hear from them.

Finally, I should like to thank John Stanton of Redditch, for his invaluable help with the reconstruction of the exhausters and bellows of the reservoir, and Roger Booty of Essex, for his copies of Maxfield's patents. Without their help, this article would not have been possible.

John Harrold Esq,
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Wollaston,
Stourbridge,
West Midlands.
DY8 3PQ



Date of Application, 27th July, 1896—Accepted, 10th Oct., 1896

COMPLETE SPECIFICATION.

Improvements in Mechanical Musical Instruments.

ALFRED MAXFIELD 326 Liverpool Road London N. Musical Instrument Manufacturer do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained, in and by the following statement :—

- 5 My invention relates to that class of mechanical musical instruments which are operated by perforated sheets of paper.

In the accompanying drawings

Fig. 1, is an end elevation of the instrument.

Fig. 2, is a plan of the instrument showing the improved mechanism.

- 10 Fig. 3, is a modified arrangement for rewinding the spool music.

Fig. 4, is an enlarged section of music spool showing the improved style of journal pin for driving.

Similar letters of reference are used to indicate like parts in all the figures.

- 15 In Fig. 1, A represents the pedals to which is attached the projection B which in turn is pivoted to the connection rod B¹ and projection B², B² is secured to the pumper C so that when the pedal A is depressed the action of the connecting rod B¹ distends the pumper C thereby exhausting the air from collapsible chamber D. By this arrangement of connection rod B¹ and projection B² a softer action in pedaling is thereby obtainable and dispenses with the webbing and rollers
20 used in the ordinary pedal organs, in the latter the webbing has to be frequently renewed, through the constant friction.

- E, E, are springs for depressing and distending the pumper and exhaust chamber respectively F, is the perforated music sheet made into an endless band and is carried through the instrument with my patent endless band arrangement
25 No. 16748, 1887, represented by the letters L, L¹, L² & L³, in addition I provide a channel G at back of instrument to receive the loose band as it passes through, and the wire frame I, to separate the music sheet, which would otherwise rub together and gather up, consequently retarding the easy progression of the band through the instrument. H, is the music rest provided with air ducts which are
30 connected with the pneumatic levers I, and operate pallets J, closing the aperture to vibrating reed K, spring J¹, keeps the pallets in their normal position.

In Fig. 2, M is the main shaft worked by the operator, and drives the auxiliary shafts M¹, M², & M³, through the instrumentality of the coiled spring bands S, S¹ & S².

- 35 For long tunes such as quadrilles &c., the music sheet is wound on the spool L², and is drawn over the music rest H by the take up spool L, operated by the auxiliary shaft M¹, which is provided with a pinion at the end and geared into the toothed wheel W. When the whole of the music sheet has passed through the instrument, it is necessary to rewind the sheet back on to spool L², which is
40 accomplished as follows.

- The stop R is pulled out moving the slide R¹, which is provided with a diagonal slot engaging with the small flange R², carrying forward the auxiliary shaft M², and bringing into contact the carrier r, with spring peg r¹, which is secured to pulley T, (the said pulley having a sleeve or socket R³, to keep it in position and
45 allow it to run freely on shaft M² when playing the instrument), as the shaft M², moves forward it comes in contact with oscillating lever V, which again engages with shaft M¹, thereby throwing the pinion out of gear from wheel W, and allowing

Maxfield's Improvements in Mechanical Musical Instruments.

take up spool L, to run freely. Thus when the main shaft M is revolved in the same direction as when playing, the spool L², is revolved through the agency of the spring band S³ and rewinds the music sheet.

When the music sheet is rewound the stop R, is pushed back and the instrument is again ready for playing. 5.

But I preferably use the arrangement as shown in Figs. 3 & 4, for rewinding the music sheet after having passed through the instrument, and the same is actuated as follows :—L², is the music spool on which the music sheet is wound, Y is a journal pin inserted in the end of spool, this pin is cut away forming a clutch as shown in Fig. 4. Y¹, is a corresponding pin and forms the driver, both are adapted to run in tube X, and when brought together the pin Y¹, engages with and revolves spool L². To rewind the music sheet stop R, is pulled out moving the auxiliary shaft M² carrying with it the pully T, which drives the small pully T¹, through the agency of coiled spring band S³, pully T¹, is secured to pin Y¹, so that when the main shaft is revolved the spring band brings the two pullies directly opposite each other, thereby bringing the pin Y¹ into contact with pin Y, and consequently revolving spool L². When stop R is pushed back and shaft M is given a half turn the reverse way, the two pins become disengaged by the pressure of the spring band S³, when the music is again ready for playing. 10.

Stop P is for controlling the expression board P¹, N¹ is a small fan for producing the sound called vox-humana. When it is required to give this expression to the music, the stop O, is pulled out, this stop is pivoted to lever O¹, at the other end of this lever is attached a flat spring O², which presses forward the fan, bringing into contact the small rubber pully N¹ with bevel pully N, this pully being revolved by the main shaft M, revolves the fan by friction. 15.

Having now particularly described and ascertained the nature of my invention, and in what manner the same is to be performed, I declare that what I claim is :—

1st. In combination with a mechanical musical instrument slide R¹, auxiliary shaft M² carrier τ , and spring peg τ^1 , sleeve R³, and oscillating lever V, as described and for the purpose specified. 20.

2nd. In combination with a mechanical musical instrument, the channel G and wire l, for the purpose specified.

3rd. In combination with a mechanical musical instrument, fan N², lever O¹ with spring O², india rubber N¹ and bevel wheel N, as described and for the purpose specified. 25.

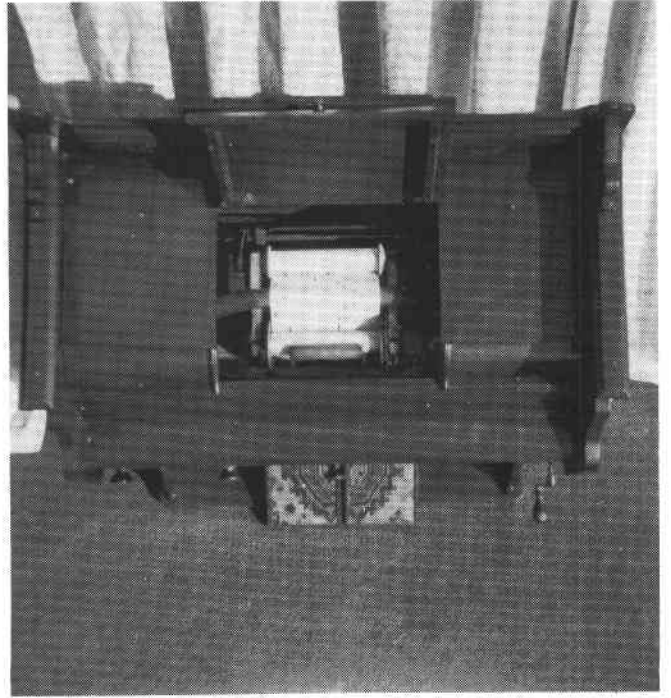
4th. In combination with a musical instrument, the projection B connection rod B¹ and projection B², as shown and for the purpose specified.

5th. In combination with a mechanical musical instrument the clutch pin Y¹, tube X, pullies T and T¹, and coiled spring band S³, as described and for the purpose specified. 30.

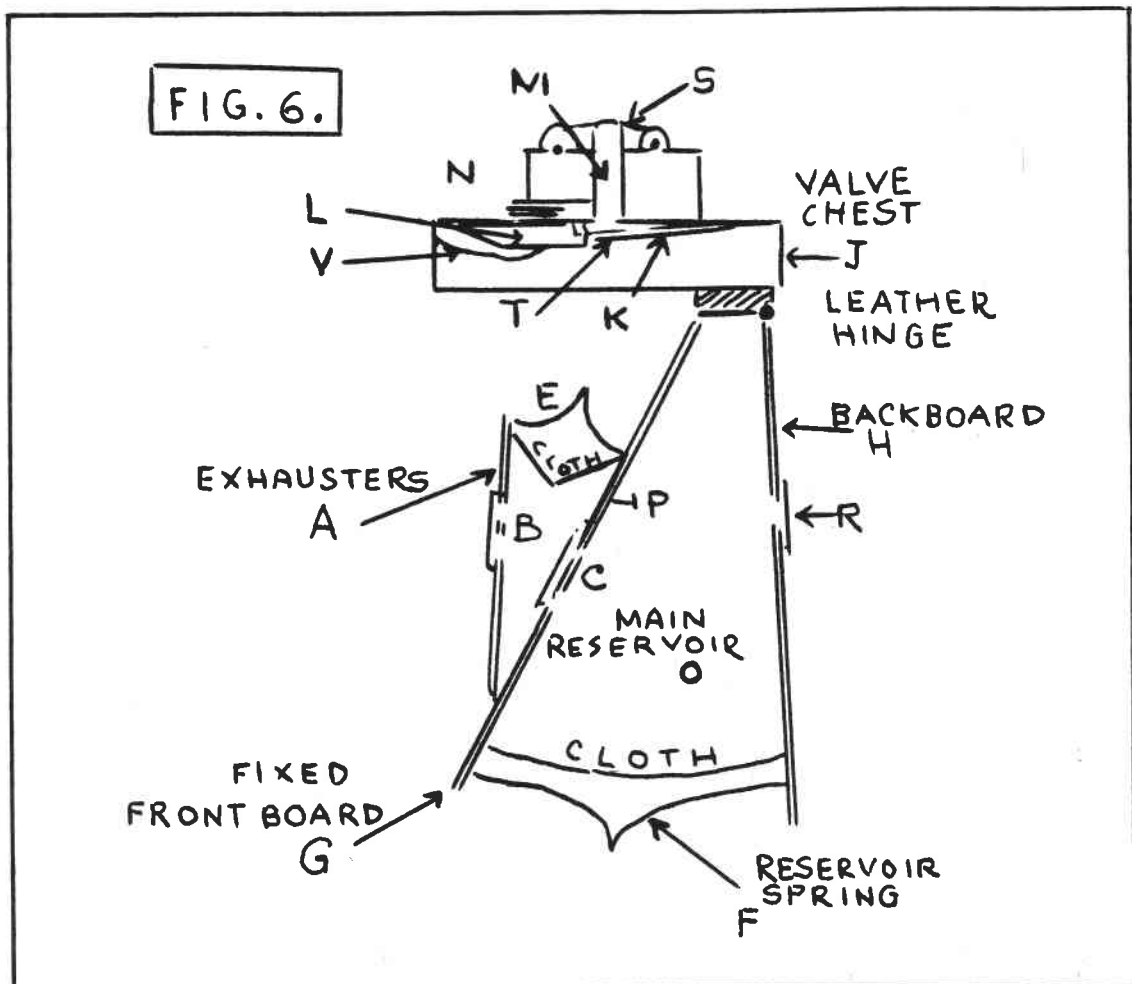
6th. In combination with a music spool for use in a mechanical musical instrument, the clutch pin Y for the purpose specified.

Dated this 27th day of July 1896.

ALFRED MAXFIELD. 35.



Photographs of the instrument



How the ladies of Paris dressed in the Music Box era.



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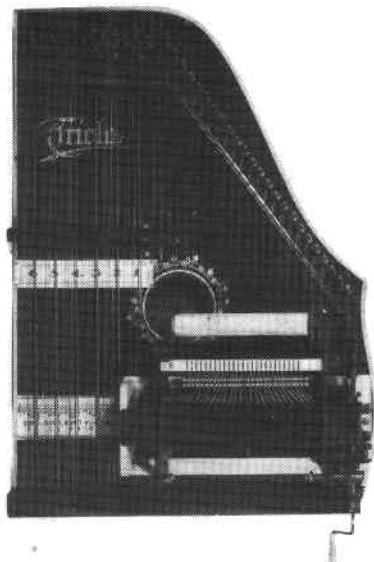
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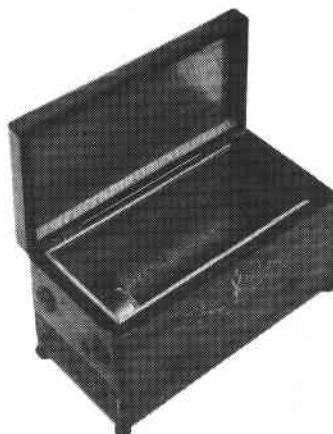
Mechanical Musical Instruments



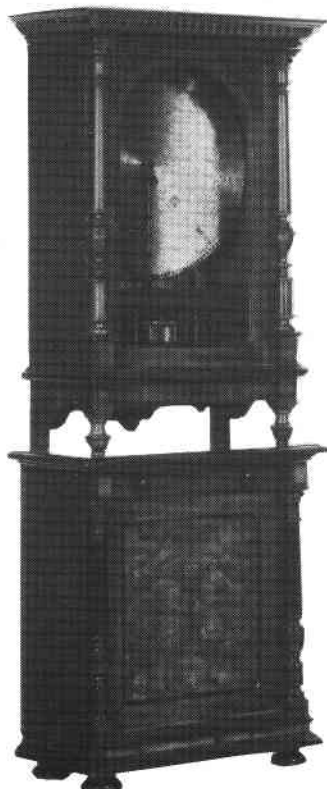
A Paillard, Vaucher, Fils Overture cylinder musical box, cylinder 33 cm., estimate £2,500-£3,500.



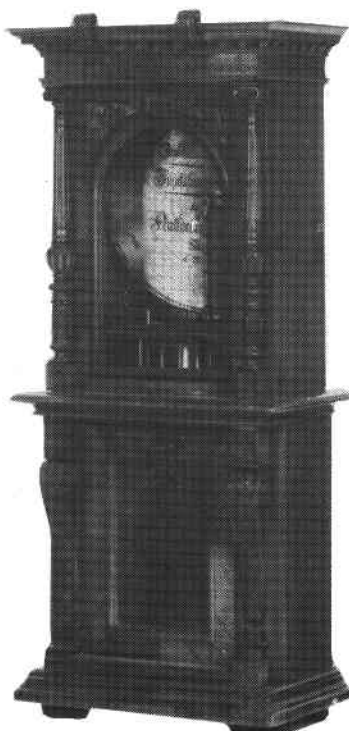
A Triola mechanical zither, 53.3 cm. long, estimate £600-£800.



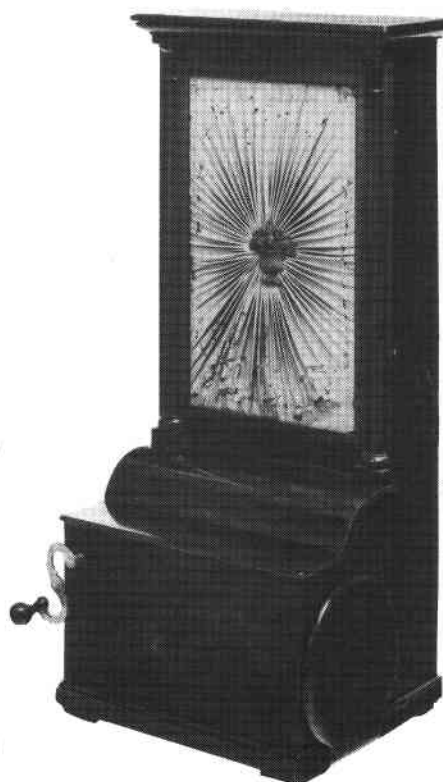
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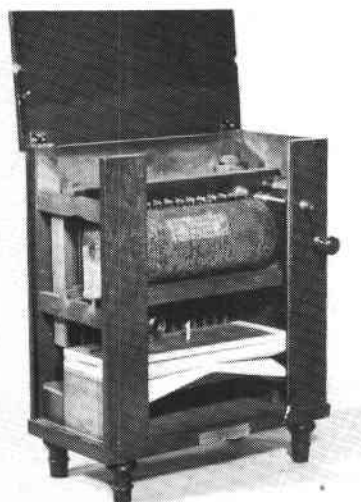
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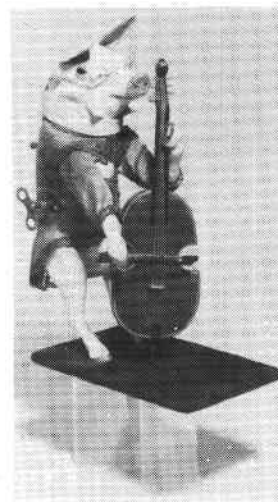
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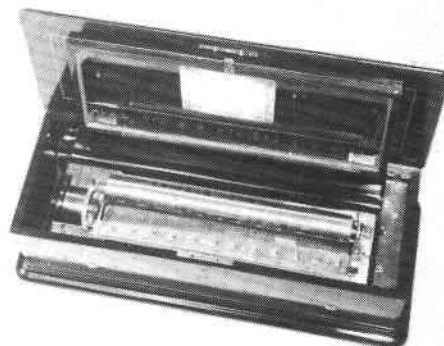
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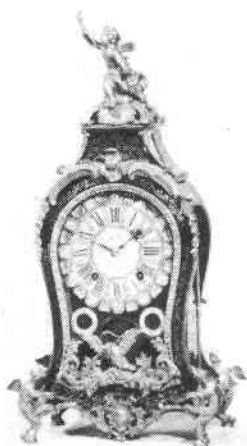
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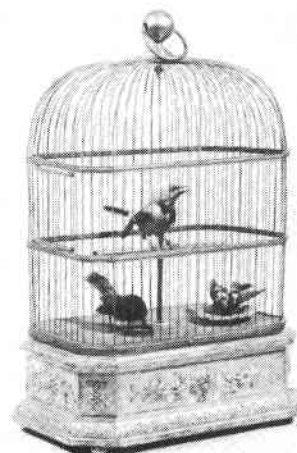
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