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# The Music Box

An International Magazine of Mechanical Music

Volume 14 Number 6

Summer 1990

Edited by Graham Whitehead


Inside The York Museum of Automata
Player Piano Functions for the Beginner
Rally Dates

The Journal of the Musical Box Society of Great Britain

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CHRISTIE'S

The Music Box
An International Magazine of Mechanical Music

The Journal of the Musical Box Society of Great Britain.

Volume 14
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Summer 1990

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**Front Cover:**
"The little performers," from a French post card.



## Contents



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# Editors Notes

I hope the membership enjoyed the last edition of Music Box in which I was able to return to our earlier standards before financial restrictions reduced the number of pages.

That restriction created a few Editor's headaches in how to cram all the contents into the space available. This often meant that typesizes were reduced to a size that was almost difficult to read, some of the regular articles had to be omitted, and articles that had been submitted by the membership were subject to a delay in publication.

Thanks to the membership's decision to increase membership fees to realistic levels, those problems are now over (well until inflation takes hold again anyway). I do hope that the delay in being able to publish articles has not given the impression that we have an abundance of articles just waiting to go to print. We do not. Articles are urgently needed and as has been said many times before, there is a wealth of knowledge out there in the membership simply awaiting for pen to be put to paper and I would welcome material from both new contributors and from established ones.

Should any one wish to discuss their thoughts on writing an article, please ring me on 0926 812183 in the evening or 0203 361800 in the day. ■

# SOCIETY TOPICS

## FORTHCOMING MEETINGS

**Saturday, 2nd June, 1990**

A reminder that the Summer Meeting of the Society, along with the Auction and A.G.M. will take place in the Tuke Common Room, Regent's College, Inner Circle, Regent's Park, London, main meeting starting at 10.00a.m. prompt. This will be preceded by coffee and biscuits from about 9.30a.m. onwards. Items for sale in the auction may be delivered from 9a.m. Anyone unsure of how to find the Tuke Common Room for delivery purposes are advised to contact Alison Biden on 0962 61350. Free parking is available in designated areas around the Inner Circle. Whilst unloading in College Grounds is permitted, permanent parking is not (for security reasons), and violating vehicles are likely to be clamped! It is regretted that no special catering arrangements other than the coffee and tea at the meeting can be made on this occasion, although the Refectory and/or bar **may** be open depending on other functions taking place at the College.

Speakers will include Anthony Bulleid, who will be telling us "More about Cylinder Musical Boxes," and David Tallis, who will give an illustrated talk, showing the results of some restoration work. Further details from Alison Biden.

# Notice of Annual General Meeting

The annual general meeting of the Musical Box Society of Great Britain will take place on Saturday, 2nd June in the Tuke Common Room, Regent's College, Regent's Park, London. The AGM will follow the society auction and commences at approximately 4p.m.

**Autumn Meeting and Annual Organ Grind,**
**14th - 16th September, 1990, Bournemouth, Dorset.**

The Musical Box Society is no group of strangers to the Manager of the Hermitage Hotel, Bournemouth, venue for this year's Autumn Meeting and Annual Organ Grind; whilst discussing initial arrangements with Alison Biden, the Meetings Secretary, he revealed that by coincidence he had been working at the King's Head Hotel, Cirencester when the Society held its organ grind there, a few years ago. We evidently made a vivid (and good) impression there, and he looks forward to giving us a warm welcome in Bournemouth. The Hermitage Hotel is ideally located; if you are familiar with Bournemouth you will know that it is hilly, but the Hermitage is right on the sea-front, opposite the pier, and adjacent to the lovely public gardens, all a short, reasonably flat, walk into the town centre. The weekend package includes dinner, bed and breakfast for two nights, and at £70 per person is excellent value for such a good hotel in a town not renowned for cheap hotels. Some rooms available will have sea views, so book early. There is no supplement for singles. At time of writing, the programme is still being put together, but will include the annual organ grind on the Saturday, together with talks/demonstrations and/or visits to places of interest. Bournemouth itself is an attractive town, with many pines and palm trees, a magnificent swathe of beach, fabulous shops (husbands hold on to your wallets!) and bracing sea air. Our visit will coincide with an Exhibition of the Terra Cotta Warriors from China, and there are many other interesting things to see and do in Bournemouth and the lovely surrounding country.

**Saturday, 1st December, 1990**

Once again the Christmas Meeting in London will be held in the Tuke Common Room of Regent's College. The programme is in the course of preparation at time of writing. For further details nearer the time of this or any of the Meetings, please contact Alison Biden, Meetings Secretary, address in journal, or telephone (0962) 61350.

## REPORT ON PAST MEETINGS

**by Reg Mayes**

**Spring Meeting at Bowness-on-Windermere - 30th March - 1st April 1990.**

Jim Hall has done it again. Those who were lucky enough to attend Jim's previous meeting which was held at Kendal 7 years ago, would know that he does nothing but the best. For our venue this time he chose the excellent Burnside Hotel which overlooked Lake Windermere.

For those of us who got to Bowness before 3pm on the Friday, Jim had arranged a special visit to the Steamboat Museum at Windermere, which was not officially open until Easter.

George Pattinson and his lady assistant showed us around. A dozen or so boats were in the water in the sheds, including the oldest working mechanically powered boat in the world, the S.L. Dolly, built around 1850. It sunk early this century and was salvaged from the bottom of the lake after some 67 years. All the steam boats were fitted with a Windermere steam kettle which can boil a gallon of water in one minute. One launch had one of the original Rolls-Royce petrol engines. All the boats were in pristine condition but space does not allow adequate description here.

In the evening, after dinner we adjourned to the lounge, where we were entertained by Sid Patterson playing the piano for a couple of hours. This was another innovation by Jim which was appreciated by all.

There was a Bring and Buy sale on the Saturday morning, where some good bargains were to be had, for example a six air hymn tune cylinder box for £300. One member bought 6 items, sold them and bought 4 more. There were also organettes; discs; back numbers of our journal and a hundred other items. To add to our interest David Swan exhibited his six air mandolin organocleide which has a cylinder 45cm long by 6.8cm dia: the comb has 169 teeth tuned in groups of 8, well into the base notes. It sounded very well indeed.

Jim started the meeting off by welcoming everyone to Bowness. He inquired if there were any members who were attending for the first time - there were three, Marion Trikosko from the USA; Mr Kerridge and Mr Robinson from nearby Carnforth, each received an individual welcome and a round of applause.

The first talk was given by a "dyed in the wool" horological engineer Gordon Thwaites on wheel cutting. He took us through the history of gear cutting, starting with file cut gears of the 17th century, he said that a Robert Hooke invented gear cutting machines. Involute gears (having the margins rolled inwards) are used in heavy engineering and Cycloidal gears (teeth with rounded side profiles) are used in such as musical boxes. Gordon related one of the problems that he had was with making 'endless' gears in relatively long lengths, which were prone to snapping. He realised he was getting hardening right through, but only surface tempering - his solution was to fill a length of copper pipe with sand, place the 'endless' through the centre and heat the whole lot up and let it cool down naturally.

There was some discussion on the justification for using brass of specification CZ120 as there is a distinctive colour difference to that used in antique boxes and clocks. Gordon considered that cast antique brass as used in musical boxes was soft. Tempering steel was also taken up in discussion as between plunging the heated item into sand or the use of 'Bluing Salts'.

At the end of his talk Gordon demonstrated his machines which he made himself. He recommended that 'Fly Cutters' should be used at 5000 rpm. or more. If one was thinking of taking up gear cutting Gordon suggested a book called Clock Wheel & Pinion Cutting by Malcolm Wild.

Jim Hall put himself into bat next, talking on 'Tips on Restoration'. This was a slick performance lubricated by whit and dry humour. He told us about renovating gold lines with Pilot Gold Marker pens and reinforcing worn Ariston cardboard disc driving holes with brass eyelets. Then we had Jim's dolly saga, starting from where he had bought a bandmaster in Chamoix France for the street organ front he had made. Jim seemed to turn into a magician by producing figures he had made - there were nine bandmasters altogether. The female ones appeared to disdain their male counterparts because they had their noses turned up, presumably in the hope that a better male would come along - how true to life.

We were told of many useful tricks and tips: a book to help identifying tunes with a simple up - down - repeat representation. It is written by Denys Parsons, published by Spencer in 1975, ref; ISBN 0904747. It mentions a Hearse Tune (how the worms get in). Paper for Zithers - the use of greaseproof paper - vellum for drum skins having been soaked in warm water for five minutes - repairing tips of comb teeth by making 'arrow heads' for up to 1/3 of length of tooth - chainsaw oil for musical box mainsprings - making black polish - escutcheons from old piano key coverings - a formula for removing heavy grime from m/box woodwork and Brumme stiffers or Beaumontage for filling holes.

Our president Jon Gresham thanked both Gordon Thwaites and Jim Hall for their very informative and enjoyable talks this morning, again to Jim for organising such a wonderful meeting.

Saturday afternoon was taken up with a visit to Richmond Mason's collection via a beautiful scenic route past eight lakes travelling in two 49 seater coaches.

Richmond said that he had been a collector for about twenty years. His first box was a Christmas present for his wife, as she was thrilled with it he felt safe to proceed to make a collection. Having collected for so many years you can imagine that he had many interesting items, such as monkey automata, a painter, another a conjurer. On the underside of a mandolin box there was a wax seal, with one of the words being Prague. Another entertaining piece was a Hooker smoker. There was an Astor, Cornhill, London double tracker bar chamber organ, with a stop of round wooden pipes, 5 barrels, triangle, drum and tubor pipes. Next we heard an Austin Cogusin Street organ. This collection had many more fine instruments than mentioned here and they were all credit to Richmond so our thanks go out to him and family for showing us around and for their hospitality.

After the Society dinner on Saturday evening, David Snelling made an audio/visual presentation entitled 'The Experiences of a Collector'. He started at 10pm so he kept it a somewhat light-hearted presentation with a miscellany of snippets and he even got us singing, which all helped the dinner and the wine go down.

On the Sunday morning Jim had chartered one of the Lake Windermere boats for us. The Boatman said that Lake Windermere was the longest of the lakes, being 10.1/4 miles long and 1.1/4 miles at its widest. The deepest part is 310 ft; it has 15 islands. 'Mallard' the new car ferry weighing 150 tonnes was at berth awaiting to be brought into service crossing and dodging the 1500 private craft that moor on the lake.

This boat trip was a fine climax to a very fine meeting and as we stayed a little longer or wended our way home we all had memories to recall. ■

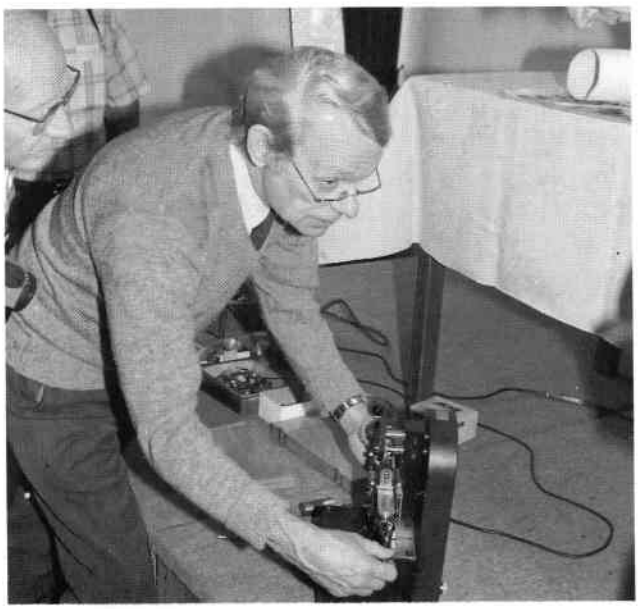
# Society Auction

The Society's annual auction will be held on Saturday, 2nd June in the Tuke Common Room, Regent's College, Regent's Park, London. Auctioneer Christopher Proudfoot (by kind permission of Christie's, South Kensington). A great chance to sell and buy. Commission rates - Buyers premium 7.5%, Selling commission 7.5%. Register your entries on the day or use the enclosed Auction form which will save time on the day.

# Picture Parade

## Spring Meeting at Bowness-on-Windermere

**A demonstration of gear cutting by Gordon Thwaites (below left) captures the concentration of members. Below right, David Snelling presents his "Experiences of a Collector" talk.**



**Windermere Steamboat Museum.**

**Top, The main boatshed. Members admire the steam-driven motor launches from the viewing gallery.**

**Middle, The view from the gallery. Boats being prepared for the new season.**

**Bottom, An intriguing exhibit 'The Flamephone," a London made novelty clockwork gramophone which produces dancing lighting effects. The supply of gas to a double burner mounted above is varied by the movements of the diaphram and the effect amplified by the movement of air from the horn in the rear reflector.**

# The visit to the Mason's collection

Mr and Mrs Richmond Mason our hosts for the "house" visit at the Spring Meeting.

Monkey artist automaton, 24½" high, 18" wide, with clock and musical box by Phalibois, 23 Rue Charlot, Paris.

Singing bird wall clock by Emilian Wehrle & Co., Furtwangen, 28" high x 18" wide.

Ormolu clock by Robert of Paris, silk suspension. 2 airs musical box with sectional comb by P.I.C.

# Organ Grinders chat

by Geoff Alford

While I am clicking away on my typewriter the increased sums most of us are having to pay under the Community Charge system are headline news and many Councils will have pruned their budgets to minimise the effect on the less well-off. What has this to do with organs? Perhaps quite a lot. As a Nation we have a low perception of culture and the arts, which when combined with Government under-funding means that the hopes of the late Frank Holland's collection finding a good permanent home in a first national museum of mechanical music are at a lower ebb than ever before. Most members will be aware of the high regard with which museums are regarded in Holland - a much smaller country which has its superb Van Speeldos tot Pierement Museum in Utrecht. In Germany, several Federal Regions have their own music museums - in Berlin, in Muenchen and, in more recent years the Karlsruhe Museum Service found a home in Schloss Bruchsal for the outstanding private collection of Jan Brauers. It is sad that in a country which is so proud of its history so little is done to preserve and display it despite heroic individual private efforts. Local authorities have, in general, a good record in providing facilities. These will now be squeezed by the new financial straightjacket and museums will be among the first to suffer. We are now totally subservient to the god of private enterprise - which will mean that if it doesn't pay then it wont happen. The latest and biggest privatisation, known as CCT, is intended to put all local authority facilities under private control. This is already having utterly ridiculous consequences and will certainly stifle council initiative. This puts a question mark over events such as the Manchester Council run Fairorgan Rally, already hammered by Government Ratecapping.

## A New Dancing Bear

Mechanical squeezeboxes were produced in various forms in the early part of this century. The firm of Seybold in Strassburg-Meinau in cooperation with the famous Hoehner firm of Trossingen produced the Magic Organa operated by electric motor or footpump, one of which appeared at the 1987 Llandrindod Street Organ Festival played by Dr. Hartmut Krause. If suitably displayed, the fact that is was not being hand-played could be effectively disguised. Perhaps better known in Britain is the Tanzbaer, or Dancing Bear, which was produced by A. Zuleger of Leipzig, and the 32 note concertina-style model in the collection of Bob Minney is frequently displayed by him at rallies, being of the type frequently depicted in sailor's hornpipe illustrations. With reed organs now being produced by both of the major mechanical street organ builders - Hofbauer and Raffin - it should come as no surprise that the former has now produced a modern version which he has appropriately also called the Tanzbaer. Because this utilises the Hofbauer Micro-box system there is no need for a lever pump which was needed to operate the paper roll of the original Zuleger model. In appearance the instrument resembles the Melodian with which I was presented as a child, but appears to be appreciably larger. It is interesting that is has proved possible to reduce the Micro-box equipment to a size enabling it to be incorporated in an accordion and it should be easier to play and also easier to delude an unsuspecting audience. A Seybold-Hoehner is included in the Linz am Rhein museum collection.

## 20 note Roll Music

That I have very definite views regarding the advantages of roll music for smaller scale mechanical organs must be well known. For years I have tried to persuade music producers to cut roll music as well. We are slowly getting there as numbers of roll playing street organs steadily grow. Now it appears that is under threat. The most common scale is of course the popular 20 note Carl Frei scale and the original list of music, the source of which appears to be lost in the mists of time, has been produced by most builders to supply with their organs. In recent years a number of arrangers from different countries have arranged music for the scale which has been bought by some organ builders and cribbed by others. Arrangers have found it very difficult to protect their copyright and similarly builders have also had problems as supplying your own music provides a profit that helps to keep all prices down. Some builders have adopted their own scales to minimise the problem, but many organ owners don't like the limitations on arrangements that this imposes. For British organ owners who have to be commercially minded when collecting, probably for charity, the Continental lists of music are less attractive as they include a small proportion of our popular music, so we have a growing need to encourage our own arrangers. But if their music is to be pirated as soon as it is produced they will be prevented from making a satisfactory profit, and the pirate who is able to undercut having no arranging overheads will put our arrangers out of business. I have been informed by several sources that a foreign entrepreneur who frequently operates here, has copied the arrangements of Peter Watts and also Mel Colebrook and is offering them for sale. Organ owners are of course entitled to buy their music from the cheapest source but they should be fully aware of the probable consequences of this. There is a certain amount that each owner can do and that is not to supply or make available British music to any person who they consider might themselves permit it to be copied. I have many good Dutch friends but I have to say that the worst examples of pirating are in Holland - perhaps because that is where the best arrangements originate. Whilst the action is currently limited to 20 note scale, the number of organs using the Raffin 31 scale is also growing and it may not be long before the arrangements shortly to be generally available from Alan Pell suffer a similar fate.

## Haydn Floetenuhrstuck

Some time ago I publicised the fact that Ted Bowman of Bedford had produced a roll of 20 note music containing a number of Haydn's pieces for flute clock and I have obtained a lot of pleasure playing these excellent arrangements. Recently Josef Raffin has added two rolls of these compositions to his music list. Naturally some of these duplicate the pieces on Ted Bowman's roll. Interestingly we find we have preferences for one arranger for one piece, and the other arranger for another. One of my most valued tape recordings was sent by a fellow grinder in Germany and is of twelve Haydn pieces played on a clock dated 1792. The note which accompanied the recording states that Monk Primitivius Nimecz was a librarian in the service of Duke Esterhazy. Three clocks he made - in 1772, 1792 and 1793 - are still in private collections together with the Haydn compositions of which he wrote about 30. Pieces Nos 1-12 were composed by Haydn for the clock of 1792 featured on the tape. The pipes were situated out of sight on the clock floor, they were made of pear wood and were constructed in the Vienna flute manner. One of the pieces is played on the hour every hour. This clock was owned by Prince Lichtenstein and is now in the collection of Hans Urban in Vienna.

The 31 scale music list of Josef Raffin includes music by Bach. Unfortunately few mechanical organs include such classical music in their repertoires. A notable exception is the Gavioli La Cascade of the late Brian Oram for which he arranged a number of classical pieces, including Mozart's Fantasia No. 1 in G. It is also appropriate to mention that outstanding Carl Frei organ De Korsikaan, which has a very extensive repertoire, includes music by Bach and Mozart, probably arranged by van Boxtel who produced much of the music for this organ until recent years.

### Llandrindod 1990

The worst part about organising an organ festival is not the work load, though this can be substantial, nor the fact that you are usually too busy thinking of other things to enjoy the festival yourself. It is the unpleasant task of saying no to people to whom you would rather say yes when you have all you are able to accept. As any event gets better known its popularity tends to increase and so it has proved in this rural part of Wales. Once again organ builders should be well represented with four having already indicated their wish to attend - Alan Pell, Paul McCarthy, Kurt Niemuth and, from France, Philippe Crasse of Toulouse who builds under the name Le Ludion. Once again well over 30 organs are 'booked in' representing no fewer than 18 builders. This year there will be a stronger fair organ element represented by 46 key Gasparini (Paul Kirrage), 46 key Alfred Bruder (Colin Bullock), 35 key Limonaire - all being vintage organs - plus the modern 35 note Limonaire scale Le Ludion. Last year's Continental input has been exceeded with several new entrants, from France, Germany and Switzerland. Some organ enthusiasts go to events for the vintage organs present. This is still possible with fair organs in Britain, though increasingly more are finding their way into collections and rarely if ever get taken out to give public performances. It would be totally impossible with street organs with only a few vintage instruments in the country. So one has to accept that the street organ input will be all modern. With a steady demand for street organs but a shortage of venues where they may be 'Played and Displayed' it is important that Llandrindod should fill this need by providing a market place for what is on the market and builders know that they are encouraged to bring their latest products to show to enthusiasts. For example it is hoped in 1990 that Alan Pell will be able to demonstrate his trumpet organ and Paul McCarthy will be showing a new 40 note street organ. An example of the 26 note Schuhbauer organ will appear for the first time - a product of cooperation between Hofbauer and Peter Schuhknecht. An organ new to me also, is the 27 note Erman built in Geneva. There will be the usual variety of models from the better known builders, plus a model of the 21 note book organ produced by Peter Trueman. The usual Bring and Buy will as usual be held on Saturday evening before dinner and enthusiasts are encouraged to bring anything related to organs which is 'surplus to requirements.'

### An Oehrlein Mainzelmann

The variety of organ related cards I receive at Christmas always gives me great pleasure. Whilst it would not be correct to select one as being better than the others, undoubtedly the card which most aroused my curiousity was from Franz Oehlein, who I was delighted to welcome to Llandrindod last year complete with brand new organ model. This card depicted what I assume must be his latest novel creation. This is a beautifully carved figure of a flute player dressed in the colourful costume of a Jester (Til Eulenspiegel perhaps?). I assume that the figure is capable of movement and that the organ playing mechanism is contained within the cabinet upon which the figure stands. I look forward to having the opportunity of enjoying this latest product of the Mainzer organ builder on a future visit.

### Organ Events

Whilst 1989 was a bit thin on the ground for organ festivals on the Continent, that charge cannot be made this year, with the three yearly Waldkirch Organ Festival on June 22/23 (the same weekend as Manchester) and the Berlin Festival a mere two weeks later. At the latter it is hoped to organise the procession in such a way that it encompasses both East and West Berlin, surely an occasion not to be missed. We have been invited to an Organ Festival in Wuppertal before then, in May. This is the first event organised by this large city which is divided by the River Wupper, over which is suspended the unique Schweberbahn railway. Wuppertal is reputed to have the largest pedestrian precinct in Germany - which should make it ideal for an organ festival - and it also houses a famous clock museum. ■

## Have you paid your subscription yet?

Please remember that your subscriptions should now be sent to Ted Bowman, April Cottage, 24 The Slade, Clophill, Bedford, MK45 4BT.

## Wanted

Articles for publication in the "Music Box"

Let the membership as a whole benefit from the experience of individual members. Write a letter or send a complete "article". Photographs of unusual pieces are also required for "Members Showcase".

*Address your correspondence to:*

**Graham Whitehead,**
**Broadgate Printing Co. Ltd.**
**Crondal Road, Exhall,**
**Coventry CV7 9NH.**

# NEWSDESK

# THE YORK MUSEUM OF AUTOMATA

**By Jack Tempest**

March saw the opening of the world's first Museum of Automata containing probably the biggest collection of its kind to go on show to the public.

Altogether there will be some 300 examples of these mechanical wonders, some old, some new. The majority of them are the products of the French automata makers of the last century and the early part of the present century, though examples by present-day masters of the art also show that such pleasing mechanical novelties are still widely enjoyed.

The museum is a wholly private venture created at a cost of over £3,000,000 by Andrea and Jon Robertson, the realisation of their twenty year old dream to find somewhere to display their ever increasing collection of automata. Their joint interest in the subject led to Andrea receiving the gift of a beautiful singing-bird instead of an engagement ring!

In 1987 Jon secured a suitable site in the centre of York, just across the road from Clifford's Tower, consisting of three shops backed up by a derelict warehouse. Now the whole area has been converted into purpose-built museum premises, retaining the original shop fronts and the restoration being carried out to perfectly harmonise with the surroundings.

Visitors are welcomed to a small twenty seat theatre and presented with a five minute introductory programme displayed on a 16-screen video wall. This is controlled automatically by laser discs, which also operate the TV monitors used to illustrate many of the items of automata in motion in various rooms of the museum.

The Opening Ceremony was performed by the Lord Mayor of York, Councillor Jack Archer, J.P., who spoke of how the museum would be a valuable contribution to the tourist industry of the district and remarked how he was reminded of his younger days by the section designed to represent a 1930's seaside pier.

Amongst the special guests were two notable members of the M.B.S.G.B., our Honourable Honorary President Jon Gresham and long time member Jack Donovan. It was nice to meet up once again with these two gentlemen and talk old times over champagne and the tiniest sandwiches I've ever seen - even in London, and that's saying something! They were good, though, and there was plenty of them.

Jack was specially thought of that day and this genial "King of Automata" had been remembered by an excellent piece of automata depicting Jack's head wearing an armoured helmet. When set in motion the vizor opened and closed, each time allowing a glimpse of Jack putting out his tongue to the world!

Side by side one could hardly tell the real Jack from the automatic Jack, apart from the latter having no body. The only visible difference was that Jack - the real Jack - had shaved off his moustache since his sitting for the animated sculpture, but the likeness and twinkling eyes were all there, thanks to the skills of Frank Nelson, who made the model.

As many of our members appear to possess frustrated showbiz talents in the realms of illusion and magic it would be only right to mention that the guests on Opening Day included one of our more recent TV personalities, Simon Drake, who describes himself as "The Illusionist" and is associated with the entertaining programme "Secret Cabaret".

Interest in the world of music boxes certainly extends to generally include a fascination for automatic figures; a positive link being the fact that many of the antique examples have their entertaining actions accompanied by tuneful renderings from a musical mechanism hidden away somewhere

**A political piece of automata by Frank Nelson, of Manchester, marking the introduction of the new British taxing system, the Poll Tax.**

**Long-time Club Member Jack Donovan shows us what to expect when the vizor of the helmeted automata figure lifts! A remarkable, tongue extending likeness is revealed - apart from the moustache!**

alongside all the levers, gears, and springs which bring the pieces to life.

At the Museum of Automata there are showcases devoted to collections of tools, heads and limbs, eyes, mechanisms, and other items used in the construction of automata. One section displays interesting relics and ephemera from the factory of Bontems, another of memorabilia from the Vichy works; two famous producers of animated figures once based in Paris.

The early days of automata are recalled by a computer-graphic interpretation of three mechanical theorems propounded by Hero of Alexandria around about the year 200 B.C.; a copy of a figurine dating from about 25,000 B.C., carved from mammoth ivory and which possesses an articulated arm, discovered in Czechoslovakia; copies of early Egyptian artefacts having moving parts from the period 1300 to 800 B.C.; and details of the 13th century Peacock Fountains of Al Jazari and the 16th century Renaissance Gardens of Solomon de Caus.

The wonderful 18th century works of Jacques Vaucanson, one of the most influential of automata makers are remembered in a showcase devoted to his achievements; as are the marvellous products of Pierre and Henri-Louis Jaquet-Droz - along with their associate Jean Leschot - whose remarkable androids are preserved in the Musée d'Art et Histoire in Neuchâtel, Switzerland.

One small room is dedicated to the display of precious miniature pieces, including a beautiful 1820's Rochat jewelled gold lute and a richly enamelled singing-bird box, dating from a similar period, made by Bruguier. Other objects on display here are mechanical toys and clocks which feature automata.

The toys include an interesting collection of those weird and wonderful wooden Japenese Kobe Toys. These real curiosities are simply animated by turning knobs or levers, the action being transmitted by cotton thread to wooden levers and pulleys.

In the French gallery many charming pieces of automata are on view, representing the work of the French masters of the art - including pieces by Bontems, Vichy, Phalibois, Lambert, Décamps, and Renou. Obviously, to arrange for the exhibits to be operated would

**An example of the modern development of old-time automata - the IBM 7535 robot designed to assemble typewriter keys.**

**A tea-drinking Oriental smoking from a hookah, probably by Vichy.**

be impracticable and the actions are relayed via TV monitors, the piece in question being spotlighted at the same time.

One particularly interesting piece, from late 19th century Japan, is "The Archer"; a figure which loads a bow and fires arrows, whilst watched approvingly by two young Japanese ladies. A similar type of automaton has been produced in recent years, carved from wood, by David Secrett, and an example is featured in the museum.

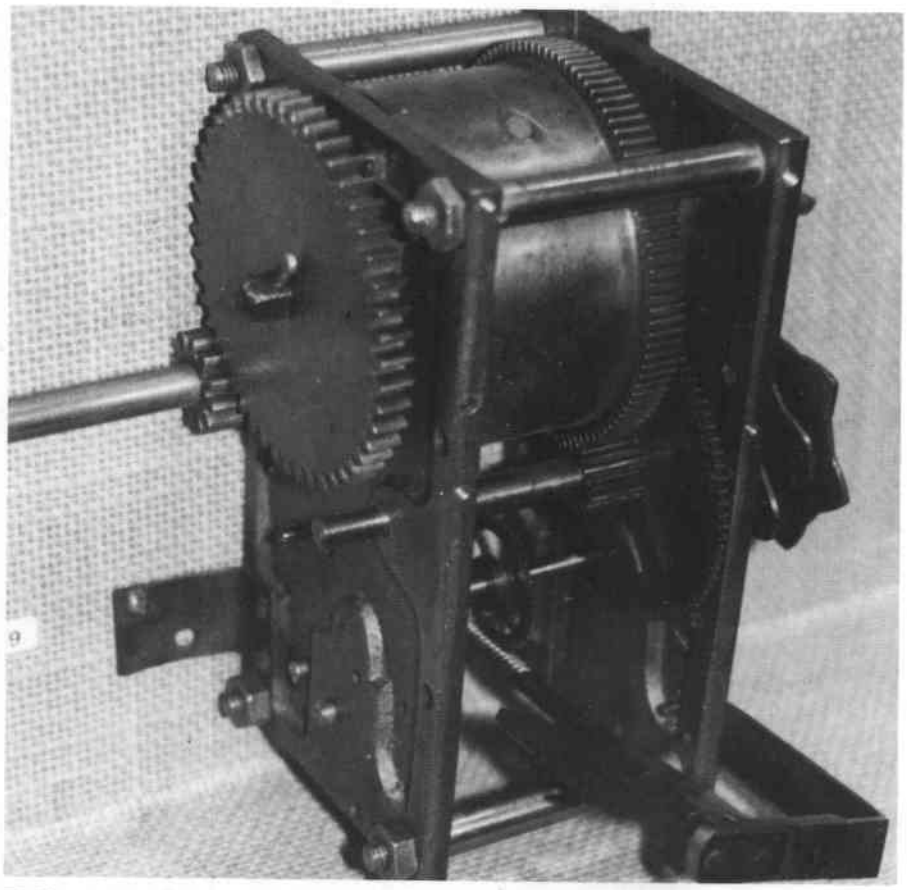
Several modern pieces are displayed, some specially commissioned by the museum, and include a working model of a "Chocolate Factory", by Tony Mann; "The Mad Hatter's Tea Party", by Eric Williamson; and "Dex", by Simon Blades - not forgetting the aforementioned animated "Jack Donovan", by Frank Nelson. Other specialist pieces are by Edessia Aghajanian, James Chedburn, Andrew Heaps, Tim Hunkin, Peter Markey, Jon Mills, Catie Roe, and Jan Salud.

Frank Nelson is one of the country's leading automata experts and he is now retained by the Museum of Automata in the positions of consultant and restorer. Many of his pieces have a gently vulgar theme of the type found on seaside picture postcards over the years and echoed in "What the Butler Saw" penny-slot machines. Frank was born in Blackpool, so that may well be his excuse!

One room of the museum is designed to represent a traditional seaside pier of the 1930's, complete with murals decorated by cheeky Donald McGill picture postcard characters - fat ladies and red nosed men - and all the automata on view here are the works of Frank Nelson. The visitor is able to set them in motion and see what happened to "The Man Who Fell Down the Loo", along with performances from "Big Bert", "The Can-Can Dancer", and "The Man With a Bad Conscience".

Elsewhere one of Frank's products brings us bang up to date with an amusing animated political piece dedicated to the Poll Tax. The following words are addressed to the visitor:-

> Turn out the poor man's pockets,
> The rich man's overflow,
> Support our leader on a poll tax?
> No! Support her on a pole -
> Like so - - - !



**Relics of the Bontems factory, Paris, a clockwork mechanism and a plate from one of the workrooms.**

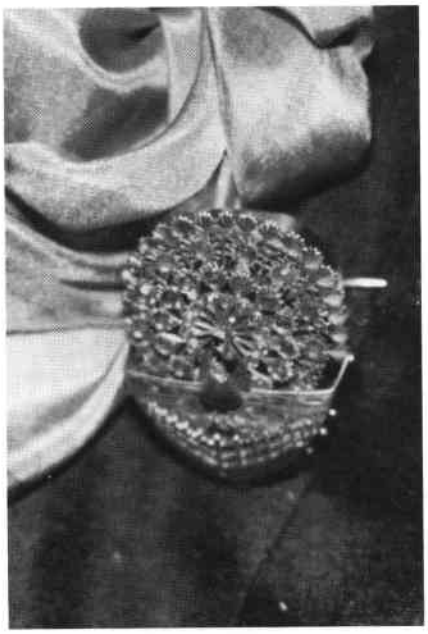


**The Museum of Automata from the ancient landmark of Clifford's Tower.**

**Above: At the Opening Ceremony of the Museum of Automata, York - (left to right): Jon Robertson, the museum founder; Mrs. Kay Donovan; Simon Drake, "The Illusionist"; Jon Gresham, Hon. President, MBSGB; Andrea Robertson; Frank Nelson; Liz Nelson; and Jack Donovan.**

**Right: Some of the many antique examples to be seen.**

**Below: Andrea Robertson wore this pretty automaton brooch for the opening ceremony - French in origin, the minute clockwork mechanism rotates the peacock's tail though, unfortunately, it has no musical accompaniment!**



**Two small, beautifully enamelled musical pieces on display - an early 19th century Bruguier singing-bird box; and a miniature musical lute by Rochat.**

Moving a lever at the side causes the lower figure to pull out his empty pocket linings and the top-most figure's head (Maggie's) to shoot upwards.

Towards the end of the tour the visitors reach a room which sets out to make the connection between automata and the automation carried out in today's industrial plants by 20th century robots which are the direct descendants of the automata of the 18th and 19th centuries. These items on display here include a reproduction of a tea-serving Chahakobi, custom built for the museum in Japan to a design which was published in 1796.

Then there is a really up-to-date piece of apparatus, of solely functional appearance, an IBM 7535 robot designed to assemble typewriter keys. Here, too, can be seen Simon Blade's fascinating "Dex", which operates a helter-skelter. More practical applications of automata principles are seen in the display of artificial limbs, including the latest electronic hand and powered gripper, from Steeper's, of Roehampton.

The Museum of Automata, Tower Street, York, is open every day of the week, from 9.30am to 7.00pm. From October to Easter the museum closes earlier, at 5.30pm. Admission is £2.30 (Children over 5 years old £1.30; Senior Citizens £1.50). ■

# *Society Auction*

The Society's annual auction will be held on Saturday, 2nd June in the Tuke Common Room, Regent's College, Regent's Park, London. Auctioneer Christopher Proudfoot (by kind permission of Christie's, South Kensing-ton). A great chance to sell and buy. Commission rates - Buyers premium 7.5%, Selling commission 7.5%. Register your entries on the day or use the enclosed Auction form which will save time on the day.

**HAVE YOU PAID YOUR SUBSCRIPTION YET?**

# OUR HERITAGE

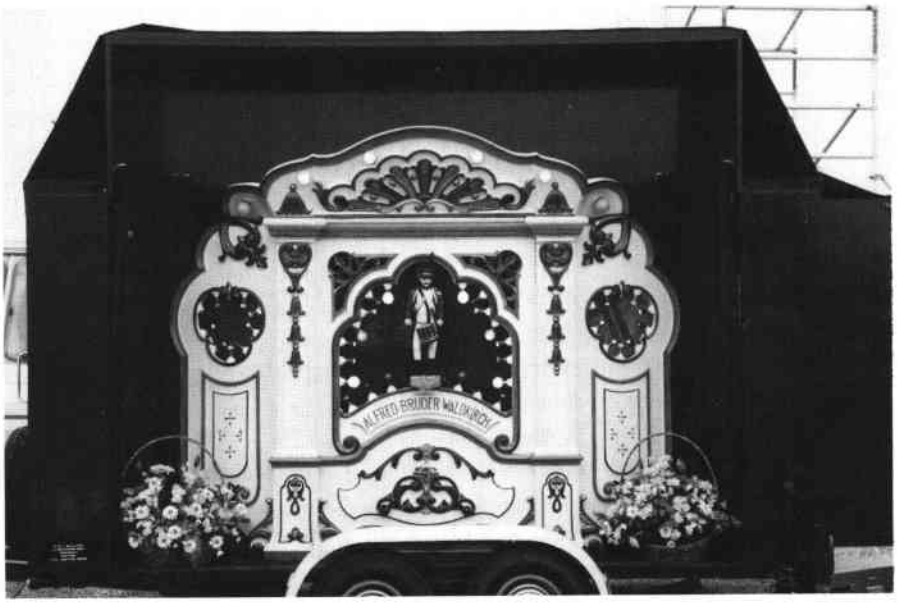
by Dorothy Robinson

Fairs are cloaked in mystery. True they have a magic that no other form of entertainment can provide. British fairs have a long and ancient history. The Romans were once credited with their introduction, the word fair itself is derived from the Latin "feria" - a holiday, but the tradition is more deeply rooted. They have their origins in the pagan customs of the people who first settled this land. Their seasonal gatherings, held perhaps for the purposes of both trade and festivity, contained within them the essential elements of the fair.

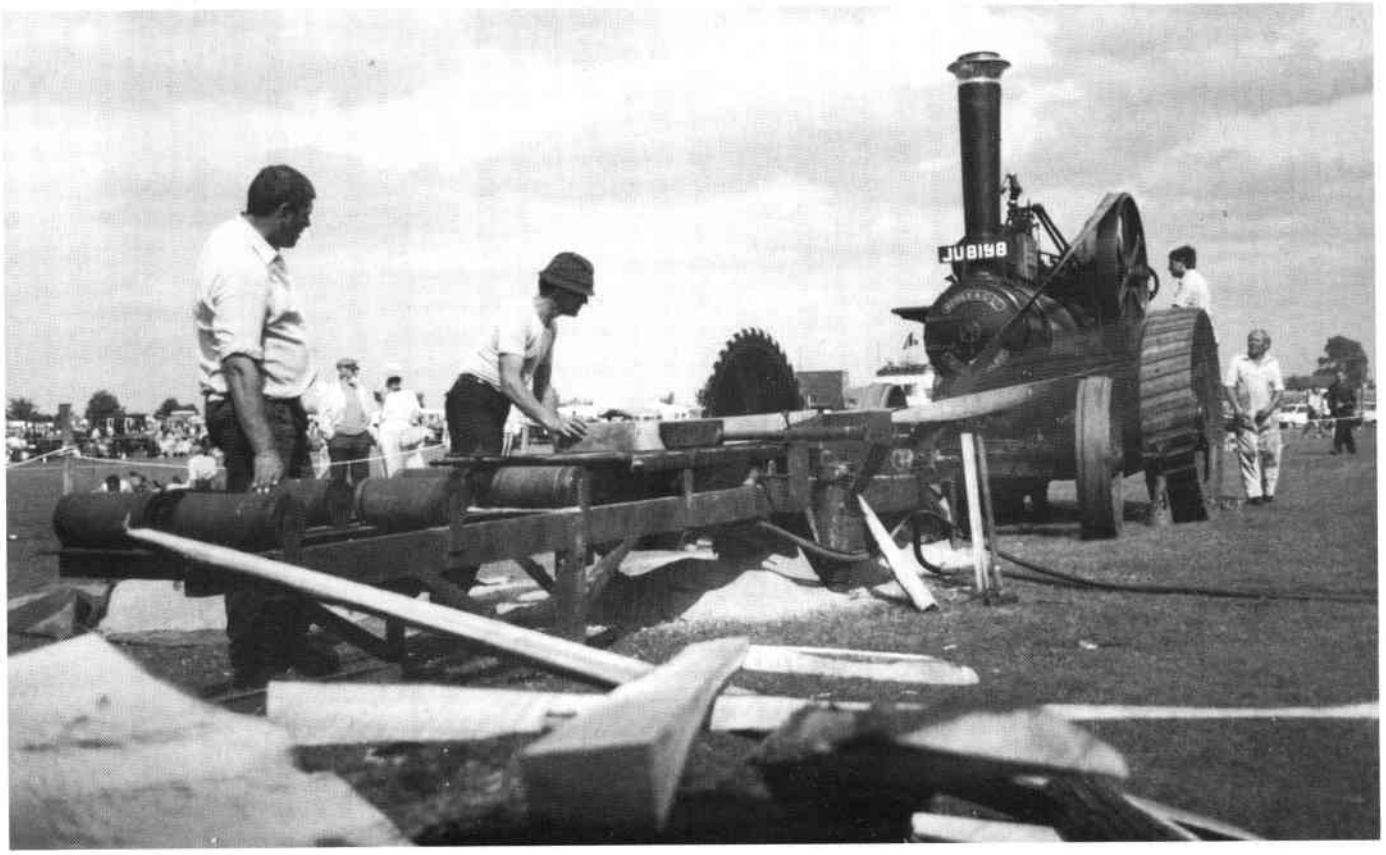
The Black Death of 1348-49 brought a new kind of fair. In order to stem the rise in wages Edward III introduced the Statute of Labourers. This compelled all able-bodied men to present themselves annually for hire at a stated wage. These gatherings, or hiring fairs, were held mainly around Michaelmas, the end of the agricultural year.

Most of these events survive today as pleasure fairs, although the practice of hiring fairs continued until as late as the 1920's in some rural areas. Generally described as Statute Fairs, they are known in certain parts of the Midlands as "Mop Fairs," a curious term derived from an old word for tassle or tuft. Labourers wishing to be hired would wear an emblem of their trade; the shepherd a tuft of wool, the thatcher strands of straw, the carter a piece of whipcord. Most Mop Fairs were followed, within a week or two, by a second event the "Runaway Mop." If a labourer was dissatisfied with his new job he would run away to seek another employer at the second fair.

By the early eighteenth century the trading aspects of the fair had waned and the fairs consisted almost entirely of amusements, acrobats, illusionists, puppet plays, beast shows and freaks. It was around this time that the first fairground ride appeared.



**Alfred Bruder organ built in Waldkirch, in the Black Forest, Germany. Owners, Colin and Liz Bullock of Nottingham.**



**M.B.S.M. Richard Booty with Robey 42675 built in Lincoln 1927, wood sawing at Lincoln Rally.**

Steam power came late to the fairground. In 1868, Frederick Savage a successful agricultural engineer from Kings Lynn in Norfolk, devised a method of driving roundabouts by steam. His invention, a steam engine mounted at the centre of the ride, was to transform the showmans' business. Freed from the limitations of muscle power, roundabouts could be made larger, more capacious and most significantly more heavily ornamented. The golden age of the fairground had begun - an era epitomised by the elaborately carved "Galloping Horses," suspended on twisted brass rods and leaping round to the strains of a mechanical organ. The showmans' increasing demand for novelty was matched by the ingenuity of Savage and other engineers.

In the wake of the steam revolution an astonishing variety of new designs appeared - The Switchback, The Cake-Walk and the Steam Yachts. But rides were not the only innovations. For many country folk their first sight of electric lighting was at the local fair.

Travelling showmen were the first to recognise the entertainment value of moving pictures. Within months of the Lumiere brothers' pioneering demonstration of this new invention in 1896, crowds were packing the fairground Bioscope Shows.

Despite this new attraction and shows, once the mainstay of the pleasure fair, this gave way to the rides.

By the time of the first World War, the scenic railways with their elaborately carved cars and special waterfall effects were the biggest crowd-pullers.

After the Great War a new generation of rides appeared, including the dodgems - the most popular fairground ride to this day.

The story of the fairground is one of continuing evolution. Novelty, the showman's stock-in-trade is the vital element in attracting the public's custom. Fairs have changed over the years but their purpose remains the same, to provide the fairgoers with a form of entertainment that is unpretentious, exciting and uninhibited. ■

# EVENTS 1990

**SPRING BANK HOLIDAY WEEKEND**

**MAY**

| | |
|---|---|
| 26 -28th | Steam Spectacular, Temple Newsam House, Leeds. |
| 26 - 28th | Bracknell Steam Show, Warfield, Berkshire. |
| 27 - 28th | Carrington Rally, Carrington, Lincolnshire. |
| 27 - 28th | Abergavenny, Steam and Vintage Show. |
| 27 - 28th | Steam Rally, St. Rumpshaw Hall Park, Norwich. |

**JUNE**

| | |
|---|---|
| 2 - 3rd | Steam Extravaganza, Great Wymondley, Near Hitchin, Hertfordshire. |
| 2 - 3rd | Steam Rally, Avebury Manor, Calne, Wiltshire. |
| 9 - 10th | Brocklesby Park Rally, North Lincolnshire. |
| 9 - 10th | South Tyne Rally, Tynedale Park, Corbridge. |
| 16 - 17th | Morecambe Bay Rally, Ashton-with-Stodday, Lancaster. |
| 16 - 17th | Parham Rally, Storrington, West Sussex. |
| 16 - 17th | Staverton Airport Steam and Vintage Show, Gloucestershire. |
| 23 - 24th | Banbury Steam Rally, Bloxham, Near Banbury, Oxfordshire. |
| 23 - 24th | Berry Hill Park Rally, Mansfield, Nottinghamshire. |
| 23 - 24th | Fair Organ Festival, Heaton Park, Manchester. |

**JULY**

| | |
|---|---|
| 30 - 1st | Sheffield Steam Extravaganza, Rother Valley Country Park, Sheffield. |
| 7 - 8th | Elveston Castle Rally, Near Borrowash, Derbyshire. |
| 7 - 8th | Heddington and Stockley Rally, Calne, Wiltshire. |
| 7 - 8th | Bromyard Gala, Stoke Lacy, Bromyard, Herefordshire. |
| 14 - 15th | Rempstone Rally, Wymes-Wold, Loughborough. |
| 14 - 15th | Vintage Vehicle Show, Ardingly Showground, Sussex. |
| 14 - 15th | Bristol Steam Weekend, Wapping Wharf, Bristol. |
| 20 - 22nd | Weeting Rally, Brandon, Suffolk. |
| 20 - 22nd | Netley Marsh Rally, Ringwood Road (A336), Southampton. |
| 20 - 22nd | Masham Rally, Near Ripon, North Yorkshire. |
| 28 - 29th | Ross-on-Wye Rally, Upton-on-Severn, Worcestershire. |
| 28 - 29th | Cumbria Steam Gathering, Cark Airfield, Flookborough |
| 28 - 29th | Pickering Rally, North Yorkshire. |

**AUGUST**

| | |
|---|---|
| 4 - 5th | Redhill Steam Rally. |
| 4 - 5th | Nottingham Organ Festival, Nottingham. |
| 11 - 12th | Knowl Hill Rally, Near Maidenhead. |
| 11 - 12th | Astle Park, Chelford, Cheshire. |
| 11 - 12th | Steam Rally, Driffield Showground, East Yorkshire. |
| 18 - 19th | Fairford Rally, Near Circencester, Gloucestershire. |
| 18 - 19th | Lincoln Rally, Showground (A15), Lincoln. |

**SUMMER BANK HOLIDAY**

| | |
|---|---|
| 24 - 26th | Street Organ Festival, Llandrindod Wells. |
| 24 - 27th | Island Steam, Haven Street, Isle of Wight. |
| 25 - 27th | Harewood House Rally, (A61 Leeds - Harrogate). |
| 25 - 27th | Town and Country Festival, Stoneleigh, Warwickshire. |
| 25 - 27th | Cornish Rally, Merrymeet, Liskeard, Cornwall. |
| 26 - 27th | Bishops Castle Rally, Shropshire. |

**SEPTEMBER**

| | |
|---|---|
| 29 - 2nd | Great Working of Steam, Tarrant Hinton, Dorset. |
| 8 - 9th | Stroud Rally, Stonehouse, Gloucestershire. |
| 8 - 9th | Haddenham Rally, Ely, Cambridgeshire. |
| 15 - 16th | Roxton Park, Near St. Neots, Bedfordshire. |
| 22 - 23rd | Steam Threshing, Bicker, Near Boston, Lincolnshire. |
| 22 - 23rd | Barleylands Farm Museum, Billericay, Essex. |

# GETTING STARTED

## 2 Player Piano Functions for the Beginner

by Allan Jones (Australia)

When I first became interested in Player Pianos and purchased my first instrument, I knew very little about the operation of a Piano, except that, if a key was set in motion, a hammer hit a piano string and a musical sound resulted. My knowledge of the player action was practically nil; I knew that it operated pneumatically, whether by suction or pressure I knew not. Previous to this, a friend, Don Morgan endeavoured to interest me in players: He had demonstrated his and explained that it was a reproducing piano. This was far too much for me to absorb at that time.

Anyhow, along came a player for sale. I let Don know and asked if he was interested in it. His reply was, "Why don't you buy it yourself?" Little did I realise where this would lead me. We examined it and discussed the pros and cons. One hundred dollars later I was the owner of an old run down player. After transporting it home I was eager to make an attempt at my first restoration. Don arrived soon after and we proceeded to dismantle it. Within a couple of hours, we had the instrument in pieces. One can imagine my feelings at this juncture, bits and pieces in this box, that tin, that box, this tin and so on. I hadn't the slightest idea what function each performed, or how. After some instruction and many, many explanations I gradually became able to understand the many operations that enabled me to bring this unit back to life. Many a roll I pedalled through this player with great enjoyment.

You may wonder why I have gone to this lengthy introduction. My aim is to let anyone, who has the patience, know that it is not all that difficult to restore a player. There are many books that should be read before attempting restoration of parts that one is not familiar with.

After many restorations, with some successes and some that I have not been overjoyed with, I advise anybody contemplating a purchase to seek advice before deciding on an instrument that has not been recommended authoritivally for restoration.

When I commenced restoring players I had troubles understanding the technical operations of many parts. With this in mind, I propose to give a short technical insight to the beginner into the operation of a Player Piano. Giving simple explanations, I propose to do this through a series of articles in the bulletin of the Society: However, there is one thought that should be given a lot of consideration, that is the quality of musical sound obtainable from the piano. No matter how good your restoration is on the player action, you cannot get the desired result unless the piano itself is in top condition and properly regulated.

Outlined below is the course I intend to follow in my explanations.

Firstly, I propose to divide the player action into several sections, which will converge together as a whole when completed.

1. A pneumatic.
2. A pneumatic valve and its relationship to a pneumatic.
3. Tracker bar and its relationship to stack.
4. Spool box.
5. Tracker pneumatic.
6. Air motor and governor.
7. Exhausters or bellows.
8. Stack cut off.
9. Tubing.
10. Regulating stack to pneumatic action.

### 1. A Pneumatic

In a Player Piano, a pneumatic is generally constructed of two boards hinged at one end and covered with air-tight material. A pneumatic is a means by which applied suction can be converted into mechanical energy. The operation is governed by three main factors:

1. Size of Pneumatic.
2. Amount of applied suction.
3. Atmospheric Pressure.

When suction is applied internally to a pneumatic, atmospheric pressure reacts externally and collapses it. The faster suction is applied the faster the reaction. The size of the pneumatic governs its strength, as atmospheric pressure exerts a pressure of 14.7 lbs per square inch. In a player piano stack there is a hinged pneumatic for each note to be played. However, some manufacturers omitted some low bass and some high treble pneumatics. As these notes are seldom played it is of no great detriment to the instrument. It is important to keep the span of the stack pneumatics to a reasonably uniform size, as the size of the span has a direct relationship to the power of the pneumatic when operated. Pneumatics need some means by which operation can be controlled, hence, the use of a valve is required.

### 2. A Pneumatic Valve and its relationship to a Pneumatic

The pneumatic valve is a means of controlling the suction supply passage to the pneumatic.

First consider putting a tap in line with the suction supply and the pneumatic. Turn it on and suction is allowed to pass through into the pneumatic collapsing it. Turn it off and allow atmosphere back in and it will re-open. Note I have said allow atmosphere back in otherwise pneumatic would stay closed. This is what the pneumatic valve accomplishes. Generally its design is of three compartments containing a two way directional valve, a diaphragm, a bleed and various ports. Refer Figure 1, Page 3.

The directional valve has to have:

1. The capability of supplying suction and at the same time cutting off atmosphere to the pneumatic, when it is moved to an **operational** position. (Refer Figure 2).
2. The capability of closing off suction and at the same time opening a port to allow atmosphere to re-enter the pneumatic, when it is moved on to a **non-operational** position. (Refer Figure 3).
3. The capability to operate on command.

When the valve is at rest and not allowing suction to pass to the pneumatic, one face is being held against its seat shutting off suction, the other face has moved away from its seat opening up

atmosphere port. (Refer Figure 3). When the valve is moved to its operational position it closes off the atmosphere port on one end and opens the port to suction chamber on the other. (Refer Figure 2). Before reading further be sure to understand what has been explained so far, this will determine your understanding of how a valve functions.

There is a compartment in the valve body where applied suction is there at all times, this is called the suction compartment (Refer Figure 1). There is another compartment that allows suction to pass through it **OR** atmosphere to pass through it, depending on valve position. This is called the pneumatic supply compartment. (Refer Figure 1).

## SECTIONAL VIEW OF VALVE

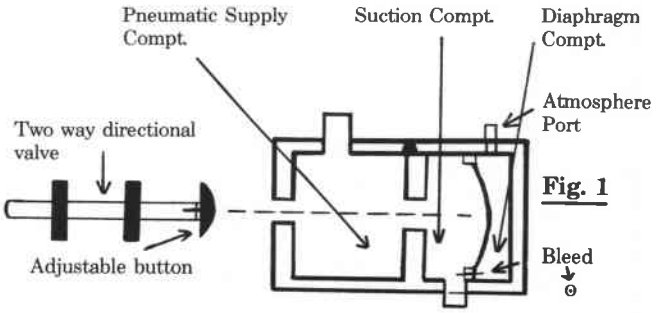



Fig. 1

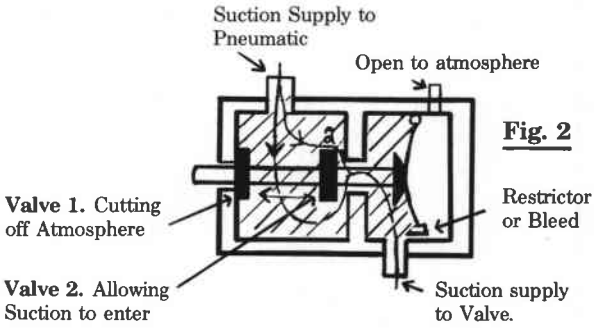



Fig. 2

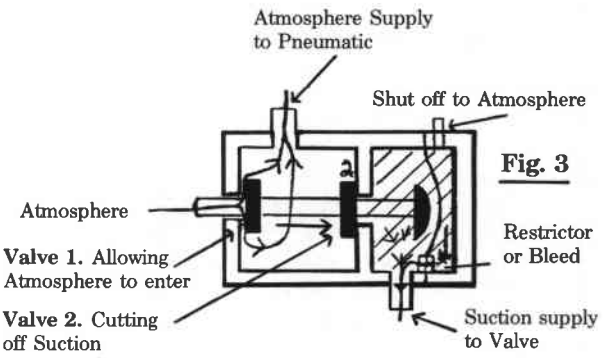
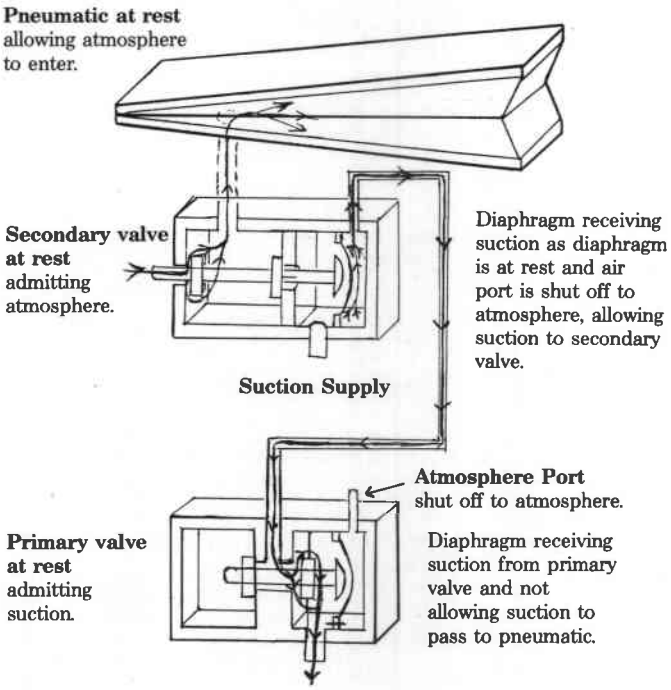



Fig. 3

So far explanation has been given to the valve positions and the passage of applied suction or atmosphere through the valve. To operate a valve on command, another compartment is added which is called the diaphragm compartment (Refer Figure 1). This compartment consists of a flexible diaphragm, a bleed and a port that can be opened or closed to atmosphere. The most common material used for the diaphragm is very thin leather. When the diaphragm is at rest there is applied suction to both suction and diaphragm compartments, suction entering diaphragm compartment via the bleed. As the suction pressures are equal between these compartments the diaphragm is at rest. It can be seen that atmospheric pressure can be utilised to operate a diaphragm. This is accomplished by having a port in the diaphragm compartment that can be opened or shut off to atmosphere. (Refer Figure 1). The port in the diaphragm compartment being larger than the bleed minimizes the effect of the bleed. When atmosphere is admitted into the diaphragm compartment the suction pressure is reduced and the diaphragm extends itself towards the suction compartment. When atmosphere is shut off the diaphragm resumes its rest position, suction being re-admitted through the bleed. Note: The diaphragm operates the valve which allows either suction or atmosphere to the pneumatic, depending on the position of the valve.

The above explanation is of single valve operated pneumatics only. Some stacks incorporate a double valve system which vary slightly from the single valve systems. In the double valve system two valves per pneumatic are used, namely a primary valve and a secondary valve. Both of the valves have an applied suction supply. The primary valve takes command of the secondary valve which in turn feeds the pneumatic. As noted earlier the function of the valve was to either give suction **or** atmosphere to the unit it operated. The primary valve still performs this function, only, when operational, it allows **atmosphere** to the secondary valve diaphragm compartment to operate the secondary valve. When the primary valve is at rest it allows **suction** to enter the **diaphragm chamber** of the secondary valve, returning it to a rest position. No bleed is required in the secondary valve as the primary valve is applying suction to it when it is at rest. If reference is made to Figure 4 it is seen that valve faces of primary valve have been restructured to allow suction through to the secondary valve diaphragm compartment when the valve is at rest and atmosphere through when the valve is operational.

Fig. 4.




When atmosphere port is opened in primary valve suction pressure is reduced in diaphragm compartment, which extends the diaphragm, operating the valve. The valve closes off suction supply at the same time admitting atmosphere to secondary valve. When atmosphere enters secondary valve diaphragm compartment, diaphragm extends, operating valve and admits suction at the same time shutting off atmosphere to the pneumatic.

If the operation and relationship of a valve to a pneumatic is thoroughly understood one can visualise a large group of these assemblies mounted side by side on a common suction supply board. As the width of a pneumatic governs the number that can be assembled together in a given length, it is necessary to use more than one board. Generally three boards are tiered together connecting air channels to one another. Each board has a channel, that connects to suction compartment of each valve. They also have channels that connect each valve to its respective pneumatic. The whole assembly is called the pneumatic stack. It's construction makes it possible to connect each of the pneumatics in an order that can be relayed to the piano action, however a means by which the valves can be operated automatically is required. To achieve this a selector bar is used. It is commonly known as the tracker bar.

### 3. The Tracker Bar

The tracker bar consists of a metal bar in which a row of evenly spaced holes have been machined through it. On one side nipples are soldered to the holes. These nipples are connected by tubes to the valve diaphragm compartments of the valves in the stack. On the other side the holes are open to atmosphere. Opening or closing off atmosphere to these holes direct valve operation. The paper music roll achieves this when it travels over the tracker bar. There is a hole in the tracker bar for operating each valve in the stack; also there are holes that control other functions e.g. sustain pneumatic etc. To make a tracker bar function in conjunction with a music roll, a spool box is added.

### 4. The Spool Box

In the main, the spool box is the unit, in which the music roll is placed and wound across the tracker bar. It consists of a wooden framework containing a tracker bar, a transmission, a take up spool, driven and sliding chucks and various control valves. The transmission is a means, by which power from the air motor is geared to a useable speed for winding the music roll across the tracker bar by the take up spool. Incorporated is a reversing gear, that can be engaged to select forward or reverse, as required. There are also devices that control operation of tracker pneumatics etc. Spool box designs vary. A close inspection should be made and noted before dismantling.

### 5. The Tracker Pneumatic

The tracker pneumatic is an automatic device controlling a series of linkages etc., which keeps the music roll holes directly in alignment with the tracker bar holes. It consists of two hinged pneumatics, mounted to a common base, linked together to obtain directional movement to a linkage, that in turn controls the spool movement in the spool box from side to side. When these pneumatics are supplied with an equal amount of suction they move to a central position. Being linked together they work in opposition to one another. If atmosphere is admitted to one of these pneumatics a reaction takes place, causing the opposing pneumatic to collapse and being linked together the other one opens. It can be seen, that by admitting atmosphere to a desired pneumatic, direction of movement can be controlled.

However, at this stage movement would be too fast. Restrictors are positioned in both atmosphere channels and supply channels, to slow down the reaction, and therefore create a workable speed of movement for use in a roll tracking system. To control admittance of atmosphere to the pneumatic at the desired moment, gravity valves, or atmosphere holes in tracker bar are utilised. As the roll moves out of alignment, a gravity valve, or a hole in the tracker bar, exposes itself to atmosphere operating its related pneumatic. This is, in most cases, the principle used for automatic music roll alignment. There are many types of arrangements added by different manufacturers; it would be impractical to delve further. On close examination of any system, knowing the principle, one can generally work out the various functions performed.

By this time, the principle of a player action should have unfolded in one's mind. Established so far, the music roll is kept in alignment as it is passed over the tracker bar by the tracker pneumatic. Perforations in the music roll allows a passage of atmosphere to the valves. The valves perform their task and energise the pneumatics selected which in turn operates the piano action.

### 6. The Air Motor and Governor

The air motor is a means of supplying rotary motion to operate the transmission. It consists of a channelled base board, sliding valves, pneumatics, a crankshaft and numerous linkages. Brackets are assembled on the base board in which the crankshaft rotates. The sliding valves move backward and forward between slides. The pneumatics are connected to the base board over suction supply holes. The number of pneumatics used vary, some use three, others many. For explanation purposes consider a motor comprised of three: They are connected to the crankshaft by swivel links. The sliding valves are also connected by links to the crankshaft, **or** to the swivel links. The cranks are spaced 120 degrees apart. When the crankshaft is rotated one complete cycle, each of the pneumatics have functioned once.

When a pneumatic commences its suction stroke, the sliding valve has been positioned over the suction supply hole in the base board by the crankshaft, which has opened up a suction passage to the pneumatic and at the same time it has shut off the atmosphere passage. As the pneumatic collapses, it rotates the crankshaft and changes the position of the sliding valve. As the sliding valve position alters, it shuts off the suction supply and allows atmosphere to re-enter the pneumatic, allowing it to open. The pneumatics operate in a pre-determined order. As one pneumatic completes its suction stroke the next commences. The cycle repeats and rotary motion to the crankshaft is achieved.

As the motor is required to operate at a constant selected speed under all conditions of suction pressures, a motor governor-regulator is added. This is normally known as the tempo regulator. It comprises of two compartments, one connected to suction supply, the other to the air motor. Between these the governor-regulator mechanism is added. The governor determines the volume of suction required by the air motor to rotate it at pre-determined speed. The regulator keeps this volume constant when suction supply pressures vary. The governor consists of a slide which opens or closes an aperture that allows a set volume of air to pass through. The slide is connected to the tempo lever that is controlled manually. If a constant supply of suction was obtainable no further means of regulation would be needed.

As this is not possible an automatic regulator is added. This consists of a knife valve controlled by a spring tensioned pneumatic. As suction is increased or decreased, the tensioned pneumatic responds, and moves the knife valve to a relative position that keeps a constant volume of suction to the air motor at all times. Also incorporated in the structure is another slide, **or** a valve, that allows suction to by-pass the governor-regulator and supply full suction to the air motor on rewind. This slide is connected by linkages to the manual re-roll lever.

### 7. Bellows or Exhausters

I have left the explanation of the bellows or exhausters until now on purpose. I thought it confusing to associate them with earlier operations. The wording suction supply, or applied suction can be used either before or after suction has been regulated or as in the explanation of a restrictor or a bleed.

In the suction supply system of a player there are generally two exhausters connected to an equaliser or reservoir. Each exhauster has an internal flap valve to the reservoir and an external flap valve to the atmosphere. As the exhauster is forced open the external flap valve is held shut off to atmosphere and the internal flap valve is opened by suction created by the exhauster, causing air to be sucked out of the reservoir. As the exhauster finishes its suction stroke, the internal flap valve shuts, allowing suction to be retained inside the equaliser. After

finishing its suction stroke it proceeds to shut, expelling the air sucked out of the equaliser through the external flap valve. It again commences its suction stroke repeating the cycle again. The other exhauster carries out the same procedure. The exhausters are connected to foot playing pedals. The reservoir serves a multiple purpose, it retains suction supplied by the exhausters and keeps a relative constant supply of suction for use by the player action.

### 8. Stack Cut Off

The stack cut off is a means, by which, suction can be shut off from the pneumatic stack. If suction is kept connected to the stack, music roll would play on re-roll. It consists of a divided box, one division connected to the stack, the other to the bellows. Enclosed within is a sliding board that **opens** or **shuts off** the air passage between the bellows and the stack. The sliding board is connected by linkages to the re-roll lever.

### 9. Tubing

At first this looks very complicated. However, first consider the components that require a supply of suction. It will be noted that the pneumatic stack needs one tube only, as it is so channelled to distribute it to all of the valves etc.

From the bellows, tubing is required to stack cut off, thence stack, also to motor governor, thence to air motor, also to sustain pneumatic. The tracker pneumatic obtains its supply from a source that is cut off when re-roll position is selected. That covers the suction supply tubing necessary.

The bulk of the tubing is used for admitting atmosphere, and is centered around the stack and the spool box. The tracker bar holes control about ninety nine percent of the operations in a player. Eighty eight of these admit atmosphere to the stack valves and are tubed accordingly. Number one playing hole is tubed to number one valve, number two to number two valve, and so on, to number eighty eight. This has dispersed with the majority of the tubing required, however, there is generally a hole in the bar at the left side used for sustaining pneumatic operation. This is tubed to its valve via an on-off switch in the spool box. Some tracker bars have holes to operate the tracker pneumatic, these are tubed to their respective pneumatics. Some systems use gravity valves, if so, they are tubed to the tracker pneumatics.

Player systems vary, using various other components. With a little consideration they can be understood, and tubed accordingly. If in doubt when tubing up a system, tube the obvious first.

### 10. Regulation of the Pneumatic Stack

When a pneumatic stack is mated with a piano action it has to be adjusted to perform the same operation as that of a pianist. If a close inspection of the piano action is made, it can be seen that, after a key is depressed and held down, a hammer would have hit the string and returned to a position approximately five eighths of an inch from the string. The piano key, can only be depressed three eights of an inch. The piano action is regulated accordingly to check the hammer five eighths of an inch from the string when the key is depressed fully. This space needs to be retained when the pneumatics operate the piano action. As the piano action is governed by the distance a pneumatic travels, and not the piano key, a rail with adjustable stops has been added. These are adjusted to allow the pneumatic to close and retain the same space of five eighths of an inch between the hammer and the piano string, when in operation. The clearance between the pneumatic link arrangements to the piano action should be to a minimum and adjusted accordingly. Before regulation begins the player action should be adjusted to the piano action in a level and upright position.

### EPILOGUE

The aim of this description has been to explain operation of a player action and not restoration. ■

# Music by Machinery

*From the "Musical Opinion & Music Trade Review," January 1893*

Dr. W. Mason, in a recent article, has once more indicated the importance of the interpretation of the classics, this time in the case of Paderewski, and the discussion that ensued and the attention bestowed upon it distinctly demonstrate how important and significant a matter interpretation of music becomes in the loftier studies of the art. How classical or romantic or any kind of school of music should be expounded, elucidated, or interpreted is the basis of polemics that fill volumes of interesting musical literature.

Despite the recognition of all this state of things among musically intelligent beings, the parallel with the developments of the adjuncts of productive music - the musical instrument - a certain class of inventors, promoters, and investors have been engaged during some years in urging, through the public prints, the advantages of mechanical music, - that is to say, applying the interpretation of the great composers and compositions to devices that are based purely and if possible absolutely, upon the action of mechanics, aided or abetted by such aids as pneumatics, automatics, automechanics, and electricity, or a crank.

For music written in simple rhythms, such as dances or marches, there may be found some justification for the introduction of mechanical means or reproduction; but I maintain that no mechanical device within the hitherto explored powers of human invention can reproduce properly the rhythmic movement of a Strauss waltz. A march can be reproduced mechanically, the two step rhythm going forward forever without change; although here also an accent is necessary for the first beat, but this accent can be provided mechanically and the dynamic effect maintained. But outside of this, the realm of mechanical music is limited to the merest monotonous imitations with increased power over the accordion played by human hands. The latter reed instruments can be made to express feeling, because the player controls the expression as he momentarily feels it; the other, pumped by the foot, gives forth a large tone, but can only express such feeling as the man who cuts the paper rolls may have indented into them. For strictly musical emotional purposes the accordion must be preferred, or even the toothed comb with a paper cover vibrating between the lips of the street boys of olden days.

In the next place, the instruments are nearly all five octaves, and the transposed music - originally written for the orchestra or the piano - is brought forcibly into the condensed limits of five octaves; and as portions of the upper octave and the lower octave are frequently useless, the great classics are cut down still more to retain a semblance of their former forms.

No such thing as tone colour or timbre exists in these mechanical devices. The poetic charm of an orchestral works is in many instances centred in the instrumentation, the distribution of tone colour being a great art. In these instruments the same reed quality displaces all other colours, and the monotony becomes offensive to a cultivated ear and distorts the education of the youthful ear.

Moreover, there is no necessity for further impulse or ambition, and the poor deluded man or woman who once becomes seduced by these instruments is necessarily fallen from a high estate and cannot be reformed. The heel and toe or the crank or the dynamo will do the work for the brain, and the brain can finally have a rest from this hot pursuit after good music. It will be dished out to you by the foot, the yard, or the mile, as you lie on your couch, and you can be rocked to sleep under its sweet influences; and, if you should happen to have an inclination for music at meals, you can have a machine attached to your chair or your table, and it has been known to be used in the bathroom.

The commercial side of the venture is centred in the rolls of music. They can be replenished as fast as the paper mills can turn out paper. The machines for punching the holes are all patented, and you can get anything, from Beethoven, Bach, Wagner, et al., up to "Annie Rooney" or "Throw him down, McClusky". ■

# Musical Box Oddments

by H. A. V. Bulleid Number 45

Composer Edward Solomon (1855-1895) came from a London family of theatre musicians. He was musical director at several theatres in London and New York and he composed numerous comic songs and parlour pieces for piano and several operettas including . . . .

| | |
|---|---|
| Billee Taylor | 1880 |
| Claude Duval | 1881 |
| The Vicar of Bray | 1882 |
| Polly | 1882 |
| Pocahontas | 1884 |
| The Red Hussar | 1889 |
| The Nautch Girl | 1891 |

Solomon's operettas were reckoned among the best contemporaries of Sullivan's, but perhaps he is now best remembered by his music for George Grossmith's 1889 song *See me dance the polka,* - heard to great effect on sublime harmony boxes by Geo. Baker.

## Mermod Freres

Mermod were making cylinder musical boxes at high speed by the late 1880s, most incorporating their own distinctive design which included crank wind, spring drive and governor at the right, treble side and a combined tune indicator and selector with stationary cam at the bass end. The spring and cylinder bearings were in line and of cast iron, integral with the bedplate. The cylinder had a small stub shaft each end screwed into its robust end-caps, and the shaft at the treble end carried a driving fork to engage with a peg on the spring barrel cover and a coil spring to maintain contact between cylinder and snail. Most larger models also had Mermod's parachute safety check. The stop lever was a brass plate pivoted to the bedplate near the conventional governor and bent to form three extensions: one sprung against the face of the spring barrel and entered a hole in it at tune end, one was bent upright and simultaneously caught the stop arm, and the third was engaged by a small lever pivoted to the spring bearing and protruding through a slot in the bearing cover plate which listed the Mermod patents and indicated PLAY or STOP for the lever.

An objective debate on whether the Mermod design was an improvement on the old original would probably end in a draw. No space is saved by having the spring and cylinder in line. Crank wind is handier than lever but the handle is loose and still needs a parking slot at the bass end. The controls are slightly less convenient and are both under the glass lid. Simplified final assembly brought cost savings, and the layout was excellent for interchangeable cylinders, as noted in Oddments 37, Vol. 13, No. 6.

This Mermod style with its list of patents up to 1888 spans a huge range of serial numbers; for example 60255 with 4.3/4 inch cylinder and 81853 with 3.1/2 inch cylinder, both six airs, in simple grained cases with small transfer on lid and without tune selector and parachute check. The case of serial 60255 is stamped 275 on the left side top surface in 8mm figures, almost certainly denoting Ste. Croix manufacture. Probably most Mermod output in the 1885-1895 period was of standard movements with cylinders six inches or less. Stella disc machines were also in production. Sales were growing in America where Jacot was their agent. The Mermod factory is shown in Fig. 1.

All these Mermod cylinder boxes had tune sheets of the design shown in Fig. 2. They come in different sizes to suit different lids and in the left hand lower corner they show the Mermod trade-mark with founding date 1816. Unaccountably, this date sometimes comes as 1840. For Mermod's special types, such as Guitare and Bells, the design gives ample room for a descriptive heading above the tune list. Sometimes, as on serial 80428 (5.3/4 inch cylinder, 8 airs) the tune list is in purple ink from a jelly-pad duplicator, suggesting a batch of boxes all with the same programme.

## Design Details

The complications of the combined tune indicator and selector arise from the need to prevent the user trying to make a change during a tune - whether from mere fiddling or ignorance or because the cylinder had stopped before tune end. The result would be broken tips and possibly bent pins, particularly if done while the cylinder was at rest and all the way from last to first tune. The resulting design is ingenious but not quite so elegant as the simple selectors fitted by Bremond, Baker-Troll and others which merely flap the air if operated away from tune end.

The main spring unwinds one turn for every tune, so it has to be as many times weaker and longer as the spring barrel to cylinder gear ratio of lever-wind design, which needs much more winding so crank-wind is almost essential. The single bearing for the spring is only 1.1/8 inch wide and has to stand forces imposed by heavy-handed winders. To reduce float the brass cover-plate is ingeniously made slightly convex so its concave underside only bears on the shaft at the two extreme ends of the vee-

**Fig. 1. View of Ste. Croix about 1900 looking West towards the Mont des Cerfs (Deer Hill). The three main buildings of the Mermod factory are in the left foreground. The centre section is painted FABRIQUE D'HORLOGERIE above MERMOD FRERES and the right section, BOITES A MUSIQUE. Thanks to the Swiss Tourist Office for this picture.**


**Fig.2. Mermod's large (11 by 7 inches) multicoloured tune sheet for serial 56428, printed in Paris on stiff card and fixed with only three pins, sides and top centre, date 1890 or later. Cylinder length printed in pouces but given in inches, - here 11.1/4 inches, about 10.1/2 effective. Mascagni was added to tune 1 in a very weak hand, it is the only up-to-date tune in the list.**

groove of the bearing. There is no felt oiling pad as on the interchangeables, and the oiling hole is covered over by the list of patents, which is more than a bit stupid, see Fig. 3.

Assembly is very simple and quick; the cylinder first, with driving fork upright, and the spring then positioned to engage it. No skill is needed to position and screw home all the pieces, and the only adjustments required are (1) the bearing covers, (2) the orientation of the cylinder driving fork, and (3) the upright extension of the stop lever; this has to catch the governor stop arm only when the stop lever has entered the hole in the spring barrel. I have found this out of adjustment at Auction viewings, being so set that it always stops immediately the lever is moved to STOP - thereby obliterating the automatic end-of-tune-stop and probably causing stops in mid-tune. I suspect this has been done by owners who know better than the makers.

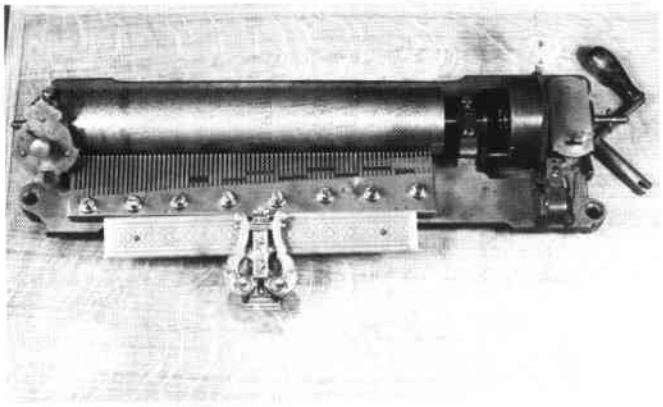


**Fig. 3. Typical Mermod mechanism of serial 56428, with governor geared to spring, tune selector at bass end, and stop lever slot in the plate listing patents. Lines on the comb show groups of teeth tuned to the same pitch.**

## Mermod Guitare

On serial 56428, whose tune sheet is in Fig. 2, the comb slopes at 5° to the bedplate and the cylinder axis is 1/4 inch below tooth tips, so the critical comb/cylinder angle is 18° as noted on other Mermod movements. The tune track width is .022" as on interchangeables. Brass dampers were fitted, held by brass pins; the dampers were scarcely worn and the pins were second or third hand so I think this was a replacement of original steel dampers.

The spring barrel gear, which in this design acts as the great wheel, is 2.3/4 inches diameter with 156 teeth giving 2184 revs of the endless per cylinder rev, - the top end of the usual range.

An idiotic feature of the case is that if you put the winding handle back in its partition it slides underneath and rattles about. Cure: a small wood block will retain it vertically in ready-for-use rattle-free position.

As will be seen in Fig. 3 the comb is unusual in having 42 of its 77 teeth in groups of four or more tuned to the same pitch. This permits extensive display of the guitar or mandolin effect. The helical lines of cylinder pins vary in slope from 5° to 9°, representing playing rates of eight to five notes per second respectively, the cylinder running at the conventional surface speed of .11 inch per second. The majority are nearer to eight notes per second, the five per second minority representing a rather lazy though effective strumming of the guitar.

The helical lines slope uphill from bass to treble, as shown in Fig. 4. This feature is usually associated only with Lecoultre movements. It will be very interesting to learn if it is typical of Mermod, and whether it was in some way adopted from Lecoultre.

One has to compliment the tune arranger for extracting an excellent result with sustained tremolo effect from only 77 comb teeth.

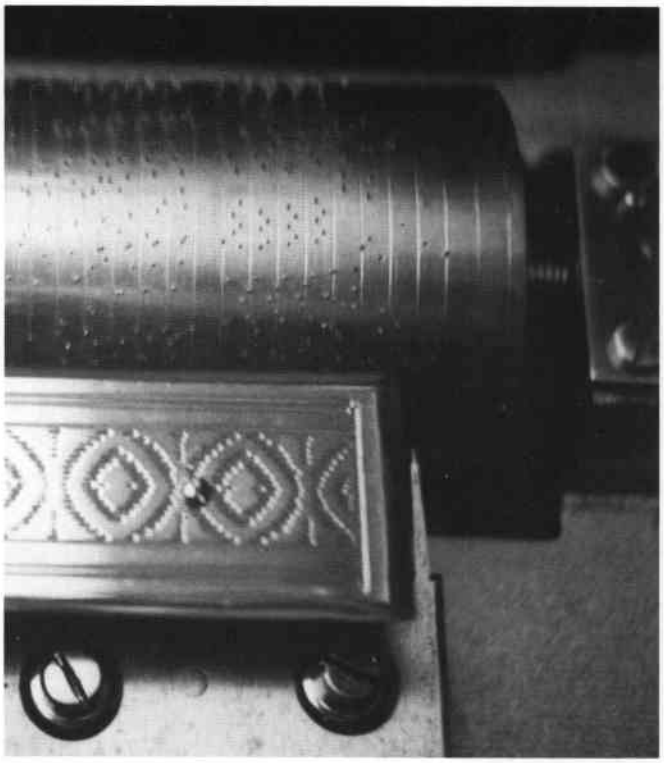


**Fig. 4. Treble end of serial 56428 cylinder showing helical lines of pins for Guitare effect, here sloping uphill towards the treble end.**

## Mermod Zither

Most larger Mermod boxes were fitted with a zither, and they were also sold separately, in two sizes; one for cylinders up to six inches, the other for cylinders 7.1/2 inches and over. They were catalogued in America as "a novel contrivance to produce the sound of a stringed instrument . . . can be removed at will and can be attached to any box, new or old." Luckily the zither on serial 56428 was in its original condition and secured by the fifth comb screw from the base end. As usual, the lyre-shaped support had a red felt backing to show through the sides of the lyre and contrast brightly with the polished nickel-plated zither top.

The zither tissue is 8.1/2 inches long and covers all teeth except the extreme twelve bass and four treble, see Fig. 3. I must say this is a genuinely effective zither application; the repeated notes are heard separately when it is applied, in strong contrast to the sustained-note effect when the aftersound from each tooth is allowed to continue. Even the extremist Antizitherites must concede that it allows two distinct versions of each tune on a Guitare box of this type.

As usual the tissue roll was flattened to an oval and had to be re-made. It had six wraps of paper about a thousandth of an inch thick and two wraps slightly thicker. I think this is far less likely to be a technical break-through than a patching-up job when the main tissue was too short. The finish was in fine green silk, glued to the tissue to provide the last lap. Zithers so finished with green, brown or red silk are not uncommon and suggest that the makers wanted them to outlast paper. The silk was arranged with the warp threads parallel to the comb; there were 100 warp and 150 weft threads per inch. I think today's best substitute is polyester lining material which is available in similar colours. It has about 100 warp and 50 weft threads per inch. In contrast to the 1890s, artificials are far cheaper than real silk and 10cms cost about 20 pence though purists may worry that buying a short length puts the weft parallel to the comb. It works excellently on Mermod 56428, heard but not seen . . . but I think only the most dedicated restorers will bother.

## Mermod in the U.S.A.

In his 1938 notes L. G. Jaccard praises Mermod's Ideal musical box as one of the best, most simple and inexpensive ever made, explaining its popularity in the U.S.A. and its great scope with cylinders up to 25 inches long by 3.1/4 diameter.

The extensive Mermod range is covered in a 70-page catalogue issued in 1895 by Heeren Bros. of Pittsburg. It lists and illustrates six Peerless and twenty Ideal types and a further thirty ranging from small "tabatieres" to orchestrals and coin-operated types. There are also manivelles, chalets, musical alarms, singing birds and sundries. No wonder the decent-sized factory of Fig. 1 was needed. The catalogue concludes with fifteen pages listing cylinders available, all with six tunes and with unlisted tunes available at a small extra charge; and ten pages listing and illustrating available spares, replacements for practically every item in every box, including springs and comb teeth - total 137 items.

Most movements are offered with a choice of American-made oak or mahogany cases with carved fronts, "guaranteed never to warp or split," as seen in Fig. 5. The Guitare movements all have 11 inch cylinders playing six airs; being interchangeables with wider tune tracks they have the same number of teeth as serial 56428 described above.

The catalogue also contains sundry snippets of mostly good advice including DIRECTIONS FOR OILING MUSIC BOXES. This is very sound, if optimistic, concerning the governor as shown in Fig. 6, but less happy in its advice about keeping the cylinder pins oiled . . . .

> ". . . . otherwise they will produce a disagreeable grating sound. To do this, take a thin piece of metal one or two inches wide (or the blade of a large table knife will do), oil it well, and pass it over the pins from one end of the cylinder to the other end while the box is playing, so that all the pins shall be oiled."

This conjures up visions of a genial but ham-fisted operator downing a double scotch and lighting a cigarette to steady his hand and advancing on the grating musical box to lunge unsteadily at the cylinder with oil dripping from his large knife.

**Fig. 5. Heeren's catalogue illustration of Mermod 14.1/2 inch cylinder six air sublime harmonie movement with drum, bells and castanet in 34 inch American case with carved front. Typical Mermod tune sheet, parachute check inscribed Jacot for American market, and tune selector - called tune skipper in the U.S.A.**

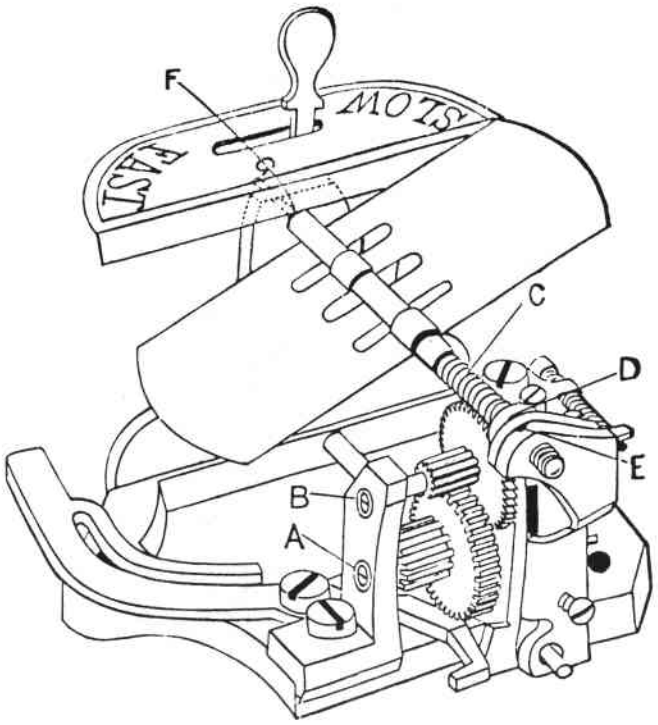



**Fig. 6. Diagram of Mermod's horizontal governor (described in Oddments 37) with caption reading . . . "It is very important that the parts indicated as A,B,C,D,E and F be well oiled. One drop should be put at each of these points at least every three months, also on all bearings."**

## Oiling cylinder pins

This is certainly worth doing because it reduces wear and helps the dampers. The area of contact is extremely small between pin and tooth so a high-pressure oil should be used, as in car back axles. The quantity applied should be the minimum possible, and this is best done by first applying a smear of the oil on the bottom half inch of a piece of card about 3.1/2 inches wide, such as a postcard. Check that the oil is not spread too thickly by drawing a pin through it and examining the amount picked up; it should be only just discernible with a magnifying glass. Having adjusted the amount, start the cylinder and apply the card. You will find that there is still oil to be picked up from it after you have finished; about three drops of oil will "do" a 13 inch cylinder. The only snag is that the grating sound will persist as it is almost certainly due to faulty dampers. Occasionally one finds dampers almost glued to their teeth with a sticky, oily mess. That is due to over-oiling the pins, and affects performance.

## Raked pins

The Winter 1988 and Spring 1989 issues of the MBSI magazine *Mechanical Music* contained some notes I supplied on how timing is affected by altering the rake of cylinder pins. They included a table of relevant data, reproduced here in a slightly extended form. It shows how altering the rake angle affects both timing and distance of pin from tooth.

The calculations apply to a 2.1/8 inch diameter cylinder with pins .035 inch long and .011 diameter playing at one minute per revolution. That gives a pin speed of .11 inch per second.

Raking was generally done at between 15 and 25 degrees, and from the table it is easy to reckon the effect of changing the rake, as might have been done during "justifiage." For example, changing from 20 to 25 degrees advances the timing from .109 to .134 of a second, an increase of .025, that is a fortieth of a second - possibly just discernible. Similarly, the increased distance from pin to tooth is (3.3 - 2.1) = 1.2 thousandths of an inch.

If the pin length were only .025", as on some early boxes, the corresponding advance would be from .078 to .096, an increase of .018 of a second, less than a fiftieth. The extra distance from the comb would be about 3/4 of a thousandth of an inch.

If raking exceeds 30 degrees timing corrections by increasing the rake are increasingly nullified by the pin being moved further from the comb.

Timing errors less than a fiftieth of a second, which is equivalent to mis-placing a pin by 2.2 thousandths of an inch, are not noticeable. All cylinder musical box makers were conspicuously successful in keeping within this tolerance.

## Polyphon pieces of music

Descriptions of discs by novelists must be extremely rare. Member Grace Thompson kindly sent this one from the Henry Williamson novel *Donkey Boy* (1952) which also introduces a spelling variety . . .

> Then Daddy opened his surprise, in a big wooden case. It was a musical box, that played big thorny round tin pieces of music which clanged when you shook them. He said it was a German Polyphone. It was lovely music, like the bells of St. Simon's when you were walking over the Hill to hear Mr. Mundy preach and the anthem afterwards, but the Polyphone was much nicer. ■

| Angle of rake | **degrees** | 10 | 15 | 20 | 25 | 30 | 35 | 40 |
|---|---|---|---|---|---|---|---|---|
| Advance of tooth release compared with unraked pin | **inches** | .006 | .009 | .012 | .015 | .018 | .020 | .022 |
| | **seconds** | .055 | .082 | .109 | .134 | .159 | .183 | .205 |
| Increased distance of pin from comb | **thousandths of an inch** | .5 | 1.2 | 2.1 | 3.3 | 4.7 | 6.3 | 8.8 |

**Table showing the effects of different rake angles.**


London's next mechanical music sale will be at Southeby's on Friday 18th May where the highlight is sure to be an Imhof and Mukle orchestrion. This is an 86 key instrument with 256 pipes including 41 reeds with brass trumpet resonators. There are 52 barrels playing European and Indian tunes, pinned spirally, revolving 7 times for each tune. For further information contact Jon Baddeley on 071 408 5286

**Prices realised at Christie's, South Kensington, Mechanical Music Sale 30th April 1990.**

The bigger the better, or so it may seem with Polyphons, when the 24 5/8" model realised £9,500 complete with 11 discs.

The always popular Symphonion "Eroica" triple disc musical box housed in a walnut case with a clock-backed fretwork door, small disc storage shute in base and balustraded top with 16 sets of discs, fetched £11,000. This did not appear to be a good example as one of the two original motors had been removed and replaced by an intermediate wheel, so that all three move-ments are driven from one motor behind the lowest movement. Al-though there is a coin shute, the mechanism was missing. Notice too, the different finials on the balustrade.

A Symphonion 19 1/8" upright disc musical box with diametric twin combs, coin mechanism and walnut case, with replacement pediment and glazed door sold for only £2,200 against the estimate of £3000-4,000. The lower price possibly reflects the difference in popularity between the Symphonion and the Polyphon.

The same price was reached for a 15 5/8" table Polyphon with a "comb-and-a-third" movement in a quarter veneered walnut case with inlaid lid and interior print. This was mounted on a contemporary made stand with three shallow drawers and turned legs as shown in the accompanying photograph.

Another 15 5/8" table Polyphon with double comb movement and a panelled walnut case with carved mouldings inlaid lid and interior monochrome print realised £2,800.

An interchangeable cylinder mandolin musical box number 15780, having 12 broken teeth, with ribbed brass bed plate half-two-thirds length mandolin section, 6 cylinders playing 6 airs and serpentine case and matching table with cross banding and inlay, cylinder storage drawer and part turned legs reached £4,000 .

A musical automaton tableau with three pairs of bisque-headed doll dancers on a rotating turn-table in a rustic setting with waterfall, wooded background painted on a glass dome, two-train clock and ebonised wood base was sold for £1,600.

A guilt metal oval musical casket cast with classical folitate and geometric patterns, the hinged lid containing singing bird mechanism with enamel cover, the base with oval type piece in front and musical movement playing 4 airs listed underneath, 4 3/4" wide, made in Switzerland early this century was sold for £2,400 against an estimate of £400-600.

Barrel pianos are examples of the instruments which do not seem to be increasing in value. A ten air example in a varnished wood case with incised decoration and glazed upper panel bearing labels of A.O. Wintle, Lawshall, Bury St Edmunds, on a painted cart, reached £1,500.

Amongst the smaller items was a cabinet roller organ in guilt stencil walnut case with 12 "cobs" which sold for £800.

A 14 note organette in a guilt stencilled walnut case bearing the trade label Moon and Sons, George Street, Plymouth, was sold for £160.

# Letters to the Editor

*Letters sent to the Editor may be reproduced in part or whole, unless marked, "Not for Publication." Due to the amount of work involved in producing the "Music Box" the Editor regrets he cannot answer all letters personally.*

## *Disc and musical box auction prices*

**G. Taylor writes from Clitheroe:-**

I have always been struck by the minimal information given in the magazine relating to prices attained at auctions. In the Spring 1990 edition there is only your short note relating to 19.5/8" Polyphons; reference to a six air box whose quality is not defined plus Christie's advert on page 116.

Surely each edition could have a basic listing of the contents of larger auction sales, brief description, condition, price attained etc.

I do have the feeling that this magazine is dominated by "people in the trade" who do not wish normal public members to have any price guides whatsoever.

I would be most interested in other members views.

*The contents page of each edition lists the officers of the Musical Box Society of Great Britain. Out of the 15 people listed only one, Christopher Proudfoot, is "in the trade." Our meetings too, are attended by very few dealers. Contrary to what you believe, our dealers impart valuable information, not just on values, but restoration tips and general advice. Please come to some of our meetings and you will see that there is a different side to the MBS than which might appear from the outside. Editor.* ■

## *Value of Society*

**A. Semel writes from Staten Island, New York:-**

I have just received the Winter issue of The Music Box, No. 4, Vol. 14. Thanks to Mr. Ted Bowman's prompt service.

I am a member of MBSI, Member No. 06407 and also a member of MBS of GB.

The reason for this letter is to inform you of the ways I find to encourage my friends the value of a Society of this type. In order to get them to look to the future and to show the younger people the value of what a music box can do.

I know that I am up against progress for tomorrow, but with a little time and effort the younger set see's what I mean.

To explain what I mean, I am 70 years of age, with wife of 45 years, plus 3 fine sons. I retired from work, so I had to find something worth doing, I started going to Flea Markets and by god I found a long lost love, "Musical Boxes" in any form, I also started to buy books on music boxes and pieces and joined the MBSI and MBS of GB.

I bought damaged picture frames of all types, some musical, and proceeded to repair the musical movement.

I also found a way of using glass from disposed windows and from this proceeded to etch with acid with the use of santex paper and stencils.

What started out to be a hobby became a bit of a money making deal.

The reason I am writing this letter is to express my appreciation for Societies such as yours, the MBS of GB, are well worth the dues. ■

## *Relying on chance?*

**Ted Brown, new Advertising Secretary writes from Sidcup:-**

I must admit I thought that Classified Adverts in our Journal were more relying a great deal on chance. Having just taken over the job of Advertising Secretary, I thought I had better put an advert in. I needed 22 note Mignon Rolls and within three days of the first advert I had got one. The advert more than paid for itself. Since then I have spoken to other Classified Advertisers many of whom have met with success. The record for a reply so far is three hours after receipt of the Journal. A Classified Advert is well worth the £3 minimum at 11p per word. I wonder how many members go straight to the Classified Adverts after their initial glance at the Journal, before reading the articles. I do, do you? ■

## *A stamping error*

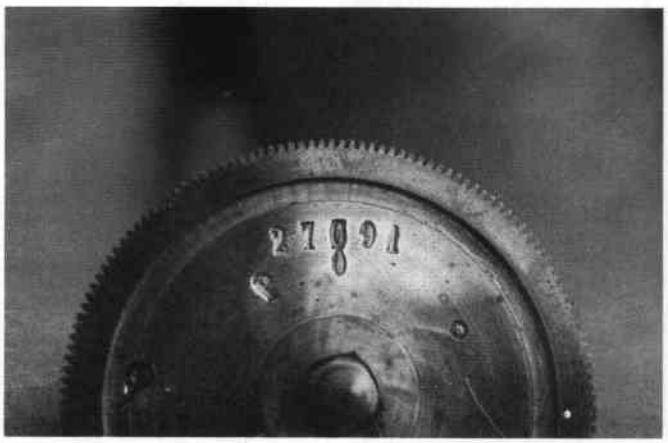
Mike Tucker sends a good example of the efforts taken to remedy a miss-punched number. The mistake was a second 7 which was overstamped with a square punch which was then overstamped with the correct 0.

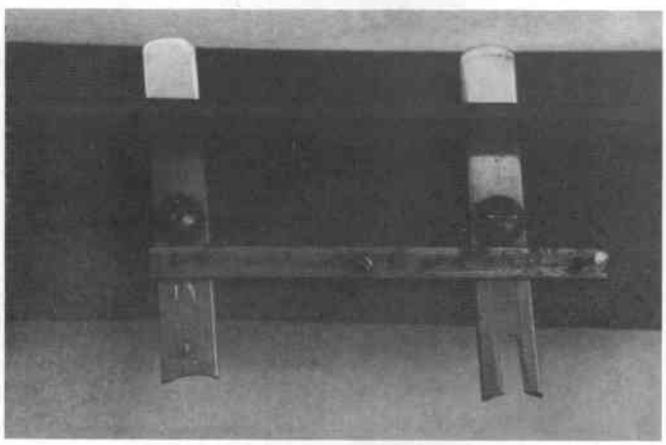
The resulting mess was very pragmatically overcome by the simple expedient of stamping another 0 below the correct position.

The same box had a most unusual detente, as it does away with the problem of a slack screw allowing the box to turn off on each rotation when continuous play was required.

Mike says the method used was to copy the working of the change lever but apply it to the detente lever. This provided positive on and off positions. This is the first example of this method he has seen.

The music appears to be a late Paillard or PVF, as shown by the tune sheet. ■





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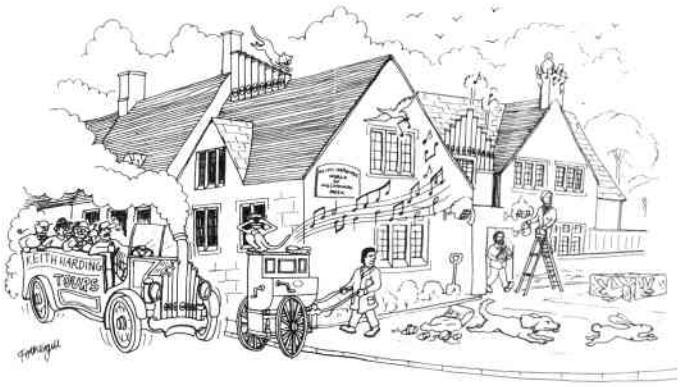


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Collection and delivery. All work can be collected and delivered door to door by insured carrier. Large items can be collected and delivered personally.

*In fact anything necessary to completely overhaul your musical box. Part jobs welcome.*

# Classified Advertisements

LAST DATE FOR RECEIPT OF ADVERTISEMENTS FOR INCLUSION IN NEXT ISSUE:- 7th July 1990.

Members: 11p per word
(**bold type** 5p per word extra).
Minimum cost each advertisement £3.
Non-Members: 22p per word.
(**bold type** 10p per word extra).
Minimum cost each advertisement £6.

Semi display single column 3cm max. 30 words £9. 5cm max. 50 words £13. Box No. £1.

**CASH WITH ORDER PLEASE TO:**
**Advertising Manager,**
**Ted Brown, 207 Halfway Street,**
**Sidcup, Kent DA15 8DE.**
**Tel: 01-300 6535**

## FOR SALE

**Hello!** Did you read the letters page before looking at the classifieds. Well you are reading this, so many of the other 850 odd members are reading it as well. It could be an advert for that thing you've been after for years, or someone might want that thing your wife has been trying to persuade you to get rid of for years. Write off now to the Advertising Secretary, me Ted Brown, my address is at the front. It's only 11p per word for members. Get it in the next Journal.

19.5/8" upright polyphon case £200. 0228 710156.

Nice selection of **Player Pianos** plus New/S/hand Rolls Duo-Art etc. Export service. Laguna Rolls, Lagoon Road, Pagham, Sussex PO21 4TH, England.

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**Heilbrunne "Virtuos" Electric Expression Piano**
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**£1,950**
**Further details 0736 63625**

**"Cylinder Musical Box Design and Repair"**
by our contributor **H. A. V. Bulleid** - £11.70 post paid from Artmusique Publishing Company, 31 Perry Hill, London SE6 4LF.

## WANTED

**Wanted Symphonion Gambrinus** or any large Polyphon or Symphonion disc machines. Also wanted 19.5/8" and 24.1/2" discs. **03917-78640 Mark Singleton.**

**Wanted** good cylinder & disc music boxes, barrel organs, Symphonia, Celestina & other organettes, singing birds, Gramophones & phonographs, also rare items. Offers with pictures to: HANSPETER KYBURZ mech. Musikinstrumente, Jubiläumsweg 10, o 064 43 35 59. CH-5036 Oberentfelden.

**Musical Automata.** Enlarging collection. Top prices. 815 Moraga Drive, Los Angeles, CA 90049 (213) 471-3000 Mr. Levy.

**Wanted,** Green Welte Piano Rolls, Mills Violino Virtuoso, and rolls for same. 15.5/8" Polyphon discs. 24.1/2" Polyphon and discs. 041 881 4074 or write to Roger Brooks via Subscription Secretary (Member 1619).

**14 note** Clariona and Melodia rolls required, Ted Brown 01-300-6535.

**8.3/4"** Troubadour discs wanted, any condition. D. I. Almond 0323-35493.

**Polyphon** case wanted approx. 14" x 12", disc size 11.1/4". Symphonion case wanted approx. 13" x 12", disc size 8.1/4". Tel: 0228 710156.

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Gramophones, Phonographs and mechanical curios bought and sold.
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**WANTED**
**Barrel Pianos/Organs,**
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*Please telephone:*
Alan Wyatt on (0223) 860332.

**NOTICE**

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

## RATES FOR DISPLAY ADVERTS IN 1990

SPECIAL POSITIONS (offered as available).

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| Outside back cover | Full page only £125 |
| One additional colour to match front page | £45 |
| Full colour | £285 |
| 8 x 6 colour photograph | £45 |

Inside covers: Full page £110, Half page £60

POSITIONS INSIDE JOURNAL (as available)
Full page £82, Half page £48, Quarter page £30, Eighth page £20
5cm box in classified area £17, 3cm box in classified area £12

These charges include typesetting but are exclusive of any artwork and camera work which may be required. Half-tone, line, and line-and-tone negs plus artwork, design and layout facilities can be provided if needed at additional cost. Squared-up half-tones £11 each. Cut-out half-tones £15 each.

SPECIAL COLOURS
If required, advertisements can be printed in a second colour. Rates available on application.

DISCOUNTS (applicable only on accounts that are settled within 60 days, otherwise strictly nett).

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| Four or more consecutive insertions with same copy: | Area rate less 10% |
| Four or more consecutive insertions with differing copy: | Area rate less 5% |
| Two or more full page advertisements in the same edition: | Area rate less 10% |

MECHANICAL DATA type area:-
Full page 10.5/8" x 7.1/8" (270mm x 180mm), Half page 10.5/8" x 3½" (270mm x 88mm) or 7.1/8" x 5.5/16" (180mm x 135mm), Quarter page 5.5/16" x 3½" (135mm x 88mm).

## Deadline Dates for Display Advertising Copy

7th April; 7th July;
7th October; 15th January

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

**Posting of magazine:**
27th February; 27th April;
7th August; 7th November

**Musical Box Society of Great Britain**

## SUBSCRIPTIONS

Have you paid the correct fee for subscription renewals?

Please check now and forward any outstanding amount to Ted Bowman, Subscription Secretary.

If you are paying by standing order please make sure your bankers have received a revised standing order.

### Correct Membership Fees

**United Kingdom**
£18, Joining Fee £9.

**Europe and Near East**
£18, Joining Fee £9 (plus £1 if not in Sterling).

**Australia, New Zealand and Far East** £20 Surface Mail, Joining Fee £10. £26 Air Mail, Joining Fee £13 (plus £1 if not in Sterling).

**United States** $40 Surface Mail, Joining Fee $20. $50 Air Mail, Joining Fee $25.

**Canada** $50 Surface Mail, Joining Fee $25. $60 Air Mail, Joining Fee $30.

*Send in your classified for the next edition NOW ! ! !*

## Wanted

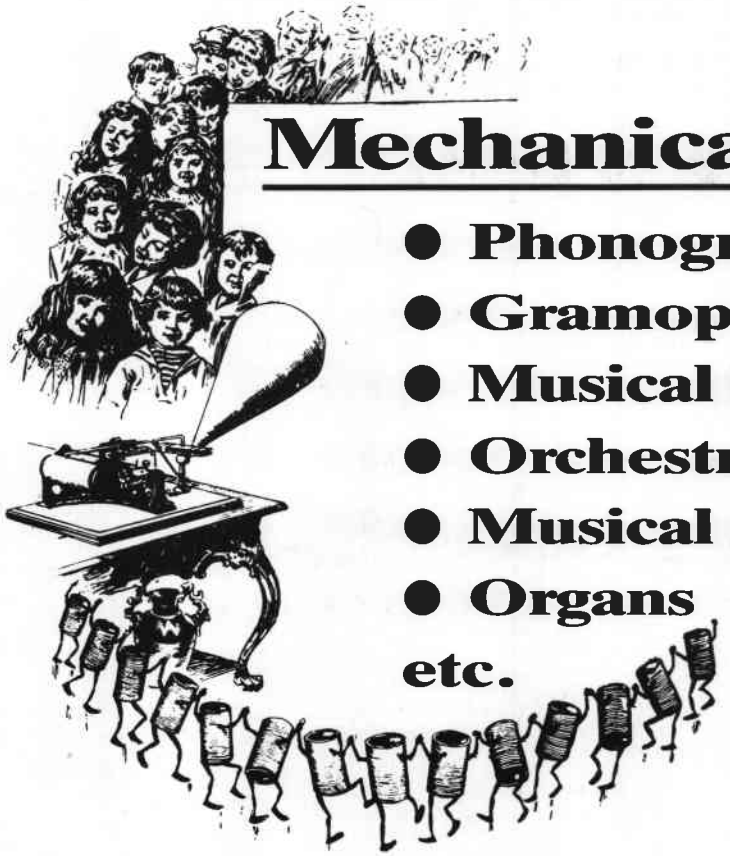
Articles for publication in the "Music Box"

Let the membership as a whole benefit from the experience of individual members. Write a letter or send a complete "article". Photographs of unusual pieces are also required for "Members Showcase".

*Address your correspondence to:*
**Graham Whitehead,**
**Broadgate Printing Co. Ltd.**
**Crondal Road, Exhall,**
**Coventry CV7 9NH.**

# INVITATION

After our successful spring sale you are kindly invited to our next special auction.
We're looking for unusual items and entire collections of:



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Catalogues DM 25,– / £10,– /$ 20,– incl airmail against prepayment only (Euro-cheque/cash).

Closing date for entries for our next special-auction: 30th September 1990.

Overseas please ask for "easy shipping" instructions


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— Breker —

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