

Inside A Tribute to Frank Holland Restoring a Tingelary – Part Two Sleeping Beauty

The Journal of the Musical Box Society of Great Britain



Grand Roller Organ with six $13^{1/4}$ inch 'cobs'. Estimate: £1,000-1,500.

Mechanical Music

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Front Cover:

Frank Holland's portrait, painted by his artist cousin Margaret Holland-Sargeant.

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I have now completed four years as your Editor. Until now many complimentary letters have been received and none that complain.

Unfortunately that record has now been broken with a letter of criticism from Claes Friberg of Denmark, a well known and much respected member of our Society. If Claes is thinking the way he is, no doubt there are others in our midst that have had similar thoughts but have not committed them to a letter. Therefore I am taking up his points here.

"Dear Mr. Editor

On page 83 Mr. John Hammond asks for information regarding the 6000-series of discs for a musical box. I have never heard about a Polython musical box. First I thought that it was a Polyphon, but since you repeat the name "Polython" several times I wonder what it is. You forgot to write the address of Mr. John Hammond. I think I have the material he wants, so I hope you can inform me of his address in your coming issue of the Magazine. Something puzzles me. You started as an editor of "The Music Box" telling us folks, that you would invest money in this project or rather spend money to give us a superb magazine, with colours and everything, which promoted yourself and your activities very much. After two years you start to complain, that you (or rather the society) is short of money because of the gorgeous magazines.

I thought you were serious, so I sent some money for support, but upon receipt of "The Music Box" I was very disappointed."

Let me clarify the more important points first. I did start by promising my commitment to the magazine. But I certainly did not say that I was "going to invest or spend money to produce colour sections" like those we have enjoyed in the past. I was given a budget only for a black and white magazine with a two colour cover. Whilst full colour pictures are certainly desirable, they can only be financed by an increase in membership. Otherwise the viability of producing colour is limited to the cover, financed from the advertising revenue on the back page. We are indebted to Shelagh Berryman's continued advertising support for this facility. The cost of producing colour inside has been paid for by either myself, Broadgate Printing Company Limited, or the generosity of Broadgate Printing Company's regular suppliers as acknowledged on page 166 of volume 12 number 5.

In my first year of Editorship five magazines were produced against a budget for only four, it is mainly that and partly the fluctuating dollar exchange rates that have caused our cash shortage - not overspending as you suggest.

A large extent of the deficit has now been wiped out by the generosity of those members who early this year made donations following my appeal. The total amount received in this way was approximately £1000. Whilst it has not been possible to thank everyone individually, I would certainly like to express my thanks to all who have contributed to this appeal.

I suspect that the reason that you were disappointed with the last edition of Music Box was not the quality of the content but simply the lack of it. It was the committee's decision to reduce the number of pages until new subscription rates apply, rather than allow an increase in the cost of printing due to inflation.

During my four years as Editor, the budget allocated for the production of Music Box has increased by 20%. In this period the actual cost of printing and paper has, according to figures published by the British Printing Industries Federation, increased by 40%.

To put this matter right the committee proposed to increase UK's subscriptions from £11 to £16 with similar increases for overseas.

However, at the Annual General Meeting held 4th June 1989, a counter proposal from members won the day with subscriptions rising a further $\pounds 2$ to give the society a little "buffer" against any other rising costs.

Therefore, I am pleased to advise that from the next edition I shall be producing an average of 38 pages per edition.

I believe that one of the requirements of producing a successful magazine is that it goes out on time, especially when it contains dated advertisements. The last edition coincided with my annual holidays. Like a good editor I went to the office on the first morning of my holiday to check the final proofs and spotted the unusual "Polython" and several other small mistakes. I even stayed while the corrections were made but unfortunately with other key staff on holiday too, the incorrect version was reproduced. A black mark for the printer!

Finally, it is my policy not to publicise the address of any society member without his written permission. The facility exists for any member to make contact with another member simply by writing, c/o The Subscriptions Secretary.

SOCIETY TOPICS

FORTHCOMING MEETINGS

CHRISTMAS MEETING Saturday, 2nd December, 1989 at the Tuke Common Room, Regent's College, Regent's Park, London.

Meeting starts at 9.30 with coffee and registration. Speakers to include Arthur Ord-Hume, with advice on some pitfalls to avoid in the restoration of musical boxes, Ted Bowman talking about musical temperament, and Reg Mayes with an illustrated talk about his recent trip to the USA, including the 40th Anniversary celebrations of the MBSI.

At the time of publication, Regent's College do not anticipate the Refectory being open, but for up-to-date information regarding catering and the programme, contact Alison Biden on 0962 61350 nearer the time.

Sunday, 31st December, 1989 and Monday, 1st January, 1990. A New Year's celebration is proposed at Chichester, to take place at a fourstar hotel, consisting of a Society Dinner followed by entertainment, with a full day at Clive Jones' Mechanical Music Museum on Monday, 1st January. This will be a highly entertaining and enjoyable event, if past experience is anything to go by, with the opportunity to listen to up to about forty different items from Clive's extremely comprehensive collection. Hotel price: bed and breakfast £19.50 per person, Dinner £18.00, (open to non-residents), Society registration £2.50 per person, and buffet lunch on Monday, 1st January £7.00-£8.00 each.

Family members and friends are welcome to join in this event. Please send s.a.e. to Alison Biden, St Giles Hilltop, Northbrook Close, Winchester, Hants SO23 8JR for booking form as soon as possible, or phone her for further details on 0962 61350.

SPRING MEETING

Friday, 30th March - Sunday, 1st April, 1990

at Bowness-on-Windermere

Registration and hotel booking forms are sent out with this issue. Jim Hall, the local organiser, has arranged a very comprehensive and exciting programme of events to complement the lovely setting of this hotel, with its excellent facilities. You MUST book early to avoid disappointment. The programme includes entertainment Friday and Saturday evening, demonstrations and lectures by David Snelling, Gordon Thwaites and Jim Hall himself; a trip to Richmond Mason's collection, taking in some of the spectacular Lakeland scenery en route, and it is hoped to arrange a mechanical music fleamarket.

Picture Parade

Society Organ Grind, Autumn Meeting, Bristol, 15th/16th September, 1989











Our venue was the fine Unicorn Hotel, in the historical docks area, so it was well placed for visiting the places of interest around the town centre.

The weather wasn't very kind to the Organ Grinders on the Saturday morning as it was raining although there were sufficient shop canopies, which gave some protection. There were over a dozen members with their instruments around the Broadmead Shopping Centre who braved the elements. Robbie Gordon; John Harold and Nicolas Simons had their brand new Pell organs on on public show for the first time. Robbie and John's organs are 31 note keyless with four hand stops, Nicolas's is 25 note keyless with 2 hand stops. The "Grind" collected £372 in aid of the R.A.F. Benevolent Fund.

- 1. Alan Wyatt, John Miller, Daphne Wyatt, Margaret Miller.
- 2. David Harold.
- 3. Maggie Morris.
- 4. Jim Colley.
- 5. Left to right, Dorothy Robinson, Margaret Howard, David Snelling, Peter Howard.

Auction Benefits Society

The profit from the June Auction for the Musical Box Society of Great Britain totalled £721.82 the profit goes to the Society's funds.

Sales totalled £4,244.50. Some lots were kindly donated to the Society, which explains why the profit is more than 15% of the sales.

Please note that subscriptions for 1990 are now due. For the convenience of members a subscription form is included with this magazine. Please complete and return with your remittance to our new Membership Secretary G.E. Bowman, April Cottage, 24 The Slade, Clophill, Bedford. MK45 4BZ.

AN UNMUSICAL BOX

You've probably met my sort of box before. I don't have a cylinder but I do have two discs (although they're usually spelled the American way - Disk); they come in two varieties - a hard one and a floppy one, which can be a bit tiresome at times. Although I don't have any springs I do get wound up occasionally when people hit the wrong keys. I have a governor, but no combyet - but more of that later.

You must have guessed by now; I'm your new computer, and my governor is Ted Bowman, (that's the new Subscriptions Secretary for anyone that can't read!). I'll be churning out all the address labels for the journal each quarter and I'm going to keep tabs on your subscriptions - so watch out all you late payers!

Mind you, please don't expect me to get everything right from the word go; after all I'm still learning the job. Let's face it, everyone goes through a period of teething troubles when they enter this world, keeping their creators up through the small hours of the night, so why should I miss out on this essential development phase? In fact, why stop there, there are growing pains, adolescence and eventually second childhood, so I think I'll enjoy them all! It even took Ted Brown a little while to get to grips with all the problems, so please, give me a break if I get things wrong at first. The only advantage I've got over Ted is my speed, but that means that when I screw things up, I do it even faster than he could! There's an old saving among us computers - To err is human, but to really foul things up you need a computer'.

I shall exercise the utmost discretion of course, in fact I have to under the law - I'm not allowed to disclose any information to anyone without your permission. The law says that I needn't register with the Data Protection Registrar (which is both bureaucratic and expensive for the Society) provided I ask everyone whether they mind being held on a computer system and they don't object. I still have to obey the principles of the Act though, so I won't be selling any mailing lists or anything like that. In fact if you wanted to contact another member whose address you didn't know, then you could write to him/her care of me, and I'd forward your letter on. That's the way Ted Brown always used to do it, and I wouldn't dare argue with him.

Did you know that my boss, Ted Bowman, is a really hard task master? He expects me to work until midnight or even later - (at my age, I ask you!) loading member after member onto the new database; can you imagine it, Name, Address, Number, date joined etc, etc... Name, Address, Number . .. on and on and on, it gets so boring! Every now and again I slip in an odd spelling mistake like Toad instead of Road - well, it'll liven things up a bit when I have to print out all those address labels.

I'm not terribly keen on some of the things I've been asked to do - for example, sorting out those members who don't put their membership number on the back of their cheques. It's OK when they have a name like Borodin or Offenbach but when there are so many Smith's (or Brown's!) it can become a real pain in the parallel interface. I intend to continue printing the membership number on each address label just as before, it's the first thing I print - top left hand corner - so no excuses. Remember I'm only a machine so I don't make any allowances for sloppy behaviour!

I'm afraid I'm beginning to get a complex! You see, they're trying to dream up a name for me - you know the sort of thing that's made out of initials that spell some silly buzz phrase - and you should hear the suggestions I've had so far; would you believe -'COMBS', or 'Computerised On-line Music Box Subscriptions'. Please, someone, come to my rescue and send in something with a little more dignity, or I'll be stuck with that ridiculous nonsense for ever. Please HELP! If you do I promise I won't spell your address wrongly. You can write to me c/o my governor, Ted Bowman, April Cottage, 24 The Slade, Clophill, Bedfordshire MK45 4BZ.



invention Anv new generates opposition from traditionalists, and the application of the microchip to music memory for mechanical organs is no exception. For Hofbauers of Goettingen, one of the largest street who switched organ huilders production to virtually 100 per cent Microbox organ production some years ago, resistance has grown. First Berlin Organ Festival banned all instruments employing electronics, then Waldkirch, and now Thun, the major Swiss event, followed by other Swiss Festivals. Clearly any festival organisers have the right to lay down rules to preserve and protect the kind of event they promote - for example Bishops Castle Steam Rally for many years accepted only vintage entries and the event was all the better for it, and I for one regret that it finally succumbed. A number of Hofbauer organ owners didn't take the Berlin decision kindly. however, and organised a kind of protest event concurrently with banners, leaflets and press publicity. I cannot see how this achieves anything. If anything it causes bad feeling and tends to force enthusiasts into one camp or the other. It is also possible that the additional publicity has brought about the ban in other towns. Of the various German Societies, only CDD has a completely unrestricted attitude in this area, but as it organises most of the organ festivals under its banner, there is likely to be no problem about "micro-organ" owners taking part in festivals elsewhere. Nevertheless Berlin is the most prestigious



Chairman of Radnorshire D. C. presenting certificates to Mr & Mrs Ted Brown at Llandrindod.

event, much the same as the Great Dorset Working is THE event in Britain. The other major German Society has promised to organise festivals for its members, and if the GSM fulfills this it is possible that they also will operate a ban as the Microbox was the fuse which drove the two societies apart.

Because of its emphasis on keyboard instruments, not necessarily mechanically operated, GSM has lost support among organ owners which has been picked up by CDD, though the former retain a substantial foreign membership. It is partly for the benefit of their Swiss members that GSM are holding their AGM this year in Ueberlingen in the deep south at the end of September.

I firmly believe that as younger generations accustomed to accept modern electronic systems take over from older generations resisting change, more and more organs will be adopting the modern systems currently being objected to so strongly. But it is in their application to larger organs that I find the microchip so exciting. For the first time a modern music system will work happily alongside a traditional one. At a time when our diminished number of barrel organs are still having their barrels ripped out to make way for key frames, we have here a new way of programming music which obviates such vandalism. All the organ minder need do is programme the organ and then just sit back and let it play through the repertoire. If a member of the public asks to hear a specific tune that can be done simply. The organ owner can have all his repertoire of books put on to cards or cassettes, so that no longer does he have to take just a selection he can take the lot! Of course he can take a few books as well just to show the public how it used to be done.

Once the initial cost has been met the memory can be re-programmed at relatively low cost. Indeed there is no reason why builders and music suppliers should not provide a music rental service, just as organs are rented. Hofbauers claim to be able to supply Microbox music for virtually every known music scale.

For the organ builder the microchip has a special attraction, for it does away with the tedious work of music cutting. Many famous names in organ building over the years have had to involve members of their families not employed by them in this work in order to meet demand, and this still happens. Being able to see on a display the music being arranged, to be able to delete or insert notes at will and to play back the result instantly is a great advance which speeds the arranging process considerably.

I had the pleasure of seeing and hearing one of Peter Trueman's new 20 keyless street organs at the Cannon Park Celebrations in Birmingham in July. It follows standard German practice, with a double row of flutes displayed in the front and the accompaniment horizontally in the base. I found the pipework attractively voiced and well balanced, manufacture and finish appeared good and the organ is compact and not too heavy to lift for most people. Last but not least, I would judge the price as being highly competitive and giving good value for money. The organ plays book music which Peter prefers for reasons of economy and because he says people like to see the music passing through. A roll playing organ would add to the price because of the extra engineering involved - rewind system, etc. I have my doubts regarding the validity of the second reason as most roll organs are played with the lid open for this very reason. I feel that the organ grinder

has enough to do concentrating on playing - with tempo, expression, registers and the public to look after . without having to watch card music that it is folding correctly or that the wind (rarely completely absent in this country) doesn't make it airborne without warning. Franz Oehrlein solved this by enclosing the card in cupboards each side which also helped the music to fold properly and permitted large books to be played without hassle. But it does make for a bigger, and so heavier, cabinet. With an increasing proportion of women organ grinders size and weight factors assume a much greater importance. And I have to admit that on the whole, women make more attractive and also more effective organ grinders!

Bromyard Gala 1989 will stand out in my memory as the rally where Bob Minney brought his partly restored Ferd. Molzer street organ. For a street organ it is very substantial which made me think it might actually be a fair organ, but Bob assured me otherwise. The barrel is in quite good condition especially bearing in mind the general appearance of the case, but it seemed that changes had perhaps been made with the pipework. Some of the tunes, only some of which having been identified, sounded most odd. However, a small adjustment made during the day brought about a surprising improvement. The old organ with its rumbling bass has character, but seems to lack the purity of sound of Norman Woodford's Molzer. It sounds more like the Molzer fair organ I had the chance of turning two years ago in Thun. There could be a number of reasons for the tonal discrepancy which, at this distance in time, can only be a matter of conjecture. There are not too many Molzer organs around and most are probably located in Switzerland. With many organs like this it is impossible to restore back to original as there is no means of knowing what that was. Bob also brought to



Robert Hopp's 35 key Limonaire scale fair organ at Llandrindod.



Franz Oehrlein's 26 key Oehrlein and Ruth Meng at Llandrindod.

Bromyard a cleverly restored barrel reed organ of unknown make from the Norman Woodford collection.

The latest number of the GSM magazine contains an interesting article by Roland Wolf "The Showmen's Organs of Fritz Wrede, Hannover." Roland owns the only Hannover based Wrede and it would be nice if it could be kept in its home town, though it has been up for sale for some time. It is to be hoped it doesn't end up in a museum as it is a good 67 keyless instrument. Apart from card-playing fair organs Wrede also built a variety of street barrel organs of which Roland knows of the existence of 17 models. Smallest organ built was a Meloton reed organ of around 20-22 keys. 24 and 25 key Harmonipan, Doppelpan and Violino Pan were the smallest pipe organs, followed by 33 key Doppelpan and Violino Pan, some with manual register, as well as the trumpet organ of unknown key size. The article includes an illustration of a 33 key Harmonipan with a front row of 19 bamboo Pan flutes. Typically the builders name and model are boldly displayed below this and inlaid decoration along the bottom panel. The organ is owned by the Hocke rental firm of Bremen who have recently had two of their other organs. a Bacigalupo and a Holl, stolen. Fritz Wrede was born in 1868 and between 1886 and 1889 founded his own organ building business at Scheiderstr. 20, Hannover-Kleefeld. The firm's most successful period was in the twenties, organ work having been suspended during the First World War, and at its peak at least 15 workers were employed. On the 28th March 1944 during one of Hannover's air attacks, the factory was hit and Fritz Wrede was killed. His son and two daughters decided not to continue the business.

As far as I know no Wrede street organs are in British ownership but the copy Wrede owned by Dorothy Robinson bears a close resemblance to the real thing.

Brought forward this year to the last weekend in August, the 3rd Llandrindod Wells International Street Organ Festival went off well. The date change encouraged more to arrive early, permitting the event to be stretched. No less than eight organs were present at the pub organ grind. Largest organs were 36 key Verbeeck and 31 keyless Raffin trumpet organs. 20 note instruments present were by Fussell, Raffin, Alderman, Dean, McCarthy, and Carl Frei. It was a pleasant location in which to enjoy our favourite music whilst sampling the local brew and with the sun smiling its approval. Altogether 38 organs (all but three being hand-turned) appeared and everyone who registered turned up. Kurt Niemuth brought the sister organ to the 45 keyless trumpet organ seen last year and also an outstanding 36 key A. Holl und Sohn trumpet barrel organ built in 1929. This was the first visit for Franz Oehrlein of Mainz. His latest batch of 26 note organs feature a cafe street scene with hand-carved puppets moving in time to the music. A surprise entry was his new 36 note trumpet organ with seven register sliders, attracting a great deal of interest. This year Alan Pell was showing his new 25 note organ with melody ranks of bourdon and violin, as well as his 49 note Harmonist organ. For the first time the Festival welcomed a French entry, organ builder Robert Hopp who has been organ building in France for some eleven years. He had entered two street organs built in typical French style with most of the pipework visible along the front in three "bays." I believe that street



George Houghton's 48 key Page & Howard at Llandrindod.

singing is perhaps more popular in France, and to accommodate this, Robert Hopp is able to supply these organs in Transposition models. These have a sliding rod which adjusts the key box to a third higher or lower scale to suit the vocalist. An unannounced entry was his 35 key Limonaire scale fair organ which helped to fill a gap in this area. With so many organ builders and organ models present it gave those considering buying a street organ plenty to consider. I have always recommended enthusiasts visit a Festival to see what the market has to offer and this year we had no less than 16 organ builders represented and at least 25 different models. An important part of the Festival is the evening gatherings. Friday evening is official participants evening. A chance for everyone to get to know one another. This year we had a picturesque, if somewhat cramped venue at the Lakeside Cafe. An additional item this year was a slide show given by Michael Belcher and Dick Jolly which included pictures of museums in the United States. Saturday is the main evening with a small but very busy Bring and Buy. This year the organ builders were invited to bring their organs along and enthusiasts had an opportunity to inspect and play them after our meal. Sunday is really a post Festival optional extra, but our video show was very popular this year and about forty attended. Films shown included the second Arosa Organ Festival in Switzerland and, with permission, the commercial video of the Norman Woodford collection which was very interesting. Always a favourite, however, is Christa Mademann's video of Llandrindod as she has an eye for the humerous and the knack of catching organ grinders in amusing situations. For the first time I felt that Llandrindod began to compare favourably with some of the German organ festivals, it being based on that Country's festival scene. There was more public and there were more enthusiasts, more organs and more countries represented. Even the Saturday morning parade went better, led as usual by Bill Brookman and Webb Foote. Also, I think we are all getting the hang of the thing better now and able to pull together.

Even in Germany the Festival scene has its problems. The oldest, Hannover, is not what it was due to lack of local support, Berlin is now on alternate years. Marburg decided to give it a miss in 1989. So I count us as being most fortunate in Britain, where funding has always been a much greater problem, to have found in rural Wales an organisation with the imagination to support an Organ Festival. Long may they continue to support it.

NEWSDESK

Frank Holland

A memorial thanksgiving service will be held at 12 noon, Friday 24th November 1989 in St Michael Paternoster Royal, College Hill, London EC4. For the convenience of members wishing to attend a map of the location appears below.



OSCAR OF THE TOURISM WORLD

"Come to Britain" is the most prestigious award in British Tourism, and is awarded to those attractions who help to draw visitors to the UK. The awards were presented to the 35 Nationwide winners by Norman Fowler, Secretary of State for Employment, at a special ceremony and luncheon at the Grosvenor House Hotel in London. There to receive a Certificate of Merit was Keith Harding of the World of Mechanical Music, Northleach, he was accompanied by Peter Taylor a partner in AYS Press and Public Relations who entered the Museum for the Award.

The awards go only to those attaining the highest standards and setting an example to which others can aspire. The Keith Harding World of Mechanical Music has facilities for the disabled and a brochure in Braille, is especially welcoming to children and is open 7 days a week, as quoted on Radio and TV it is a "Unique Experience in Sound". Concerts and other events are being planned for 1990, European Tourism Year.

The Museum opened in Northleach in 1987 and in 1988 had reached a target of over 25,000 visitors, a good percentage of these from overseas. Keith and Eva Harding with their partner Cliff Burnett are absolutely delighted with the award and now look ahead to even greater things.

The Certificate of Merit was shown to the press at the opening reception of the European Information Centre at Moreton, which was also showing the newly released Logo for European Tourism Year in 1990, the exhibition is also promoted by AYS who specialise in Tourism.

The Award is on view at the Museum in Northleach.

Brian Oram

Brian Oram founder of the Mechanical Organ Owners Society died on Tuesday July 18th, having suffered a major heart-attack whilst working on a blower for one of his organs. He was 68 years.

Brian was a collector of large instruments which included a Gavioli, "La Cascade" a Hooghuys "Shaharazad" as well as several other smaller organs including a Ruth. He maintained these instruments himself and arranged and cut his own music books.

Brian was certainly very talented, if eccentric and was on the Music Box Society continental trip to Germany and Switzerland and organised a side trip to see the reproduction Roman Organ while we were at Rudesheim. He also gave a lecture to the society on organ "bonking" long enough ago for the word not to have its present connotations.

Nickelodeon Move

The Napton Nickelodeon which over the last 8 years has developed in to a significant tourist attraction, is to move. Lack of space and the remoteness from the "tourist track" has prompted owner Graham Whitehead to search for larger premises. The five year plight which involved considering sites as far away from Coventry as Stratford-on-Avon, Banbury and Northleach (the premises subsequently occupied by Keith Harding), has now ended with the acquisition of a country mansion set in acres of park-land one mile from the Warwick junction of the new M40 motorway due to be opened next Autumn.

The new venue will mean that, what is believed to be the largest Imhof and Mukle barrel orchestrion will at last have a home together with several other large instruments too large to be accommodated at Napton.

Who rang Jim Weir?

Jim Weir recently rang the Editor's office to confess that he had lost the name, address and telephone number of the owner of a 19 5/8" Polyphon which he had arranged to pick up for overhaul. Hopefully, that person will make contact again with Jim by ringing 0575 73781.

The ironic angle for this simple story is the fact that the society's newly acquired computer came from Jim Weir - which just goes to show that you can't manage without a computer these days!

Organ Grinder Wanted

A request has been received for an organ grinder to appear at the Belfry Hotel near Sutton Coldfield on the evening of 7th January 1990. The purpose is to help celebrate a 21st birthday party. Would any one interested please telephone Mrs. Kirtland 0827 830242.

Jim Colley Retires

Jim Colley one of our best known dealer members and a regular attender of society meetings has now retired. Jim has been a regular advertiser in "Music Box" and has given many lectures at society meetings. While Jim's interest in mechanical music continues, he is now no longer able to take on any further work. Jim has asked us to thank members for their patronage of his company Bellevue Antiques, over the years. The society would now like to wish Jim a very happy retirement.

FRANK HOLLAND, MBE FIMIT 1910-1989



Frank Holland, founder of the musical museum at Brentford near London died on September 11th after a long illness which he bore with courage and fortitude. He was 79 years old, Frank was one of only four people to receive life honorary membership of this society in recognition of his outstanding work in the field of mechanical music.

Frank Walter Holland was born at Gravesend in Kent on April 29th, 1910. He was the eldest of three sons and two daughters born to a much respected Trinity House channel pilot whose job it was to assist shipping to negotiate the English Channel and to escort them into the ports.

From an early age he developed a fascination for anything mechanical or electrical. He remembered as a small child standing on his parents bed to replace a bulb in the ceiling fitting, managing only to shatter the new bulb in his attempt.

He was educated at Deal school and then at Ardingly. There his interest in electricity, electric motors and machinery developed. Rapidly he became an expert in these sciences which at the time were still in their infancy.

His first job after leaving school was working in the local electrical shop in Gravesend. After a short time he left home for Rugby where he served an apprenticeship with the British Thompson Huston Company. When he became qualified he worked for RCA, installing sound systems in to cinemas all over the country. He would often talk of those golden days in the cinema industry, recalling that in a small cinema in Glasgow in 1938, the fog was so thick inside the building that they could not project a picture on to the screen. Later he joined the central London Electricity Supply Company and became one of its most important engineers.

At the start of the 1939-49 war, his work was considered to be of such importance that it was (Picture: The Musical Museum)

designated as a "reserved occupation" which meant that he could not be summoned for military service. Instead he worked with the nation's ministry of works throughout the duration of the war, responsible for maintaining electricity in London during the bombing. All through the heaviest of the enemy attacks, Frank Holland was responsible for keeping essential power supplies operating. His work was most dangerous and he was bombed out of no fewer than seven different London homes in his determination to keep the power stations running. He could tell many stories about repairing the nightly devastation which the bombing did and of the many narrow escapes from death as he worked even as the bombs were still falling.

As the war ended Frank moved on to Rediffusion. He experimented with electricity and was one of the pioneers of radio-frequency heating, a process which is used so widely today in the familiar domestic microwave oven. Aircraft construction and repair often called for the rapid hardening of glue and his work in this area was very important. At the first ever exhibition of radio-frequency heating out in London in 1948, he produced a hot sardine sandwich in 20 seconds for one of the experts who did not believe his work was of a serious value.

As the work became more routine, Frank left London for the USA and Canada and he spent three years there in various jobs, including the importation of a large number of British made pianos for use in schools and colleges and through this he gradually became aware of the vast field of reproducing pianos and their music.

In America he saw many other mechanical musical instruments and when in 1958 he returned to England he decided to bring back with him a quantity of piano rolls and reproducing pianos. Very quickly his new interest became an all consuming one and he started



Frank Holland conducting a museum tour, wears his favourite tie. A souvenir from his younger days working for BTH at Rugby.

collecting more and more instruments. His one room flat in Hangar Lane, Ealing, housed at least two grand pianos and the rolls were stacked floor to ceiling all around. In 1959 he placed an advertisement in the Times inviting anybody else who was interested in pianos to come to a meeting. The outcome of this was the very first "society" for those who appreciated the reproducing and player piano. So was formed the Player Piano Group. His own collections continued to grow and he had the idea the Science museum in South Kensington might be interested in housing his collection. He was given a polite but firm "No" to his suggestion and, indeed, over the years that followed, no British institution or museum ever showed any positive encouragement to him or offered any help.

With an urgent need for a permanent home for the collection, he learned of a redundant church at Brentford in Middlesex. This Victorian building was St Georges Church and the church authorities offered it to him as temporary storage for the collection in return for his service as caretaker of that old building. That was in 1963 and what started out as a temporary arrangement for two years, was destined to be the home not just for his collection but his own home for the rest of his life. The church was in a very poor condition and he was forced to spend a lot of time just making the building suitable for putting pianos in to. He rigged up a heating boiler and during the cold weather kept the building and its contents warm by burning old motor oil which he begged from local garages. Waste oil, he once said, produced 171,000 BTU's of heating energy per gallon, a figure which unquestionably was correct. Frank was one of the first people to find a use for old oil and recycled material which would otherwise have just been wasted.

Local authorities were quite unaccustomed to having so unusual and eccentric person in their midst as Frank but his persistent approach to people in high office brought him offers of help and assistance from many quarters. Office equipment, photocopiers and lighting accessories were all "donated" by leading companies in response to Franks direct requests for help. Frank himself lived in the Vestry in a small windowless room inside the church itself. This room, barely three meters square contained his bed, his desk, his huge library of books, his filing system and his clothes cupboard. His was a man of great character and often peculiar habits. Each evening for example, before he went to bed he would place his shoes on a book shelf above his desk. This he said kept them dry, fresh and warm. Frank lived a very frugal, simple life, existing on a small pension which he had from his former job aided in later years by the state pension. He never married.

His kitchen was an absolute delight for he had "developed" the water system into a nightmare tangle of pipes, taps, joints and tanks, each one carefully labelled with clear instructions so that his museum helpers could understand it. The kitchen also housed his bathtub raised upon long legs so a gas burner could be lit under it to heat the water. Everything seemed very "makeshift" yet all was logical and everything worked as he intended. When he connected the powerful main water supply to one pipe made of lead, the pipe began to swell up and move away from the wall. This he bound up with wire and wedged back into place with a wooden stick. His kitchen chairs were tied with string to the kitchen table legs making it impossible for his "helpers" to remove them for unauthorised use. Another piece of string would span the length of the kitchen and into his bedroom, attached to one end a light switch, thus he had the convenience of switching the lights on or off wherever he sat. His electrical installations seemed in sharp contrast with his great knowledge of electricity and there would be apparently dangerous numbers of wires emerging from power sockets all over the building.

Frank's eccentricity was always tempered by a sound understanding of science. Once, when the crypt of the museum was flooded after a heavy rain-storm, the large and powerful electric motor used to pump the heating system for the building was totally submerged in the water. Frank pumped out the water by hand, and then switched on the soaking wet electric motor, putting a very low electric current through it. This he asserted would dry out the motor and, as the motor hissed and spluttered in a cloud of steam and sparks, he gradually increased the electric current until after an hour it was perfectly dry and working as usual.

Frank was honoured for his work with the museum by the award of an MBE by Her Majesty the Queen at Buckingham Palace in October 1979. This was one of his proudest moments.

During the past 15 years, Frank suffered serious illnesses and had a number of painful operations, all of which he cheerfully endured. A man of great fortitude, he did not like being ill and allowed himself no time for recuperation or recovery. His life was the museum, keeping it open for visitors, giving endless talks and museum tours and generally demonstrating both his knowledge and enthusiasm for his collection. He was happiest when the church would be filled with visitors, even happier when, as often happened, he had visitors from the United States, the Netherlands, France or Germany. Many notable people visited the collection, and many were the letters from the famous who wrote to thank him personally for his time.

He hosted several visits from members of the Musical Box Society of Great Britain and strongly supported the aims and objects of any organisation given to the conservation and preservation of mechanical musical instruments. He used to speak despairingly of the British reticence over his museum and his quests for a proper home, saying that America was the place where things got done. Even so he jealously guarded his collection for Britain and politely turned down at least two offers for the whole collection to go to the States. He was also a staunched believer in Klavarscribo, the vertical system of musical notation invented in the Netherlands between the wars, and always included a demonstration of it in his museum tours.

Last year it became obvious that he was suffering from incurable lung cancer. Ironically Frank was a non smoker and was always intolerant of others smoking close by. Almost overnight, the man who has always appeared to be indestructible was fading.

He was justly proud of the fact that he was a member of some thirty or so institutions, be they clubs, societies, or whatever, that were involved in the world of music. The Musical Box Society of Great Britain was one of his favourites and he used to look forward to their weekend meeting. As recently as December 1988 he gave a talk at the Regents Park venue, and with Ted Bowman he took us on an illustrated tour of the Bechstein factory in Berlin. His last MBSGB meeting was at Northampton where he visited Napton Nickelodeon on New Years Eve and Mr and Mrs Smith at Saddington Hall on New Years Day 1989. There he sat quietly beside the roaring log fire listening to the sound of one of his favourite instruments, the Aeolian pipe organ. Frank was always full of snippets of information, important and trivial that he would impart to society members with enthusiasm and excitement. He would even quote how many watts of energy were being generated, through heat loss from the bodies in the room. He often spoke of the possibilities of his museum moving and his burning ambition seemed to be to acquire the use of the science theatre at David Soloman's House near Tunbridge Wells. Other venues were considered such as the old Ealing Odeon, but underneath Frank was probably quite content and certainly very happy in his little dilapidated old church. He was at his best after midday and at his very best late in the evening. He would often telephone me around midnight to compare notes on some orchestrion. He would occasionally ring me from Rugby station at almost the same hour saying "hello boy, I'm changing trains

at Rugby Station" and that would be the cue for me to go racing off to pick him up for the night or two. Because of his association with Rugby in younger years, he was always very fond of the area and those who knew him will recall that he was rarely seen without his BTH tie (British Thompson Huston). He also wore an RCA badge which was really a chrome and enamel cinema amplifier name plate, suitable adapted.

The museum, described by the Daily Telegraph in it's Obituary notice as one of the finest collections in the world has for sometime been registered as a charitable organisation and administered by a Trust. Its future is thus secure.

Earlier this year Frank Holland published his autobiography - a little booklet entitled "A Box Full of Rolls", in it he wrote

"As I ponder where the next 25 years will take me and the museum - I am reassured that the group of trustees will steer the museum safely on, not only for the next quarter of a century but for many years after that too"

With the old church threatening to collapse, the quest for a new and safer home for the collection, is now the task of his administrative board of trustees.

During the funeral service held at Putney Vale Crematorium, the Priest held up a card which had been found in Frank's tiny room in the museum. It was obviously part of a travel advertisement for the particular country mentioned. It simply said "HOLLAND IS DIFFERENT". What an apt description for a man of Frank's energy, tenacity and enthusiasm.

By a strange coincidence, on the day of Frank's funeral, 22nd September, the great American song writer, Irving Berlin past away at the age of 101. Frank may not had reached those advanced years but through the continuation of the museum, he started nearly thirty years ago we can faithfully say "The Song is Ended but the Melody Lingers on."

Acknowledgements

The editor wishes to thank Arthur Ord-Hume, editor of "Music & Automata", and Richard Cole, trustee of the Musical Museum for their knowledgeable contributions towards this obituary.



Frank Holland entertains members of MBSGB on 21st September, 1986.

Early 24¹/₂" Polyphon

This interesting very early example of the Style 54 Polyphon recently passed through the hands of John Cowderoy Antiques. The most striking difference to the familiar standard mechanism is the comb assembly, with plain bed plate and a single fine toothed piccolo comb in place of the usual alternately plucked pair. The main combs have somewhat thinner (less stiff) teeth than the later product, resulting in a particularly sweet and mellow tone. Doors are fitted each side of the case to increase the volume of sound. Both motor and comb assembly bear the serial number 125.

The dampers are quite unlike the conventional Polyphon design, being of spring steel with a short length of quill acting on the side of the tooth tip. There are other minor detail curiosities including the pressure bar which does not have the normal length of tubing acting as a spacer between each roller. Instead a pair of taper pins locates each roller. Altogether a rather nice instrument.









By David Snelling

Part Two

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The Motor

The spring motor is very robust but the spring is too large and dangerous to be removed without special equipment. Unfortunately the motor may be filthy and the spring may be gummed up with dried out grease and dirt. I have found that it is possible to get a gummed up motor working well again by temporarily inserting it in the piano during the course of the restoration and winding up the spring. If the motor is then placed in a suitably large dustbin and covered in two or three gallons of paraffin the motor can be allowed to unwind and most of the dirt can be removed whilst it is unwinding. It is possible to probe between the leaves of the spring during this process using a piece of wood (but not your fingers) and to get a considerable amount of the dirt out of the spring and out of the motor by shaking the dustbin and the motor during the unwinding process.

When the motor is as clean as possible it is a good idea to wind it up again and to pump in (with some form of syringe if possible) a suitably fluid grease between the coils of the spring at various stages of winding and unwinding so that the grease distributes itself well between the leaves of the spring. Motor vehicle grease mixed with Molyslip is a suitable lubricant.

A word of caution. Do not remove the governor whilst there is any tension on the spring otherwise you will have a run and an expensive repair job to carry out. The spring motor is very sturdy and if it is cleaned up in the manner mentioned above and if the various governor parts are cleaned up and, if necessary, given a Horolene bath the motor should continue to function well and provide adequate power for the foreseeable future.

When replacing the motor in the re-furbished case make sure that it is level and meshes comfortably with the gear ring on the barrel in all ten playing positions.

The Barrel

The state of the barrel is absolutely fundamental to achieving satisfactory results when the barrel piano has been restored. If the barrel is too far gone, i.e., if too many pins are missing or have rusted away it may not be possible to save it. If the various parts of the barrel have started to come to bits because of damp and failure of the glue joints it is possible to reconstruct and reglue the barrel and for this purpose some form of temporary jig should be constructed to hold the two ends of the barrel firmly so as to facilitate working on the barrel. Take care that the lateral alignment of the twelve panels which make up the periphery of the barrel is correct otherwise the piano will jump from one tune to another. If in any doubt these panels can temporarily be held in place on the barrel formers, including the two end formers, by means of oval nails. At the end of operations on the barrel the twelve lateral pieces should, preferably, be glued but if there are any doubts as to this operation then it is probably better to hold them in place with countersunk wood screws.

If you need to glue the barrel panels back hold them in position overnight using tourniquets made out of sash cords to persuade them to take up their correct circular shape. Use a wire jig located on each barrel end pin to check for radial accuracy during the cramping and tieing process.

Occasionally, despite exercising the greatest care, one may find that one has a barrel which produces uninteresting or unrecognisable music. This can be due to not knowing the scale to which the barrel has been pinned but it could also be that the barrel is a very old one which has been pinned with somewhat obscure, unrecognisable and unexciting tunes. In this event no amount of effort is likely to improve the music which the barrel in question will produce.

Examination of the barrel will show that it is (or was) lined with paper. It was the custom for barrels to be pinned and repinned more than once. After extraction of the old pins the barrel would be shaved true, papered and then repinned. My piano tuner who worked in a barrel piano factory in Leeds in his youth informs me that new barrels had their pins inserted on printed paper which was glued around the barrel. These printed barrel pinning charts are believed to have originated in Italy. However, the chances of finding a barrel which has been pinned by reference to a printed pinning chart are unlikely. Most of the barrels on today's barrel pianos have been pinned more than once and may well have passed through the hands of the late Canon Wintle (RIP) at the East Anglian Piano Co. Limited in Lawshall, Bury St Edmunds.

Before leaving the barrel for the next task make sure (using a wire jig) that the gear ring is accurately and firmly fixed in position. This ring is normally screwed to a wooden former which has been shaped on a lathe.

The pins in a barrel come in two shapes. The normal pins are square in section but re-iterating notes are produced by round pins which are punched in more deeply than the square pins.

All pins are normally inclined slightly forward and it helps to make up a hollow punch for depthing and straightening any misaligned or replacement pins. New pins can be made from sheradized gimp pins with the tops cut off.

Tuning Scales

The three barrel pianos which I acquired all had the same tuning scale. However, there were a number of different tuning scales in use and some of these are set out in the attached box. If any readers are aware of any other tuning scales it would be helpful if they could write to me c/o The Editor so that these might be published to add to our knowledge of the various scales. This may help anyone who has a barrel which does not play properly because the piano is tuned to the wrong scale.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
T	D	E	F	#	G	A	в	c	#	A	в	с	+	D	E	F	#	G	#	A	в	c	#	D	#	E	F	#	G	#	A	в	с	#	D	#	Е	F	#	G	#	A	в	с	#	D	#	E
T	D	E	F	#	G	A	в	с	A	в	c	#	D	Е	F	#	G	#	A	#	в	с	#	D	#	Е	F	#	G	#	A	#	в	С	#	D	#	E	F	#	G	#	A	#	в	с	#	D
	D	E	F	#	G	A	в	с	#	A	в	с	*	D	Е	F	#	G	#	A	#	в	с	#	D	#	E	F	#	G	#	A	#	в	с	#	D	#	E	F	#	G	#	A	в	с	#	D
	D	E	F	#	G	A	#	с	A	#	в	с	#	D	Е	F	#	G	#	A	#	в	с	D	#	E	#	F	G	#	A	#	A	B	с	#	D	#	Е	F	#	G	#	A	в	C	#	D
	D	E	F	#	G	A	в	c	#	G	A	в	с	#	D	E	F	#	G	#	A	в	с	#	D	Е	F	*	G	#	A	в	с	#	D	Е	F	#	G	#	A	в	с	#	D	E	F#	G
	D	Е	F	#	G	A	в	с	#	A	в	с	#	D	#	Е	F	#	G	#	A	#	в	с	#	D	#	E	F	#	G	#	A	#	в	с	#	D	#	Е	F	#	G	#	A	#	в	c
T	D	E	F	#	G	A	*	в	c	#	A	#	в	c	#	D	#	Е	F	#	G	#	A	#	в	c	#	D	#	Е	F	#	G	#	A	#	в	с	#	D	#	E	F	#	G	#	A	#

The Hammer Rail

This sub-assembly is probably the hardest and most time consuming part of the barrel piano to restore. It might even be easier, if one has access to the tools, to construct a new one and in this connection reference should be made to Graham Whitehead's article on page 229 of the Music Box Magazine (Summer, 1986 edition).

The first stage in disassembling the hammer rail is to remove the springs which actuate the hammers which will, in all probability, be very rusty. Care is needed to remove these without damaging your fingers or your thumbs. If they are difficult to remove apply heat with a soldering iron. The springs should be kept as they will form a useful pattern for making new springs.

The two long metal reinforcing bars should be unscrewed from the top and the bottom of the hammer rail and will need to be de-rusted using a rotating abrasive flap wheel in an electric drill. Once they have been completely de-rusted they should be painted with one or two coats of Rust Remedy and, finally, with black paint.

The three eye headed adjusting screws should be removed from the hammer rail. These may be very difficult to dislodge if they are rusty. Once they have been removed they should be de-rusted with a rotating wire brush and the threads should be cleaned up with a die used as a thread chaser.

The next operation is extremely critical. It will be found that there is a $\frac{3}{32}$ inch brass wire which extends the length of the hammer rail which is, effectively, the pivot for each of the hammers. This requires to be extracted very carefully with one long firm and uninterrupted pull. If this operation is carried out carelessly or if you are unlucky the end of the brass wire will break off and it then becomes extremely difficult to remove without disturbing the 49 cheek pieces between the slots in which the hammers are located.

When this wire has been removed the hammers will all fall out or be easily removable. The carcass of the hammer rail assembly should then be carefully examined and repaired and/ or reconstructed as necessary. The wooden carcass will sometimes be found to be considerably distorted or bowed but, with care, it can be restored and reglued to its original shape. In this connection the two metal reinforcing bars are obviously of considerable assistance. If the hammer rail assembly is not reassembled completely straight it will be found that some of the hammer tails will be further away from the barrel than others and it may be impossible to get them sufficiently into line for the barrel to play properly.

The wire which has been pulled from the hammer rail assembly should be carefully cleaned and preserved. Ideally it is probably best to replace it with a new brass wire if you can obtain one of the right dimensions in this age of metrication. If, by any chance, there is a need to clean out the hole in which the brass wire is located this can be done by taking a suitable length of $\frac{3}{22}$ " round mild steel and forming a suitable reaming end to this. The other end of this long reamer should then be inserted in the chuck of a variable speed electric drill. If the hammer rail assembly is then placed in a vice it will be found that this long reamer can gradually be fed right through the hole to the other end so as to clean up the hole.

The restoration of the hammers themselves is very time consuming. It will be necessary to remove any rust from the wire part of the hammers with emery cloth or a rotating flap wheel and, again, to paint these with Rust Remedy so as to convert the residual rust finish to a clean black finish.

The wooden part of the hammer tops may, in some instances, have disintegrated or partly disintegrated. It will be found that any damage here can usually be repaired by using fast setting epoxy resin glue and careful cramping.

A part of the hammers which can sometimes cause difficulty is the metal tail which projects from the base of the hammers and which is actuated by the pins on the barrel. In case of need it will be found that these can normally be grasped with a pair of pincers and removed. This may be more difficult if they have broken off. If any difficulty is found in extracting any of the hammer tails they should first be given the heat treatment with a soldering iron after which they will be removeable without too much difficulty. The remaining hole should then be cleaned up with the smallest available drill which will snugly fit into the hole. New pins can be made from mild steel or silver steel and inserted in the holes. In some cases, depending on the size of stock used, the new pins may sit snugly without any adhesive. In other cases it may help to use rapid setting epoxy adhesive to glue the pins firmly into the holes.

The hardness of the hammer tails appears to vary. If they are reasonably soft they can be bent slightly so as to mesh properly with the pins on the barrel. If they are hardened they will simply break off during the bending process unless only the end is hardened. I have not yet experimented with hardening any of my replacement hammer tails or the tips of them as mild steel or silver steel hammer tails appear to work satisfactorily and have not shown too much wear as yet. In this connection it is worth bearing in mind that barrel pianos, when new, had to stand repeated use over many years and that they are less likely to be used as much today so that the need to reduce the wear on the hammer tails is not so great. In any event if the hammer tails are too hard this will have the effect of increasing the wear on the barrel pins which may be a greater evil.

Hammer tails can be filed to shape using round silver stock of the appropriate diameter. Care needs to be taken not to make them too short otherwise they will be unusable. If they are slightly overlength they can be filed down after fitting so as to be the same length as all the other tails.

The standard width of hammer tails appears to be about 1 mm (40 thou) and there is a case to be made out for machining the tips of them between two milling cutters or thick slitting saws spaced 1 mm apart by means of a spacing washer.

Once the hammers have been restored and recovered and any broken or mis-shapen hammer tails have been replaced the final steps to reassemble the hammer rail should be taken. These include regluing any parts which may have disintegrated or become unglued and gluing a new strip of hammer rail felt in position to replace the old hammer rail felt which will probably no longer be usable. Use proper mechanical felt for this purpose. Ordinary felt is not suitable.

The hammers can then be reinserted in their slots and the $\frac{3}{32}$ inch brass rod (preferably a new brass rod) can then carefully be re-inserted putting each hammer in place as the brass rod moves along the hammer rail itself.

The old hammer rail springs will probably be unusable. If so, new hammer rail spings should be made out of 18 SWG (50 thou) steel music wire. The loop in the spring can be made by fastening one end of a length of wire on the bench or on a purpose made spring board in a suitable fashion and winding the wire round a headless screw of appropriate diameter, which has been inserted into the work bench or the spring board, for the appropriate number of revolutions. It will be necessary to keep the spring wire under tension whilst winding and to wind it for more than the required number of revolutions as it will attempt to unwind when the tension is released. With a bit of practice it soon becomes possible to produce a 21/3 turn loop on the spring wire fairly quickly and to ensure that the ends of each spring sub-tend the same angle as the previous one. The angle ought to be slightly larger than that subtended by the old springs which will be fatigued. When the appropriate number of over-length springs have been prepared the ends can be shaped using a pair of household pliers in conjunction with a pair of pointed nose pliers. Once all the springs have been manufactured they can be inserted in the correct positions in the hammer rail with the other end inserted in the hole in the hammer shank. The hole in the hammer shank has a brass insert to stop the tail of the spring digging into the wood. If any springs are misshapen or cannot be made to operate the hammer satisfactorily it is simpler to discard them and to select or make a new spring of the right dimensions.

One of the problems encountered with hammers is that they, or the slot in which they sit, may be worn from repeated use. In this event it is necessary to build up the sides of the hammer shanks with slips of veneer. In order not to have to wait too long for the glue to dry it can save time if these slips of veneer are glued on with a fast acting two part glue such as Loctite Multibond. This bonds in one minute. After a number of hammer shanks have been built up in this fashion they can be sanded down to size until they are a nice snug sliding fit in the slot to which the hammer relates.

It is useful to number the hammers in pencil or ball point pen before disassembling the hammer rail assembly but it may be found, after disassembly, that the hammers were in any case in the wrong order due to previous bad repair work. In this event it may be desirable to sort the hammers out in descending order of size and to allocate new numbers to them. However, care should obviously be taken to ensure that they fit in the new slots allocated to them. It is important to ensure that any side play in the hammers is eliminated as far as possible in the manner described above as the hammer tails may otherwise slip off the barrel pins without being actuated. It may also be a good idea to burnish the side of the hammers with graphite at the reassembly stage in order to minimise operating friction.

After assembly of the hammer rail and insertion of the springs, a check should be carried out on the vertical alignment of the wooden hammer shanks. If they are out of line it is possible to build up the foot of any hammer shank to bring it into line with the others by gluing small slips of veneer under the foot of the hammer shank concerned using a rapid setting adhesive such as Loctite Multibond.

Re-felting the Hammers

One of the most time consuming jobs is the recovering of the hammers with felt.

Originally the hammers were probably made from one long piece of wood to which hammer felt would have been glued under great pressure. The resulting felt wrapped batten would then have been cut into individual hammers which would have tapered from the smallest at the treble end to the fattest at the bass end of the piano.

If the hammers need re-covering there will usually be sufficient vestiges of felt etc. on at least one hammer to show how they were constructed. It appears that the innermost covering was probably composed of a layer of mechanical felt (coloured red or green) and that white hammer felt would then have been glued around the inner covering to build the hammer up to the desired shape and weight. Sometimes there were two different coloured layers of mechanical felt.

When gluing new felt on to the hammers it is important that maximum pressure should be applied and one way of holding the felt around the hammers whilst the glue dries is to surround the hammer and the felt (laid on its side) by a series of oval nails hammered into a plank around the profile of the hammer. White carpenters PVA adhesive is satisfactory for the job and the oval nails can be removed after some hours. If the hammer has stuck to the board it can be separated with a sharp chisel and cleaned up with sandpaper and a trimming knife.

After gluing, the felts of individual hammers can be trimmed to the right contour with a trimming knife and sandpapered.

The final touch is to surround the hammer felt with a thin layer of tightly stretched leather so as to increase the life of the hammers. However, it is not clear whether barrel piano hammers were originally covered with leather or whether this was a later adaptation to make good hammer wear without the need to re-cover hammers.

Care should be taken to make sure that the hammers which play the top 15 notes are not too heavy as these notes are tuned to a fairly high pitch and require to be struck by fairly sharp, taut and light hammers. Conversely the bass hammers require to be built up with sufficient felt to have enough weight to secure a full response from the wrapped bass strings.

It is possible to buy tapered hammer felt which is extremely thin at the treble end and very thick at the bass end from piano parts suppliers and a standard length of tapered hammer rail felt suitable for an ordinary piano is sufficient for at least three barrel pianos. Care needs to be taken when cutting hammer rail felt up into strips to ensure that the strips are wide enough for the hammers of the piano in question. Barrel piano hammers are wider and shorter than standard piano hammers and, as a result, standard piano hammers cannot be used as replacements.

One of the barrel pianos which I restored had been modified in that the lengths of the top 15 strings had been doubled and their pitch dropped by one octave. These top 15 notes were struck by unfelted ebony hammers and the overall effect was mandoline like.

The Damper Rail

As they were required to play in public places and as their noise, when undamped, was quite loud cafe barrel pianos normally have a damper rail. The damper rail is actuated by turning a knob on the left of the cabinet. When this knob is turned a felt damper strip is either lifted or lowered. In the lifted position this piece of felt, which projects upwards, moves between the hammers and the strings and effectively damps the sound made when the hammers strike the strings. The left hand end of the damper rail may have to be dropped by a few millimetres to avoid it being hit by the bulkier hammers at the bass end. The height of the projecting damper rail felt may also have to be slightly less at the right hand end in view of the restricted space into which it needs to fit when the damper rail is lifted, if it is not to foul the pressure bar.

Assembly and Setting up

Once the carcass of the cabinet has been reassembled and all the other restoration work has been carried out the process of inserting and setting up the works can commence.

Before inserting the hammer rail it is best to insert the barrel using the barrel holder and to check its approximate alignment. This can be checked visually by reference to the panel in front of the barrel so as to ensure, for example, that both ends of the barrel are approximately the same height. Similarly the distance of the barrel from the front panel and from the strings can be checked visually. Any gross mis-alignment can easily be corrected by moving the right hand barrel bearing in the barrel door in the desired direction. This bearing is held in place by two woodscrews and large washers and can be moved in two directions by tapping with a hammer. Do not attempt to fix it permanently in position at this stage as there will be a need for final adjustment when the hammer rail assembly has been reinserted. Once the barrel has finally been positioned the end bearing in the door can be held in place by knocking in two or three nails around its periphery.

After the barrel alignment has been ascertained to be broadly correct and the functioning of the spring motor and the meshing of the barrel gear etc. has been checked the barrel should be removed on its holder and the hammer rail assembly should be inserted in position. If the two end bearings for the hammer rail assembly were originally in the right place there should be no serious problems at this stage. However, the bearings are sometimes found to have been incorrectly located and once the hammer rail assembly has been completely restored it may be necessary to move one or both of the bearings a little so as to ensure that the hammer rail assembly is located at the same height and the same distance from the strings at each end. Before carrying out this work slide the barrel in position (with the hammer rail lifted back from the strings) and check very carefully that it is the hammer rail bearing which needs to be moved and not just a question of re-positioning the right hand end bearing of the barrel. The left hand end bearing of the barrel should normally not need any adjustment provided that care was taken to position it properly both vertically and laterally in relation to the tune change snail when the left hand end piece of the cabinet was restored earlier in the procedure.

It is possible to obtain 1 inch diameter oil retaining phosphor bronze bearing shells which are 1 inch long and it helps to reduce friction in the left hand barrel bearing if the wooden bearing is modified to take one of these thin bearing shells. At the same time steps should be taken to clean up the 1 inch diameter pins at the end of each barrel so that they are rust free and rotate smoothly inside their bearings. Once you are satisfied that the hammer rail assembly is in the right position the springs which hold the hammer rail assembly under tension should be reinserted and the spring which holds the hammer rail assembly hard up to its left end bearing should be reattached. One end of this spring is attached to a woodscrew which has had the end cut off and has then been bent over. If the bent portion of this woodscrew is turned to the left the spring will be found easier to attach. Holding the spring in position the bent head of the woodscrew can then be turned to the right which will lock the spring in position.

With the barrel inserted the tune change lever should then be rotated until the barrel is in its right hand position. The left hand adjusting screw on the hammer rail assembly should then be adjusted until the first hammer tail lines up with the left hand row of pins on the barrel.

The right and left hand eye-headed adjusting screws on the hammer rail assembly should then be screwed in or slackened off until the tails of the left hand hammers begin to mesh with the pins at the left hand end of the barrel. (The eye-headed adjusting screws abut onto metal faced wooden stops. The proper position of these during re-assembly of the cheek pieces is critical and care needs to be taken to ensure that the adjusting screws do not slip off their stops throughout their full range of adjustment). Then examine the right hand end of the barrel to see whether or not the pins have reached the same depth on the right hand end of the barrel or whether they have gone in further or they have not descended far enough. At this stage make further adjustments to the right hand barrel bearing until the meshing of the tails of the hammers with the barrel pins is approximately the same over the whole length of the barrel. Also make any necessary adjustments up or down to the right hand barrel bearing so as to ensure that the barrel is exactly parallel to the row of hammer tails along the whole length of the hammer rail assembly. These final adjustments of the barrel in relation to the hammer tails are absolutely vital if all the notes are to play with equal emphasis and if it is hoped to avoid any of the hammer tails gouging wood or paper out of the surface of the barrel. If you get this adjustment wrong the bottom of the barrel piano will gradually fill up with shredded paper and wood shavings from the surface of the barrel in addition to which some hammer tails and/or barrel pins may be broken or gouged out

By this time the tensioning of the piano strings should have been completed in stages and the initial tunings have taken place. It will probably be necessary to tune and re-tune the piano several times after full tension has been put on the strings and to continue to re-tune it regularly after playing it each day.

The next stage, assuming that the hammer rail assembly has now been adjusted so that the hammer tails sit at the right depth in relation to the surface of the barrel, is to bend the hammer wires until each of the hammers is sitting in line with its row of strings and poised about 1 mm above the strings which it will hit.

Provided that all the above adjustments have been made carefully it should now be possible to wind the spring motor and play the barrel piano by tripping the mechanism or by inserting a coin. However, before letting the piano play for the first time it is desirable to lift the hammer tails by rotating the two eyeheaded adjusting screws inwards so that they are well clear of the barrel and only to let them mesh slowly with the barrel pins whilst the barrel is rotating. This will enable remedial action to be taken if the hammer alignment or the barrel alignment require further adjustment.

As a general rule proceed slowly with the adjustments to prevent any irreversable damage to the barrel or any broken hammer tails.

The horizontal spacing between the hammer tails is critical and it may be convenient to make up a little jig which can be inserted between the hammer tails to measure their horizontal spacing. Assuming a 33 inch barrel with 10 tunes the standard spacing between the hammer tails appears to be about 635 thou (assuming 40 thou hammer tail width). In practice it will still be necessary to bend one or two hammer tails either to the right or to the left to secure the best horizontal registration i.e., so that the hammer tails exactly meet the pins on barrel. For this purpose it is useful to use a long thin screwdriver with a 1mm notch cut in the tip. If hammer tails are not aligned accurately with the barrel pins the latter will quickly wear down on one side.

It is best to stop the barrel before adjusting any particular tail. Any attempts to adjust the tails while the barrel is turning can result, inter alia, in broken hammer tails or broken barrel pins. It is also possible to be strangled as your tie gets caught up and dragged round by the barrel. Don't be tempted to treat the rotating barrel lightly as it can severely damage your fingers if they get trapped between the barrel and the hammer pins and you are unable to reach down to stop the rotating governor of the spring motor. Yes – even barrel pianos can damage your health!



Fig. 11. David Snellings finished restoration.

Acknowledgements

I would like to acknowledge the help which Alan Wyatt gave in preparing this article both by checking it and adding further valuable information.

I should also like to thank various members of the Musical Box Society for providing details of barrel piano scales. However there are undoubtedly further scales of 48 note barrel pianos which have not yet come to light. If you have such a scale do please forward them to me at PO Box 23, Douglas, Isle of Man so that I can arrange for the publication of all known additional scales in a future edition of the Music Box Magazine.

SLEEPING BEAUTY by F. F. Hill

Last Easter we witnessed for the first time the opening of Calke Abbey, Derbyshire. The National Trust with the aid of a substantial grant from the Government were able to acquire the property in 1985, and since then with the assistance of their circle of skilled craftsmen they have been able to undertake a mammoth restoration scheme on the fabric of the house, including a conservative restoration of the show rooms and their contents to their former glory.

The house dating in parts from the 12th century was originally a priory, and was converted into a country house in the 16th century. In 1703 when the Harpur family prospered the house was rebuilt and enlarged in the Classical Style, and in 1806/8 the central gabled portico was added to the south front and several of the interiors redecorated by William Wilkins the elder under the direction of the then incumbent Sir Henry Harpur the 7th Baronet.

On the death of Mr Charles Harpur-Crewe in 1981 the house was found to have hardly changed since Victorian times, with proof of this from old photographs of the drawing room, library, and saloon, where many pieces of furniture, clocks, pictures and small pieces of porcelain still remained in the same place.

The Harpur family later Crewe and Harpur-Crewe have lived at Calke since 1622. Sir Henry Harpur the 7th Baronet who inherited the Estate in 1789, was known as the "Isolated Baronet" because of his shy and reserved nature which kept him distant from society, and this isolated nature was later to be inherited by his grandson Sir John Harpur-Crewe the 9th Baronet, and his great grandson Sir Vauncey Harpur-Crewe the 10th Baronet.

Sir Vauncey inherited Calke Abbey in 1886 and lived there until his death in 1924. Like his father Sir John he lived an isolated existence at Calke, having a passionate interest in and devoting himself to the study of birds, butterflies and minerals, and amassed a huge collection of over 400 glass cases of stuffed birds and other specimens, many of these adorn the house today.

The park he kept as a reserve for wildlife to the detriment of its upkeep, and favoured a prize herd of Longhorn cattle and Portland sheep. He forbade motor cars in the park, and there was no electricity at Calke until 1961. Sir Vauncey had very few visitors and rarely entertained. He hardly ever saw his servants or knew them by name, so we can imagine the great house where nothing was altered or thrown away, being almost dormant for over 100 years, and today remaining as a time capsule of the Victorian period.

I became involved with Calke Abbey in June 1986 when I was approached by Sir John Chesshyre, the National Trust Historic Buildings Representative about the possible restoration of an 18th century chamber barrel organ that had been found in the housekeeper's room (1). The organ was sent here to my workshop for me to examine thoroughly and supply a report and estimate for restoring the instrument to good playing order. Being somewhat daunted at the prospect I carefully took the organ completely to pieces and softening the glue in the rack boards carefully removed the wooden and metal pipes. My estimate was soon accepted and over the past three years I have been working spasmodically on the extensive repairs and remaking to bring the organ back to life, and after some 90 to 100 hours work the organ now plays again, judging by its former appearance, probably for the first time this century.

On a perfect summer's day at the beginning of June a friend and I loaded the Calke barrel organ into his van and leaving Shackleford at 6am we arrived at Ticknall early and



Calke Abbey, Derbyshire.

Photo: The National Trust.

then entered the enchanting avenue of lime trees, with the morning sunlight penetrating the green leaves.

This Lime Avenue was the start of the two mile long drive to Calke Abbey. Soon we passed through the archway of Middle Lodge then on through idyllic parkland which has been isolated for so long. As we drove down the hill the south and west facades of the house came into view, I jumped out of the van to open a large iron gate which gave access to the front door. Mr Chesshyre and Mr Usher greeted us, and we unloaded the organ and assembled, set up and tuned the instrument in the Museum Room on the first floor.

Surrounded by the Custodian, Historic Buildings Representative and members of the household, I had the opportunity of demonstrating the barrel organ and playing part of the Overture to Artaxerxes followed by God Save the King. The organ sounded very well now back in its familiar surroundings.

Description of the Barrel Organ and an account of restoration work recently completed

The Calke barrel organ is of the conventional English construction with a panelled base board, four vertical corner posts morticed into the base, and horizontal rails morticed into the corner posts on which the barrel rails and keyframe are mounted.

The wedge bellows have a pair of double feeders with mousetrap springs and external spill valve for the reservoir. The organ has 25 keys and 4 stops and the pipes on the whole were found to be in excellent condition, with the tops of the metal pipes hardly touched. The keyframe has an unusual ogee shaped moulded mahogany top, and the check rail is free standing on 4 wooden pillars from the back of the keyframe. The 4 stop knobs are mounted directly to the left end of the slides. The elegant cranked handle is made of iron with a hard wood knob. The chest is mounted onto the wind trunk on the left end, and the long stickers, all original, of octagonal form with box joint connection to the keys. The case is of dark mahogany with inlaid panels to the base and elegant splayed feet and apron, after Hepplewhite. The display pipe front and other features tend to be similar to the work of William Hubert van Kamp. A complete list of tunes from 8 barrels is clearly listed on the case flap.

Now to the restoration work. As I have already mentioned the pipes 100 in number were, apart from being choked with dirt, in good condition and came on speech without much trouble, and I was able to preserve the tuning and temperament as found. I found parts of the organ, the beech frame rails, the case door rail, and most of the barrels severely infected with worm borings. This necessitated making and fitting three new barrel wheels, No. 1 (53 teeth), No. 4 (48 teeth) and No. 8 (52 teeth), and a considerable amount of repinning work on the 7 barrels. I completely remade the bellows, recovering with the best lamb's skin. I had to remake the back of the keyframe including a new key register rail and check rail with buttons and screws. A new set of pallet springs made of phosphor bronze and one new reservoir spring. The iron keys carefully cleaned and their tips burnished, all the parts thoroughly cleaned and treated. then the organ assembled, the action set up and all the 7 barrels repaired and set true in their cradles, the pipes put on speech and tuned.

On the underside of the wind chest was found clearly pencilled:- "Built by Belloudy abt 1793." Repd 1838 GL.

Joseph Belloudy (Beloudy), Lewkin Lane, Drury Lane, London, was a maker of chamber barrel organs and flourished about 1784. He constructed a number of clockwork organs for James Cox's museum (2). GL may have some connection with Lincoln, Gt. Everdon, Near Market Harborough, whose name is printed on two of the barrels in Calke Church.

Lincoln would possibly have attended to the Belloudy barrel organ at Calke at the same time as the Flight and Robson barrel organ in Calke church.





The organ pipework photo: F. F. Hill.

Specification of the organ and list of tunes Belloudy Chamber Barrel Organ

25 notes



			Pipes
Stops:-	Stopped Diapason	8'	25
•	Principal	4'	25
	Twelfth	2 2/3	25
	Fifteenth	2'	25

Total of 100 pipes

Wind pressure 2" Pitch A = 4237 barrels Nos. 1 and 2 turning in a spiral, No. 5 missing - length 28 1/8", diameter 6 3/4".

Case:- Height 4' 9", Width 3', Depth 1' 9".

List of Tunes

Barrel 1 (Spiral)

- 1. Overtures in Artaxerxes.*
- 2. Larghetto in Do.
- 3. Gavot in Do.

Barrel 2 (Spiral)

- 1. Vaudeville in the Padlock.**
- 2. Andante in Haydon's Overture.

Barrel 3

- **Pleasure Garden Ballads**
- 1. Up Maidens All Come.
- 2. Lullaby.
- 3. Since then I'm Doomed.
- 4. My Native Land.
- 5. Whither my Love.
- 6. Heaving the Lead.
- 7. Poor Jack.
- 8. The Figaro.
- 9. Charmante Fleur.
- 10. Poor Tom.
- 11. Nina.
- 12. Duke of York's March.

Barrel 4

Reels etc - Indifferent

- 1. Tekeli.
- 2. Mother Goose.
- 3. Major Spicer.
- 4. Up Shenkin.
- 5. La Deliberation.
- 6. Spanish Patriots.
- 7. Devil among the Taylors.
- 8. Mrs Wybrow's Reel.
- 9. Mrs Wybrow's Waltz.
- 10. The Wolds of Sussex.
- 11. Miss Bilingcroft's Waltz.
- 12. Marchioness of Tavistock's Do.

Barrel 6

Marches

- 1. March of the 91st Regt.
- 2. Quick Step Do.
- 3. 2nd Life Guard's March.
- 4. Laurella.
- 5. Lord Cornwallis's March.
- 6. Quick March in La Belle Latiene.
- 7. Sir Ralph Mercrombie's March.
- 8. Coldstream March.
- 9. Owens' March.
- 10. Lady Douglas's Reel.
- 11. Marylebone March.
- 12. Marylebone Quick Step.

Barrel 7 Patriotic

- 1. God Save the King.
- 2. Battle of the Nile.
- 3. Life Let Us Cherish.
- 4. The Victory.
- 5. On This Cold Flinty Rock.
- 6. Slow Broke the Night.
- 7. Bay of Biscay O.
- 8. Nobody Coming to Marry Me.
- 9. Maid of Lodi.
- 10. Opera March.
- 11. Miss McDonald's Fancy.
- 12. March in the Caravan.

Barrel 8

- Sacred Very Indifferent
- 1. Bedford.
- 2. Abridge.
- 3. Kent.
- 4. St Davids.
- 5. Lincoln.
- 6. Leeds.
- 7. Alverstoke.
- 8. Sicilian Mariners' Hymn.
- 9. Messiah.
- 10. Broadsworth.
- 11. Manchester.
- 12. Galloway.

* Overture in Artaxerxes (3) - Opera in three Acts composed by Dr Thomas Arne and first produced at Covent Garden Feb. 2nd 1762.

** The Padlock (3) - A very notable English Opera by Charles Dibdin, first produced at Covent Garden in 1768.

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Musical Box Oddments

by H. A. V. Bulleid

Number 43

Karl Millöcker (1842 - 1899) studied at the Vienna Conservatory and started composing short musical pieces while working as Conductor at theatres in Graz, Budapest and Vienna. His first success with a fulllength operetta was *Das verwunschene Schloss* (magic castle) in 1878 and this was followed by fourteen others including . . .

Gräfin Dubarry	1879	
Die Jungfrau von Belleville	1881	
The Beggar Student	1882	
Gasparone	1884	
Der Feldprediger	1884	
The Lucky Child	1886	
Poor Jonathan	1890	
and the second se		

Several appear on discs, - for example between Polyphon 1013 and 1112 there are seven Millöcker tunes. They are also often seen on tune sheets, by no means always credited, as in Fig. 1, tune 9.

In the 1880s, Millöcker was established with Strauss and Suppé as the leading trio of Viennese operetta composers. His biggest success in Europe was the *Beggar Student* and in the USA *Poor Jonathan*.

In contrast, a pair of Italian composers still well remembered but only for one short opera each are Ruggiero Leoncavallo (1858 - 1919) for *Pagliacci* (1892) and Pietro Mascagni (1863 - 1945) for *Cavalleria Rusticana* (1890). They form a double bill, very popular for nearly a hundred years and often nonchalantly referred to as "Cav and Pag."

Tunes from *Pagliacci* are rare on musical boxes, partly due to the late period of composition; but despite this the immense popularity of the Intermezzo from *Cavalleria Rusticana* guaranteed its frequent appearance on cylinder and disc - e.g. Polyphon 1086, 5013. Mascagni wrote fifteen operas, but the only one likely to be seen on a tune sheet is *L'Amico Fritz* (1891).

Single-Comb Sublime Harmonie

Combs are always attached as firmly as possible to their bedplate, and accordingly there is no technical reason why the two combs of a sublime harmonie or a forte piano movement should not be combined in one piece. The main practical reason against it is the difficulty of aligning such a comb to give simultaneous



Fig. 1. Typical Paillard tune sheet (8 1/2 by 5 3/4 inches = 216 x 146mm) for serial 84796. Top centre cartouche gives the cylinder length in inches, it would be interesting to know at what date and serial number Paillard gave up pouces. The lower central cartouche carries a pencilled number 71172 - each 7 uncrossed and each 1 without serif so probably not written in Switzerland and not significant. Tune 10 is from the 1885 Strauss operetta. The 20 minute warranted run claimed as an afterthought in the top margin is a decided rarity.

drop of adjacent bass and treble teeth which differ in length. There would also be manufacturing problems with heavy and light teeth being side-by-side, not to mention upsets for the tuners.

Despite this, some one-piece combs of the sublimeharmonie-piccolo type were made, including the one fitted to Paillard serial 84796. This is a nickel-plated movement of about 1886 with 13 inch cylinder playing ten airs with tune selector and indicator, speed control and, of course, zither. The tune sheet description is Forte-Piccolo, see Fig. 1. As also claimed, it has doublespring drive, enabling a devotee to run through the entire 10-tune repertoire twice on one winding.

The single comb carries three sets of scales; counting from the bass end there is one bass-to-treble set of 14 teeth; a second set (with reduced bass) of 21 teeth; and a third set, covering middle range to piccolo, with 39 teeth - total 74, see Fig. 2. The comb steel is in two pieces, each with two dowels but only the outer pair extended to locate in the bedplate. Serial no. 84796 is stamped on the back bottom edge of the brass comb base and is scribed on the bass lead.

I think Forte-Piccolo is a very fair description of this movement. Though the sublime harmonie effect is much limited by the few teeth available it is certainly



Fig. 2. Bass end of serial 84796 comb showing the first two sets of teeth and the start of the third. Arrow 1 indicates serial number stamped under base. Arrow 2 indicates the join in the comb steel between teeth 48 and 49. The white leads indicate corrosion but nowhere near enough to impair tuning; and I think further corrosion is always arrested by spraying with WD40 which leaves a thin protective film after the solvent has evaporated.



Fig. 3. PVF serial 84796 mechanism with unusually wide double springs to ensure 20 minutes run per winding.

in evidence when providing the claimed forte. The piccolo end is well provided and the top sixteen teeth are heavily pinned as can just about be seen in Fig. 3. I imagine Paillard were not sufficiently pleased to experiment much further with this idea, but it remains an interesting experiment, probably giving a good arranger slightly more scope than with a conventional single comb.

Zither tissue holders

These came in two distinct types; one nickel-plated tubular brass and the other square section wood bored to suit the tissue diameter and covered by a flat nickelplated brass plate. The tissue roll was easily glued to wood so less than a semi-circle was needed for adequate support and wooden holders could be made two at a time by slicing lengthwise after boring.

I think the tubular type must have been the old original. The outside diameter was generally about three quarters of an inch and formed about two-thirds of a complete circle - enough to cradle the tissue but leave room for it to protrude onto the comb teeth. Brass about 1mm thick was used, to make the tube rigid. This type was used by Conchon and Langdorff (noted in 1882) and probably others - and of course by Paillard who sometimes inscribed it PVF both sides of the central support. This inscription is shown in Fig. 4 and is commonly seen on 1880s PVF movements including many of their excellent mandolin types with 12 3/4 inch (12 pouces) cylinders playing six airs on 120 comb teeth. This one, serial 11388, was probably made in 1880 or soon after; at that period Paillard seemed to have a great liking for the word Expressive as in Fig.



Fig. 4. Paillard, Vaucher Fils tubular Zither tissue holder inscribed PVF and fitted to serial 11388 with its typical mandolin cylinder.

5. They even added it to their Automatic Zither tune sheets.

Whether gradually or suddenly one cannot yet guess, but the tubular type was superseded by the flat type which was cheaper, lighter and more readily embellished with engraved or embossed patterns, generally geometric. Some later ones even sported built-up decorations of baroque style, perhaps intended to compensate for musical deficiencies.

It seems most probable that no tubular type holders were made after about 1890, and certainly all the numerous Paillard and Mermod interchangeables were fitted with the flat type.

Case damage

With lid and glass lid raised, the tops of the case front and sides frame the movement and blemishes in them spoil the effect. Apart from superficial damage to the polish there are two main types of blemish; woodworm with a local group of holes at an edge, almost always an outside edge; and mechanical damage caused by notso-blunt instruments. This also applies to lid veneer edges.

The problem with these defects is that they are too small to justify the trouble and difficulty of repairing with matching wood and they are too exposed to be safely filled with, for example, Brummer stopping.

12 Jours ME Oxypressive I Serine. Ryant Lung 3. inoffice - Ginoffa . andade Wildferer Geoleses Dalle 6 JI Balien fine - 93lat

Fig. 5. Tune sheet of PVF 11388. Tunes 3 and 5 date from 1874 and Gounod's incidental music for the play Joan of Arc was composed in 1873. But the box was probably made in about 1880. Tunes 2 and 4 have their composers transposed, see the same tunes on C. Paillard serial 2699, page 142 of Vol. 13. Misplaced headings are extremely rare on tune sheets; here the initial M has pushed Zither into the margin.

This stopping is ideal for cavities where it gets allround support, but risky for edges. It can however be adequately strengthened by mixing with Unibond or Resin W wood adhesive.

Place the required quantity of the water-based Brummer stopping on a saucer and if too moist let it dry for a few minutes until stiff but still workable. Then thoroughly mix in just enough adhesive to make it comfortably workable. Apply a very slight trace of the adhesive to the blemish and press in the stopping - easily done with a steel blade very slightly moistened. Sometimes it helps to use two blades in forming the built-up edge; usually there will be a vertical and a horizontal face to the filling, both of which should be left a trifle proud, the latter being the more important as part of the case top. The stopping takes less than an hour to set firm and a day to set completely. It should be checked after about half an hour when any sagging can still be rectified.

After a day it can be sanded flat with sandpaper not coarser than 200 grit, preferably 240 or flour, after which it can be stained, painted and polished just like wood. Where the filling is at the top front of a case with black interior and stained or veneered front, use stopping to match the front and stain the top face black before polishing.

The Brummer stopping comes in a range of colours which can be mixed; partial mixing allows a rough imitation of some veneers. The stopping is better stored in small air-tight glass jars, surface covered with damp cloth, than in the tins supplied.

Lifted stringing

Even well-seasoned wood can shrink and expand at right angles to the grain under conditions of varying humidity, and this sometimes causes the blemish of lifted stringing on musical box cases. It generally lifts at the ends, but some times loops up clear of its groove. In both cases further damage is likely from dusters, etc., so prompt re-fixing is necessary.

The looping is the stranger effect and not uncommon. It happened "out of the blue" on a case that had been professionally restored to high quality and in my possession for nearly ten years - about an inch of vertical box wood stringing on the case front looped out of its groove at about the middle of its length. My steps in putting it firmly back were . . .

- 1. five thou. feeler inserted through loop
- 2. stringing cut through, diagonally
- 3. debris in groove loosened with pin then blown and sucked out
- 4. Resin W adhesive inserted along groove
- 5. stringing pushed into place, surplus adhesive wiped away with slightly damp cloth



Fig. 6. Farmyard scene with poultry on the lid of serial 2039.



Fig. 7. Typical dirt and scratches on marquetry before restoration.

6. pressure from flat steel block applied for a minimum of two hours.

In step 2 a diagonal cut is less noticeable. A gap of five to ten thousandths of an inch is ample to allow the distorted stringing to lie flat. Cutting can be done with a fine saw or "veneer saw," but it is far easier to use a bonded slitting disc in a small high-speed drill or flexible shaft drive. The discs are just under one inch diameter, available in thicknesses from 10 to 33 thousandths of an inch (.25 to .85mm), and should run at not less than 10,000 rpm. Used gently, they make a perfectly smooth cut through the stringing without splitting the grain which is only too easy to do with a saw.

In step 3 the stringing each side of the cut has to be lifted a little; if it should break push the break firmly together and with a touch of adhesive below it will not show.

In step 5 avoid purely local pressure because it is important not to push the stringing below the surface.

The ends of a piece of stringing are usually chamfered at 45 degrees, and when an end has lifted it is only necessary to reduce the length while retaining the correct chamfer angle. This again is easily done against the side of a bonded slitting disc (using a thick one, a thin one will break). Alternatively 200 grit sandpaper glued to a strip of card or, of course, the fine side of an "emery board" nail file. Protect the adjacent area around the stringing.

Never be tempted to make a local stringing repair by inserting a piece of different width or colour from the original. It will catch everyone's eye, look frightful, and make the work of a subsequent restorer very difficult. I have done it.

Lid marquetry

Veneers for marquetry patterns were cut in batches of several thicknesses, so there is no chance of a unique design; but of the subjects seen on musical box lids some such as human figures are surprisingly rare. Landscape subjects and domestic scenes and animals are also rare and one might well ask why there are so many birds yet no cats or squirrels. The unusual farmyard scene in Fig. 6 complete with a water-wheel, comes on the lid of a 13 inch ten air box of missing tune sheet and unknown make but with serial number 2039 stamped on the cylinder bearing and blank codes 7 for spring and 19 for cylinder and governor, so possibly Paillard; gamme 84.

The case was in woeful condition and the lid had suffered multiple stains and scratches, see Fig. 7. Luckily the scratches were comparatively superficial and the marquetry and stringing were secure.

Rubbing with grade 00 and 000 wire wool dipped in

a 50/50 wax polish/turpentine mixture removed dirt and exuded glue but left a lot of scratches. - which looked worse than before against the cleaned surface. Removing them took about 50 firm strokes with 150 grit sandpaper, using a flat sanding block and keeping parallel to the wood grain. I have found that 50 firm strokes, with new 150 grit paper (and altering its position on the block when clogged) removes about a thousandth of an inch. The veneer is usually about 25 thousandths (0.6mm) thick so it is perfectly safe to double the dose if some scratches persist; but avoid local sand-papering with local pressure as this rapidly removes more wood. Like most 13 inch cylinder movements this has a lid with veneered area about 21 by 8 inches and I advise working on this in, say, six sections each 7 by 4 inches when it is far easier to keep the paper from clogging and to examine progress. It is wise to choose the sections so that two or three of them completely cover the area of the marguetry pattern, because it may require more work than the sides of the lid where minor remains of scratches are less noticeable. Always finish with fine "flour" paper for a really smooth surface before waxing or polishing.

Why this insistence on working "parallel to the grain of the wood" which always involves cutting *across* the grain of stringing each end and of some marquetry pieces? The main reason is to maintain the discipline of the sanding block moving only along parallel lines, because even one wild stroke in another direction can cause a transverse scratch which could take many more strokes to remove.

Case lid cosmetics are very important. Renovation is well described in member Graham Webb's Handbook, Cylinder Boxes.

Film music

David and his mother do a quick dance to a musical box tune early in the excellent 1934 MGM production of *David Copperfield* directed by George Cukor and with W. C. Fields pinching the show as Micawber. The musical box stands open and mother operates the change lever for instant start of the tune which is well recorded and is faded out within one minute. Though never seen in close-up, and with camera angle excluding a sight of the mechanism, the box and tune sheet look O.K. and the lid, seen closed in a subsequent shot, has conventional inlay. I expect the tune was separately recorded and post-synchronized, so they would not want to risk the box playing during a take, hence advice to operate the wrong lever. Or was it just an empty case?

The following captions are for Musical Box Oddments Number 42 which were inadvertently omitted in the last edition.

Fig. 2. Serial 18906 mechanism with zither removed and comb teeth marked to indicate the a teeth (nearest to 440 Hz) near the bass ends and also the three main comb teeth which are the same pitch as the second highest treble comb tooth.

Fig. 6. Cuendet serial 28323. The six drum strikers are worked from main comb teeth and the six castanet and five bell strikers (two by one tooth) from the separate 10-tooth comb at the treble end. All can be silenced by three levers of the usual type. The bedplate is screwed to blocks in the case, so it has to be mounted on blocks during restoration. The knotted string around the comb is supporting the bell and castanet links which are not re-connected to their teeth until the comb has been finally positioned.



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The Cobbler

R. Booty

I was recently given opportunity to photograph and examine for a short while, the cobbler illustrated here. I did not however, have time to dismantle this very original piece in any way, to look for further details of its maker.

The clockwork was very long running and turned a single crank which moved a flat metal rod up and down to give life to the figure. The top half of the head moved with the rod to give the impression of him first looking forward and then down, at his work. As the head came down, the arms moved outwards, pulling the thin cords which represented the threads he was using to repair the shoe held between his legs. The cord actually passes through a hole in his lower abdomen, and is fixed to the flat connecting rod with red wax. As the rod moves up, the cord is pulled back in, bringing the arms inwards with it, as the head again rises. This is the total of movement involved.

So far, all I have stated is fact, what follows is theory and question. Because of the long running motor, I am assuming it to be either a counter or shop display. French it probably is, but who is the owner of the only mark on it, LJF? I have no real idea how old it could be, but would guess from the English label it carries, that it was brought over here c.1895. Unfortunately the owners could not elaborate on this.

I confidently said I could find out when, where and by whom it was made, however books and enquiries have uncovered nothing. Does anyone have any suggestions?



Fig. 1: The Cobbler in his glass fronted case. Overall height is $14\frac{1}{2}$. The flat card figure stands at about 6".



Fig. 2: Forebears of the family who own this heirloom came from France, which explains the French sign next to the figure (see Fig. 4) and this English sign beneath it.



Fig. 3: The figure with motor beneath. The head is in the up, forward looking position.



Fig. 4: Here the head is in the down position. The sign on the left is in colloquial French. 'Lanpegne' is assumed to be the owners name. The other piece translates to, 'A lovely shoe'.



Fig. 5: The motor carries the only mark on the piece. Stamped halfway down the left side, as seen here, is the mark, LJF.

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