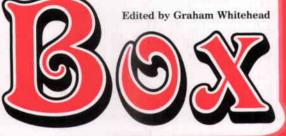
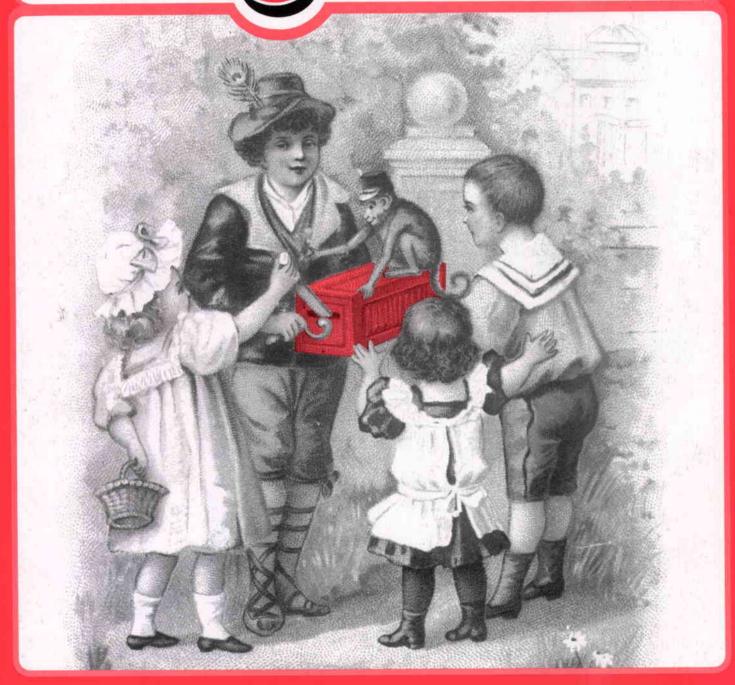
An International Magazine of Mechanical Music

Volume 14 Number 2

Summer 1989





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More Musical Box Oddments

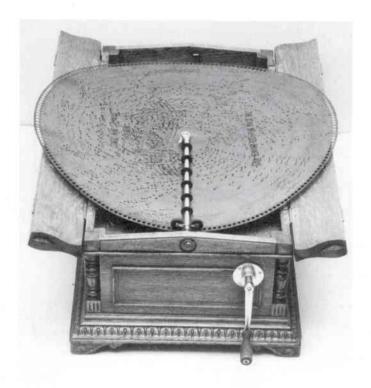
The Journal of the Musical Box Society of Great Britain

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MECHANICAL MUSIC

August 3rd 1989



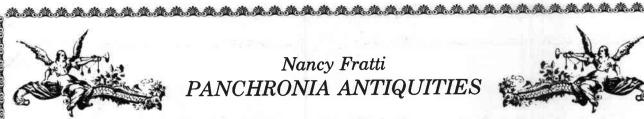
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Front Cover: From a typical Victorian lithograph. (Collection of D. DeBie).

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The Journal of the Musical Box Society of Great Britain.

Volume 14 Number 2 Summer 1989

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The Music Box is printed for and published by the Society quarterly 27th February, 27th April, 7th August, 7th November, from the Editorial Office, Broadgate Printing Company, Crondal Road, Exhall, Coventry CV7 9NH.

Back numbers obtainable from: Roy Ison, 5 East Bight, Lincoln LN2 1QH.

SOCIETY TOPICS

FORTHCOMING MEETINGS

SUMMER MEETING

Saturday, 3rd June, 1989 at Tuke Common Room, Regent's College, Regent's Park, London.
Proposed programme for the Day: 9.30 Registration followed by coffee and biscuits 10.00 Richard Cole 11.00 Jim Colley 12.00 Lunch and Auction viewing. (Bar available 12 - 2.00) 2.00 Society Auction 3.30 Tea and biscuits 4.00 Society AGM.

Please note that entries for the Auction may be brought to the venue from 9.00 a.m. onwards. The best vehicular access to the Tuke Common Room is via the Lodge Gate (NOT the main college gate) in York Bridge, just off the Inner Circle of Regent's Park. Once inside the gate, follow the "road" round the edge of the building, but keep to the left of large tree at corner of the building. Vehicles may stand for a while near the Common Room while unloading takes place (there are both stepped and ramped access to the building), but afterwards should be removed from the College Grounds for parking. PLEASE DO NOT PARK IN THE COLLEGE GROUNDS. Parking is available in the Inner Circle of Regent's Park, in designated areas, and is free on Saturdays. Nearest tube stations: Baker Street and Regent's Park. Catering arrangements: a bar will be provided from 12.00 - 2.00, but no other catering (apart from tea and coffee mentioned above) will be provided. Members attending the meeting are advised to either bring a packed lunch or avail themselves of the many establishments within a few minutes walk of the College. At the time of preparing these details, the College was not expecting to open its dining room on this day. Any further information about this meeting may be obtained from Alison Biden, Meetings Secretary on 0962 61350. Registration fees will be collected at the Meeting.

AUTUMN MEETING Friday, 15th - Sunday, 17th September, 1989

Autumn Meeting and Annual Organ Grind, based at Unicorn Hotel, Bristol. Details of the Hotel may be found on the separate insert, including a booking form and registration form. It is most important that members intending to attend regional meetings should register well in advance with the Meetings Secretary. Members who have not attended a regional meeting before should note that the registration fee payable to the Society for each meeting is not normaly acknowledged. On the other hand, the hotel concerned in each case should always confirm that it has received your reservation.

At the time of going to press, detailed planning of the meeting is still in progress, but

a comprehensive programme of excursions, local visits and demonstrations is being arranged, as well as the usual organ grind on the Saturday morning. The Unicorn Hotel is one of Bristol's most prestigious, with a high standard of accommodation, and standing in an attractive and convenient waterside location.

Christmas Meeting - Saturday, 2nd December, 1989 at The Tuke Common Room, Regent's College.

Spring Meeting, 1990 - 30th March - 1st April, 1990 at Burnside Hotel, Bownesson-Windermere, Cumbria.

A general note about all Society Meetings: The Meetings Secretary appreciates members desire to know as much about the intended programme for each meeting as possible, and regrets she is not always able to give the topic of talks/demonstrations in time for publication. However, this information is usually available nearer the time of the meeting, and members may always obtain up-to-the-minute information about meetings by calling Alison Biden on 0962 61350.

Regional Meeting held in Bradford 31 March to 2 April 1989

Bradford is a city of great industrial involvement and has the Memorial Hall to Edward Cartwright, inventor of the power loom. At least one organ builder, F. W. Nicholson, worked there. It is recorded that in 1861 he exported two: manual church organs to Australia. Our local representative who organised the meeting was John Powell and seventy-five people attended. The excellent venue was the Victoria Hotel, which is right in the centre of the city.

As part of his opening address, our President, John Gresham, had the pleasure of welcoming two new members and their wives: Messrs. Morgan from Wakefield and Smith from Bromley. Also, Mr. Wade from Guiseley was attending his first meeting.

Your chance to buy and Sell at this years Annual Auction. See details on page 56.

Notice of Annual General Meeting

The annual general meeting of the Musical Box Society of Great Britain will take place on Saturday 3rd June in the Tuke Common Room, Regents College, Regent Park, London The AGM will follow the society auction and commences at approximately 4.00pm. The following nominations have been received for offices within the society. Membership Secretary and Corresponding Secretary Alan Wyatt, Subscriptions Secretary, Ted Bowman, Auction organiser David Walch.

John Powell put himself into bat first and his talk was "One Interface Between the Music Box and Reed Organ". This all came about by John's continuing interests in the mechanics of music boxes. What set him off on this occasion was coming into possession of the remains of an 8" sectional comb cylinder box with all the teeth broke and pins missing. John showed how he had attempted to re-establish the comb tuning pattern by identifying the three tunes pinned on the cylinder. He had transferred the pin positions from the cylinder on to paper rolls and cut slots to make them playable like organette music. These were played on a device which was described using a redundant harmonium movement donated by Phil Fluke and a photograph was shown of this machine. John described how he had arrived at a possible tuning pattern for the comb and played tape re-



Pam Fluke at the Harmonium Museum.



cordings of the three tunes set to this pattern. The audience was asked if they could identify any of them without success, and he thought that more work would have to be done before he could be confident of having identified the comb tuning scale.

Next, Pam Fluke appeared, having only returned home at 3 a.m. that morning, following a successful "thrill of the chase" for an instrument in Reading. She was pleased to give us a pre-visit briefing about the Museum of Victorian Reed Organs which is jointly owned by herself and Phil Fluke. She defined the method of winding for us - harmoniums are usually pressure instruments, American organs are vacuum instruments, reeds hold their tune over long periods of time. She showed us various sets of reeds equivalent to 4-8-16-32 ft. pipes. In 1872 St. John Bosanquet produced an octave with 53 tones which it was claimed could only be achieved by reeds not pipes. The production levels of organ builders ranged from 150,000 p.a. for Alexandre (Paris) at the time of the Paris Exhibition of 1900, to that of 15 p.a. for Mustel (Paris) in 1870.

Next, Bill and John Astin put on "The Old Phonograph Show", illuminated with dry Yorkshire humour. They proudly demonstrated their first musical instrument, a Monopol disc box, which sounded very well. Bill went on to demonstrate his instruments in the order that they were manufactured.

He started with an Ariston 1880-90, then a skeleton German phonograph dated 1903 costing 3 shillings and 6 pence (say, 17½p) or free if one bought 10 cylinders at one time. An Edison Fireside phonograph of 1909 played very well. From 1912 came a Pathe internal soundbox record player; the record is played from the centre to the periphery. Bill also showed us a "Trench" gramophone and an unusual Camraphone, which looked like a Kodak Brownie Box camera but contained a multi-jointed record player. The last instrument they showed us was an HMV Model 32 which had its lumiere diaphragm slightly damaged. They were also the proud owners of a record of the opening ceremony of the bridge at Gateshead by King George V on 10 October 1928. In his closing remarks Bill said that he had shown a great variety of instruments, yet they were all manufactured in the short period of, say, 35 years, i.e. half a man's lifetime.

After lunch we assembled into groups of "Blue" and "Yellow" and were taken by coach on alternative routings to the following places. I shall report on them in the order of the "Blue" group.

The first port of call was the "Museum of Victorian Reed Organs and Harmoniums" the private collection of Phil and Pam Fluke at the Victoria Hall, Saltaire Village, Shipley, West Yorksire. Phil greeted us at the door and as we filed in we saw straight away a proudly displayed collection of 53 instruments representing Boudoir, Chapel, Parlour, Ship and Street organ types.

Their collection is backed up by some 300 biographical data items, plus about 800 specifications for reed organs. They sell a

very good booklet which has 36 pages of text, plus 22 photographs, about their collection, which is excellent value at £2.00 plus 50p postage.

Victoria Hall is a very impressive stone structure with large rooms, well suited for listening to organs, and we were invited to play them if we wished. The first one that we heard was the "Orgapian", a combined organ and piano, which was developed to accompany silent films. It was claimed to be as loud as a six-piece orchestra. It was made by E. Whomes of Bexlevheath, Kent in 1924. The piano section (by Franz Liehr) has 7 octaves and the suction organ section has 5 octaves (379 reeds), which can be played together or separately. A truly remarkable instrument, although developed too late for full commercial exploitation. Another interesting feature was that of a single, but transposing, keyboard; 16 stops; 308 reeds, and pressure bellows on a Couty and Richard (Paris) organ made in 1880. Their largest organ was built by John Holt of Birmingham in 1938 for Dr. M. P. Conway, organist at Ely Cathedral until 1949. It has 3 manuals, plus pedals: 41 stops; 1461 reeds and suction pedals. At the other end of the scale is the "Traveller" organ of 1907; suction bellows; 4 octaves; 98 reeds by Bell (Ontario) and the tiny Book Harmonium supplied by Metzler circa 1880, with 3 octaves and 41 reeds. Space will not allow me to comment on each of the instruments, although Phil demonstrated most of them and Pam played some of them for us. Without doubt, their enthusiasm, caring, knowledge and interest in their museum came across to us all, so it will be well worth a second visit. The next port of call was Bolling Hall, which was mentioned in 1086. It's occupants were involved in the "Wars of the Roses" on the Lancastrian side. The thick walls were at all angles, as are the fourposter beds and some furniture. It boasts a Ghost Room. From our point of view it houses a Chamber Barrel-Organ by H. C. Lincoln of London, who died in 1964. It has 4 stops, 24 notes and 96 pipes, also 3 barrels, one of which is spirally pinned playing secular tunes. Unfortunately it was out of order and could not be played.

There is a fine Bracket Musical clock with the name John Wyatt of Altrincham on the face. There were several long case clocks in the House.

Some people had gone to the National Museum of Photography in Bradford to see the huge Imax screen, 52 ft. high, 62 ft. wide, but the writer had no reports on it. Friday and Saturday evenings were taken up with the showing of two videos of the 1988 meeting at Llandrindod Wells, one by Leslie Brown and the other by David Pilgrim. John Powell showed us one of our visit to Brugge in 1988.

On the Sunday morning David Snelling from the Ise of Man, gave us a talk under the heading, "From the Ridiculous to the Sublime and Back Again" in the context of mechanical musical instruments. He made very good use of co-ordinated slides and tape recordings. The talk started off with a comment on an Adler disc box, followed by a Snoopy and a Carltonware

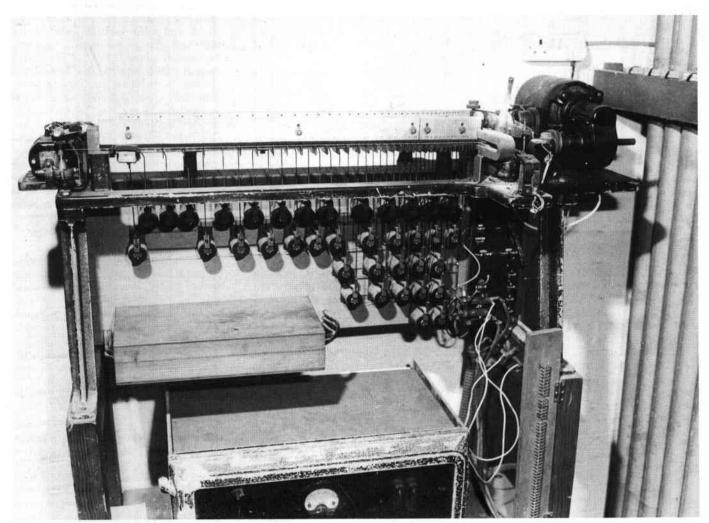
Devil Jug, which played "Auld Lang Syne". David proceeded through examples of more sophisticated instruments such as a Phonograph playing "The Old Trombone" sung by Albert Whelan, and Florrie Ford singing, "How Would you Like to Spoon with Me". Close to David's heart was a Pathe disc with the song, "There must be something nice about the Isle of Man". On an Edison Gold Moulded record (160 rpm) was a Street Piano Medley. He also showed some Nicole Freres records. David finished his sublime section with a recording of his Imhof & Mukle Orchestrion. To revert to the ridiculous a toy Bartender materialised, whose sampling of his wares turned his countenance from red to green and back again.

Sunday afternoon we made our own way to Manor House, Little Smeaton, Nr. Pontefract, North Yorkshire, to see the workshop and museum of Andrew Pilmer, which houses new and restored organs, large and small fairground instruments and a card punching machine. There is a specially designed building, tastefully fitted into a village environment. Andrew and his family all joined in to make us welcome and provided us with refreshments.

Andrew demonstrated most of his 20 or so instruments. It is impossible to do justice to them all here, so I mention but a few: those which were working all sounded very well. There is a Dienst (Leipzig) Mandolin Orchestrion; a 1938 De cap de Kampenair 900 pipe Cafe Organ, which was 121st built, and came with 400 books of music. There is a clockwork driven barrel organ. Mounted on a lorry, well illuminated with coloured lights, is a 52 key, 150 pipe Arthur Bursens Organ, made in 1970. An organ with a very quiet mechanism was a 1950 Arburo, where the main bellows were driven through a parallel cam device; it also had suction for the action and pressure for the pipes.

The remains of an 1870 Gavioli barrel organ (No. 6742) were found in a wood yard which Andrew had completely rebuilt and changed it to book-operated, also adding a glochenspiel. In the workshop there was a 1906 "Superb" organ, completely stripped down. It is thought that there is only one other in the world. It is being restored to its original order by being changed from 98 to 110 keys, with 866 pipes. The weight of the parts as it arrived was about 11/2 tons, and it will go out probably weighing twice that. It is due for a public performance in September 1990. Next, we saw Andrew operate his card punching machine which had 10 punches, all 4mm wide, ranging from 4 to 20mm long; the card was hinged and marked with lines at 3½mm centres. We left Andrew with admiration of his skills and application to his collection, and should the reader wish to hire one of his organs you can rest assured that it would be in tip-top condition.

That was the end of another fine meeting, and as our President comments in his closing address, "Credit must go to John Powell and all those who supported him in providing us with such a pleasant, full and interesting meeting".



The 'Solo Cello' unit fitted to the Compton cinema organ installed in Oxnead Watermill, Norfolk. Photo: John D. Sharp.

Compton's mechanically played cello

by Ted Crampton

Before the invention of recorded music, the use of musical instruments for the purposes of home entertainment was as popular then as the home computer is today The piano and the violin were the most popular instruments, which is probably why orchestrion makers strove so very hard to imitate the strains of the violin or cello with suitably voiced organ pipes. At that state of the art, an automatic piano accompanied by a mechanically played violin must have seemed the ultimate home orchestrion. Such instruments were successfully produced in great numbers by the Mills Novelty Company in America and by Hupfeld in Leipzig. Whilst these instruments are well known, and extremely popular with collectors today, they were not the only manufacturers to have achieved some degree of success in the field of mechanically played violins. From the Poppers stable came a piano orchestrion which included a violin and drums. While only one of these is known to exist today, (in Siegfried Wendal's Mechanical Music Cabinet, Rudeshiem) three or four much rarer instruments, practically unheard of by mechanical music enthusiasts, still exist, as a special effect on the Compton cinema organ. Here Ted Crampton describes one of John Compton's most amazing developments, the mechanical cello.

There is no doubt that the early 1930's was a time of intense competition in the cinema industry. Dozens of 'Super Picture Palaces' were being opened every week - and no city super cinema worth its name was complete without it's ballroom and restaurant, it's ornate foyer and atmosphericallydecorated auditorium. Large and fullyequipped stage and dressing-room facilities were essential as variety acts were presented frequently. The orchestra pit was sometimes equipped with a lift to gently raise the musicians to stage level. Almost invariably there was an independent lift on which was sited the console of the 'mighty organ' for even modest cinemas were not complete without their organ and resident organist.

This intense competition between the cinema owners was reflected in the competition between the cinema organ builders. Eventually about 500 instruments were installed and there was great rivalry between the Wurlitzer, Conacher, Christie and Compton firms to win the orders. John Compton had developed an organ for a cinema in Tamworth as early as 1912 and by the mid-1920's was, with inventor Leslie Bourn, investigating the development of synthetic (pipeless) organ tone. By 1935, experiments had produced the

Melotone – a selection of stops which controlled new kinds of electronicallyproduced tone colours to augment the resources of the Compton cinema pipe organ.

By 1938, the Melotone unit had been developed to enable the production of church and cinema organs using only synthetically produced 'ranks' of pipes. Several of these unique instruments were installed in cinemas and Leslie Taff broadcast a Compton pipeless cinema organ for the first time in December 1938 from the Regal Cinema, Darlaston.

Going back, however, to 1933 when visitors to the North London factory of Comptons were invited to listen to the latest addition to their cinema organs – the 'Solo Cello' unit.

The metal-framed unit consisted of a cello string which was attached at one end to a motorised spindle which could be turned to loosen or tighten the string, thus sharpening or flattening the pitch. This was controlled by two pistons marked 'Sharp' and 'Flat' which were fitted beneath the solo manual on the organ console. At the other end of the cello string was a rosined wheel which was lowered on to the string as each note was played. Below and along the length of the string were 36 'fingers' which rose and fell to 'play' the string, like a cellist's fingers. At the end of the string was a gramophone-like pick-up from which signals were converted into sound and relayed to the amplifier and speakers.

The Solo Cello unit did not really find favour with organists and audiences and only about a dozen units were fitted to Compton Cinema Organs. Development was being concentrated on the successful Melotone unit and the Solo Cello faded away. It is thought that only 3 or 4 examples remain playable, one being added to the Compton organ now installed in The Plough Inn, Great Munden, near Ware - formerly in the Gaumont Cinema, Finchley. Another is fitted to the Compton organ (ex-Carlton Cinema, Norwich) installed in the music room on the second floor of Oxnead Watermill, Norfolk - the beautiful home of Barbara and Jim Crampton.

It is good to know that this curious musical invention can still be heard from time to time – an echo of an era long past, when going to the cinema was an eagerly awaited thrill and several hours of enthralling entertainment – and all for the cost of half a packet of crisps nowadays!



The console of the 3c-7 Compton cinema organ (ex. Carlton Cinema, Norwich) installed in Oxnead Watermill, Norfolk.

The two pistons marked 'Sharp' and 'Flat' controlling the pitch of the Solo Cello unit may be seen below the left-hand side of the middle manual. Photo: John D. Sharp.

Binders

The society regrets that it is no longer viable to have specially printed binders for binding your copies of "Music Box". However, binders to take any publication the size of "Music Box" can be easily obtained from most of the High Street stationers for little over £2.50 each.

Computer Wanted

The society's membership records are kept on an outdated "time-intensive system". We need to streamline our system and increase efficiency with our membership records/payments. To this end the society needs an MS-DOS (IBM compatible) computer. The cost of a new computer would be rather prohibitive, but if you know of someone or if you have a computer that is not being used or one you would like to sell, please contact Ted Brown our current Membership Secretary.

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THE MANUFACTURE OF MUSICAL INSTRUMENTS IN SAXONY, LEIPZIG 1895

Part Three - Their harmony and technical construction

Continuing a reprint from "The American Musical Courier" rediscovered by research into historical data by L. Goldhoorn of the Netherlands

Translated and first published in 1895

The following lines are written for the object of giving to our readers, by help of some illustrations, a clearer idea of the qualities and construction of the mechanical musical instruments with steel teeth and changeable tune sheets, which take nowadays such an important place on the musical market. It cannot be our task though, to speak of all the different sorts of instruments of that kind, that have been invented during the last years and have to a great part disappeared again very soon. Neither do we intend to strictly criticise or balance the value of the instruments, as to their tone and construction. What we aim at, is simply to give to all those, who either deal with these articles themselves, or else take any interest in them, a plain and easily understood description of their different characters. Many questions in this direction have been put to us, coming just from quarters, where perfect acquaintance with these differences might have been expected.

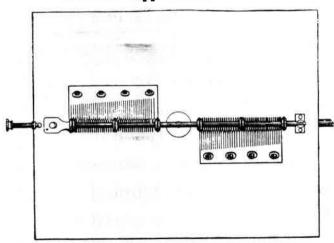
The instruments, we are most concerned in, are: Symphonion, the Polyphon, the Orphenion, the Ariophon, the Monopol. All these exist in various shapes, as boxes, cabinets, time-pieces, automatons and so on.

We shall however take not much regard of the cases, as every manufacturer of mechanical musical instruments can, no doubt, draw whatever use he may out of the advantages modern technique has brought about in wood-carving and other branches of art-industry. Quite a different thing it is with the construction of the Interior.

Although this ought to be a field exclusively reserved for free invention, there was of late much more to be found of "imitated invention" than was permissible.

The oldest mechanical musical instrument with changeable tune-sheets has been the Symphonion, which still stands in the first rank. The chief features of its construction are: the arrangement of the sets of teeth or combs, the dampers adjusted to the tongues, and the

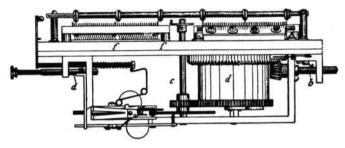
Upper view.



selfacting "fan" for regulating the time. The steel-comb is divided into two parts, in the middle of which the shaft c of the disc is placed. By this arrangements it is possible to

place a comparatively great number of tongues on a plate of small diameter, and so to produce a full sound. The shaft is brought into action by a clockwork a, which is wound up with a handle, to be fixed on the peg b.

Inner view.



The damping of the tongues is one of the chief factors for producing a clear and distinct tone. It is achieved by little steel plates if, which touch the tongues sideways



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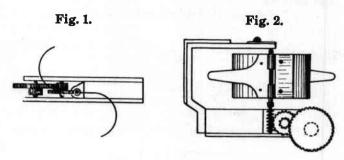
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SENSATION

and are raised up from the same or pressed against it at the proper moment by a little cogwheel, which also causes the tongues to be struck. Only by this arrangements a remedy has been found for the breaking off of the dampers, which formerly happened very frequently. This invention, belonging to the Symphonion factory, though patented in Germany, Austria, Hungary, America, England a. s. o., is imitated by other houses with alterations more or less unimportant.



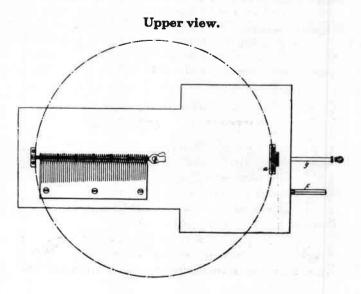
The speed regulator consists of a fan of springsteel-plate with curved surfaces that expand and contract according to the power wanted.

This system is the only one, by which the expansion of the surfaces of resistance comes about without any lever or anything of that sort. The working is such a safe and precise one, that the fully wound up spring hardly shows any alteration whatever after the movement has run down.

The regulation of time is achieved by a spring sliding on the axle of the flywheel, which however will be replaced in future by a new patented arrangement of the factory, which without any other mechanical means, will enable the fan to regulate the time in the most simple way, merely by shutting off the air. The work is started and stopped by the lever d. As to the sound, the tone of the Symphonion is such as to satisfy the severest demands, for which reason it has been introduced very easily among all lovers of music.

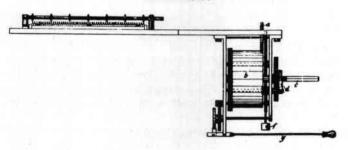
Like most mechanical instruments with steel teeth it is tuned chromatically in semitones and has a compass of 2-4 1/2 octaves, according to the size of the instrument, respectively to the number of tongues. The keys, most of the pieces go in, are B flat ma., D ma. and E flat ma. The play is a very correct one, the short notes just as well as the long ones coming in quite precisely. Although in many cases the original compositions cannot be rendered quite accurately owing to the limited space - still the melody will always come out perfectly clear.

In the Polyphon the motion of the disc is not brought about from the centre, but by a pinwheel a on the side. The latter is moved by spring power. The barrel of this



spring is placed in bearings horizontally underneath the plate. The winding up is done with a crank, that is connected with pinion c and ratchet wheel d. The fan f is brought into action by a suitable transmission, thus regulating the movement. The stopping of the regulator and of the whole movement is effected by lever g. The Polyphon has only set of teeth on the left of the machinery. In the illustration the mechanism of the Polyphon will appear extremely simple, compared with that of the other mechanical instruments. It must however not be overlooked, that all the different parts are much more worked one into the other, than is the case with other instruments.





As to the tone, what has been said of the Symphonien might be repeated here. It is remarkably full and rich. Besides that the well-known excellent setting of the pieces has made the Polyphon very popular in a short time.

The construction of the Orphenion differs rather from that of the Symphonion. First of all the bearings of the spring a a are double. To the barrel of the regulator b a safely-check is attached to prevent the movement from

Adolf Dürrschmidt

Markneukirchen, Saxony.



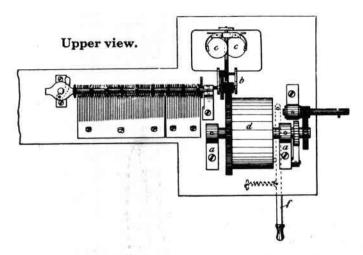
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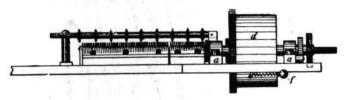
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"racing". The fans c c are self acting. The differences that result from the changing amount of power spent, according to the number of sounding notes, are constantly balanced by the raising up and sinking of the fans. Any change of power is transmitted to the regulator, which instantly balances it,

Inner view.



thus keeping the movement perfectly regular. The main spring lies in bearings in the barrel d. The dampers act very precisely. The teeth are divided into two till six sets, that are arranged partly above the plate and partly below, in order to allow the use of different compasses. The crank for winding up acts as in the Symphonion quite easily and without any noise. Besides it a little lever is attached for regulating the speed. On the front of the case the escapementbutton is placed. When the latter is brought into action, the music stops at the end of the piece. The clockwork is nickelplated in all its parts and perfectly visible, thus enabling even the amateur to see when it is necessary to oil the wheels and to keep the instrument in good working order for a long time.

The tone of the Orphenion is a remarkable fine one. It reminds one, especially in instruments with 90 or 100 tongues (in fortissimo), only in the accompanying parts of the Swiss musical boxes. It is much more like the sound of stringed instruments, where keys and hammers produce the tone. For this reason these instruments are especially adapted for the rendering of slow movements. An average piano player can not produce a better effect than this instrument, inspite of its want of soul. To smaller congregations in the Far West of America, where musicians are rare, the large Orphenion will be highly welcome as an accompaniment for the singing.

The Ariophon differs from the other mechanical instruments as to its construction chiefly in the long ribbonlike tune-sheets. This arrangement was originated by the desire to reproduce complete pieces without shortenings or with only trifling ones, so as Overtures, Potpourris, songs, marches a. s. o. The Ariophon has reached this aim completely, so far as orchestra pieces can be set at all on musical boxes with a limited number of notes. The tune-sheets are of unlimited length, and have lately been composed of paper covered tin-plate, which is not influenced by change of temperature. They can be folded together in book-form and are very handy. An other advantage is that they are perfectly smooth, without any teeth.

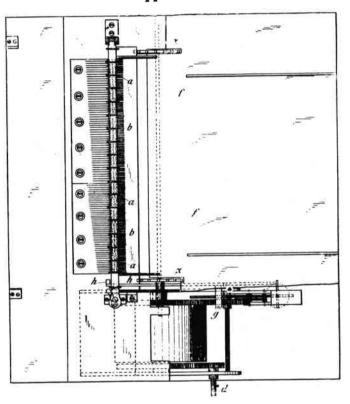
The chief difference between the Ariophon and the other musical instruments described here, consists in the little star-wheels being placed in barrel b on a rotary axle c, which gets moved by the spring barrel. This axle causes the star-wheels to endeavour to get into the holes of the moving perforated music-sheet. As soon as they succeed, the starwheels are seized by the music-sheet, which is moved by two transport cogwheels on the side, and are turned forward, thus striking the tongues.

The clockwork is placed under the easily removable plate f. It is wound up with a handle fixed on peg d. The movement is regulated by a moveable fan, so as to show no

irregularity whatever from beginning to end.

The stopping of the machinery can be effected in two ways; either after the piece is finished by the self-acting lever h, placed before the barrel of the wheels, or during the music by turning the second lever g from the left to the right. Both levers are connected with each other in a most

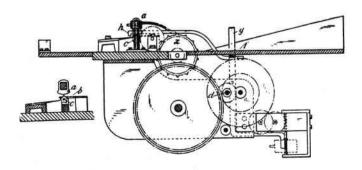
Upper view.



ingenious way, each of them causing the other one's cooperation, when brought into action. Underneath the barrel of the wheels the dampers are fixed. Consisting of steel wire and worked by the star-wheels, they damp the tongues sideways.

On the top of the barrel of the wheels the holder of the tune-sheets is fixed with an elastic knob. Whereas in other musical boxes the holder runs on little rolls, it has in

Inner view.

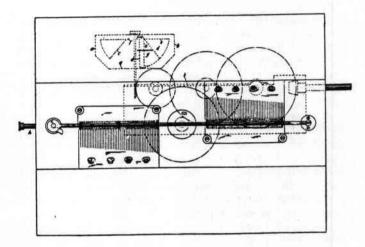


the Ariophon small discs of spring-steel-plate (a a), shaped like bells, the broad sides of which come to lie upon the sheet and hold it down. The tone is by no means inferior to that of the instruments, formerly spoken of for sweetness and richness.

The dampers act somewhat easier in this instrument, as the way in which the tongues are struck, is altogether rather freer, because the tune-sheet moves in a straight line. The Ariophon is also tuned in semitones.

The "Monopol" shows in its construction a great resemblance to the Symphonion. The chief difference is that in the Monopol the fan, that regulates the time, has two wings a b, in each of which a segment c has been cut out. On each of these wings a and b two little plates do are fixed, shaped in correspondence to the segment, turning of f and held by a spring g.

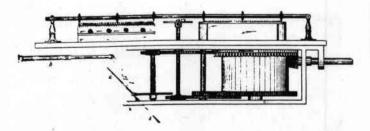
Upper view.



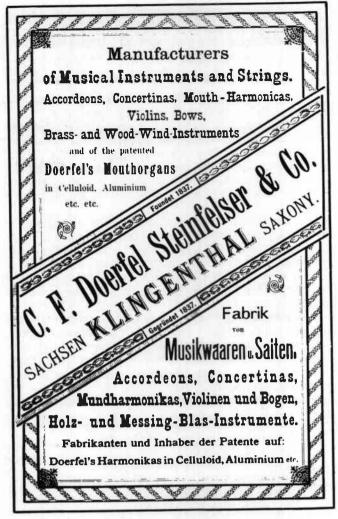
The action is the following. When the wings turn quickly, the plates do are moved by centrifugal force over the segments c, whereby a greater resistance against the pressure of the air is created, and the time is slackened. The escapement of the work and the stopping of the fans is effected by the link i connected with the disengaging lever h. The sound of the Monopol does not quite answer to stringent demands of tone.

In conclusion we will refrain from observing, that in all mechanical instruments with tune-sheets the scales

Inner view.



are still of a very defective character. Maybe, it is impossible for many reasons to improve those instruments now on the market in this direction, still it will be necessary, in case any new instruments of a similar kind are constructed, to apply to qualified professional people for assistance.



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Musical Box Oddments

by H. A. V. Bulleid

Number 41

William Vincent Wallace (1812-1865) was an extremely colourful Irishman, violinist and composer. He was stimulated to start composing by a visit from Paganini while he was violinist at the Theatre Royal, Dublin In 1835, aged a modest 23, he and his wife migrated to Tasmania, but soon moved to Sydney where he was lionized in musical circles until 1838 when he suddenly departed, leaving behind his wife and son and massive debts.

He then turned up in Valparaiso, Chile and journeyed successfully around till he reached Mexico in 1841 and finally New York in 1844. There he was again lionized, partly due to stories of his fantastic superman adventures since 1838, as relayed by Berlioz who gave them a probably spurious ring of truth by saying "He was too lazy to take the trouble of lying"

When Wallace came to London in 1844 accompanied by this colourful publicity, the librettist Fitzball was looking for a new composer for the opera Maritana. The Times of 17:11:1845 had a generally enthusiastic review of its first night at Drury Lane and it became a great international success for Wallace, unhappily never repeated. Nevertheless his other operas had modest success and tunes from all may turn up on musical boxes.

Maritana	1845
Matilda of Hungary	1847
Lurline	1860
The Amber Witch	1861
Love's Triumph	1862
The Desert Flower	1863

Maritana and Lurline are well represented on Polyphon and Regina.

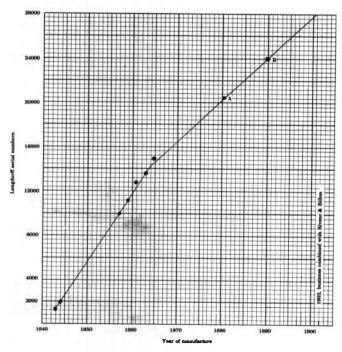


Fig. 1 Graph showing production dates of Metert & Langdorff musical boxes, which started about 1838. From about 1843 until 1865 the slope of the graph is confirmed by about 40 dated serial numbers. After 1865 it relies on the fixes shown at A, serial 20303 in 1881, and B, serial 24003 in 1890. Production rate up to 1865 was constant at about 614 each year; the reduced rate shown after 1865 is about 400 yearly. If so the highest Langdorff serial number before the 1902 merger must be about 28,000.

More Langdorff

The accompanying list covers the 68 known Langdorff boxes and updates the list of 28 given on page 308 of the Winter 1986 **Music Box.**

The earliest recorded lever-wind is serial 11833, made in 1859. The change-over period was probably more than one year.

The earliest recorded change to the later type of tune sheet with Geneva arms at top centre is on serial 20,254. Serial 14929 has the upright piano at top centre, but then we have a gap of five thousand serial numbers. There is nothing to suggest that these five thousand boxes were not made, so it is an astonishing gap. Member Olin Tillotson placed a dramatic full-page WANTED ad in the Sept/Oct issue of the American MBS News Bulletin appealing for more information, but it only unearthed two boxes, both well before the gap. During this mystery period, which lasted from about 1865 to 1881, all the old Langdorff characteristics disappeared . . . no third dowel in combs, no lengthwise finish, no brass washers, and no large serial number stamped on bedplates which had progressed to cast iron.

Later serial numbers were scribed or sometimes stamped on the bass end cylinder cap along with the stamped Gamme number. A third number sometimes stamped or scribed on the cap is the blank code number for the cylinder assembly. The code number for the spring assembly is usually stamped on the bass edge of the bedplate. The serial number continued to be written under the bottom of the case.

It is fairly certain that Langdorff continued to date all movements. Most later boxes have two numbers scribed on the bass tooth lead: the Gamme number above and the last two digits of the year of manufacture below, see Fig. 2. Some boxes also have the last two digits of the year on their comb bases after the Gamme number. Where these dates do not tally it is probable but not certain that the movement is no longer in its original box. Unfortunately the bass lead is also accident prone. I have always found it extremely interesting to know dates of manufacture, hence the graph of Fig. 1 connecting serial number with year of manufacture. It is fully authentic up to the year 1865, but then comes the long gap, and after it the rate is estimated on only two definite fixes up to 1902 when Langdorff combined with Billon and Rivenc and the progression of serial numbers probably ceased or changed.

The production rate is not likely to have been altered suddenly in 1865, as shown in Fig. 1, but we have no date about what actually happened. A reduction in output at or soon after 1865 is not altogether surprising on account of Ste. Croix having overtaken Geneva as the major manufacturing centre for musical boxes. In the Chapuis book, Professor Bolley's report on the 1867 Paris Exposition is quoted: the Ste. Croix region

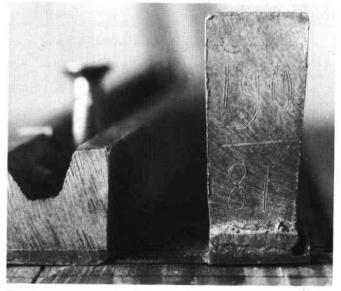


Fig. 2 Bass lead of Langdorff serial 20303, scribed Gamme 190 and year '81.



Fig. 3 Agent Michele Minas stamped on serial 6809.

had 30 establishments and 700 workers compared with Geneva's seven establishments and 300 workers plus six establishments which assembled the blanks and cases – what we now call the musical box makers. The annual production values given were Ste. Croix 1,400,000 francs, Geneva 700,000.

Langdorff Agents

Until 1854, and perhaps even later, Langdorff frequently stamped the names of his selling agents or retailers on his bedplates. An interesting new example is reported by Mr. T. Kile from Mandal, Norway, who kindly provided the close-up for Fig. 3. This shows agent Michele Minas on Langdorff serial 6809 which is a standard 4-air movement with 8-inch cylinder and has the usual tune sheet with upright piano at top centre.

Some boxes with bedplate stamped LANGDORFF have the name and address of another agent written rather casually on

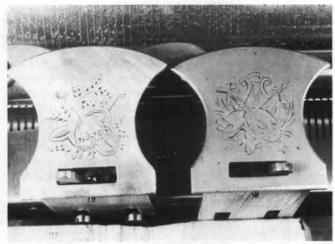


Fig. 5 Typical decorations on Langdorff zither holders.

the tune sheet . . . Golay Leresche, quai des Berguis 14, Genève.

The latest agent's marking on a bedplate so far reported is Malignon on serial 7667 in 1854.

Later Langdorffs

The later tune sheets have the Geneva coat-of-arms at top centre. They were introduced during the mystery gap, so the earliest reported is on serial 20254, 1881.

Nickel plating of the cylinder and various components is first recorded on serial 24377, 1891. This also has the earliest noted example of the harp trade-mark stamped on the governor cock. It appears on some of the later tune sheets and is sometimes referred to as "Ord-Hume 37."

The main difference about the later boxes is that, as with most other makers, Forte Piano has been replaced by Sublime Harmonie, usually with the addition of tremolo effect. These were described as Concerto Tremolo and I gave details with

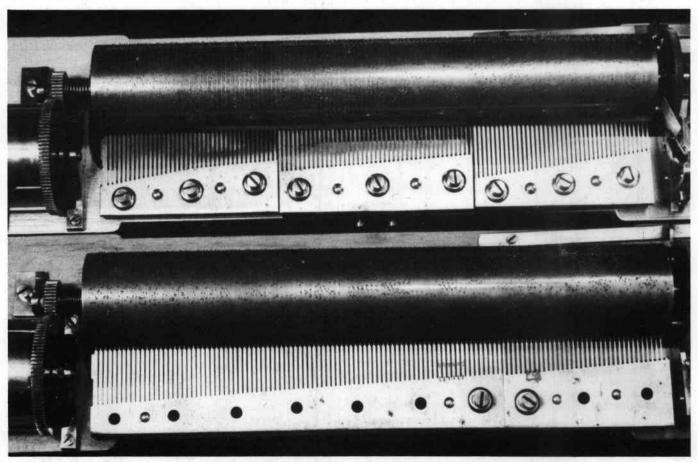


Fig. 4 Serial 20430 (top) compared with 20303, both 13 inch cylinders playing six airs. The six marked teeth on the main comb of 20303 are the same pitch as the lowest two on the treble comb. The three marked on treble comb are the same pitch as the highest two on the main comb.

tune sheet in Oddments 39. Another Langdorff type of the same period is serial 20303 which has lost its tune sheet but was probably labelled Harpe Harmonique Tremolo. It is a 6-air movement with 13 inch cylinder. The main comb, conventionally at the bass end, has 88 teeth including groups of 6, 5 and 4 teeth of the same pitch for the mandoline effect. The treble comb has 35 teeth and the pitch overlap is such that the highest fourteen teeth on the main comb cover the same range as the lowest eight teeth on the treble comb. The overlap results in one note having eight teeth. Fig. 4 shows this comb arrangement compared with the Conecrto Tremolo arrangement of serial 20430. Both have zithers mounted from the bedplate and covering most comb teeth; it is not possible to be certain how these were originally arranged, but I have found it most effective to limit the zither tissue to the tremolo comb on 20430 and to the mandolin part of the main comb on 20303. The zither holders were decorated with various engraved musical motifs, and these two are compared in Fig. 5.

I had to re-pin 20303 so I can report that it has 5729 cylinder pins, 4098 for the main comb and 1631 for the treble. By what must be pure coincidence these both average 46.6 pins per tooth. The average playing rate throughout the six tunes is just under sixteen notes per second which is in the normal mandolin range. As usual on Harpe Harmonique movements, the stiffness of the teeth is the same in the two combs. The tunes include the Toreador's Song (1875) and three waltzes which display the effective trick not so often used by tune arrangers of a slight reduction in tempo to emphasize the finale. It certainly made a lot of sense for Langdorff to produce both the types shown in Fig. 4; they are quite distinctive, one with the richness of sublime harmonie and the other with brilliant treble or piccolo effects, and both with mandolin decoration.

The blank code numbers for 20303 are 7 for spring and governor, and 43 for cylinder assembly. For serial 20430 the numbers are 72 and 108, respectively.

The Gamme number of serial 20303 is 192 as shown in Fig. 2; but Langdorff Gamme numbers, under suspicion for some time, are now rather discredited as useful data because three of the identical Concerto Tremolo boxes have different numbers, see table. That will take a lot of explaining. However I think it is well

worth recording Gamme numbers in the hope that the eventual explanation may shed more light on Langdorff procedures.

Langdorff and Bremond Specials

In a creative spasm around 1890, Langdorff apparently decided to add the base-mandolin or organocleide effect to a normal sublime harmonie piccolo movement. They did this on serial 24835 by adding 21 low-pitch teeth to the bass end comb, giving it a total of 77 teeth. The second sublime harmonie comb was unaltered at 56 teeth and a normal piccolo comb of 31 teeth at the treble end made up a total of 164 teeth, playing six airs on a 17½ inch cylinder, diameter 2½ inches. They christened the result "Organum Baryton Mandol Basse Sublime Harmonie Concerto Piccolo." You can read that again with growing astonishment on the later type of tune sheet in Fig. 6 Wow!! Member R. A. Baffer kindly supplied the data and remarked that it has "rather elaborate tune arrangements."

Langdorff was not alone with fancy titles. Bremond came up with "Sublime Harmonie Harp Tremolo Banjo" on their serial 20474, which has four six-air cylinders 19¼ by 3¾ inches. It has combs of 45/57/45/9 teeth, the tremolo between the two sublime harmonie combs and the separate nine teeth playing eighteen bells – what a shame they got no mention in the title. With 156 teeth on comb length of about 18¾ inches the track width is .02" so it would be interesting to compare the track width on other Bremond interchangeables.

The later tune sheets

All the later Langdorff tune sheets have the Geneva coat-ofarms at top centre but they vary a great deal in detail design and, as in the past, in extra wording in the top or bottom margin.

Fig 7 shows the arms of the City and the Canton of Geneva, dating from the 15th Century and symbolizing the German emperor (½ eagle) and the ruling bishop (key). Not until this Century was there any bar to a firm imprinting the arms on their products – it was a local feature, not a trade-mark. The Greek letters IES are the Greek abbreviations for Jesus; they later became altered to JHS when they were assumed to stand for Jesus Hominum Salvator. So they appear thus on the tune

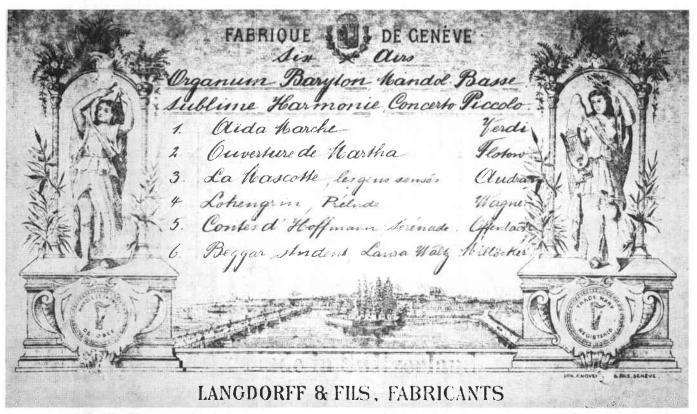


Fig. 6 Exuberant claim for serial 24835 on later type Langdorff tune sheet which in this example shows the Geneva lake view and two impressions of the harp trademark. It was rubber-stamped "Made in Switzerland." Production date about 1892, latest tune 1882, from The Beggar Student. See page 265 of Vol. 7 No. 7 for a similar tune sheet and further descriptive details.

Serial	Attributed	Marks on cylinder	Cylinder length	No. of	
no.	to	end cap	inches	tunes	Туре
1004	Metert		13	1	Overture on 3 turns
1264 1379	Metert	G270	8	4	FP FP
1385	Metert	G279-43	8	4	FP
1409	Metert	G16-44	8	4	FP
1686	Metert	G179-44	121/4	6	FP
1820	Langdorff	1	13	4	
1849	Moulinié Ainé	G448-44	111/4	4	FP Overture
2293	Lion Frères	G201-48	10¾ 9	6	Standard FP
2328	Moulinié Ainé	G419-45	8	4	Standard
2597 2627	F. H. Bourquin F. H. Bourquin	G178-46 G178-46	8	4	Standard
2683	Metert	G232-46	13	6	FP
2856	Metert	G391-46	11	8	Standard
3828	Lion Frères	G727-47	- 2	8	Standard
3919	Langdorff	G136/48	11%	4	FP Overture
4171	Moulinié Ainé	G248-48	131/2	6	FP
4208	Metert	G98/48		2	4
4217	Malignon	G356-48	13	4	Overture
4363	Metert &				1.11.01.
	Langdorff	-	21¼	4	Mandolin O'ture FP
4444	Metert	-	8		Standard
4954	Metert	G544/49	11 15¼	6	FP 11 bells
5011 5192	Malignon Malignon	G591/49 G185-50	13	-	-
			13	6	FP 11 bells
5264 5280	Malignon Malignon	G290/50 G266-50	8	4	Standard
5602	Langdorff	715-51	15¼	6	FP 11 bells
5609	Moulinié Ainé	G54/51	8	4	FP
5659	Metert	-	8	4	FP
5676	Moulinié Ainé	_	15	6	FP i/c
5857	Metert	A	13	6	Hidden D & B
6157	Langdorff	G550/51	15	6	FP i/c
6622	Langdorff	G431/52	13	6	FP
6809	Michele Minas	633	8	4	Standard
6876	Lee et Fils	G11/53	13	6	FP Hidden D & B
6882	Langdorff	G602/52	13	6	
6959 7625	Langdorff	G715/53 G113/54	15¼ 9	6	FP 11 bells Hidden D & B
7667	Langdorff Malignon	G153/54 G151/54	20	6	Part Overture
7785	Langdorff	G302/54			
7787	Langdorff	G304/54	13	6	FP
8010	Langdorff	G538/54	121/4	12	2/t Standard
8297	Langdorff	G36/54	13	12	2/t Standard
8663	Langdorff	534/55	2	-	Standard BL534/55
9601	Langdorff	G571/56	13	8	Standard
9712	Langdorff	G764/56	13¼	8	Hidden D & B
9924	Langdorff	G111/55	13	12	2/t Standard
10051	Langdorff	G262/57	15¼	8	FP
11258	Languorff	G641/58	151/2	6	FP Mandolin FP BL511/59
11833 12067	Langdorff Langdorff	511/59	13½ 11	6	Standard
	Langdorff	G409/61	13	4	2 cyl i/c
12923 12930	Langdorff	G407/61	151/4	8	FP
13401	Langdorff	_	13	4	Mandolin
13645	Langdorff	G36/63	13	4	FP Overture
13664	Langdorff	G81/63	13	4	Mandolin
14353	Langdorff	7- 011	11	6	Standard
14534	Langdorff	G25/65	13	4	FP Mandolin
14929	Langdorff	G462/65	19½	3	FP Mandolin
		105	10	•	2 revs per tune
20254	Langdorff Langdorff	127 190	13 13	6	CT BL 127 HHT BL190/81
20303 20430	Langdorff	306	13	6	CT BL306
20570	Langdorff	1-7-1	13	6	CT
20649	Langdorff	177	13	6	CT
22832	Langdorff	174	14	12	6 bells struck
					by mandarins
24003	Langdorff	24	13	8	BL 24/90
24377	Langdorff		191/2	8	SH Special
24835	Langdorff		17¼	6	SH Special Harpe Piccolo
25063	Langdorff		13	U	1 mm be 1 100010

This table lists all Metert and Langdorff musical boxes known at mid February, 1989. Thanks are due to numerous informants who have helped to build on the clue originally discovered by member Patrick McCrossan.

Metert left the partnership in 1852 and Langdorff died in 1873. It is not yet known when tune sheets first noted Langdorff & Fils, as in Fig. 6.

Serial 24377 and 24835 are nickel-plated and have the harp trade-mark on the governor cock.

I have omitted the serial numbers and blank code numbers which appeared on end caps of later movements.

Abbreviations: FP = Forte Piano. SH = Sublime Harmonie. CT = Concerto Tremolo. HHT = Harp Harmonique Tremolo. BL = Bass tooth lead. 2/t = two-perturn. i/c = interchangeable.



Fig. 7 Ancient arms of Geneva, with motto AFTER DARK-NESS LIGHT.

sheets and also, incidentally, on the first issue in 1843 of Geneva's Cantonal postage stamps. The Geneva Archivist, Mme, Tripet, kindly supplied this information. Hearing of my musical box interest, she remarked "I come from Ste. Croix. So you will not be surprised to learn that my maiden name was Jaccard."

Geneva, 1867

Further to the extract from Professor Bolley's report quoted by Chapuis and mentioned above, it now seems possible to name the six musical box makers of Geneva in 1867... those who bought blanks and combs and cases and turned out the finished job, with its uniform excellence.

We can eliminate Conchon who started in 1874, and Ami Rivenc who took over from Greiner in 1869, and Allard who was a late starter in 1880. Geo Baker was established about 1873, and S. Troll about 1880, so they are ruled out. That leaves these six, my complete list of Geneva makers in 1867...

Bremond	Langdorff
Ducommun Girod	Lecoultre
Greiner	Nicole

Any further evidence supporting or knocking this list will be welcomed. It strikes me as refreshingly simple.

Paillard Automatic Zither

I am sorry to say I blundered in Oddments 18 (Vol. II No. 2) and on page 38 of my book. The comb for this 6-air 12% inch cylinder movement has only 91 teeth, not 124. It is in fact a 93-tooth comb with two centre teeth removed to make room for the nest of cams encircling the cylinder. Also I can now give its serial number, 6698.

I am indebted to Mr. Laurence Karp of Seattle, USA, who discovered an almost identical box, serial 7003, in Victoria, B.C., Canada. It has the same tune sheet style and inscription, and four of the same tunes. When I heard it had only 91 comb teeth (many tuned in groups of three and four) I re-gained access to serial 6698 and discovered my mistake. It is a slight miracle how much mandolin Paillard could extract from these reduced groups, but of course they had plenty of practice with their 13 inch 8-air mandolin boxes with only 94 teeth.

Paillard, always zither enthusiasts, must have launched their auto-zither idea despite finding it impracticable to set the cylinder cams as close together as .017". So they widened the track width to about .022" and suffered the loss of twenty teeth though consoled by lower production costs. This track width soon became standard for Ste. Croix interchangeables.

Unfortunately there seems to be little hope of sorting out Paillard serial numbers and their corresponding dates. We do not even know whether C. Paillard (who signed the auto-zither) had separate serial numbers from Paillard, Vaucher Freres. Any data on this subject would be particularly welcome.

Classified Advertisements

LAST DATE FOR RECEIPT OF ADVERTISEMENTS FOR INCLUSION IN NEXT ISSUE:-1st July 1989.

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

(bold type 10p per word extra).

Minimum cost each advertisement £6.

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

CASH WITH ORDER PLEASE TO: Advertising Manager. John M. Powell, 33 Birchwood Avenue, Leeds 17, West Yorkshire LS17 8PJ.

FOR SALE

"Aeolian Grand" 58 Note Orchestrelle, in walnut case with fretted panels and reeded columns. For sale or exchange. Steve Greatrex

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

36 Key Spanish Street Piano (small size) make Faventia. Complete with 2, 6 tune barrels, cart, toy donkey & mechanical clown (230v). About 16 years old, perfect condition £1,200 complete.

48 Keyless "Fair Organ" Powerfull instrument, fully rebuilt by A. C. Pilmer Ltd, Melody:violins x 3, brass clarinettes, clock, trombone's on bass. A new front to be made to customers requirements. Ready end of Sept. '89. Very reasonably priced.

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For all the above contact: David A. Vipan. Phone: 0778-425178 evenings.

Symphonium 271/2" machine in good order, 16 discs. Model 118G. Substantial offers only. Albrighton (090 722) 2631.

FOR SALE OR EXCHANGE

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WANTED

115 note Aeolian rolls wanted, contact Editor.

Disc-Sets For 3-Disc Symphonion, Origin literature for Duo-Art, Welte-Mignon, Ampico pianos, organs etc. Richard Howe 9318 Wickford, Houston, Texas 77024 USA. 713/680-9945.

Books of music wanted for 20/22 note Savins organ. Harris, 93 High Street, Treorchy, Mid-Glamorgan, CF42 6PD. Tel: 0443-436731.

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

Wanted following discs:

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WANTED

Barrel Pianos/Organs.

working or not, parts and carts. Please telephone:

Alan Wyatt on (0223) 860332.

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

RATES FOR DISPLAY ADVERTS IN 1989

SPECIAL POSITIONS (offered as available).

Outside back cover (one or two colours):

(full colour, one photograph to max. size of

8 x 6" with square sides, large sizes £25 extra)

Inside covers: Full page £95, Half page £50

Full page only £110.

POSITIONS INSIDE JOURNAL (as available)
Full page £70, Half page £40, Quarter page £25

These charges include typesetting but are exclusive of any artwork and camera work which may be required. Half-tone, line, and line-and-tone negs plus artwork, design and layout facilities can be provided if needed at additional cost. Squared-up half-tones £11 each. Cut-out half-tones £15.00 each.

SPECIAL COLOURS

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

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Deadline Dates for Advertising Copy

15th March; 15th June; 15th September, 15th December Editorial copy must be submitted at least 8 days prior to above dates.

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

Society Auction

The society's annual auction will be held on Saturday 3rd June in the Tuke Common Room, Regents College, Regent Park, London. Auctioneer Christopher Proudfoot (by kind permission of Christie's, South Kensington). A great chance to sell and buy. Commission rates - Buyers premium 7.5%. Selling commission 7.5%. register your entries on the day.

Musical Box Society of Great Britain

SUBSCRIPTIONS

Have you paid the correct fee for subscription renewals?

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

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

Correct Membership Fees

United Kingdom

£12, Joining Fee £6.

Europe and Near East

£12, Joining Fee £6 (plus £1 if not in Sterling).

Australia, New Zealand and Far East £14 Surface Mail, Joining Fee £7. £22 Air Mail, Joining Fee £11 (plus £1 if not in Sterling).

United States \$30 Surface Mail, Joining Fee \$15. \$40 Air Mail, Joining Fee \$20. Canada \$40 Surface Mail Joining Fee \$20. \$50 Air Mail, Joining Fee \$25.

NOTICE

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



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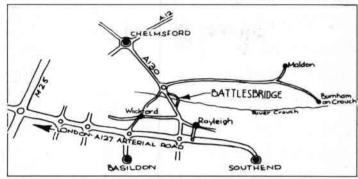
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