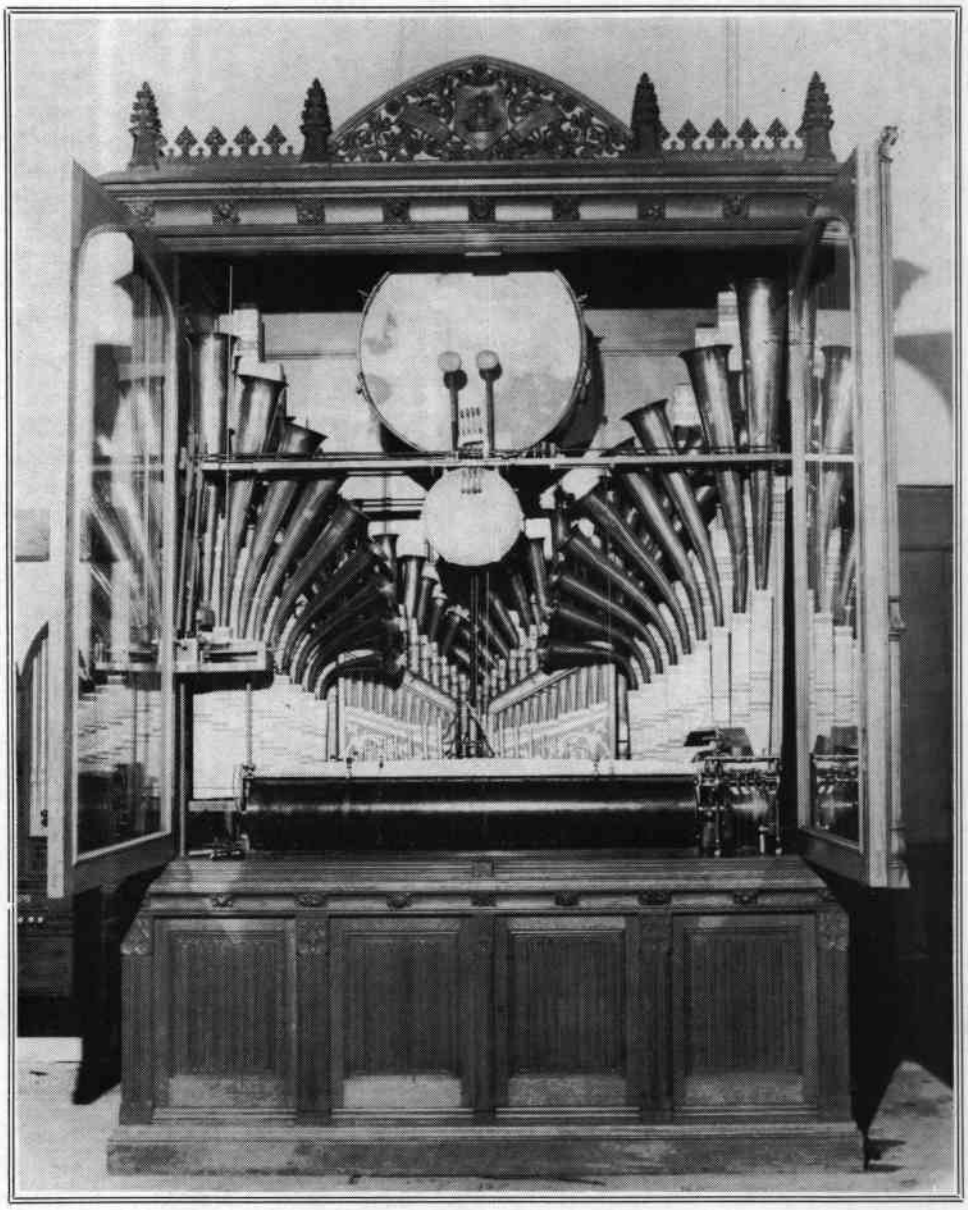
The Music Box

an international magazine of mechanical music

THE JOURNAL OF THE MUSICAL BOX SOCIETY OF GREAT BRITAIN

Volume 7 Number 5 Spring 1976



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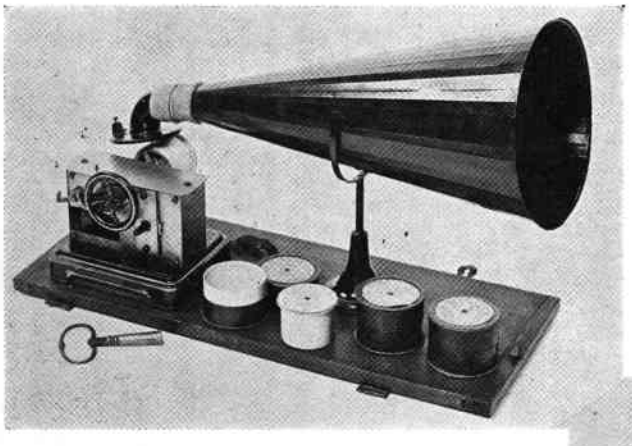
SALES OF MECHANICAL MUSIC AND AUTOMATA



LIORET TRIO

A rare Model 'A' phonograph (above) with celluloid cylinders 1⅝in. (4cm.) long.

A rare talking alarm clock containing Lioret phonograph (top right). Both these are included in our Mechanical Music sale on **May 19th.**

A Lioret/Jumeau phonograph doll (right) with celluloid cylinders ⅝in. (1.7cm.) long included in our sale of Dolls and Automata on **May 6th.**

Illustrated catalogues for both these sales will be available approximately three weeks in advance. The sales will start at 2 p.m., enabling clients to view up to 12 noon on the sale day.

For further details contact Christopher Proudfoot (Mechanical Music) or Susan Mayor (Dolls and Toys).

The Music Box

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THE JOURNAL OF THE MUSICAL BOX SOCIETY OF GREAT BRITAIN

The Editor writes. . .

THE year 1975 closed with a flurry of auctions in England, one of which merits special attention, for it represented the breaking up of one of the largest collections of musical automata to have come on the British market since the war.

A characteristic of all these sales was generally the very high prices realised by items. The exceptions were, in some cases, surprising in that some outstanding items musically speaking did not find an appreciative saleroom, yet other items of greater novelty and less intrinsically musical merit made sums in excess of estimates.

At a time of general recession and economic uncertainty and coming so soon after the 1973-74 slump in mechanical musical instrument prices which the UK experienced, these sales served to show that musical box collectors are on the one hand sitting pretty with well-invested capital, and on the other unlikely ever again to find much of a bargain.

This bodes ill for the new collector who, unless he is either wealthy or fortunate (or both!) may find his chances of forming a representative collection somewhat limited.

The sales to which I refer began with one at Christie's at the beginning of December when several items made unexpectedly high prices. A 12-note non-operative serinette in chamber organ-style case made £220! This was followed in the middle of the month by a large sale at Sotheby's, Belgravia, where a four-comb nickle-plated 6-air Paillard semi-organocleide made £850 and a Nicole Freres orchestral box on a cabinet base containing 24 cylinders made £2,300.

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Cover picture: **Oak-cased Imhof & Mukle orchestrion made for the West family of Barcote Manor, Faringdon. With 27 barrels 5 ft (153 cm) long, this Vaux collection item sold for £10,000 to a member.**

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But the auction which shook many by the sheer glitter and variety of its contents was that held by Aldridges at Somerton on December 4 when the famous Vaux collection came under the hammer. In an event which drew buyers (many of them members) from all over Europe and America to this tiny country village, something approaching £250,000-worth of musical automata was sold ranging from musical seals through to the giant orchestrion depicted on the front cover. Elsewhere in this issue is a pictorial feature showing just a few of the many items. Of outstanding quality, a small cabinet Davrainville clockwork organ with operatic repertoire was surprisingly shunned by almost everybody and justly returned to Paris, the proud new owner being Claude Marchal who has just opened up his collection as a museum (see page 196).

As the national economy remains uncertain, it seems that more long-standing family treasures are coming out of sanctuary onto the market and our members from the two big auction houses whose names feature within our covers both report some exciting items which will feature in their sales this year.

On page 85, I expressed some fears on the subject of restoration and the sundry shady practices which pass under the guise of preservation. I highlighted some of the pitfalls into which people may plunge, be it headlong through ignorance, or unknowingly by avarice. I also suggested that more instruments were being destroyed today by carelessness than were being preserved. Now let me draw your attention to the letter from David Burke on page 203.

ARTHUR W J G ORD-HUME

MUSICAL BOX REGISTER

MORE than a year ago, Arthur Cunliffe announced that he would like the co-operation of all members in compiling a register of musical boxes. It seems that many members were unable to appreciate the enormous research and data feed-back facilities which such an enterprise would create and the response was very meagre. However, from this small beginning, Arthur Cunliffe has been able to come up with some very worthwhile data. *The Music Box* presents this preliminary report in the hope that it will spur all members to participate in the scheme without further delay. This is one of the most important and potentially rewarding projects which has ever been undertaken in the field of musical box documentation

INTRODUCTION

SINCE first questionnaires were sent out to members following the announcement on page 165 of volume 6, only a rather small sample of returns have come in and the register has had to be launched based on this small amount of data.

First let me explain why I first set about compiling (or trying to compile) such a register. The basic idea was to compile a list of all known boxes and from this try to estimate the likely number of boxes remaining out of the enormous number made.

The next target was to try to date boxes accurately from the undoubted emergence of a pattern of all-maker serial numbers, tune titles and other marks.

And finally, of course, there was the strong possibility that the Register could help with the recovery of stolen boxes.

To operate the register properly, all questionnaire cards are coded and do not show the name or address of the owner of the box. This ensures that even if the entire register was stolen, published or otherwise broadcast, there would be absolute anonymity preserved. It was felt that with so delicate and potentially valuable a study as this, this would be the only way in which to conduct it.

CONCLUSIONS

Before looking specifically at some of the makers about whom information has emerged, I must repeat that my findings so far have been based on a very small number of returns and my purpose in publishing this now is in the sincere hope that members who have not so far contributed data will recognise how worthwhile this study is and so be inspired to take part.

Because of the limited sample available, it is impossible to be certain about much at all and I must preface what follows with the expressions "It would seem that", or "It could be that . . .".

From replies received, it seems that most members regard their Nicole boxes as being the pride of their collection. In numbers, unidentified boxes (i.e., unknown-make) head the list followed, in descending order, by Nicole Freres, Paillard, Bremond, Dawkins, JGM—and then there is nothing to choose between the others.

MUSIQUE A LA MODE

Artist H Jacquier chose this aristocratic street organ-grinder for his painting *Domenico le joueur d'orgue*, shown at the Paris Salon in 1905. From a postcard in the Claude Marchal collection.

THREE-BELL BOX A RARITY?

Little seems to be known of the Bremond family and its products. B A Bremond boxes do follow in serial number and seem to be regarded by their owners as "being the equal of any Nicole". There is a tendency for all boxes with a flat-topped winding lever to be classified as Bremond-built. May I appeal most strongly for more research into this maker.

It seems likely that some 12,000 to 14,000 musical boxes are being held by the members of the Musical Box Society of Great Britain.

The least common make or style of box seems to be the three-bell box and boxes of the type produced by B H Abrahams are scarce. Could it be that in the years to come the three-bell box might turn out to be a rarer animal than a Nicole?

There is also mounting evidence to support the stories that musical box manufacturers made parts for each other.

EVIDENCE — JGM

Thanks to the recent work done by Christopher Proudfoot, the mystery of JGM has been resolved —John G Murdoch & Co, 91-93 Farringdon Road London. Movements were probably made for them by the Thibouville-Lamy organisation.

The earliest movement recorded is numbered 200 and this number is stamped on the bedplate and is visible between the treble-end comb teeth. Numbers then rise to five-figure numbers and later still movements have their serial numbers prefaced by a letter. The letters A, I, K and R have been recorded. Early movements all appear to have 51 teeth in the comb: later ones have 55 teeth.

Older movements seem to have had winding keys with a heart-shaped handle to them while later winding keys have circular ring handles and "barley-sugar" sticks. Tunes seem to be traditional and I suspect that these movements were only fitted in photograph

albums. Has any member a JGM movement fitted other than to an album and in original condition?

DAWKINS

This maker seems to have produced a very wide range of musical boxes which vary widely in quality.

An early box with the serial number 35135 has the date "1884" written on it in pencil. Box number 44191 is dated in pencil "Bought 17 January, 1898".

If these figures are true, then Dawkins produced 9,056 boxes in the 14 years or approximately 646 per annum, or 12 per week.

Dawkins made a range of boxes with combs of 43 and 52 teeth, whilst the mandoline expression boxes, harmonical harp piccolo boxes and interchangeable boxes all have combs up to 124 teeth.

Some Dawkins boxes have the sphinx trade mark rubber stamped underneath the case.

LANGDORFF

Key and lever-wind boxes have been reported and it would seem that Langdorff made use of at least four different designs of tune card.

The cases of Langdorff boxes do have the characteristic "double cross" joints first detected by the editor some years ago, and many seem to have had pencil writing on the underneath of the box which has been partly rubbed out. Perhaps this was some manufacturing instruction, or despatch directions?

Some forte-piano boxes have been listed but most are lever wind models of the 76 or 77-tooth variety.

Serial numbers range from four figures to five figure numbers.

DUCOMMUN-GIROD

Not a common box at all. Only lever wind boxes reported to date.

Often serial numbers and gamme numbers seem to be difficult to find for this maker. Serial numbers range from four-figure to five-figure numbers.

Box number 39580 has no inner glass lid although box number 39577—an earlier movement number—does have such a feature.

THE GREAT UNKNOWNS

By far the largest survival rate seems to be among boxes made by makers who have not left their identifying marks behind them, or whose marks have yet to be interpreted accurately. Among these are the following boxes which, because of their manufacturing characteristics, I suspect must have been made by the same maker.

First is the unknown maker who stamped the letters JA on the combs of his manufacture. The ones reported with this characteristic are all unusual, being either forte-piano or fitted into exotic cases.

Then comes the unidentified maker who made fine keywind movements with two sets of numbers stamped on the brass bedplate. One number is always stamped in the left-hand corner of the bedplate, and the second number is stamped under the comb and is visible between the treble teeth. Not one of these boxes so far advised has survived with a tune card.

This concludes the conclusions from the initial survey.

All members who understand the value of this type of work are urged to contact Arthur Cunliffe at 2 The Lane, Sunderland Point, Morecambe, Lancashire LA3 3HS, requesting the number of questionnaire cards which they need, i.e., one for each box.

SINGING BIRD BOXES

by Robert Burnett

ON page 107 of the present volume there appears an article on the singing bird box owned by our President, Cyril de Vere Green, and this was of particular interest to me as about eight years ago this box came to me for repair.

Many Swiss singing bird boxes of this type have passed through my hands since then, but I remember this one particularly well because it was the first bird box of the more complicated Swiss type of which I ever recovered the bellows.

Normally, I try to avoid doing a tricky job of this sort for the first time on an item which does not belong to me, but in this case the valves were clearly not working properly and, since they can only be got at by taking the skin off and dismantling the bellows, I felt obliged to go ahead and undertake recovering the bellows. I did so with some trepidation, but happily all went well and, once the job was done, the bird sang very well, as a bird box by Bruguier should.

The article referred to states that the bellows of the President's box are of wood but in actual fact they are of brass as they always are in the Swiss boxes of this type.

Since bird boxes of any type have become rare and expensive, like pretty well everything which the members of our Society collect, it might be useful if I said a word or two about the different types that exist and then, if one should come up at a local auction, say, it might help a member to decide just what was being offered and how much to bid.

Essentially bird boxes occur in two well-defined types.

The simpler type are mostly of German origin made by Griesbaum in the Black Forest, but this type were also made in Switzerland and in France. Externally the main features are a bird which turns bodily from side to side, flapping its wings and opening and closing its beak.

The tail also moves at the same time, though the movement of the tail may be small and scarcely noticeable. The winding square is in the middle of the bottom of the box and winding is done clockwise. These boxes can have cases of almost infinite variety. Among the commonest are brass with a sort of filigree decoration added, plain tortoiseshell, or gilt metal. Silver and silver-gilt are also found. The metal cases often carry repoussé decoration or they may be decorated with engraving or engine-turning. Sometimes they are decorated in part or wholly with enamel. Cases of all types may have a lid covering the bird which carries a miniature enamel painting. These are usually the better boxes. More frequently the lid is of material matching the case, or with the tortoiseshell cases, it is gilt brass decorated with engraving.

The question of when the German type of bird boxes were first made is one which, regrettably, I cannot answer. I suspect that they were not made in any quantity until about 1850, but I have no direct evidence. What is certain is that they have been made continuously since the start

and are, indeed, still being made today. Throughout all the time they have been made, by far the greater number have the same song, as, indeed, they still do today.

Simple bird box

Coming to the mechanism of the simpler bird boxes, these have a going barrel, that is the spring is contained in a large barrel with teeth round the upper edge. The spring is wound from the centre and the teeth round the upper edge of the barrel drive the next pinion in the train. The lower edge of the spring barrel carries two cams which determine the song. One controls the plunger in the whistle to make the pitch go up and down. The other controls a little flap valve which interrupts the flow of air to the whistle. The bellows of these boxes are of wood and of the form shown in Figure 1.

Since they were made for such a long time with so little variation, judging the age of a German type bird box is not at all easy. One feature to which I pay attention is the material of the bird's beak. In the earlier boxes the bird's beak is of ivory or bone and usually the bird is finely and elegantly feathered. Later the birds had metal beaks and less elegant feathering. Again, I do not know the date when the change occurred, but I would judge that it was between the wars. In the boxes made today, the birds have metal beaks with brightly coloured feathering which is rather crude in colour and in the way it is applied. One may, of course, find an old box to which a new bird has been fitted.

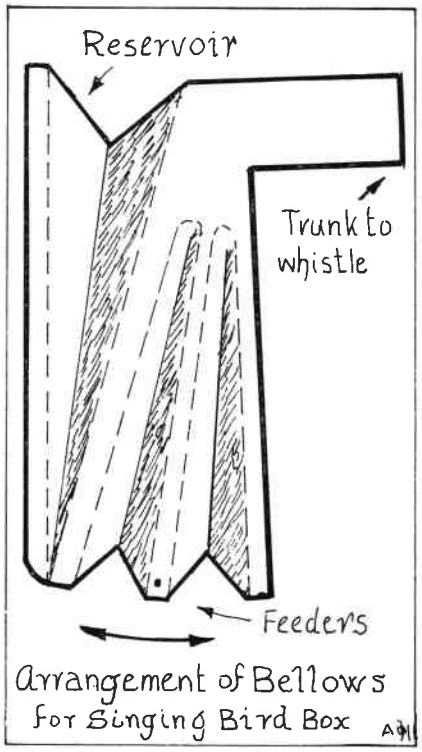
I should, perhaps, add that there are about at present quite a number of new bird boxes in cases decorated with enamel.

Better quality types

Bird boxes of the second type, like the one owned by our President, are the better ones and are of Swiss origin. As far as I know they were never made anywhere else.

The most obvious distinguishing feature is that the bird turns its head on its body in addition to having all of the movements of the birds from the simpler boxes. Another difference visible externally is that the winding square is near to one corner of the bottom of the box and winding is anti-clockwise.

As with the simpler boxes, the cases of the Swiss boxes come in very many forms. The commonest are tortoiseshell, then silver, or silver-gilt which are usually dec-



Arrangement of Bellows for Singing Bird Box

orated with engraving and may have in addition varying amounts of enamel. I have not come across a Swiss box with repoussé decoration. Finally, some of the Swiss boxes, especially the very small ones made by Frères Rochat, have gold cases and are, of course, extremely valuable.

Swiss-made characteristics

Coming to the mechanism of the Swiss boxes, this is where the difference between the two types is really marked. The movements of the Swiss boxes are far more complicated and are usually beautifully made. The main ways in which they differ from the simpler movements is in being driven by a fusee and chain and in having four sets of cams controlling the song. These move up and down to allow the different cadences to be played in turn. Usually, then, the songs of the Swiss boxes are longer and better than those of the simpler boxes. The bellows are rectangular (though in certain very rare boxes they may be circular, D-shaped or oval), and they are always of brass. A further refinement, not found in the simpler boxes, is a small separate train of wheels ending with a free pinion which controls the speed at which the lid closes. This is presumably to prevent damage to the bird or to the enamel which nearly all Swiss boxes have on the lids covering the birds.

What price ?

Finally, since I said above that I was commenting on the different types of bird boxes for the benefit of members who might come across one being offered for sale, I propose to add a little about prices, even though in present conditions the prices I quote will only be valid for quite a short time. The prices given are what might be expected at one of the main London auctions for boxes in sound condition.

For a simple type bird box in metal case with no enamel on the lid covering the bird £120 - £180 depending on the quality of the case. For a tortoiseshell-cased simple bird box £150 - £250: the higher price for one with an enamel painting on the lid. For one in a really nice enamel case, up to about £850.

For a Swiss bird box in tortoiseshell case, around £700. For one in a silver or silver-gilt case, from about £900. For a gold box, the price might be several thousand.

Novice's Corner

Keeping the moth from your felts

INSTRUMENTS of the player piano and Orchestrelle family frequently deteriorate because they fall foul of that most perfidious of all pests, the domestic clothes moth.

Moths lay their eggs in the inviting felts and bushings of these instruments and have an almost equal delight for thin leathers.

Once moth has attacked a piano or reed organ, then the only thing to do is to strip the instrument and rebuild it with new felts. All for the want of a few pence-worth of protection!

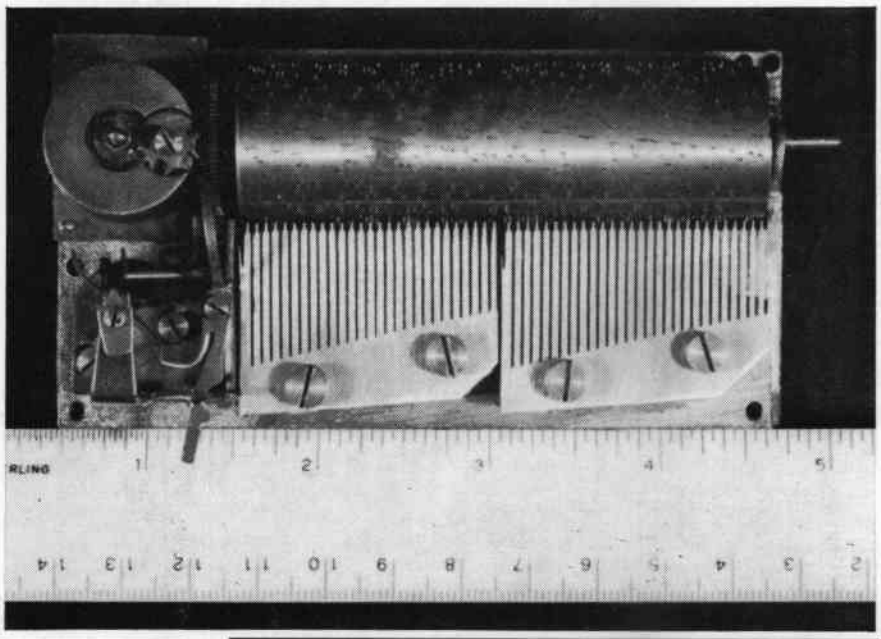
Patent moth deterrents, known variously as moth balls, moth rings or by trade names such as Mothax, do work and should be used. Hang a moth ball in the inside of your piano. It may make it smell funny, but it will keep those fleet-winged monsters with their voracious appetites well away from your treasures.

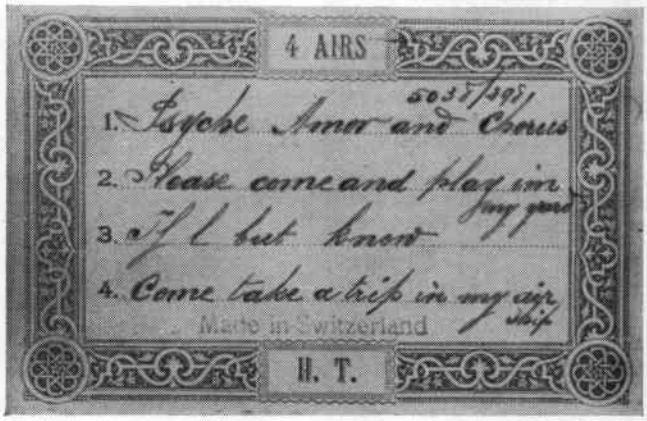
A Midget Sublime Harmonie

by Richard E Baker

IT IS becoming next to impossible to find a unusual musical box at any price, but to find a unusual musical box at a very reasonable price and in mint condition is indeed something we all look forward to in our wildest dreams. These pictures are of a very fine and very small Sublime Harmonie box that I recently picked up in a antique store in Pasadena. The pictures show up the details excellently. At close inspection you can count the teeth on the small combs and get a very good look at the whole unit. It is in perfect working order and only needs cleaning.

The top of the box has the picture which is reproduced here full size and this is the only part of the box that has shown wear, but it is still in restorable condition. The tune card is reproduced full size and is in excellent condition and I assume that the initials H-T stand for Hermann Thorens. If anyone thinks otherwise, I would very much appreciate hearing from them. This is the first Sublime Harmonie box I have even seen that is this small.





These pictures are by Lee Sims of Sierra Madre and you will be seeing a lot more of his work in the future as I have been very fortunate to have several rare and unusual boxes that will be photographed and written about.

'Das Mechanische Musikinstrument'

THE newly formed Gesellschaft der Freunde Mechanischer Musikinstrumente E.V. has published its first journal, a splendid 76-page magazine in format to match *The Music Box* bearing the title *Das Mechanische Musikinstrument.*

This premiere issue is dated October, 1975, and features a Welte Philharmonic residence organ on the cover. President of the society is Jan Brauers, of Baden-Baden, who owns a superb collection of instruments which is on show in that town.

The first two pages are devoted to fine-quality reproductions of pages from Menzenhauer & Schmidt's mouth-blown reed instruments and then follows an illustrated article on the Brauers collection. A ten-page facsimile of the catalogue describing the Welte Philharmonic follows plus a picture of the instrument in the British Piano Museum operated by Frank Holland. A short paper on the history of the Swiss musical box follows and then the 1887 Mermod Freres catalogue—all 36 pages of it—is reproduced. This is followed by a description of the Hannover Barrel Organ Festival of May, 1975, and the concluding pages mainly comprise the aims and objects of the new society. At the time of publication there were 113 members.

The publication seems well supported with advertising and we wish it well. If it can sustain its present level of presentation, it will continue as a valuable addition to the increasing library on mechanical music and its instruments.

Membership of the Gesellschaft der Freunde Mechanischer Musikinstrumente costs DM 50 and full details can be obtained from Jan Brauers, 757 Baden-Baden, Lichtentaler Allee 28, Germany.

Mit unseren besten wünschen für erfolg !

JUNOD'S HELICOIDAL

by Pierre Germain

ON page 130 of *The Music Box*, vol 7, our editor wrote about helicoidal and semi-helicoidal mechanisms. The article was illustrated by a helicoidal musical box from the Moltzer Museum, Bennekom, Holland. The number 12243 of a Swiss patent was stamped on the governor and the editor asked "Can one of our Swiss members identify and date the patent?". May be a Belgian living in Geneva would be acceptable to him!

Arthur Junod-Turin from Sainte-Croix, in Switzerland, took out patent number 12243 on the 23 March, 1896, at 5.30 p.m. Curiously, although Sainte-Croix is in a French-speaking region of Switzerland, the text of the patent is in German. The reason is probably because the patent-councellor was a Swiss-German firm, C Hanslin & Cie in Bern. The title of the patent is:

Musikwerk mit kontinuierlich während dem Spielen verschiebbarer Walze

and an Austrian colleague translated this for me as:

Musical mechanism with a cylinder advancing continually while playing.

The patent contains a drawing reproduced hereafter and it might be of interest to summarize in some detail the description given. It could give to the lucky collector of such a helicoidal box the opportunity to check if the description in the patent corresponds to the realization of the mechanism. I have simplified the text of the patent keeping only what is essential to understand the drawing.

Description

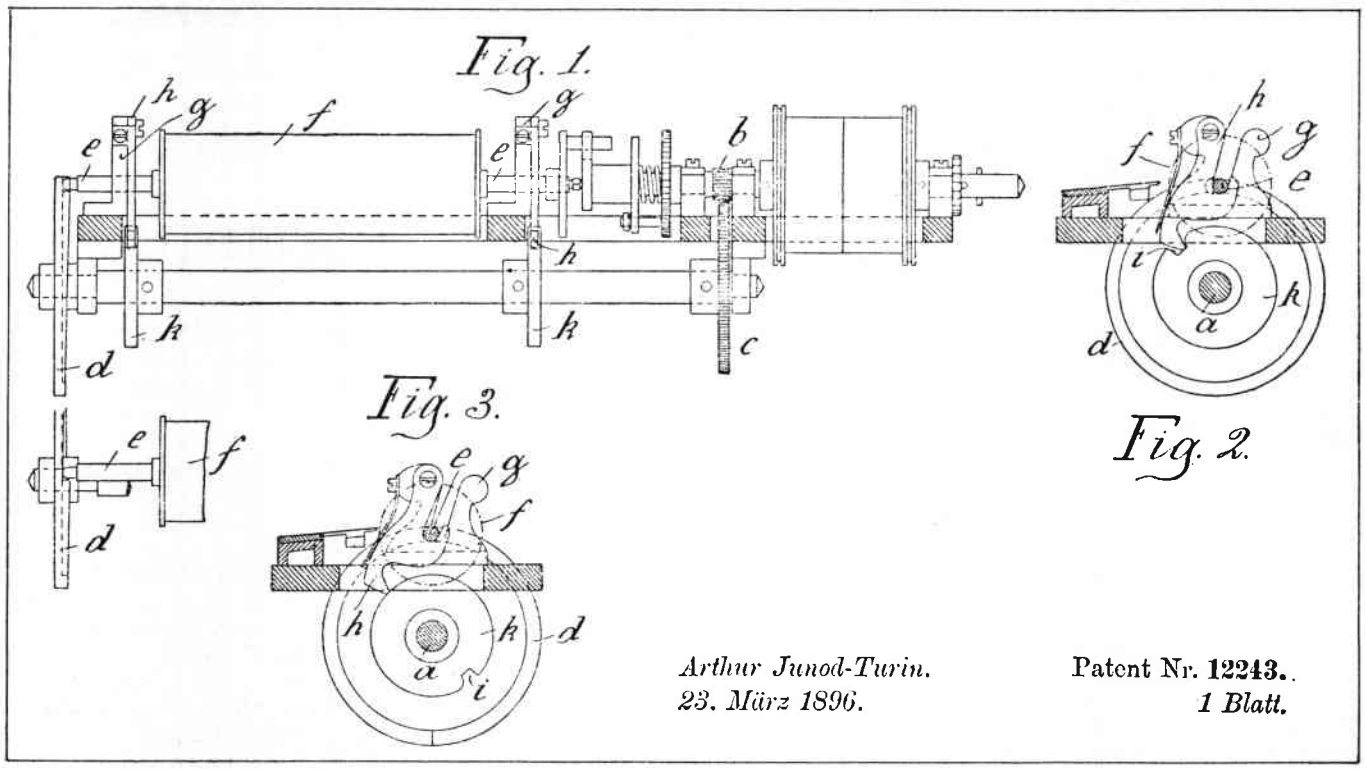
The invention concerns a musical box with a cylinder advancing continually while playing. It allows to play tunes requiring more than one cylinder revolution. The attached drawing shows an example of such a musical box (figs 1 to 3). The axle (a) is driven by the spring motor by means of the gears (b) and (c). It also carries a disc (d) bearing a smooth helicoidal cam followed by the end of the arbor (e) of the cylinder (f). In this way the cylinder is advancing continually while playing.

If, for example, the musical mechanism has to play two tunes corresponding to four cylinder revolutions each, the disc (d) will make one turn while the cylinder will do eight turns. The ratio of the diameter of the pinion (b) to the one of the wheel (c) will in this case be 1 to 8.

In order not to damage the comb by the pins when the cylinder is brought back to its starting position, all the tunes being played, the bearings (g) supporting the arbor (e) of the cylinder are each fitted with a piece (h). This piece (h) partially surrounds the arbor (e). One end of (h) is allowed to rotate around a pivot attached to the bearing (g), while the free end of (h) is pressed by a spring against the periphery of a disc (k). Each disc (k) is fixed to the axle (a) and has a drop (i) on its periphery. Shortly after all the tunes have been played, i.e., after one revolution of the disc (d), the free end of the pieces (h) fall into the drops, backing the cylinder away from the comb. The end of the arbor (e) jumps at the same time to the lowest point of the helicoidal cam, shifting the cylinder back to its starting position. (Nothing is said in the patent about the stop/start mechanism but one can assume it to be as usual.)

The tunes are repeated when the free ends of the pieces (h) leave the drops (i), bringing the cylinder again forward into its playing position.

When playing, the cylinder is held both by the bearings (g) and



by the pieces (h) so that it cannot be removed from the mechanism. Note that it can be removed, without damaging the comb, when the free ends of the lever (h) are in the drops (i), i.e., when the musical box is in its stop position.

Comments

From the text it is clear that the patent refers to a helicoidal mechanism for an interchangeable-cylinder musical box. I know myself nothing about Arthur Junod-Turin the taker of the patent, but Mosoriak and Q D Bowers give some indications on him.

In Mosoriak's book *The Curious History of Music Boxes* the two following US patents of Junod are listed:

(a) 366,325, July 12, 1887 — assigned to Emile Cuendet, Hoboken, New Jersey;

(b) 367,409, Aug 2, 1887 — assigned to Jacob (Jacot — *ed*) & Son, New York City.

David Bowers, in his *Encyclopedia of Automatic Musical Instruments*, reproduces, page 124, a US patent (number 717,581 of January 6, 1903) granted to Arthur Junod-Turin but assigned to Mermod Frères, from Sainte-Croix. This patent concerns a new disc-shifting device for a disc musical box. It is not said if this device was used in practice.

L A Grosclaude (1841 - 1915) who credited Francois Conchon with the construction of a helicoidal movement in 1878. Was this the first ?

Although Junod is a common name in the Sainte-Croix region, it should not be difficult to know more about Arthur Junod-Turin since Turin was probably the family name of Arthur Junod's wife. I suspect that he was an ingenious mechanic working for musical box manufacturers, but not a manufacturer himself.

It is worthwhile to mention that the Swiss patent office exists only since 1889. This might explain why Junod-Turin patented in 1896 a helicoidal mechanism, whose principle was much older. It is L A Grosclaude who in 1880 refers, in his article *Les Boîtes à Musique*, to a musical box playing the unabridged overture of *Guillaume Tell* lasting 10 to 11 minutes (see my article in the vol 6, p 306 of *The Music Box*). The musical box referred to was most certainly one built by François Conchon and displayed by him at the Paris Exhibition of 1878. This is proven by a Conchon's advertisement reproduced hereafter. Was Conchon the first inventor of the helicoidal mechanism or did the principle exist before 1878 ?


FABRIQUE DE PIÈCES A MUSIQUE

F. CONCHON

9, PLACE DES ALPES, 9

GENÈVE

FABRICANT ET EXPOSANT EN 1878 DE LA PIÈCE JOUANT EN ENTIER ET DANS SON MOUVEMENT

L'OUVERTURE DE GUILLAUME TELL

Player-Piano Topics

'To insure perfect tracking'

Reproduced with acknowledgement from the Bulletin of the Player Piano Group

by C H Grainger

THOSE four words introduce a note which appeared on many Aeolian and other rolls, but the multiciplicity of ways in which this was to be achieved according to the various manufacturers points to the conclusion that absolutely perfect tracking of all makes under all circumstances, atmospheric and mechanical, was an ideal rather than a reality. Nevertheless, perfect or at least efficient tracking can be achieved with nearly all rolls, with a little help from the various tracking devices fitted to player pianos.

STARTING from the premise that the player-piano owner is more or less stuck with the particular tracking device fitted to his piano, we may as well start by considering how we may achieve improved tracking on any player, before proceeding to consider the merits, demerits, and adjustments of the various devices.

Rolls, spools and handling

The advice on Aeolian rolls following the four words quoted in the title to this article is very good:

Before playing, and holding the roll fairly loosely tap the right-hand spool end against a firm surface. In fact allowing the spool to drop a few inches on to the floor carpet works quite well. This throws the spool paper against the right-hand flange. The effect of this action can be judged afterwards by holding the left-hand spool end up and viewing against the light, when a space of about 1/32inch should be visible right to the core of the roll. A few rolls have a spring-loaded left-hand flange: I do not consider this to be a good idea and advise such rolls to be respooled.

If there is not a clear space as indicated, another tap may be required; if the roll is slightly warped several taps or drops may be necessary, and, of course, if the roll has been kept in a damp situation it may well have swelled so that no tolerance exists to show in this manner. However, the point of this action is that with the roll paper well shaken down, the paper will feed in a true line off the spool and much of the work of the tracking device is obviated.

The paper will nevertheless wander somewhat, which leads to two further good rules:

(a) Never repeat rolls after rewinding without first taking them off the piano and tapping them down again as above.

(b) After rewinding, tap the roll paper to the right as before and tighten slightly (*not* until it squeals!) before

placing the roll in its box. In this way straight rolls remain straight and warped rolls may well be redeemed.

The roll feed — alignment of the take-up spool, etc.

Obviously, it is necessary for the spool and tracker bar to be properly aligned. Unless there has been faulty manufacture, the roll when inserted in to the stub spindles should be parallel to the take-up spool. With the roll carefully tapped to the right as above, it is worthwhile examining the lateral alignment to ensure that the roll feeds centrally between the flanges of the take-up spool.

The take-up spool frequently has a wooden core which may have shrunk over the years. Make sure that there is at least 1/32inch clearance between the edge of the roll paper and the flange on *each side*. If not, pack out the flanges with thin card to achieve this. There is often no need to remove the take-up spool from the piano: merely insert a penknife or old table knife blade into the head of the flange fixing screws from the front of the spool box and rotate the take-up spool in the appropriate direction to undo the screws about one turn, then insert a sliver of fine card in front of each screw between the wood core and brass flange and retighten carefully.

In making this adjustment, first check that the roll paper is 11¼ inches wide. Old rolls may have swelled or shrunk, and roll widths also varied originally up to about 11 5/16 inches.

The tracker bar

Again, subject only to faulty manufacture, the tracker bar should be parallel in both planes to the spools. However, with forty or fifty years of use or mis-use, this may be faulty, resulting in uneven stresses on the roll. Over-enthusiastic use of the tracker bar pump with heavy pressure against the tracker bar may be the cause, or perhaps faulty machining, but some tracker bars are slightly hollow on the face laterally, causing higher tension at the edge of the paper and attendant squirming of the roll during play—resulting in ciphering on long unbridged notes and chromatic passages in the music. Some people consider a very slightly convex face may be advantageous to assist tracking but here we are in the realms of opinion.

Roll tension

There is normally a spring-loaded friction pad and disc attached to the spindle of both the music roll shaft and take-up spool.

The writer is inclined to think that these were introduced to prevent rolls from lasting too long ! It is best to disconnect the springs entirely. The weight of the pad just rubbing on the disc will provide all the tension required.

Excessive tension on the roll leads to squirming during play, causing the paper bridges on long notes to break. It also may cause the edge of the paper to damage against the take-up spool flange.

The tracking mechanism

The first player-pianos, equipped with 58 or 65-note actions, worked adequately without special tracking devices. With the introduction of the 88-note rolls it became necessary to achieve more accurate tracking. In practice this is effected by a device which continuously monitors the alignment of (a) the music roll, or (b) the tracker bar, or very occasionally (c) the music roll and take-up spool together.

The foregoing pointers, however, will do much to prolong the life of your rolls whether or not a tracking device is employed. And once a mis-tracking roll starts to get damaged by tearing at the edges, or by pleating, the roll will never be the same again and its condition can only worsen each time it is played.

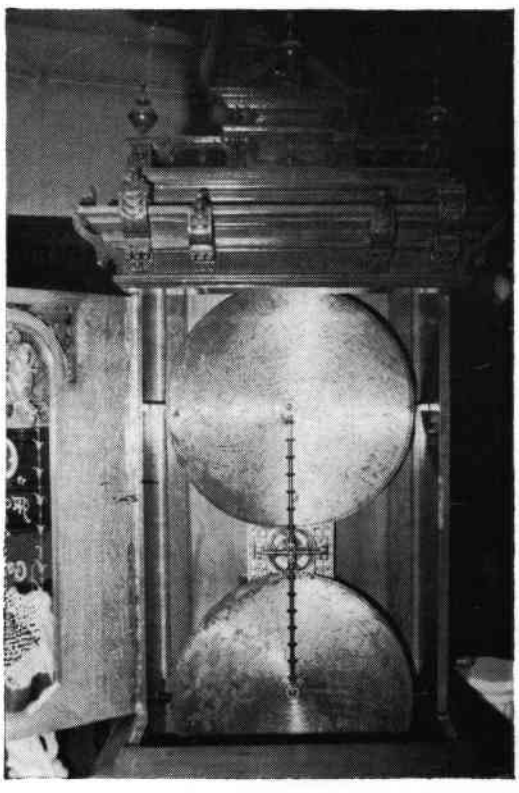
MONOPOL GLORIA

MULTIPLE-DISC musical boxes are uncommon but among this scarce breed there are a few which are distinguished by their extreme rarity or mechanical idiosyncracy. One such machine is the Monopol Gloria.

After his first and largely experimental disc machine called the Ehrlich, Friederich Ernst Paul Ehrlich perfected and produced the Monopol which was introduced some time between 1890 and 1892. The most complex of the Monopol range was the Gloria Musik Automat which played two 26⅜inch (70cm) discs at once, each on parallel unison combs.

The unusual feature was that both discs were driven by a single contrate drive cog mounted parallel to the plane of the discs so that the discs rotated in opposite directions. This was the only twin-disc machine ever to operate on this principle. The two disc pressure bars were hinged to a common axis supported above the contrate wheel and locked on to the disc spindles in the usual manner.

Pictures from Q David Bowers of the only known specimen in the J B Nethercutt Collection.



FROM CYLINDER TO PIANO ROLL

John M Powell describes his unique experimental work by means of which he has not only discovered the tuning scale of a broken comb, but played musical box cylinders on his player piano . . .

THIS exercise started with the acquisition of a box well ventilated with woodworm holes and containing an interchangeable movement No 13312 of at present unknown origin, four cylinders which at one time had pins showing above the cylinder surface, and a two-section comb with a total of 123 teeth. The main comb has a gap of 14 teeth in the middle register and the treble comb has been repaired several times, having only 10 of the original 43 teeth remaining. Perhaps a rather ambitious restoration, but the original tone of the machine could not be ignored.

There is no tune sheet but the pinholes in the lid indicate a sheet size which could have accommodated four programmes and the cylinders were numbered one to four, again indicating possibly a complete set of cylinders. Curiosity about the music locked away in the cylinders became a bit of an obsession and this would not normally be satisfied until the combs and cylinders had been repaired. A player piano with a Higel action shortly joined the household and the possibility of transfering the cylinder pinning to a paper roll gradually evolved. This would then confirm the comb tuning and satisfy my curiosity regarding the music.

Computer paper

Once the idea became fixed, the problems of executing the task started to appear. First problem was paper, and this was solved by making use of used computer print-out sheets. This comes in long lengths and is perforated along each edge which allows a positive drive for the connection to the cylinder. I manufactured a device which, in appearance, would be a credit to Heath Robinson. It is made up from bits of wood glued and screwed together with the addition of a few bits of alloy and steel bars and wheels made up to suit. The musical box cylinder is geared to the paper drive wheels which have studs to locate in the paper perforations in a 12 to 1 ratio which effectively expands the cylinder circumference from about 8 inches to 8 feet on the paper. The paper is rolled round two free-running spools tensioned with weights and strings round the spools and between these spools are the paper drive wheels and punch. The paper perforator is a ground steel punch sliding in a block and provided with a return spring. This block can be slid along a bar and located in any of 88 positions to line up with spacing of the holes in the piano tracker bar. A matching bar also with 88 holes lining up with the top half of the punch is supported below the paper strip.

Punching

The method of operation is first to locate the teeth on the comb with the correct holes in the tracker bar, for instance, four teeth on the comb each playing the same note would be punched out in the same line on the paper. The punch is located in the first note position, the alignment marks on the cylinder set to a pointer and lined up with the first tune position. The paper drive action is then cranked round until the pointer is aligned with the first pinhole, the punch pressed and then aligned with the next pinhole and so on until one rotation of the cylinder has been completed. The punch is then positioned for the next note or untouched if the next comb tooth position is the same note. The pointer is again lined up with the first tune position but now in the second tooth position on the cylinder and the process repeated for another rotation of the cylinder and so on until the first tune is complete.

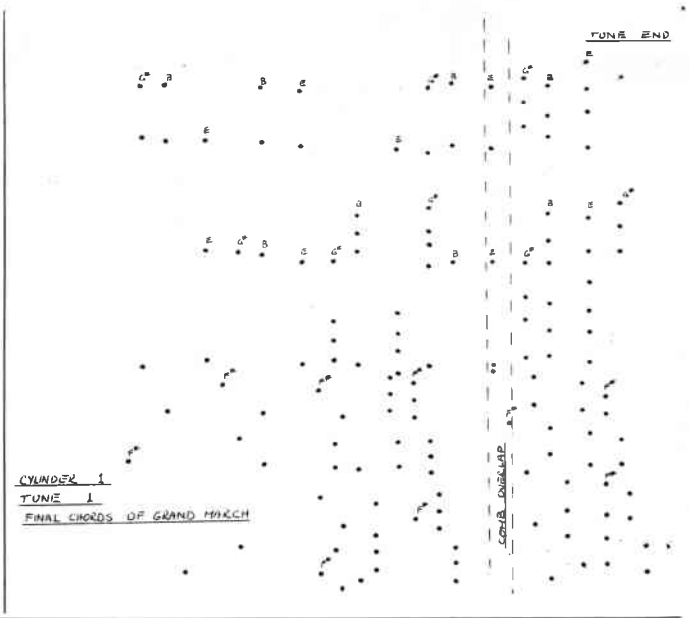
The remnants of the pins were removed from one of the cylinders, the cylinder cleaned and partly polished to make the pinholes easier to see. Numbers were pencilled along the cylinder relating to the punch hole numbers and the required note, thus making for easier and quicker setting of the device. The first tune was then punched out (after practice, the time taken was $1\frac{3}{4}$ - 2 hours per tune), the paper trimmed to width and wound onto a piano roll spool. The family assembled to hear the birth of the masterpiece and the result reduced us all to laughter—it sounded just as though the music was being played backwards. This might well have been the end of the tale but, having had a modicum of success, there was sufficient incentive left to see it through to the end.

Tuning scale

My original assessment of the tuning scale was based on the comparison between the comb sound and a piano in conjunction with the comb markings. The treble comb marking was different in style to the main comb and consisted of lines indicating groups of teeth and major groups stamped from one to seven. The main comb is lightly scribed for the first two thirds of its length in groups and the bass third has very feint numbers and sharp markings which were not discovered until later in the exercise. Having the music punched out and easily displayed, it was relatively simple to analyse the groups of notes played and pick out obvious discords. These apparent errors were logged in order on squared paper using the middle register as a "base" and, after a while, a pattern emerged indicating that the treble section needed to be moved a semitone higher and the base section a semitone lower. Further examination of the comb markings showed some previously unobserved numbering which confirmed the diagnosis and showed that all twelve semitones per octave were included and ran continuously for $3\frac{1}{2}$ octaves from the treble end. This covered the marked part of the combs and appeared to be the correct solution.

Adjustment

A new roll was now cut and the result was a great improvement but obviously contained further errors. The next analysis showed that a group in the base end and a group in the treble end would benefit from an adjustment but after that, no further rearrangement appeared to be of any advantage. The music now appeared to be very nearly right



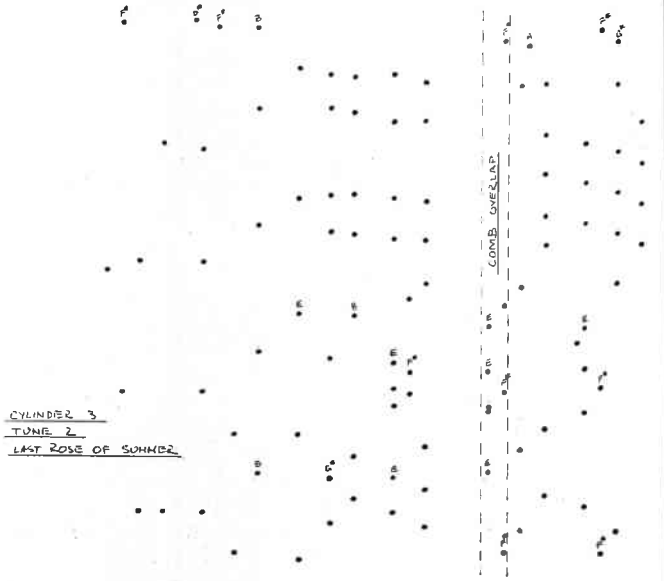
and two further tunes were cut and compared. Up till then, the notation over the junction of the two combs had been continuous and seemed in accordance with the comb marking. Analysis of this section showed that it was here that the discords were occuring. The only solution to this was to dispense with the logical continuity by deleting two notes and making the last two notes of the treble comb the same as the first two of the main comb such that a run of D, D′, E, F/F′, G, G′, A then became D, D′, E, F′/E, F′, G′, A, thus losing notes F and G.

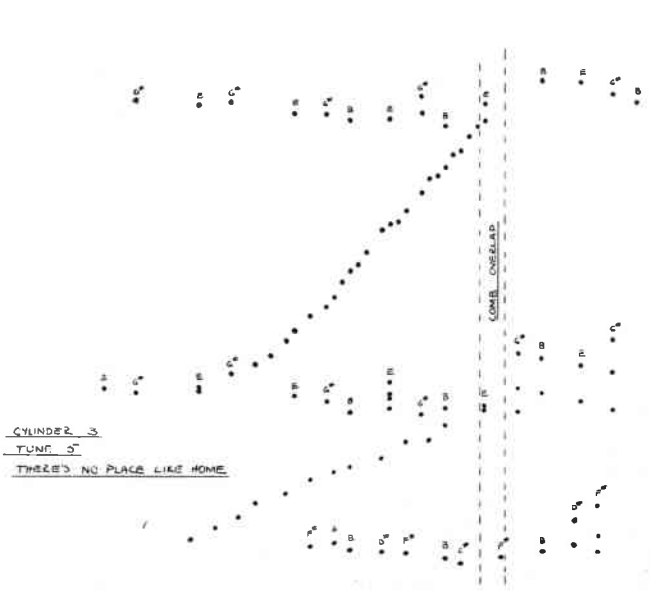
The illustrations have been made by spotting through the paper roll and the irregularity of the pin positions is as on the cylinder and deciphering is not quite as straightforward as the written music. However, I have selected sections which include some of the notes in question but generally this area of the cylinders is only lightly pinned. The alternative arrangements to this grouping are limited by the positive identification of notes D′ and G′ on either side of this group further limiting the possible arrangements to this one only.

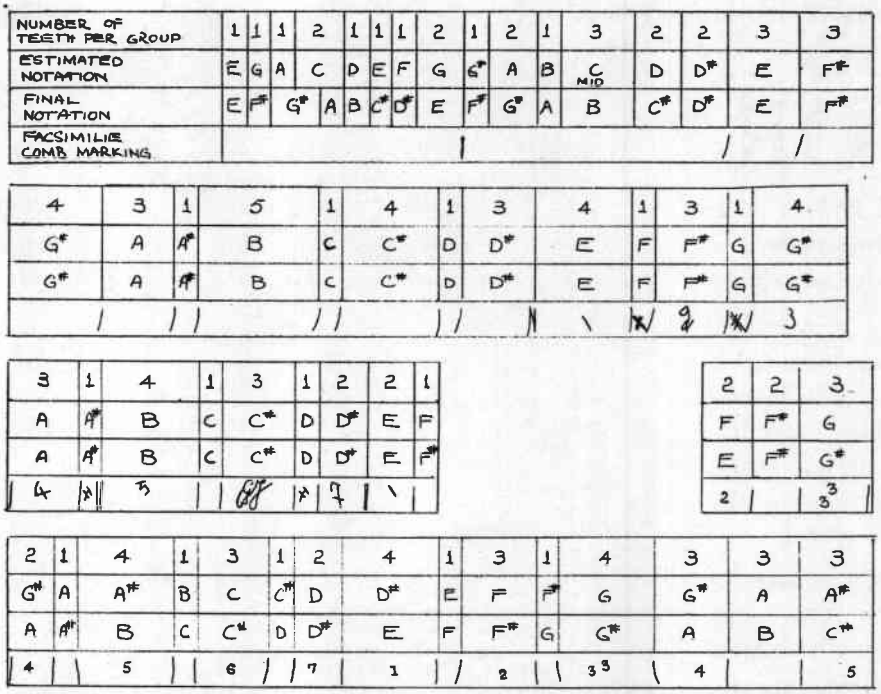
Illogical

So far, this conclusion was reached by examination of the "printout" only and rearranging the notation to remove apparent discords. Confirmation of this conclusion has been further established, I feel, by examining the final comb notation. The comb would appear to be tuned to play the majority of the music in the key of E major. The comb notation includes all twelve semitones per octave except sections at each end and in this overlap section. All notes in these sections turn out to be notes in the E major scale and in the remaining sections, the larger tooth groups are also notes in the E major scale. Examination of the "printout" shows the majority of the tunes finish with chords in E major although they do not necessarily start in that key.

I had great difficulty at first in accepting this arrangement as it did not appear to be very logical and I have seen no mention of a similar arrangement with respect to other boxes. The markings on the four cylinders indicate that the box, although interchangeable, may have been made as a set to suit this movement only in which case, a variation in comb tuning like this would be of no consequence. The tunes already identified show that each cylinder consists of similar music. Cylinder No 1 — Operatic—*Grand March, Miserere* and *Carnival of Venice.* No 2 — Dances—None identified yet. No 3







Block chart showing the progression from estimated tuning to actual tuning as well as the markings on the comb case.

—Songs—*Coming Through the Rye, Last Rose of Summer, Men of Harlech, There's No Place Like Home* and *All in the April Evening.* No 4—Sacred—The tune to *All People That on Earth Do Dwell* is the only one recognised so far.

One definite error in the comb tuning was discovered which I do not think could have been proved except by examination of the "printout". The fourth and fifth teeth from the bass end were both tuned to the same note. The third and fifth teeth upset the chords in which they occurred but all errors appeared corrected when the third and fourth teeth were paired instead. We will probably never know whether this was an error in the comb tuning or on the cylinder setting.

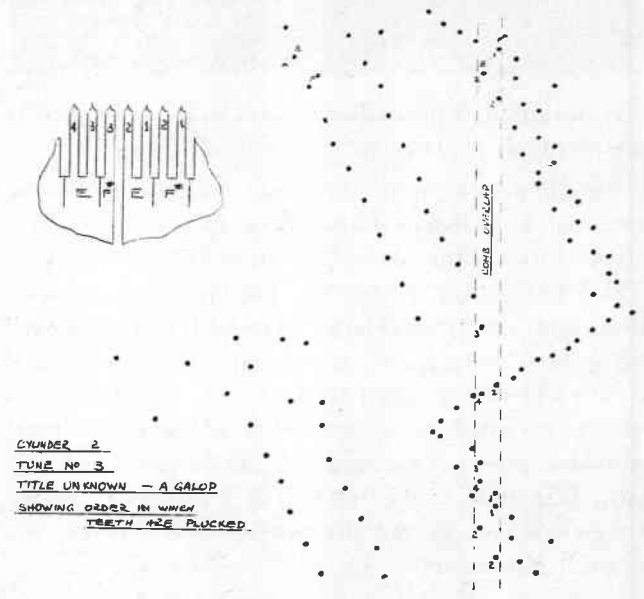
Inherent irregularity

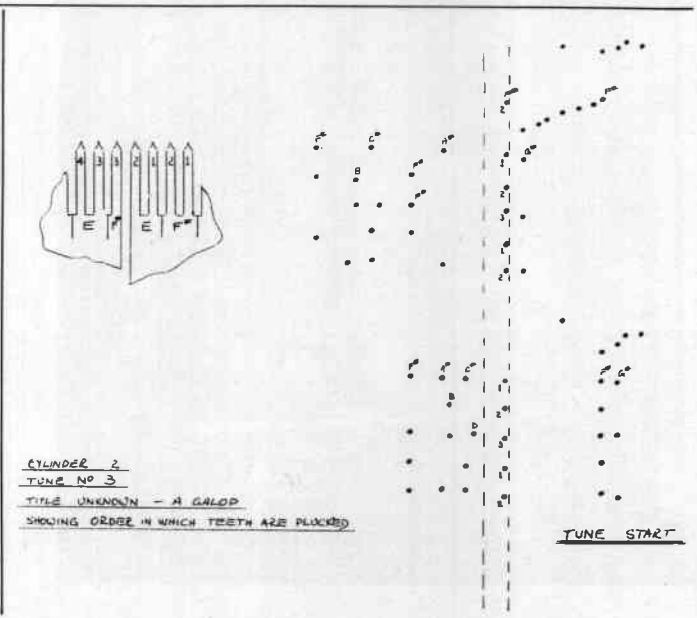
After the first one or two tunes had been cut, it was quite noticeable that the chords did not always fall regularly. At first it was thought that this may have been caused by inaccuracies in the transposition of the pin positions to the paper but on repeating the process, the duplication was found to be gratifyingly accurate and this irregularity was in fact inherent in the pinning.

Another aspect was the large number of notes in some of the chords—more than ten in some cases. If the cylinders were marked originally with a typewriter type of machine, the maximum number of notes one would expect to find in a chord would be ten unless there was a means built into the machine for coupling groups of notes. Again, how were pinning mistakes corrected whilst marking was proceeding? How could the marker pick out these errors and then continue playing the music without an apparent break? One pin on one of these cylinders was finally located on the fourth attempt, although all the other errors seen have only been corrected once. These questions lead one to believe that the music would first have to be set up on a master of some form and then copied onto the cylinder rather than played directly onto the cylinder. Is anything known of these machines, either the machine itself or documentation describing it?

In conclusion, this apparatus has shown its value for analysing some of the tuning problems where restoration and repair of combs is concerned, although its original purpose was for something different. It will be used again to sort out a two-comb *sublime harmonie* box which has a large group of teeth missing on one comb and no comb markings at all to use as a guide. There are even more ambitious uses to which it may be put, but they are in the future.

The determination of a tuning scale, and even of the music on a cylinder, can be undertaken in several ways. John Powell elected to use the intermediary of a piano roll in his experiments and thereby employ a number of related talents in his task. It is not suggested that this is either the ideal or the simplest way, but it certainly ranks as one of the most unusual. In the final analysis, a method is judged by its results, and this way works. Ed.





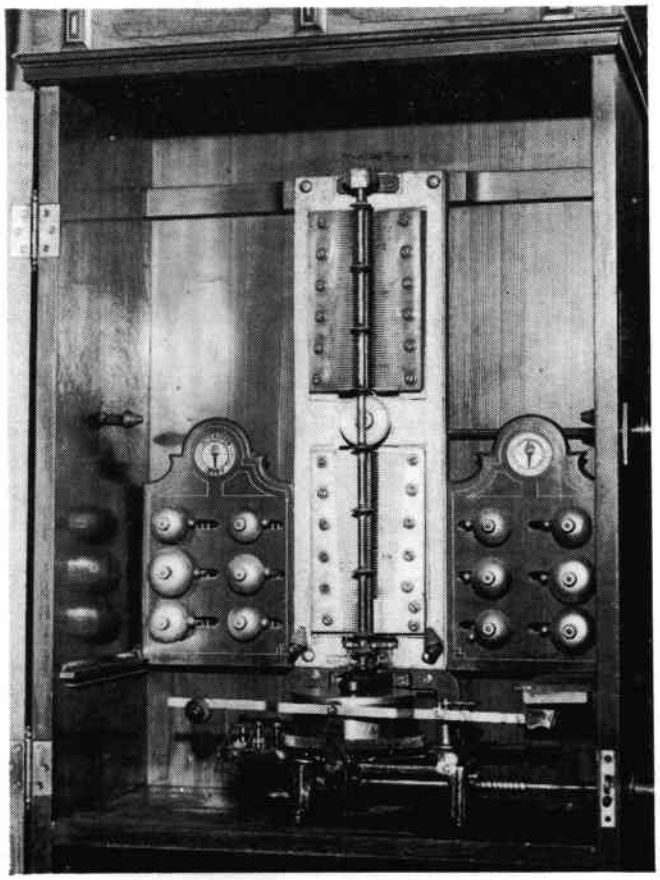
RICHTER'S IMPERATOR

FROM the picture collection of Q David Bowers come these two pictures of a 21in (53·5cm) Imperator disc musical box which is something of a rarity outside its native Germany.

Friederich Adolf Richter of Rudolstadt took out a number of patents for mechanical musical instruments between 1893 and 1900 which together accounted for two rather sophisticated musical boxes. One was the book-playing lever-plucker called the Libellion, and the other was a disc instrument.

The Richter business was at Schwarzbergerstrasse 56 in Rudolstadt and was established in 1876 (some sources say 1896 which is incorrect) by Dr A D Richter, Councillor of Commerce, and subsequently operated by Adolf Richter Jnr.

A large and wealthy business, it was also a diversified one and formed part of a large combine known as the Leipziger Lehrmittel-Anstalt which produced scientific apparatus, "appliances for teaching", electric motors, soap, and a remarkably detailed model building brick kit from which accurate scale models of buildings could be constructed. The company exhibited extensively at the 1900 Paris Exposition and

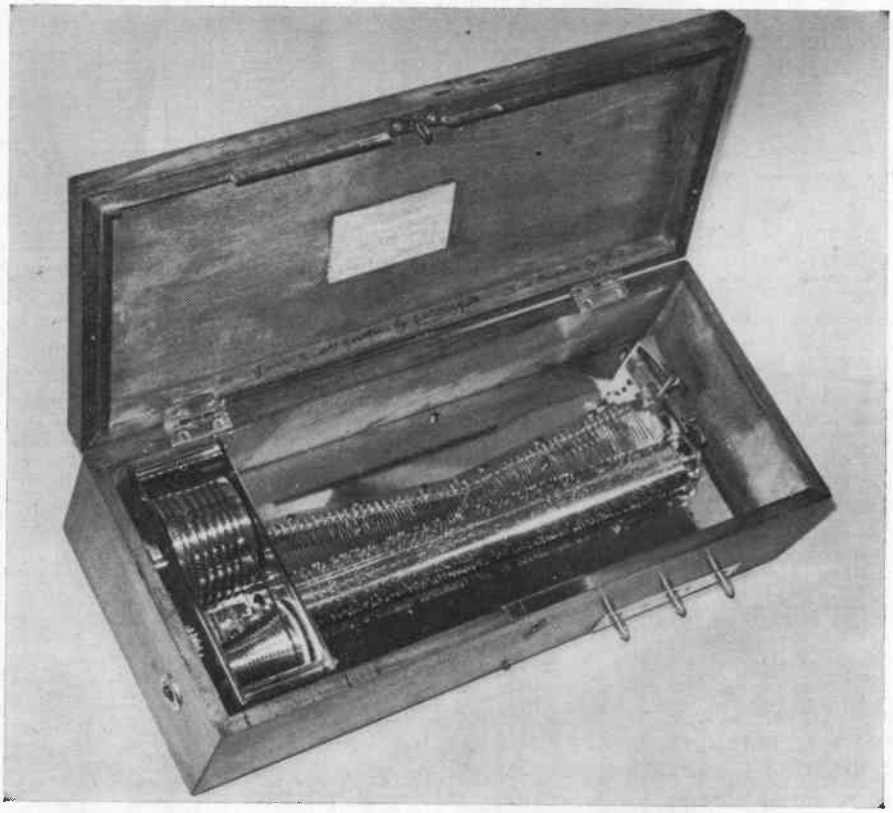


was awarded a medallion which was subsequently modelled on its later musical boxes.

The Imperator bore the trade mark of a flaming torch of knowledge. It has been identified in three sizes. First is the Style 27 with a 5½in (14cm) disc. Then there is the Model 52G playing a 10¼in (26cm) disc, and finally the large model shown here, the Style 49, a spectacular instrument with four parallel combs and twelve tuned steel bells. A totally-enclosed spring mounted in a somewhat abbreviated frame provides power. An unusual characteristic of this particular style is the full-length front door opening to give access to the disc-storage space below the musical movement.

THE CHAPPUIS, GENEVA

by Suzanne Maurer



IN HIS book *Histoire de la Boîte à Musique* (1955) Alfred Chapuis says (I translate):

> "In 1826 already, the first year where we have some positive information, we find a first list of musical box makers; they are: BADEL, BOUJOL, *two CHAPPUIS,* CURTET and DUCOMMUN, MEYLAN and LECOULTRE, NICOLE and in the small town of Carouge RAFFARD and MORNEY."

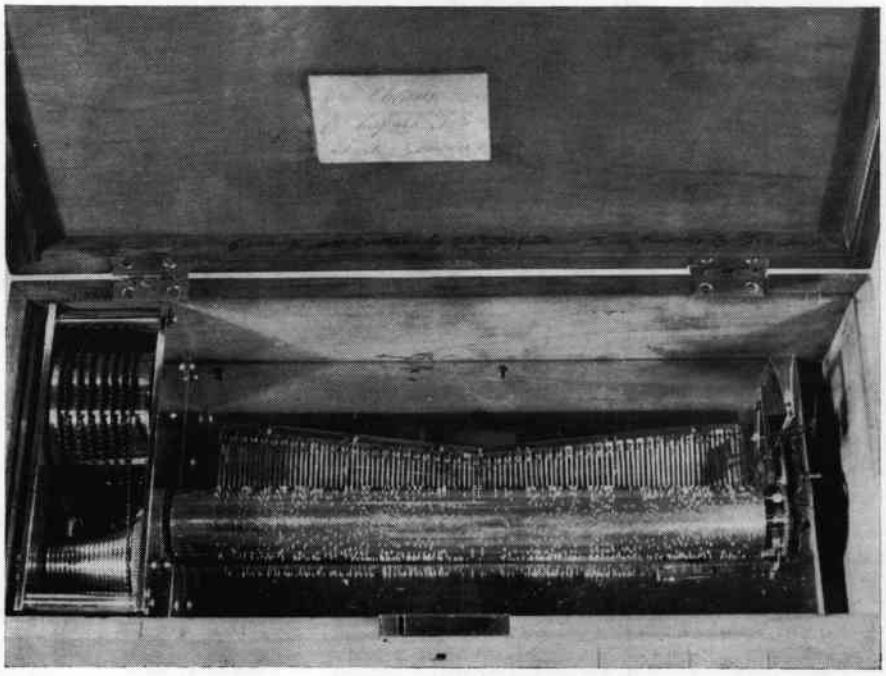
If we have a look at the address directory of the same year, i.e., 1826, we read effectively:

— CHAPPUIS, musical boxes, Plainpalais.
— CHAPPUIS, musical boxes, r. Rousseau 55.

The musical box maker Chappuis, located at Plainpalais, a ward of Geneva, is Abraham-François who was born in 1777 in that city. His father, Jean-Pierre Chappuis, was a watchmaker. In 1803 Abraham-François married, in Geneva, Susanne Françoise Zoller from France, who gave him two daughters: Marie Jeanne and Jeanne Françoise, and one boy: Antoine François.

Jean-Pierre Desire

In June, 1810, Abraham Chappuis formed an association with another watchmaker, Jean-Pierre Desire. The purpose of the firm was "the manufacture and trade of musical boxes". The foundation deeds stated that the firm's name would be "Jean Pierre Desire and Abraham François Chappuis. Jean-Pierre Desire invested ready money, goods and equipment for the sum of Sw Frs 16.267 in the company. The association was contracted for six years, but in fact it lasted only one year and was dissolved on the 30 June, 1811. Jean-Pierre Desire alone was in charge of the liquidation.



The watchmaker and mechanic Jean-Pierre Desire was the son of André Desire, a watchmaker too. He was born in 1772 in Geneva and married, in 1796, Marie Flaissiere(s), whose sister had married Jean-Pierre's brother one year before. His taste for music is noticed even in the army where he is mentioned, in 1816, as a musician. Jean-Pierre Desire died in 1851.

After his short association with Jean-Pierre Desire, Abraham François Chappuis seemed to have continued on his own. In 1816 he lived with his wife and three children at "Rue de Coutance 72", at St Gervais, which was mainly the ward of watchmakers and musical box makers. In about 1822 he moved to Plainpalais.

It is interesting to note that Abraham used to sign his musical boxes by adding his wife's family name to his own. The different spelling "Abram Chappuis" found in his musical boxes is not really puzzling for spelling was rather inconsistent in the first half of the 19th century and "Abraham" was nearly always spelled "Abram". The use of the wife's family name was a rather common practice. Two other examples were

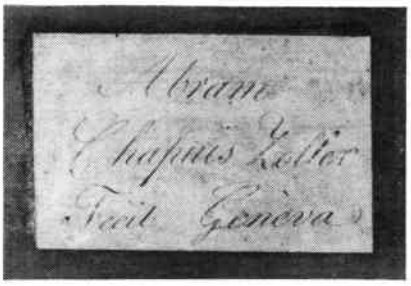
Ducommun-Girod (see *The Music Box*, Summer 1975, pages 59 - 60) and Billon-Haller (see the *Bulletin* of the Musical Box Society International, Autumn 1975, pages 182 - 188). This habit was confusing and in the case of Billon-Haller, for example, one often believed that it concerned an association between two persons.

Two years after the mention of two musical box makers named Chappuis in 1826, a third address appears in the directory of 1828:

"CHAPPUIS, Molard 123."

In fact, in comparing census and address directories of that period, we learn that it referred simply to Abraham François who was moving downtown again, to Rue du Molard 123.

Abraham-François Chappuis died in 1832 in Geneva, leaving, at Rue du Molard 123, his widow and daughter, Marie, 29 years old,



From the collection of David Walch, Bristol, come these pictures of a fine early box signed Abram Chapuis Zoller (note spelling). A plain fruitwood case houses a massive fusee-wound motor between large plates. There are 52 groups of two teeth in V formation. Four airs of specially composed music — inscription on lid reads "Given to Mrs Gratten by Col Fitzgerald — tunes composed by G A for it". The mechanism most likely dates from 1811 - 1815.

who, in the meantime, became a musician.

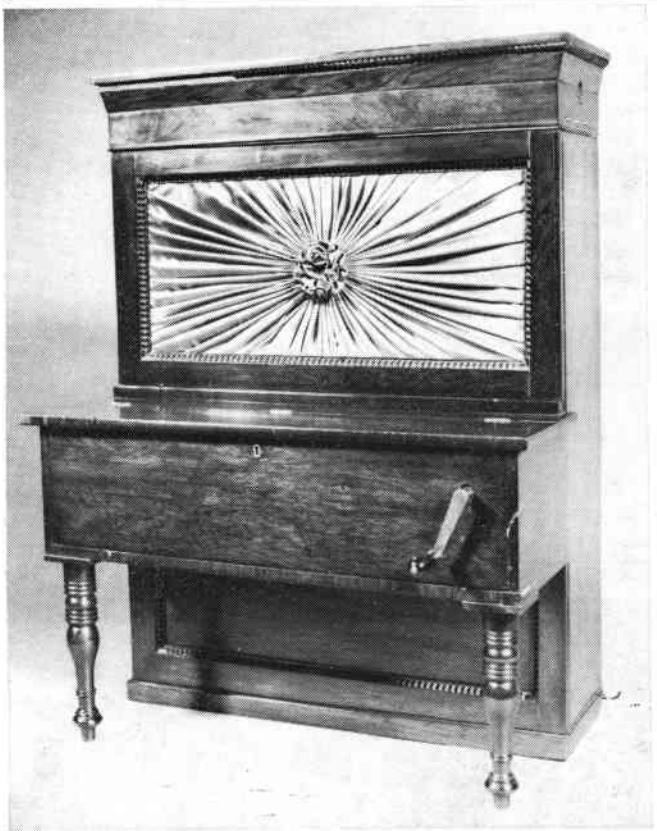
What precedes is the story concerning Abraham Chappuis-Zoller. As regards the indication of "CHAPPUIS, musical boxes, *r. Rousseau 55*" in the address directories of 1826, 1828 and 1831, I was not able to determine with certitude the musical box maker concerned. I have reasons to believe that it is Jacob Chappuis, a watchmaker born in 1774, in Geneva. One traces Jacob at Rue des Etuves 97 in 1816 and at Place St Gervais 152 et 153 in 1822, with his children and his wife, Dorothée Rojoux, whom he married in 1806 in Geneva. In 1823 Jacob went to Paris. The following census and electoral lists mentioned Jacob at Rue Rousseau 50. Jacob Chappuis-Rojoux died at the age of 75 in 1849, at Rou Rousseau 49 in Geneva.

Vaux collection oddities

AMONG the very many interesting and unusual items which came on the market when the Vaux collection came under the auctioneer's hammer at the end of last year were these two items.

Below is a typically Bremond style of interchangeable-cylinder musical box of a type produced in quite large numbers. What is unusual is the original carved and turned rosewood table. It made £825.

Right is an instrument which caused many raised eyebrows amongst more experienced collectors. Other



than the replacement silk front with large rosette, the instrument is well made and original. It is what is inside it which presents the controversy! It is a fairly simple barrel piano but, unlike most such instruments, the layout of the strings and the hammer action is similar to that of a real 1870-period upright pianoforte. The deep lid to the top of the piano back displays three brass levers protruding — they are just visible in the picture on the right side — plus a hole for a large key. Inside is a Nicole Freres musical movement!

This piece probably represents a one-off example of master-craftsmanship and could date from c.1880, making use of an existing Nicole movement. The case is in rosewood and the workmanship is of the highest order. This sold for £775.

SYNTHETIC MATERIALS

Geoff Worrall discusses the merits of using modern synthetic cloths and materials in reconstructing pneumatic actions and highlights what is available

FIFTY years ago there was no problem ! A pot of hot brown glue and a stock of well-made, high-quality cloths especially produced for the makers of mechanical instruments were all you needed to ensure that the finished job could be guaranteed to last a lifetime.

Alas ! We are not so fortunate today. Your fabric cloths, rubber cloths—and even animal skins—are of such inferior quality that selection of good stuff means a high degree of wastage. And then you would be lucky to make it last eight years. Heavy rubberised British-made cloth in a Duo-Art or Ampico motor pump will not last two years, even with light work !

Tan pouch leather (perfection skin) is always porous to a certain extent—and seems more so than ever today. Even red rubber tubing cracks on the distended nipples after six years (it never did this in the 'twenties). The old faithful thin rubberised cloth (tosh) is so badly made that Durrell Armstrong, president of Wichita's Player Piano Co Inc (styled as the largest player piano spare parts and accessories house in the world), refuses to stock it at all. He has for years strongly recommended the new synthetic materials and is gradually winning the battle against the "must be replaced as it was originally" brigade.

Really there seems no alternative in the future as air pollution gets worse and attacks our treasured vital organs and players. It takes modern synthetics all their time to withstand it even now and organ rebuilding in New York has become quite an exercise in synthetics since chemical pollution there is among the worst in the world. Rubbers and fabric stand no chance at all there, unless a rebuilding cycle of two years is acceptable.

The answer is simple. What sort of space suit would you prefer ? Would you feel happy walking on the moon with a tosh outfit, or one that is made of nylon and polyon materials that can withstand anything ?

We can have this same material that American collectors use in their own instruments here in Britain, and they last twenty times longer than traditional substances. A rebuilt should, in my opinion, last for at least 25 years if possible, just as in the old days when things were really built to last—and some of them still do.

Materials available

These are some of the materials that you can use :

1. **Polylon.** ·0035inch thick. Nylon coated with polyurethane. Suitable for all light pneumatics, but not pouches. 2. **Bilon.** ·0045inch thick, double wear and strength. Nylon cloth embedded on both sides with polyurethane. This is better than Polylon and is also suitable for covering pneumatics. 3. **Nylon Motor Cloth.** ·0085inch thick. This is the same material but is thicker and suited to the covering of larger pneumatics. 4. **Nylon-reinforced Heavy Duty Sheeting.** ·020inch thick for motor cloth. This is British made and is terrific stuff, being impossible to tear by hand. 5. **Perflex.** Extremely thin pouch material only ·0025inch thick. Completely airtight and will last many times over the "perfection" pouches. Very sensitive and a "must" for Orchestrelle pouches. Hard to manipulate but can be bought preformed from America.

Unfortunately, all these substances have an oily texture and consequently the problem of adhesion can for some people be quite a headache. One thing is certain, and that is that, with these materials, the old glue pot with animal glue is completely out and must not be used.

GLUES

THERE are two types of adhesive that can be used successfully with the modern nylon and polylon materials. One is the general petroleum-based polymerised plastic type adhesive, and the other is the latex-type, water-soluble adhesive.

The main point which must be understood about trying to bond these materials is that adhesion can only be satisfactory if there is sufficient outlet for the solvents to escape by evaporation. This applies equally to petroleum and water vapours. Only after solvent-evaporation is complete can the base harden and develop its adhesive properties.

Since this is impossible to achieve through the modern material itself due to its 100% air tightness, it follows that any evaporation must take place through the other connecting medium which, in our applications, is invariably wood.

It is most important therefore that the wood be not only clean and dry, but with an exposed surface as open and as spongy as possible. Make sure that the wood is perfectly free from old adhesive before attempting to apply fresh adhesive. If the old animal glue left on the wood has penetrated below the surface (as it should on softwoods), it is best to sand it well back to the original wood. This particularly applies to the larger pneumatic bellows on parts such as expression boxes, tracking bellows, switch pneumatics and suchlike, as they are often made of a harder wood on which the old glue remains firmly embedded in the surface grain. No adhesive will stick properly if it is left on.

Surface preparation

After ripping off the old cloth, the wood beneath can often be seen as a shellac-smooth hard surface formed of a film of orange-brown coloured old glue. This often takes some time to remove. Always use a very coarse sandpaper or a coarse emery band on a sanding machine—this latter is ideal and saves a lot of time. Do not use fine paper as that clogs up the pores of the wood worse than the glue you are trying to remove!

The object is to present as rough a surface as possible for the adhesive to "key" into. Stack pneumatics are usually of softer, cheap, coarse-grained wood which is rapidly made ideal for adhesion. A quick rough sanding is all that is usually needed here.

To check if all the old glue is removed, spread the new adhesive on the surface of the wood in a thin coat with a fine brush and allow to dry for about a minute. The film left should still adhere

firmly. In all cases, always work in a warm dry room. Do not use the "contact" method of adhesion, but merely spread the adhesive on the wood parts only and apply the material straight away followed by gentle, even pressure all over for about 20 seconds—this is the same as for glueing with animal glues. Where the material overlaps, such as at the back of the striker pneumatics, adhesion is still perfect but here the adhesive takes longer to dry as the solvent can only escape from the free edges. For this reason, leave the job for about three hours to dry before trimming.

The best adhesives to use are as follows: **Latex type:** *Imfix (ICI), American plastic glue.* Easy to use and being water soluble, the surplus can be wiped clean with a damp cloth. **Contact type:** *Time Bond, EVO 8454, Pliobond, Pritt.* These are more messy and are harder to remove.

For American readers, the manufacturers recommend a special adhesive known as PVC-E which is manufactured by National Casein of New Jersey, PO Box 151, Riverton, New Jersey 08077.

Unsuitable glues are animal (fish) glues, seccotine, Bostik, Uhu, Evo and suchlike.

PERFLEX IN USE

A description by Austin Organs, Inc

PERFLEX-E is a blown polyurethane film product of Union Carbide Corporation covered by registered trademark. The use of Perflex-E as a substitute for pneumatic leather is a result of over a decade of intensive and continuing research by Austin Organs Inc.

Perflex-E is not only an answer to pollution and deterioration problems which have long been of concern to organ builders, it is a material superior in all ways to previous pneumatic membranes and coverings.

Perflex-E is very thin (·002inch), yet strong and absolutely airtight. More flexible than the thinnest leather available, it will withstand millions of cycles of folding and flexing without showing signs of wear. Perflex-E will stretch over 200% before breaking and can be stretched 150% without any permanent change in shape. Tensile strength is over 5,000 p.s.i. The properties of Perflex-E show no change in a temperature range of −100 degrees to +200 degrees F.

Except for discoloration in certain cases, strong concentrations of chemicals found in polluted air, even in the presence of heat, do not affect Perflex-E. In similar tests, leather rots within minutes. Continued exposure to direct sunlight (ultra-violet rays) will weaken Perflex-E (50% after six months, typically.

Ideal for use on square and hinged folding pneumatics and pouches up to 4inches wind span on pressures up to 20inches wind, and even higher pressures on smaller pneumatics, Perflex-E will actually increase the speed and efficiency of a pneumatic system. Its properties make it equally desirable for use in low and high pressure organs and player or reproducing piano actions.

Perflex-E requires some different techniques in application, but is basically similar in use to leather or rubberized cloth.

This new material requires a special adhesive, PVC-E, manufactured by National Casein of New Jersey, PO Box 151, Riverton, New Jersey 08077, and is also available from National Casein plants in Chicago, Illinois, and Tyler, Texas.

Perplex-E may also be obtained in ·005inch and ·010inch thicknesses for heavy duty and special deep pouch applications.

TECHNIQUE

WORKING with Perflex-E plastic film requires certain techniques which are different from those used with leather. To begin with, Perflex-E is so thin and flexible it is initially a bit more difficult to handle than stiffer coverings.

Perflex-E is best cut with a paper cutter or sharp scissors. When doing several pneumatics of the same size, fold the material into several layers and trim the edges with a paper cutter. This will result in a packet or pad of proper size pieces which will be slightly stuck together at the edges and can be peeled off as needed.

Since Perflex-E is transparent, as compared to leather, it is acceptable to glue the excess over onto the top and bottom of folding pneumatics rather than trimming, to gain a maximum of bond area. However, the excess may be trimmed in the usual manner.

Also, the transparency of Perflex-E makes it possible to mark the opening span on the work surface as a guide when covering book type pneumatics.

If difficulty is encountered in getting Perflex-E to adhere well, the material may be wiped with a rag soaked in alcohol to remove any oily residue.

PVC-E adhesive is water-based and looks like marshmallow fluff. It has a mild odor which is pleasant and harmless. Pot life is long if stirred occasionally. The skin which forms on the top should be stirred in, or removed if necessary. To thin, stir or add fresh glue, not water.

PVC-E spreads and works like medium consistency hot glue with a fast set-up time at room temperature. Assembly time can be lengthened by chilling the glue or shortened by warming. If the wood is warm, the glue will set-up very fast.

Application can be by artist's brush or small paint roller. It is best to apply the Perflex-E starting at one end and rolling the film into place to avoid trapping air bubbles. Slight finger pressure or rubbing to squeeze out air bubbles is all that is needed to set the material. Perflex-E can be moved or slid as necessary until the glue sets up.

The secret of a quick, permanent PVC-E bond is in the curing or drying process. Before the glue dries (while it is still white), the action is "baked" at 120 to 150 degrees F for about 15 minutes (until dry). After cooling, the glue is unaffected by further changes in temperature or humidity, and has reached maximum strength.

The process is not critical. A heat lamp placed a few feet away, a 100 watt light bulb 4inches to 6inches away, a warm radiator, or ideally, a warming oven will supply sufficient heat.

It is advisable to work on six actions at a time, only partially covering them in two or three stages so that the glue doesn't begin to dry before the heat is applied.

Remember that the glue dries fast on a warm surface, and allow

the baked actions to cool before applying glue.

It is not absolutely necessary to apply heat during curing. This merely speeds the process, which otherwise takes several days to reach maximum strength. The bond should not be stressed during curing.

Perflex-E is lapped over and glued to itself in the usual manner, although this sealed joint will take longer to dry.

Round pouch type pneumatics present a special problem. Since Perflex-E may not be permanently stretched or worked like leather, only pouches with a total motion of about $\frac{1}{8}$inch the pouch diameter may be formed by hand during application. Pouches may be thermoformed, however, and either made up in advance using a mold, or easily formed in place.

To form pouches, the entire pouch board may be covered with PVC-E, using a paint roller. The Perflex-E is then applied flat in one piece. (If pouches are on close spacing, the time saved outweighs the material wasted.) A rubber roller such as a photographic squeegee will quickly roll out air bubbles.

After curing the glue, the pouches are formed by heating the Perflex-E to about 300-400 degrees F. At the forming temperature, the Perflex-E becomes water-clear and glossy. A simple forming tool made by suspending a round disc of the pouch valve diameter the proper distance below the surface of the pouch board will form a perfect pouch and hold it until the Perflex-E is cooled.

An ideal and portable source of heat is an industrial heat gun. As long as the form is cooler than the melting point of Perflex-E (about 350 degrees F) the Perflex-E will not stick to the form.

If a deep pouch is required, it may be necessary to use ·005inch or ·010inch Perflex-E as the material becomes thinner as it is pouched.

Procedures given here are general, and may have to be varied to fit various specific types of actions.

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Tonal quality of Musical Box combs

John M Powell takes a practical look at comb theory

WHEN trying to decide why the sound we hear from a vibrating strip of steel sounds the way it does, it is first necessary to understand what it is in fact doing to make that sound. This must involve the theory and the authority for this is taken from *Vibration and Sound* by P M Morse. Alfred Thompson referred to this in his article on page 315 of Vol 6 but perhaps passed over the significance of the theory which does in fact show that non-harmonic overtones are always present in a vibrating tooth. This theory tends to get involved mathematically but if one is prepared to accept this, then some useful facts emerge which can be relatively easily understood.

The theory starts off by equating the internal forces at work in the strip and developing an equation which will allow its frequency to be found. The first example taken is of a rectangular strip having a regular profile throughout its length and fixed in the same way that our combs are. This is the simplest shape to work out and the equation, when solved for frequency, gives a total of four frequencies, all different but being produced at the same time. These are the fundamental frequency, the first overtone being 6·267 times the fundamental frequency, the second overtone being 17·548 times the fundamental and the third being 34·387 times. These frequencies, it can be seen, are by no means harmonic which, at first sight, does not seem to make sense at all. A demonstration of this may be useful here. Take a tuning fork, the prongs of which are the shape of the worked example, squeeze it between the fingers and release it. There are two distinct sounds. the initial "ping" as the fork is released, and when this has died away you are left with the pure tone of the fork. This "ping" is the product of these overtones which being of higher frequencies than the fundamental, naturally decay faster than the fundamental.

Frequency harmonics

Another example that is worked out which is useful to us is that of a strip of constant thickness but tapered from its fixed end again as our comb teeth are. This again results in a fundamental frequency and three overtones but they are not in the same ratio to those for the parallel strip. This tells us then that if you have two teeth both having the same fundamental frequency, one of which is parallel and the other tapered, the initial "ping" obtained will be different as the overtones they contain will be different. How much more so will this ratio vary when you consider the actual variations in profile that are present in comb teeth?

The conclusion so far, then, is that shape alone determines the quality of the overtones and is not dependant on the material or its condition. This is born out by examination of a Paillard two-comb *sublime harmonie* which has teeth of different proportions in either comb. Corresponding teeth on each comb do, in fact, have different initial sounds although the fundamentals are the same — or very nearly. I am not yet sure whether they should be exactly in tune but that is another problem.

Is this the difference that we have been looking for? It is certainly part of it. The initial sound given out when a tooth is released is certainlly louder than its fundamental tone and these initial sounds would be more dominant when playing a succession of notes.

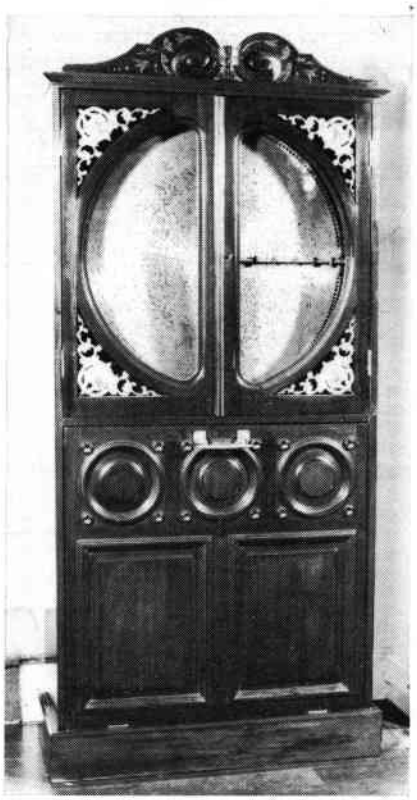
There are, of course, several other factors which affect the sound that a box will give out as Alfred Thompson has already pointed out. Variations in the temper of the comb steel (according to the theory), do not affect the vibration characteristics. The only effect that this should have is loudness or length of time that the note is sustained. The case also has an effect on the sound but I would think that the variations in case construction would not account for much of the difference in tone.

Returning to tooth shape, there appear to be perhaps three distinctive tooth forms which can be

associated with distinctive tones. I will admit here that my experience is limited in this respect and that there will be more examples and that these could also be subdivided but my generalisations are Lecoultre, Nicole Freres and Paillard. Some boxes by each of these makers have tooth proportions varying from the long and slender to short and stubby and each can be associated with its distinctive tone.

My interest in this amounts to several boxes with large gaps in the combs which, at some future date, have to be filled. There is one conclusion that I have drawn from this study which I think is worthy of consideration if one wants to stand any chance of reproducing the original sound of the comb. Variations in the tooth thickness must be faithfully reproduced over the length of the tooth and any tuning necessary for non-weighted teeth carried out by adjustment to the width. Variations in thickness are more critical than in width.

Perhaps these conclusions may be construed as common sense but it can sometimes help to have it confirmed by use of the theory.

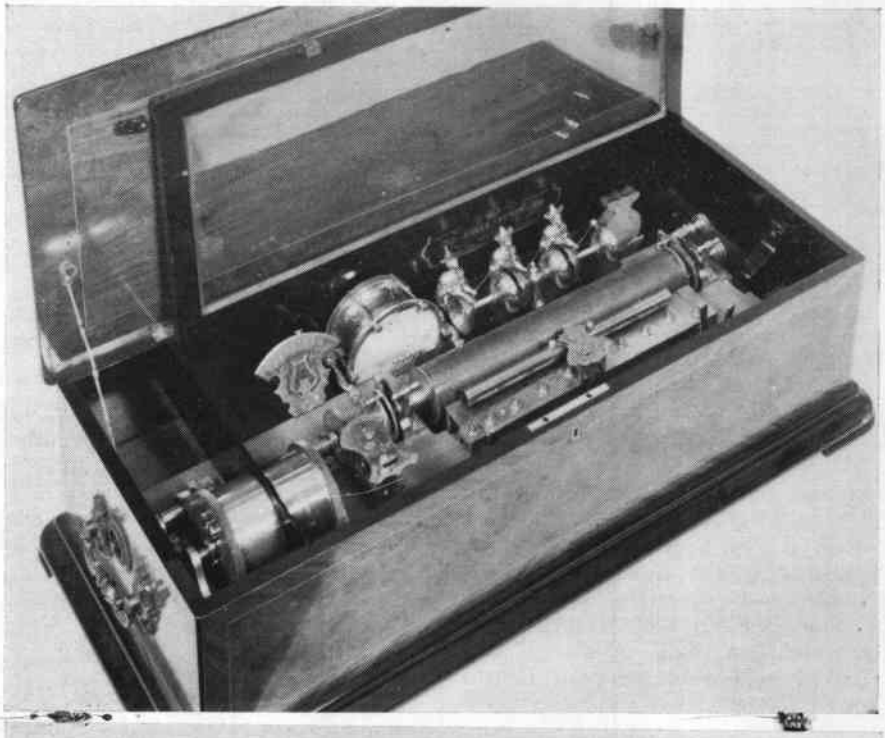


Saleroom Spectacular

MORE from the Vaux collection sold at Somerton. Right is a 27in Regina in unusual but contemporary slimline case. Doors and bin are hinged inside the case sides. Sold for £1,900.

Below is one of the prime items in the sale — a large automaton clock in ebony and ormolu-mounted case. Made in London by George Pyke, c.1750 - 1770, the piece incorporates a 10-tune organ and has three stops of wooden pipes. The front of the clock surrounding the characteristically-small dial is reputed to have been painted by Zoffany. This sold for £4,000. Below right is a small rosewood street piano with eight automaton figures. This was dated 1846 and sold for £3,800.

Two snuff-boxes and a pair of singing birds, that on the left is by Breguet and is finely enamelled (£850). The other is in silver gilt (£550). At the left is a gold and silver box (£450). Far right is a small barrel organ by John Longman of 131 Cheapside, London. This made £150.



Sold at Sotheby's Belgravia on December 2nd, 1975, was this large Nicole Freres orchestral box with 24 cylinders. This outstanding piece, handle-wound and with two spring motors, plays cylinders 38·5cm long, each comprising eight tunes. Accompaniment consists of a six-beater drum, six-beater castanet, and six bells struck by beaters in the hands of three seated mandarins. These mandarins, when not in play (i.e., bells disengaged), normally look down. When the bells are brought into play, they look up and nod each time a bell is struck. A tune indicator, tune selector and speed regulator is fitted. The unusual base for holding the spare cylinders is 107cm wide — the box is 96cm overall — and has two cupboard doors inlaid with tulipwood cross-banding and mother-of-pearl with a central fruitwood design. The piece sold for £2,300.

La maison des Nicole est perdu !

by Suzanne Maurer

At the end of my article about this subject published in *The Music Box* of Spring 1975, page 36, I said that the house where the Nicole famile lived in Geneva, i.e. 17 rue Kléberg, was, although still occupied, in bad condition and that " it would not be a surprise to see it demolished in the near future ".

What was expected, has happened ! The Nicoles' house does not exist any more. It was demolished at the end of the last year together with another old house next to it. These two houses were among the last old buildings of the street. Ten years ago, a commission pointed out the historical and architectural interest of these houses. For instance, a picturesque passage connected the Kléberg street to the Cendrier ran through the Nicoles' house. Unfortunately, when it was envisaged to demolish these buildings, it seems that the Commission was not consulted.

The accompanying picture was taken on October 19, 1975. As explained in my previous article the remaining windows on the top of the building were those of a typical watchmaker's workshop, called " cabinet " by the Genevese.

No need to hurry up to see the House of Nicole Freres any more! Redevelopment — the scourge of progress, has beaten you to it !

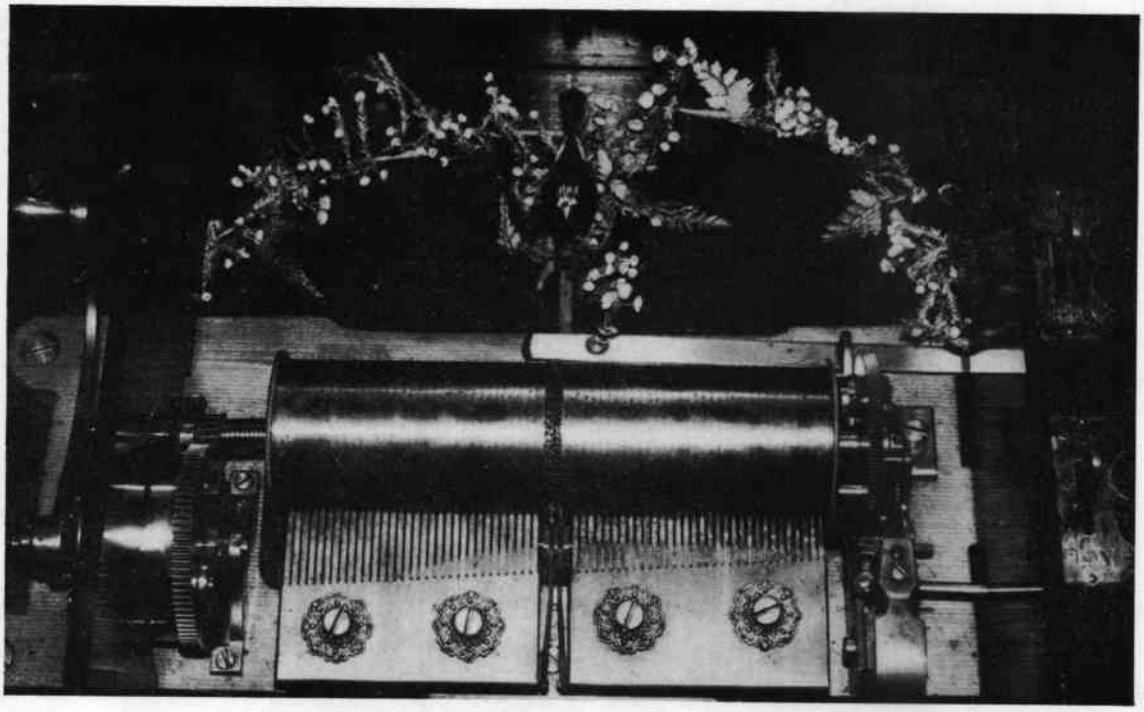
ACROSS at Christie's, South Kensington, two items in the sale which took place on November 19th, 1975, are pictured above.

Top left is one of the largest of the Swiss chalet-type musical boxes which it has been our fortune to see. Usually these somewhat sentimental, almost twee items are fairly small and exhibit signs of " mass production ". This one, however, is an early example standing 24in high with a 13in cylinder Bremond movement playing eight airs. It is, of course, keywound — all chalets of this style are keywound even after the introduction of the leverwind era.

The chalet itself displays careful craftsmanship and the musicwork is housed in a semi-acoustic chamber visible through a large door provided with a large Bremond tune sheet.

Above right is a small English-style serinette or table barrel organ. This was distinguished by the fact that the barrel displays a maker's name which so far has not been recorded elsewhere — Thos Dar(b)y in Red Lion Passage, Red Lion Square, London. The compass of 12 notes is played on one rank of stopped wooden pipes and the style of the instrument suggests a date around 1800.

COLIBRI



Jack Tempest tells the story of his rare 'Bird-Chanting Machine'

SOME eight or nine years ago I was introduced to a kind of one-man Victoria and Albert Museum by the banks of the infant River Mersey, which flows past the southern extremities of Manchester before going on to greater things by Liverpool.

I write "one-man" when I should really double-up on this because this amazing collection of antiques and curios had been accumulated over the years by the two genial brothers Miller; John and Alfred. This isn't the place to go into detail over such a rich and unusual collection; in any case even a cursory essay on such a varied accumulation would, at the least, fill a whole volume.

The Millers were bone-fide collectors—always buying, never selling and, as men of substance, were able to buy their way through the Depression years of the '30s when the once-rich Lancashire textile barons were biting the dust rapidly as fate played them one of its mean tricks. Whilst they sold off their treasures the Millers were quietly driving round in their Rolls, visiting auction houses and corner markets buying, buying and buying. Their taste was fairly wide but they were always attracted by curious items with a novelty interest which explains, of course, their musical box collection.

Their detached Victorian merchant's house became crammed from cellar to attic with gorgeous relics of the past, from Louis XIV furniture to a floor full of display cases loaded with rare orders and medals from all over the world. They had rare clocks everywhere and, on the hour pandemonium would break out as the quiet was broken by a cacophony of bells chiming and striking, organs cooing, and fanfares from tiny trumpeters. There were cases full of rare books, miniature furniture, choice porcelain, examples of early armour, a table weighed down under a sea of millefiori paperweights and wig holders, and glass domes containing plastic do-it-yourself replicas of the Frankenstein monster.

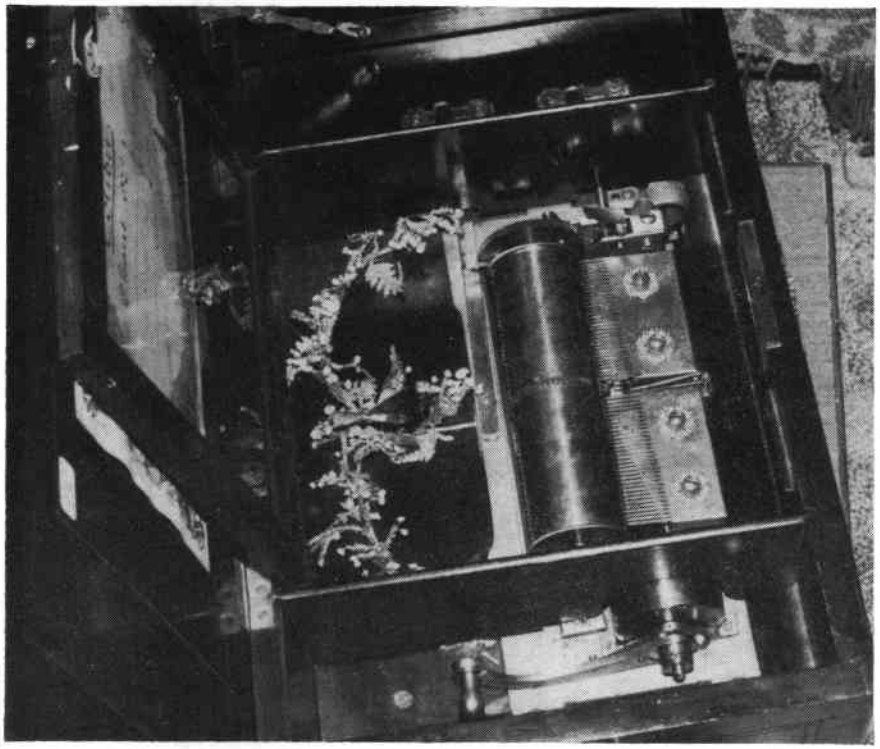
The latter may surprise you but I have already said that the Millers were attracted by novelty. In post-war years when antique prices escalated their collecting continued unabated concentrating on contemporary novelties. Hence the do-it-yourself plastic toys, the die-cast Dinky cars, and the Japanese battery-operated toys. These items from the 1950's are themselves eagerly sought after by collectors who are willing to pay good prices for them.

The Colibri box.

As you will have surmised from all this, in that house, somewhere, would be musical boxes. In fact I reckon there must have been about seventy to eighty at a guess. The difficulty was in seeing them as they were kept stacked higgledy-piggledy in a smallish room surrounded by cabinets and showcases containing a variety of bygones ranging from Tompion pocket watches to a book full of autographed photographs of prominent Nazi prisoners of war.

Practically all the musical boxes were cylinder machines and I only remember seeing a 22inch Stella disc player. All shapes, sizes, makes and types of cylinder box seem to be represented but one could never see what was at the bottom of the pile. The box which really fascinated me was the one that is the subject of all this meandering.

John called it his "Bird Chanting Machine" and I had never seen anything like it (but then, until joining the Society I had led a very narrow life!). In general appearance this box was like any other medium size musical box—



cylinder, comb, ratchet winding handle, glass inner lid, and tune sheet. The difference being that, situated in the space immediately behind the cylinder, there was a tiny little bird. When the mechanism was released the bird would flap its wings, waggle its tail, and mime to the trills being played on the comb. The tune sheet was headed *Colibri*, which is apparently the French word for humming bird. The programme indicates five tunes marked *Chant No 1; Chant No 2;* and so on. The tunes are varied imitations of bird-song with plenty of trills thrown in for good measure. Whether or not they are true imitations of bird song I cannot say. One tune includes snatches of *Baa Baa Black Sheep* and another of the French tune *J'ai un bon tabac.*

No bass notes

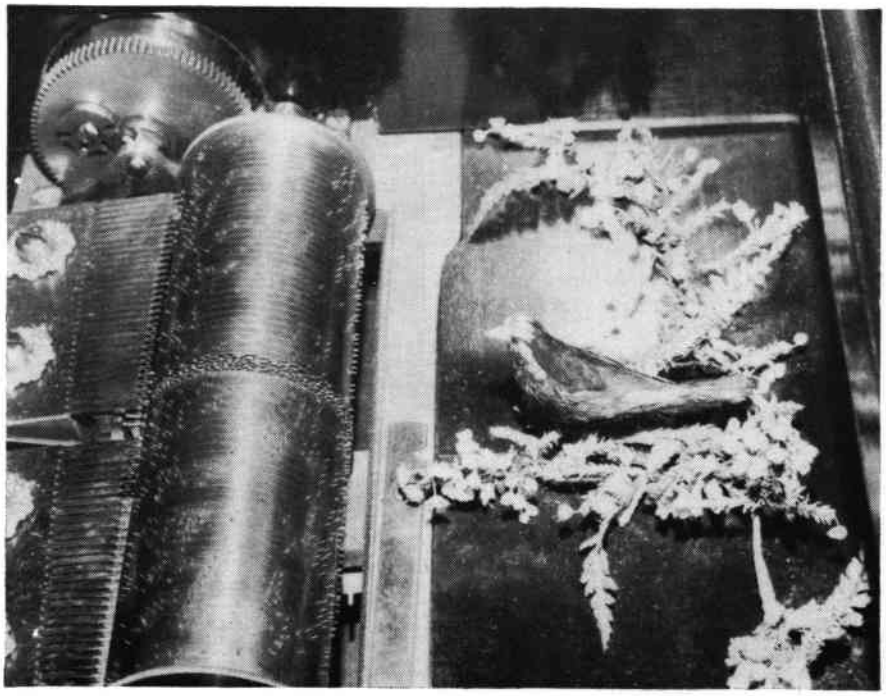
Naturally there are no base notes on the comb, which is really one comb divided in two so the tracker system which controls the bird movements may be operated by the organ-type pinning in the centre of the cylinder. One didn't need to be a great expert in the field of musical boxes to see that it was a Dawkins product — rosettes on the comb screws and the pins holding the tune sheet. The sphinx trademark was on the tune-sheet and stamped on the governor-bracket.

I tried to find out all about it but no one seemed to know of anything like it, apart from a musical box combined with a singing bird. So I wrote to our Hon Editor and he published my letter (*The Music Box,* Vol. 3, No 3, Autumn, 1967) with a footnote saying that he had heard of such an instrument and requesting me to obtain photographs for publication. The Millers agreed but stressed that they should remain anonymous (incidentally it was the Millers who kindly loaned to the Society their Guldman & Co 1902 Automatic Musical Instrument catalogue which was reproduced in its entirety in Vol 3, No 5 of the Easter 1968 edition of *The Music Box.*

A short description under the heading "Comb Bird Chant" along with four photographs appeared on page 239 of edition No 4 of Vol 3 (Christmas, 1967). No further information resulted. Whether there are any other such machines in the world we do not know—perhaps you may know of one? There is no doubt that it is quite a rarity.

The chance to buy

The Millers now, alas, are dead. They passed away in their eightieth years two years ago and their collection has been scattered over many auction houses. It was by chance I saw the "chanting machine" illustrated in Sotheby's Belgravia catalogue to be auctioned last December. By careful comparison of the photographs in *The Music Box* and their catalogue I satisfied myself that it was the very same article and set off to Belgravia with a pocketful of money, prepared to brave the competition of wealthy Continental bidders and even put up with the dreaded buyers' premium. I never thought that I would be able to be lucky enough to outbid everyone, but I did so and there are a couple of reasons which may explain why I had to pay far less than I anticipated. One was the fact that a couple of days later there was an important auction of automatic musical instruments being held which was destined to be well attended and probably, with this in mind, bidding was more cautious. The other reason seemed to be that many present were



under the impression that the bird ought to sing and that this part of the mechanism was missing. This was confirmed to me when one of our more prominent members came over to me after and said "I suppose you know the thing is faulty and that the bellows mechanism is missing ?".

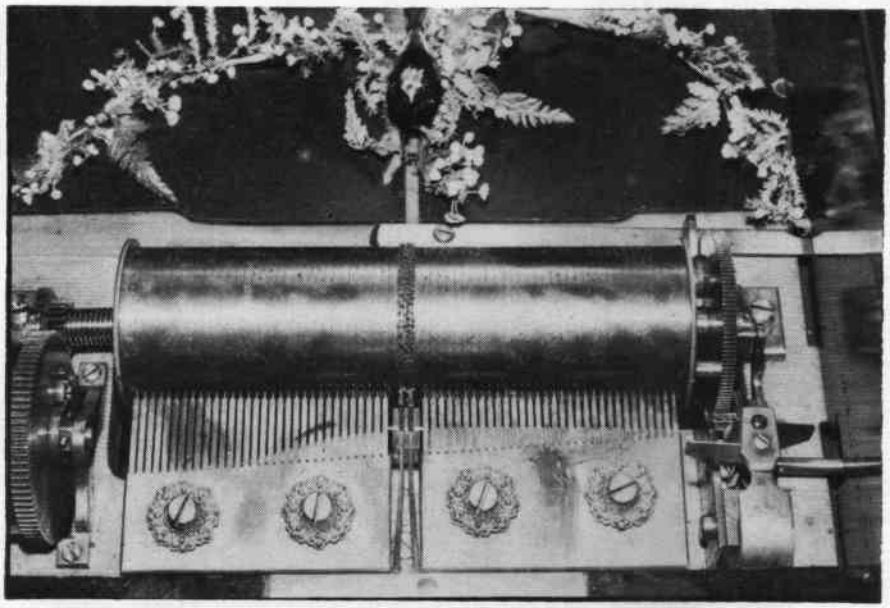
Editor's comment : Birds have always represented a fascination for Man and have taxed his powers of inventiveness since the pre-Christian era when automaton birds were first, allegedly, manufactured. Authenticity was striven for, but the very characteristics which give bird-song its strange beauty largely precluded its fidelity of reproduction until the invention of the Swanee whistle and its incorporation into miniature singing bird movements. This was because the majority of bird-song conforms not to the parameters of the accepted divisions of the octave and most of the best-loved birds sing songs devolved around quarter and fifth tones.

Many composers have sought to imitate bird-song in their writings and in particular have coveted the bird which Garstang in his book *Songs of the Birds* (1922) described as "the Beethoven of the birds"—the blackbird. In 1700 John Hamersley went as far as to publish a treatise on the subject with the monumental title *A Description of all the Musical Birds in the Kingdom . . . also several New Tunes made for Birds, and may be taught them by the Cantillo or Small Flageolet.*

On July 1, 1894, a paragraph in *Musical Opinion* proclaimed: "For the manufacturers of bird organs and musical automata with bird reeds, it will be interesting to learn that Dr Voigt, of Leipzig, has succeeded in reducing all the notes of wild birds to musical notation; so that it is now possible to reproduce in musical automata a perfectly accurate imitation of the song of any bird".

I feel that the operative word there is "reduce", for although many have successfully penned the *themes* of bird-song, it is another matter to reproduce it faithfully. The ear, happily, is a splendid liar and the non-conformist semitones of the bird's scale can be synthesized by rapid *glissando* passages.

This is just the characteristic which we find with the *Colibri*. Here we have two combs between them representing little more than an octave and two thirds (miniscule by normal musical box standards) upon which the cylinder pinning exacts a series of trills and runs. For the purest, this is no bird-song. Nevertheless, the *Colibri* stands as one of the most unusual



mutations of the cylinder musical box. Bird movements are provided by two central levers operated by bridges and pins in the centre of the cylinder between the two combs. The mechanism which is visible is exactly as found in a typical voix-celeste or organ box. The levers, however, depress control rods which move the beak, head, wings and tail of the gaudily-feathered bird. This has to be a bridge-operated movement rather than, say, a comb mechanism such as used for drum and bell linkages, because the bird movements must be relatively slow and sustained.

The *Colibri* is not to be confused with a type of orchestral box which did actually include a singing bird (piece à oiseau mecanique) or with a singing bird accompaniment. These incorporated a full and separate bird-song mechanism.

Who made the *Colibri* and when ? The style is that associated with the house of Dawkins in London — the cylinder has large bezels on each end, the comb has the large pressed gilded rosette washers and the cock is impressed with the lion mark. The tunesheet also displays the lion. My guess is that it is probably about 1870 - 1880 and it is Swiss (without doubt). Has any other member any comments to make or more information to offer ?

In this view, the proportions of the box can be appreciated. The same size as the average bell-box, the Colibri was probably less-complicated from the manufacturing point of view.

Society Affairs

Manchester Meeting

THE Winter Provincial Meeting of the Society was held at the Midland Hotel, Manchester, Lancashire, on Friday evening, Saturday and Sunday, December 5 - 7, 1967. The event was organised by committee member Alex Duman by whose efforts a most successful meeting was staged.

More than 100 members and guests assembled at this, one of the palatial hotels which marks the time when railways and their companies made money. Friday night proved to be an informal get-together with cocktails in a private room. Overseas members present included Hughes Ryder from New Jersey.

Saturday began with registration at 9.00 and the first talk of the day was given by Arthur Cunliffe on the musical box register he is trying to compile. The results so far form the basis of his article reproduced on page 170.

This was followed by a talk by Christopher Proudfoot, chairman of the City of London Photograph and Gramophone Society, whose talk "Acoustic gramophones from 1898 onwards" aroused considerable interest among many members who had not hitherto taken too kind a look at this instrument.

The lunch interval was followed by an illustrated talk by Claes Friberg on the Hupfield reproducing piano and the Mekanisk Musik Museum in Copenhagen, Denmark, of which he is a director.

Bruce Angrave then presented what was undoubtedly the most unusual talk we have ever had. Entitled "Water Music", the talk was presented entirely by tape and slides of Bruce's hilarious cartoons and the subject turned out to be his discovery of a new sort of mechanical music — the sound of lavatory flushes as recorded by him on a loo-phonic tour of France. Judging by the response which this created, a new interest is about to be initiated!

Christopher Proudfoot, who is also Christie's musical box auction expert, was persuaded to run our auction sale and an improvised rostrum was set up at the top table. In lieu of auctioneer's hammer, Christopher gamely made do with a beer bottle, although it took several lots to be sold before he mastered the correct and safest force to use in bringing the bottle down! Everyone entered into the spirit of the event and, thanks to Christopher's experience and wit, every lot was sold — even those which did not at first reach their reserves were persevered with until a mutually acceptable price was reached. The outcome was a total of £3,191, of which the society received ten per cent — an outstanding achievement by any standards.

The first-ever provincial musical box dinner followed complete with band, entertainer, singer and conjuror which Alex had laid on. Surprise turn of the evening came from member John Gresham, who turned out to be a professional fire-eater. He gave a convincing demonstration of a dragon and breathed fire no doubt to the consternation of the hotel staff.

The full programme for Sunday included member J L Hammond, who spoke on the definition of automata and produced some fascinating evidence on automaton devices of past times. He also showed extracts from a BBC colour film illustrating the writing automaton recently revealed to Western eyes. This is in the Palace of the People in Peking, and is apparently London-made although programmed to write with beautiful Eastern dexterity in Chinese.

Geoff Worrall, owner of a giant Komet disc musical box with non-original case, heard that both Komet and original case existed in Baden-Baden and so, although (he says) he had never been further afield than Bradford, he set off on a mammoth trip to Jan Brauers' museum to photograph and measure the cabinet. And all without knowing one word of German! This was the subject of his amus-

Pricey push-up piano-player

This fine specimen of the forerunner of the player-piano, the piano-player, was made by Aeolian and sold by The Orchestrelle Company, London. It plays full-scale or 88-note rolls. So far, piano-players, also known as push-ups, have not commanded much in the way of price. Average has been between £20 and £50. This one, in superb exterior condition, made a staggering £200 at Sotheby's Belgravia on December 2, 1975.

ing illustrated talk called *Tykey's Baden-Baden Museum Saga.*

Arthur Ord-Hume presented a slide and tape preview of the West Cornwall Museum of Mechanical Music, where the March provincial meeting is to take place.

In the absence of the President, who had to attend a prior professional engagement, and the Vice-President, the Editor expressed thanks to Alex Duman and Norman Brown for their joint hard work which had helped to make this such a successful meeting.

Newsletter publication stops

IT IS with regret that we have to record that committee members Alex Duman and Norman Brown, collectively known as "the Haggis Bashers", have decided that they must discontinue publication of *The Newsletter.*

As members know, Alex and Norman tried very hard to keep this light-hearted publication going but in recent months the support from members has declined sharply. On top of this, the latest in the chain of postage increases rendered the cost prohibitive.

It is not generally appreciated that the entire cost of production and mailing *The Newsletter* was borne by its two able editors. As each issue cost approximately £1,000 to publish, the size of the undertaking and its capital expenditure can be appreciated along with its economics. Originally it had been hoped that after a year or two, the members might be asked to pay for it by way of a further increase in subscriptions but in the light of the all-round cost escalations, this was deemed neither warranted nor feasible.

We express both grateful thanks and admiration to the sheer enthusiasm which has sustained *The Newsletter* so long, yet at the same time understand that its continuance was not to be in the present light.

Quad-spring long-player

The usual Longue-Marche musical movement has a very large wheel interposed between the spring motors and the cylinder drive pinion. Illustrated here by courtesy of Sotheby's Belgravia is a Monjon Manger & Co *Sublime-Harmonie-Longue-Marche* box which was sold in their December 2, 1975, sale for £950. This version features four spring barrels driving a central pinion on a layshaft which terminates as a large internal spur gear. This engages with the cylinder drive pinion. The tunesheet says: "This Musical Box is Guaranteed to Play Two and a Half Hours When Once Fully Wound Up" and gives a patent date of September, 1879. The patent referred to is British Patent 3711 dated September 16 and granted to Aubert & Son for extending the playing time of a musical movement. The box shown here has the usual MMC stamp on the cock. The endless has the cross-tee type of attachment for clamping the wings of the fly. The box is 37in (940mm) wide.

Now American International Galleries opens

A NEW company has been formed to handle the international sales activities operated by the Mekanisk Musik Museum in Copenhagen. Heading the company are Claes Friberg and Q David Bowers (both founder directors of the MMM), Terry Hathaway (former partner with David Bowers in the now-legendary Hathaway & Bowers company) and Bonnie Tekstra. It is called the American International Galleries.

The new company will specialise in the sale and display of both cylinder and disc musical boxes, reproducing pianos, fairground organs, orchestrions, automata and many other things.

In the past, in addition to having a fine display of instruments on permanent exhibition for the public, the Mekanisk Musik Museum has been one of the world's most active dealers in mechanical musical instruments. Now the addition of the AIG provides a truly international organisation with offices in both America and Europe. Large illustrated catalogues are to be issued from time to time along the lines of the former MMM publications.

The first announcement of the new company appears on page 234 and gives details of subscriptions to the catalogue. The European address of American International Galleries is Claes O Friberg, Vesterbrogade 150, DK-1620 Copenhagen V, Denmark, telephone 22-21-22. In America, the AIG can be reached at 1717A Stanford Street, Santa Monica, California 90404, telephone (213) 828-2886.

Fair organ talks

ERIC COCKAYNE, author of *The Fairground Organ,* is giving a series of six talks on mechanical musical instruments based on exhibits in the St Albans Organ Museum. The talks will be at the St Albans College of Further Education on Wednesday evenings at 7.30 beginning on May 19th. Members who would like to attend should telephone Mrs S Bond for details at St Albans 51152.

Important Announcement : The Mekanisk Musik Museum, Copenhagen, Denmark presents

A Great New Expanded Service for Collectors and Dealers in

AUTOMATIC MUSICAL INSTRUMENTS

— the world's largest selection —

In just a few years the Mekanisk Musik Museum has grown to be Europe's largest source for everything in the line of automatic musical instruments. The business, however, was not only limited to Europe and within the past few months we have been sending shipments to as many as 20 different countries.

We have therefore taken a new big step forward and have formed AMERICAN INTERNATIONAL GALLERIES, Inc. in Santa Monica, California. The new firm will continue the usual activities of the Mekanisk Musik Museum and will also incorporate the present business of Terry Hathaway at 1717A Stanford Street where now the complete American operation will be under one roof.

The Mekanisk Musik Museum in Denmark, managed by Claes O. Friberg, will still be serving all of our many European (and "near-European") customers but with the great advantage that now even more instruments will be available to choose from — not only from our stock in Copenhagen, but we have also set up easy facilities for quick and efficient imports of attractive instruments from the U.S.A. directly to our European collectors and dealers.

AMERICAN INTERNATIONAL GALLERIES is formed and owned by Bonnie Tekstra who takes care of the daily management of our U.S.A. office, Claes O. Friberg who is in charge of the office at the MMM in Denmark, Q. David Bowers who acts as secretary and advertising manager, and Terry Hathaway who's technical expertise will be available for our customers.

The Mekanisk Musik Museum, which is also one of Denmark's leading tourist attractions, will continue as a museum with its famous guided tours and changing exhibitions. Instrument sales to our European customers and all correspondence will, as usual, be carried on by Claes O. Friberg, but in the future all catalogs will be issued in the U.S.A. and sent from there directly to all our customers.

The first catalog will be issued by AMERICAN INTERNATIONAL GALLERIES early in 1976 including a large variety of music boxes, nickelodeons, fairground organs, reproducing pianos, orchestrions, and so on. Those currently subscribing to the MMM catalogs will receive this and future issues as part of their subscription. Others can send $2 (or DM?FR?HFL 5,00 or an equivalent amount in other currencies) for a copy or $10 (or equivalent) for a subscription to the next six issues.

AMERICAN INTERNATIONAL GALLERIES will be your future source for all types of automatic musical instruments. Whatever type of instrument you are interested in write to us here in Denmark. There is a good chance that we have just the right thing for you — either here or in the U.S.A. We will have shipments coming between the U.S.A. and Europe constantly, so ordering from us is easy and efficient. Also, if you have something to sell — a single piece or an entire collection — think of AMERICAN INTERNATIONAL GALLERIES.

We welcome all of our many friends and members of the Mekanisk Musik Museum family to AMERICAN INTERNATIONAL GALLERIES. To those who are not yet acquainted with us we can just say: send us your order for the coming catalog. There is a money back guarantee if you are not 100% satisfied, so you can only win by getting to know us.

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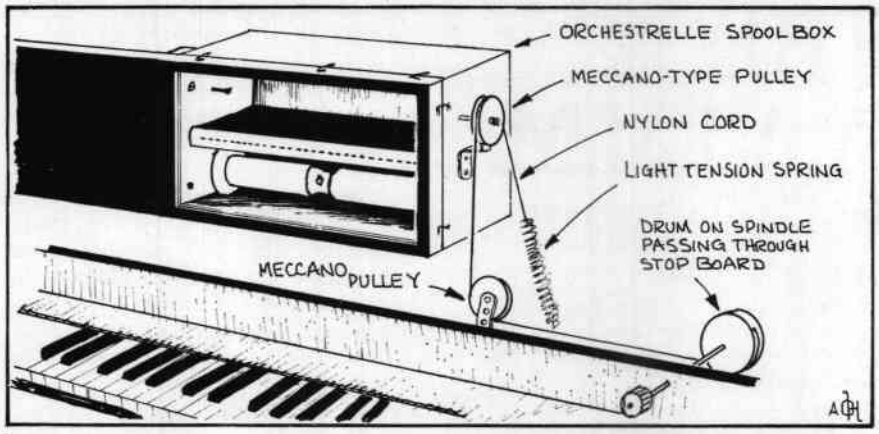
ORTAD

by Geoff Worrall



MANY 65 and 88-note tracker bars were never fitted with any form of roll adjusting device. It was assumed in the late 1890s and early 1900s that the paper from which music rolls was made would never distort and would always track perfectly. Whether they did behave in this manner when new, I cannot say but certainly after 70 years or so, it seems too much to ask of them to perform this pre-requisite of proper playing.

Conscious of this shortcoming and equally aware of the fact that most of the time when playing a roll-playing instrument, the adjusting screws for the spool ends are inaccessible, I have devised a simple system which anyone can make from bits of Meccano or any other odd parts that fit the bill. This enables rolls with slight distortion to be corrected from outside the case and although the prototype has been made for my own Aeolian Orchestrelle Model V, it could be used for similar instruments that have pressure-operated spool boxes and no tracking arrangements.

You can, of course, take the fronts off the instruments and fiddle with the adjusting screws, but now ORTAD (Orchestrelle Roll Tracking Alignment Device) does this for you without embarrassment.

All it consists of is a small pulley—I use a one-inch Meccano light pulley—drilled out to ¼inch and fastened by a small dab of glue in place of the locknut that fixes the lateral top right-hand spool holder. Then, by means of a short piece of nylon cord fastened to the base at one end with a small coil spring (this wants to be a light spring or an elastic band will do), it is then passed over a jockey pulley to a one-inch diameter drum (a cotton reel if you have one) glued on to the end of a length of Meccano rod passing through a tight-fitting ⅛inch diameter hole drilled in the stop board at the end as shown in the sketch.

A knurled knob (I use a Meccano gear pinion) on the protruding end of the shaft enables the shaft to be adjusted remotely up to about ¼inch in either direction which gives about ⅛inch adjustment on the roll at the tracker bar. If you want to be really sophisticated, the two right-hand upper and lower shafts could be connected together so that the roll shifts evenly from side to side, but I did not find this necessary.

THE A.A.I.M.M.

by Claude Marchal

THE initials AAIMM stand for Association des amis des Instruments et de la Musique Mécanique which translates as the Association of the Friends of the Instruments and of Mechanical Music.

Our new French-speaking association all started because friends told me that I should not keep purely for my own entertainment and interest some of the instruments in my collection such as my Steinway Duo-Art or Hupfeld Violina, but should show them with other mechanical musical instruments to as many people as possible. The outcome of this was the MMMM — Marchal Museum of Mechanical Music. We do not have any proper museum premises in which to greet many visitors yet and for the time being the museum is still in my house and is open for private visits by appointment only.

To help the MMMM, we decided to start an association of people interested in these instruments, but this first idea was almost abandoned and the association began almost like the existing ones in the UK and in the United States; that is to say that we have got together as a group of collectors of these instruments.

At our first meeting, held last June (1975) at Le Vesinet in my home, we had more than 40 enthusiasts. The purpose of our association has no direct connection with the MMMM. We will try to meet several times in a year at my home to hold mechanical musical events and the immediate plan is to spread the idea of our existence and objects. Our goal is to gather together all interested persons in French-speaking countries — Switzerland, Belgium, Quebec (Canada) and France. Already we have 100 members.

Whereas we know that, for example, in the United States there are separate societies or associations for the collectors of musical boxes, player pianos, gramophones and automata, we are trying to create one association to encompass the entire subject. Later, perhaps, it may be necessary to divide into sections.

We are trying to keep the membership fees very low so that we can get interested all the young collectors, especially those in the field of gramophones because we think that they (the young collectors) are our future!

We hope that with the help of some dealers in mechanical musical instruments we will be able to have a good magazine appearing twice in the first year plus many circular letters as the need demands. Our first magazine is planned to appear very shortly.

Our second meeting was held during October, 1975, in Lyon where 70 people attended a two-day (Saturday - Sunday) gathering. We had two fine meals with this event, one at Ducloux in Tournus and the other at Paul Boluse in Lyon, both places famous for their stars in the Michelin Guide and for their wonderful organs which play fantastically well. During the meeting we were also greeted by Marc Fournier, of Vienne, 30 kilometres south of Lyon, who showed us his collection of fair organs by Gavioli, Mortier, Limonaire, Gaudin and others. We were also shown a nice collection of gramophones and disc musical boxes owned by Mr Decoret, of Lyon, and were welcomed into the home of Paul Gendre, where we could admire old musical boxes and automata of great interest.

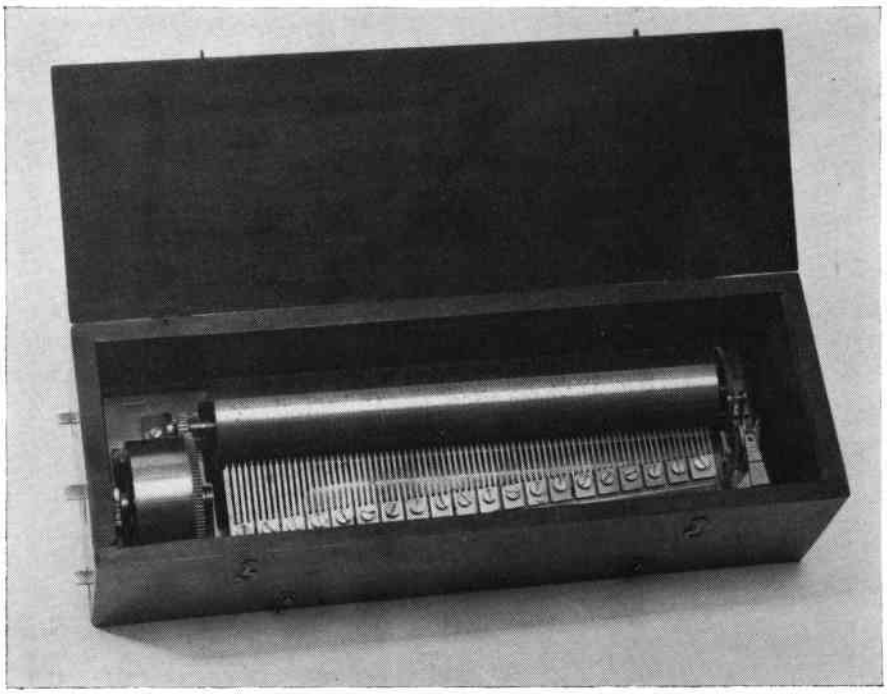
We are all now looking forward to the next meeting which will be held in Brussels at Easter and probably also in Utrecht. Our Vice-President, Fredy Baud, of L'Auberson, Ste Croix, Switzerland, is already planning a big meeting for 1977!

There is also a big idea for a world federation of all the mechanical music associations with a world congress. Monaco, with its fine museum of automata, is offering to greet such a conference this June.

We thank very sincerely our elder sister associations in the United Kingdom and in the United States who have offered help to us in order that we may start our French-speaking association. We will be translating some of their articles for our members and will call upon them for advice to our mutual benefit.

Details of the AAIMM as well as membership enquiries from French-speaking enthusiasts should be sent to Claude Marchal, 3, rue Gaston-de-Casteran, F 78110 Le Vesinet, France. This is also the sole address of both the MMMM and the AAIMM.

Wire-hinged Nicole key-winder



This fine specimen of an early key-winder is from Keith Harding. Characteristics are the flapless left end, the wire lid hinges and plain catches, the small screws securing the movement into the case, and the cut-back right-hand motor bridge. Measuring 13⅜in by 4½in by 3½in, the box bears the stamp of F Nicole in 1/16in high letters in the top left-hand corner of the bedplate. The number is 8644 and in front of the comb at the right is the number 2662. The comb comprises 19 groups of four teeth and one group of five teeth.

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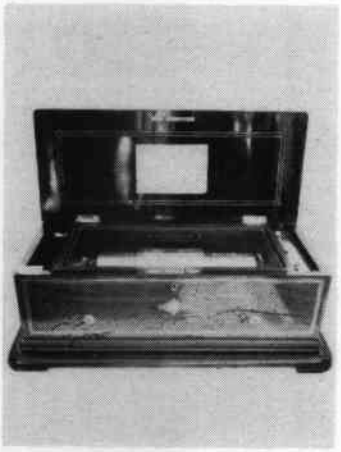

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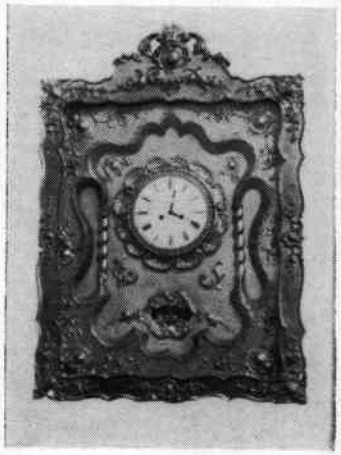

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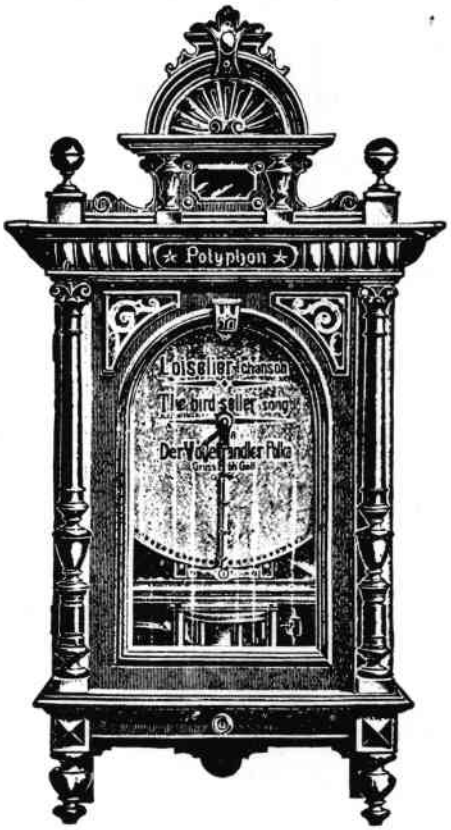
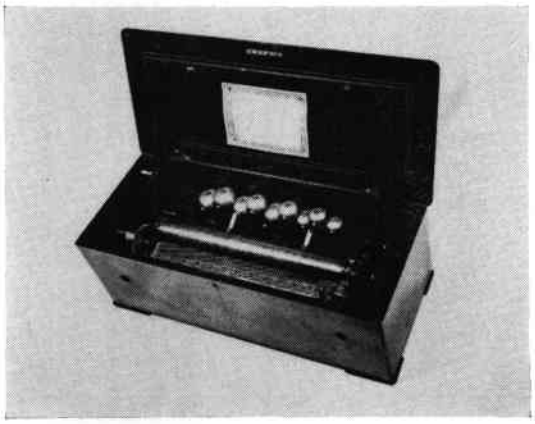


at the Pulborough Salerooms



This late 19th century musical box, playing 12 airs on the cylinder and nine bells, in a walnut case with rosewood crossbanding, 28", was recently sold for £380.

Specialist Sales devoted to Musical Boxes, Polyphons, Phonographs, Clocks, Watches, Scientific Instruments, etc., are held every nine weeks.

Illustrated Catalogues 80p (£1 by post) of our next sale on April 7th are available from King and Chasemore, Fine Art Dept., Pulborough, Sussex. Tel : 079 82 (2081).

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Loose comb can be identified by "Fish-tail" tips, 23 teeth per 2". Entire comb 7⅜" long by 2⅜" wide. Six screw holes.

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Letters to the Editor

George Worswick writes from Bardney, Lincoln:

ON THE last page of Vol 6, No 6, K G Parrott enquires about the markings on the underside of combs. As no answer has so far appeared, perhaps I should answer his query.

Brass bases of combs are usually marked with at least octave division lines, but sometimes further assistance is given to the tooth-replacer by the following: every batch of teeth tuned to the same pitch is marked by a division line and tuning according to what we know as the "tonic sol-fa" system. Being of Continental origin, *doh* becomes "ut", and the scale is "ut", "re", or "r", "mi" or "m", "fa" or "f", "sol" or "o", "la" or "l", "si" or "s" and on to "ut" again. *Always* scratched in script, not printed, and only on the section accessible when the tuning weights are fitted. In between these basic notes exist sharps and flats which are always marked as sharps, though sometimes unmarked. Even more help is sometimes available. Conchon combs are usually numbered in the sequence 1, 2, 3, 4, 5, 6, 7, 1 . . ., the sharps being indicated by the punch being used sideways, and vertically for the naturals. (Personally, I have never seen a comb with a flat marked as such). I should add that the bonus is that the number is also usually applied to the leads, probably before tuning as sometimes the mark has been almost removed by tuning.

There are pitfalls; "ut" is not *always* the tonic of any music played by the box. Assuming one is tuning in the mean-tone system, there is no help with deciding whether to tune to the sharp of the preceding note or the flat of the following note, and this has to be determined by analysis of the entire music programme. Due to enharmonic changes, it *may* be necessary to tune to the equal temperament system, but this is most undesirable unless these changes do in fact occur. This is the modern "compromise" system which enables enharmonic changes to be made with no loss of quality, though the result is that the tuning is then *all* imperfect, but modern ears have come to accept the imperfection as non-existent, probably due to the popularity of the fixed pitch instruments such as the piano, though the attractions of the violin and the human voice are in part due to the performers using perfect intervals.

Sometimes a further mark is present: an arrow pointing to the gap between two treble teeth. This marks the end of feather dampers.

A note re Nicole Freres combs. Sometimes they are marked with just octave divisions, sometimes with batching and sol-fa scratch marks. The criterion appears to be that proper marking was used only on (a) large movements, (b) interchangeable cylinder boxes, and a further category which I would describe as "made-to-order" boxes. This rule is certainly not always true, but likely.

Warning regarding tuning: comb must be clamped *rigidly*. Dampers must be fitted. But the greatest danger is doing any tuning at all unless you know what you are doing, though this applies really to the act of tuning by removing comb steel. Leads are easily replaced, but try adding steel to a tooth!

L W Tew Cragg writes from Enfield, Middlesex:

I WOULD like to point out a series of idiosyncrasies in Ken Fritz's article "From Mainspring to Governor", Autumn, 1975.

Page 104 Column 2: He writes "These established ratio are: B : C = 3·727 : 1. This means the spring barrel (B) turns 3·727 times to 1 turn of the cylinder (C). The ratio should be written B : C = 1 : 3·727", which is the converse of the above statement.

Column 3: We have the statement: "When you recall that the mainspring barrel revolves eight times for eight tunes". Unlikely?

Page 105 Column 1: When listing the frictional values in a musical box I would have expected to find three extra and significant considerations: 1, Mainspring coil to coil friction; 2, Spring motor bearings; 3, Cylinder bearings.

Column 2: When the author is considering increasing the spring thickness why did he choose to use ·020inch thick material, increasing to ·023inch by his suggested method when originally he stated that ·028inch thickness was being considered?

Column 3: He is now back to considering ·028inch thickness but does not add the percentage increase in thickness considered earlier in column 2.

The second formula given at this stage is incorrect and does not produce the answer given.

The third formula is also incorrect and further is not written out logically.

Page 109 Column 1: In the final paragraph we have "let us examine the power ratios for ONE turn and for eight turns, etc., etc.". I could not find the considerations for eight turns.

Column 2: Here it is stated:
B to turn once
C to turn 3·727 times, etc., etc.
so finally I = 4487·3 + 2·5 = 1794

This should read I = 4487·3 ÷ 2·5 = 1794. (I shall need to return to this paragraph.)

Page 110 Column 1: The calculation given

$$\frac{5{\cdot}892}{3{\cdot}92} = {\cdot}150$$

This should be

$$\frac{5{\cdot}892}{39{\cdot}2} = {\cdot}150$$

so also, I do not see the significance of the italics "at the cylinder surface".

I believe the author is considering TIME here, and therefore it is constant at the cylinder surface and the ends of the pins, the difference is velocity, if all points are revolving about a common centre.

Column 3: We are given "I = 1794 time periods when the barrel makes one complete revolution". We only want 500 times periods for I then: 1794 ÷ 500 = 3·6.

But 1794 was arrived at by considering 3·727 turns of C (see page 109 column 2). In the previous column we are given 500 time periods for 1 turn of the cylinder. Therefore perhaps the calculation should read: 1794 ÷ 3·727 = 481·3, and 481·3 ÷ 500 = 0·96.

The author's calculation at this stage only gives an approximation of the spring barrel to cylinder ratio.

I believe Mr Fritz had got himself into a bit of a technical "loop" to put it into computer terms. This can be easily shown by simple substitution of the given values, as I have shown in part above.

OBITUARY David Smith of Takeley

THE society lost one of its most interesting early members at the end of last year with the passing of David Smith of Takeley, Bishop's Stortford. Born in 1904, David Smith soon established a close association with the Church and on his retirement from his profession as master builder, devoted himself to his hobby of barrel organs, street pianos and organettes for which he was a noted arranger of new music. The editor recalls evenings spent in the barnlike building behind his modest home where he spent so many happy hours restoring the instruments he loved. David Smith was also a not unfamiliar figure in the Portobello Road until about eight years ago. Always on the lookout for "something useful", his cheerful manner and old cloth cap will be missed by many of our older members.

Richard Smith has specially requested to accede to his late brother's membership number — a wish already granted—and writes as follows:

Having been a churchwarden for over 30 years, David Smith had the opportunity of getting to know the late Canon Wintle, late of Hartest, at ecclesiastical meetings at Chelmsford. From the beginning he interested himself in street pianos, Canon Wintle teaching him how to pin the barrels and repair the pianos. Later David repaired and cut out the music for organettes. He willingly showed anyone interested how to cut the music but he often said that many would start but few would complete the instruction.

Someone who could not play a note of music on the piano but could transcribe the music onto barrels and paper strips, this was David. As the family doctor once said after he had heard a "tremolo" my brother had built: "You amaze me, David".

RES

Roger Booty writes from Ingatestone, Essex :

THE post produced on Christmas Eve what must be the best-timed delivery of *The Music Box*. What better Christmas present is there! But, oh! The clanger on page 149! Written by one of the few people in the society who know a Celestina from a Seraphone, surely you must realise your mistake with the piece on the Gem Roller Organ. The photo reproduced is of a Cabinet Roller Organ minus its case.

This photo along with one of the complete organ was reproduced with an article by J P Hall on page 184 of Vol 2 of *The Music Box*. Surely also credit for the photograph should have been given to the *Westmorland Gazette* as it was in the original article.

The rest of the magazine is right up to standard and I know it is unusual for mistakes as bad as this to creep in but I felt I must write.

Editor's comment : *Mr Booty is, of course, perfectly correct in all that he says. In truth there was to be another item on that page but at the last moment it had not arrived. Having in stock the old block back from the days when Gilchrist Brothers used to print our half-tone inserts, I used it because it fitted. The text was dreamed up in haste and, regrettably, was not all that it should have been. My apologies in particular to J P Hall and to the newspaper concerned.*

Peter Dobbs writes from Croydon, Surrey :

MY initiation into the world of the cylinder music box occurred quite suddenly in April last year. Early one morning at a Sunday street market near Shoreditch, London, I came across a derelict orange-coloured tin with a rusted and faded transfer pattern in an equally dilapidated shop. On inspection, this small tin contained a small musical movement. My knowledge of musical boxes at that time was virtually nil, but I had read at some time or another sufficient to recognise the name F Nicole impressed on the comb. I knew that Freres Nicole impressed on the brass bedplate meant that at one time this had been a good box and hence, by quick negotiation, I had the asking price reduced from the original of £20 to £15 and walked away the happy new owner. My very good fortune continued as at a nearby backstreet jewellers shop they supplied me with an antique key of the right style which fitted for only fifty pence.

My initial euphoria was soon shattered ! Close inspection at home showed that in addition to some missing screws, the box was without an endless screw, Geneva stop, cylinder bridge and four treble teeth. Everyone told me that I could never expect to get it repaired.

However, in its favour, the beautiful fine comb of over eighty teeth, and the fact that it was an early Nicole from the serial No 11955 (circa 1835), satisfied me that, despite all, I had found a bargain.

My search for a repairer eventually brought me in touch with the Musical Box Society and I was referred to David Tallis who I believe took pity on me and put me in touch with a skilled clock restorer and ex-member, William Galbraith. He has now done a super job of remaking the missing parts. The box is now working although it is slightly out of register. I hope to have this corrected together with the repair of the teeth in due course.

The photograph gives a fairly good idea of its appearance. The tin container is original and has a transfer floral pattern around the sides and a picture of what appears to be a castle on the lid. On the bedplate has been scratched "F White 29 August 1844" and there is another unreadable signature dated 1839. My guess is that these are the signatures of bygone repairers. The gamme number shown on the side of the cylinder is 527. The cylinder is pinned for two tunes. Has anyone any idea from this number what tunes are on the box? Scratched on the inside gold paintwork of the lid is 2759. I have no idea what this means.

Anyway, this box was the start! Nine months later I have a membership number of 933, a depleted bank balance, three Nicoles (two of them key-wound), a Lecoultre (key-wound), a Berens Blumberg (key-wound), a large 12-air Swiss box and two others together with no regrets and the sincere hope that, apart from providing pleasure, musical boxes like many other antiques represent an excellent hedge against inflation. Somehow I think they do.

Jesse Lippincott, Jr, writes from Haddonfield, New Jersey :

REGARDING your classified advertisement in the Christmas, 1975, issue of *The Music Box*, in October of 1966 I purchased from Mrs Bornand a Paillard interchangeable-cylinder box, No 63452. There were four cylinders with this box and a folder which contains the four tune-sheets. The cylinder numbers, incidentally, are numbers 38, 55, 57 and 73.

The inside of the cover of the tune-sheet folder bears the following information :

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The cylinders are 7½inches long with arbor and handle at each end. Each plays six tunes. The comb has 57 teeth.

John White writes from Dublin :

I HAVE just completed the restoration of a Stella 17¼inch of which I am rather proud — I got the remains from a manure heap — crown wheel stripped — all dampers rotten, no box — no winding mechanism — one spring broken. 19 star wheel suspension springs rusted away, the 14 pressure wheels rusted out of shape; 44 of the star wheels broken or rusted — the two combs fairly rusted but in such a way that one comb was rusted in places where the other was not. Anyway — to cut a long story short, the Stella is now working very well and the combination of one rather dead note and one crisp note gives the box a very pleasing tone. The combs still need some tuning, so if anyone has the 17¼inch Stella scale I will put the finishing touches. I got a loan of another Stella from Philip Smyly, but his Stella is also out of tune and appears to be tuned to a different scale than mine. Both machines play the same discs: was this practice usual or is it something that might occur over a number of years? His Stella is numbered in the 1400, mine is later and is S252.

At the auction in Manchester I picked up a 9½inch Harmonia without motor but am now well under way making a replacement. It won't look like the original as I have never seen one, but it should play. If anyone has the tuning scale for this I would also be most grateful—there are six teeth broken and no indication of teeth groups or octave markings.

Thomas A Wade writes from Glendale, Ohio :

WHY not, at the Society's general meetings, tape the technical talks and put them on cassettes to be made available to all members? It would be great for the overseas members and the Society could make itself some money on it.

Editor's Comment : At one time we used to do just this, but now that most speakers make fullest use of visual and audio aids — slides, film, displays, sketches — the only viable system would be video and that's not yet a feasible proposition. However, it is a thought well worth bearing in mind and perhaps we can get some speakers to make special cassette talks which could be made available for provincial meetings, chapter meetings or just a private gathering of members. Your Committee will give it some thought.

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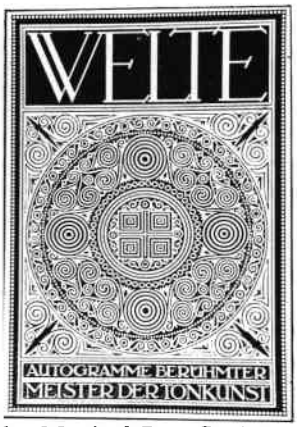

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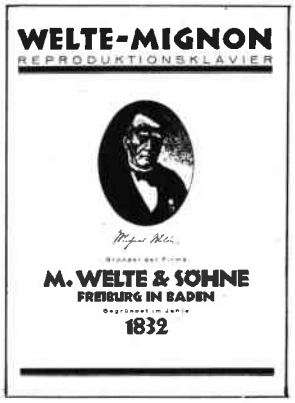

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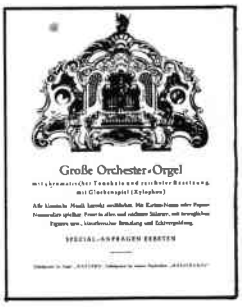


WERNER BAUS

Director of the Mechanisches Musik Museum, 3501 Fuldatal 2,
Hopfenbergweg 32, Germany
Telephone : (0561) 811412/812951

David Burke writes from Orlando, Florida:

BRAVO to your editorial in issue No. 3 (page 85). For quite a long time I've felt as you have, that we collectors have a mandate in keeping our instruments as original as can be feasibly done.

All too many times I've seen conversions that were done just for the reason "So it can make more money". I sympathize with owners of public attractions who want to earn extra income with coin-operated instruments, but I feel that those instruments not originally equipped to be "Nickel Grabbers" ought to be left as their makers intended. One owner told me he converted his Belgian fair organ from book to Wurlitzer 165 music, because its European tunes were unfamiliar to the patrons, and thus not earning its keep. Mr. X went on to say that after its conversion, it brought in much more money than it would have otherwise. This may be well and good, but why at the expense of making a musical abortion out of the organ?

I feel there are two sides to this controversy, though. The organs, orchestrions, and other pneumatic instruments which have been professionally converted, even to Wurlitzer and Artizan rolls should be left as is, since it is almost impractical to remake new keyframes, and major components. What I suggest, is to arrange new rolls for the converted systems, so that they can use as much of the original gamme as possible. For those owners who are considering "remodelling" large instruments, please realize that what you'll be doing will be undoing what someone probably more knowledgeable than you created in the first place. After all, we want future generations to hear these marvellous works of art perform as their builders originally intended.

The Editor has received what he assumes to be a somewhat facetious communication from member J A Horngacher vilifying him over his comments concerning the quoted provenance of material used in the bulletin of the recently-formed Swiss musical box group (page 152). It is understood that this letter has also reached certain other members who have received it with an equal measure of surprise.

In view of the bizarre and petty situation which has arisen, it seems necessary to spell out the fact that the questioned data, which is some of the history of the Gloria musical box, first appeared in *The Music Box* and in a book called *Clockwork Music*, both of which sources were quoted, with full permission and agreement, by member Q David Bowers in his *Encyclopedia*, published subsequently. The point made was that a serious researcher would have been expected to quote from origination rather than just his latest reference.

The editor, with the backing of the Executive Committee, unflinchingly stands by his comments and suggests that the Mr Horngacher now chooses to reappraise the words on page 152 plus his own words and his sources. Out of magnaminity, the editor waives the formality of awaiting an apology, and closes the matter.

Book Reviews

MUZIEK OP ROLLETJES, *by Dr Jan Jaap Haspels. Available from the Nationaal Museum van Speeldoos tot Pierement, Achter den Dom 12, Utrecht, Holland. 32pp, 5½ins (140mm) by 7½ins (190mm), illustrated (mostly in full colour), paper covers, fl. 4·75 (£1·20 post free).*

As one might deduce, this book is in Dutch and the title, a linguistic twister, loosely translates as "music on rolls". Essentially a popular guide to mechanical music, Dr Haspels' book is beautifully illustrated in the main with instruments from the Utrecht museum and includes a picture of Anselmo Gavioli posing in 1900 with one of his 89-key organs.

But aside from the necessarily brief historical account of its subject, the book serves to highlight the importance of the Netherlands in mechanical music where carillons were perfected and show organs blossomed — a dual field which makes Holland world renowned.

A more serious note is struck in an empassioned plea for action by the Dutch government to prevent the export of organs. "The true Dutch instruments are being sold out of our country", writes Dr Haspels. "Experience shows that this inevitably means the organ is doomed to death either by lack of knowledge or by climatic change. Through a short-coming in legislation, our law system actually encourages these exports in the belief that we are correct in sending a little bit of Holland abroad."

In a resounding plea for the changing of the law that has allowed instruments to be sold not just in Europe but to places as far afield as Australia and America, Dr Haspels continues: "The most important aim of the Nederlandse Kring van Draaiorgelvrienden (a society of street organ enthusiasts) and the National Museum is not only to expose these instruments to the public and to play them but to preserve them in our own country."

Certainly even as near to Holland as England, those Dutch instruments in the hands of UK collectors are seldom maintained anywhere near the perfection found in their native land, and the special techniques of tuning do not, it seems, travel.

All told, this is a very presentable little book, even if only for the 18 illustrations plus the attractive cover picture. I understand that a large number of copies have been distributed free to the officials of the Dutch government and it is to be hoped, for the sake of the organs if not for Holland as well, that this rich seed falls not upon stoney ground. A O-H

MUSICA MECHANICA. *"Tiroler Lied gevarieerd door Mozart." 16pp, A4 size, illustrated. J A H Wagenaar, Utrecht, Holland.*

The Music Box does not normally "review" sheet music for this has little to do with mechanical instruments other than in interpretational studies. In this case, however, the normal process of musical production is reversed; hence the validity of this present review.

In 1967, the Nationaal Museum van Speeldoos tot Pierement in Utrecht was presented by Freule C J Six with a small barrel organ. Freule Six is a descendant of the Jan Six who was painted by Rembrandt. This mechanical organ outwardly appears nothing unusual — indeed the case is a closed white-painted cupboard which would not be out of place in use as a clothes closet or even broom-cupboard. But inside is an instrument hand-crafted by the Dutchman who, in the opinion of the present reviewer, has recently emerged as one of the richest master-craftsmen builders of mechanical organs — Diederick Nicolaas Winkel of Amsterdam. The numerous truly unique features of this organ were described and illustrated on pages 486-492 of Vol 6 of *The Music Box.*

But of much wider musicological concern is the music pinned on one of the barrels surviving with the instrument. Much controversy has surrounded this barrel which bears the hand-written legend on its end: *Tiroler Lied gevarieed door Mozart* — Tyrolienne with variations by Mozart.

The discovery of what was to all intents and purposes a hitherto unknown composition by Mozart caused some raised eyebrows amongst musical experts across Europe, especially when the date of the organ — 1819 — was mentioned. However, a logical process of musical analysis suggested that although there was no clear indication as to *which* Mozart, senior or junior, composed the music, it had been written in the Mozartian style and, furthermore, written for the barrel organ. Both Leopold Mozart and Wolfgang Amadeus

Mozart were experienced in this medium and a logical elimination suggested that if one or the other of the Mozarts did not write it, it was unlikely that the master who contrived such splendid Mozartian variations should have remained unknown.

The present reviewer was the author of a paper on this several years ago and subsequently broadcast the piece by courtesy of the Nationaal Museum. He also suggested that a musical transcription should be made since the barrel pinning was in virtually perfect condition.

The long and arduous process of converting mechanical notation into conventional staff notation was undertaken by Gert Oost of Amsterdam, who most faithfully has transcribed the music, even though it is blatantly impossible to perform manually in the manner which the Winkel organ plays it—there are several places where the fingers of both hands will hardly suffice.

The tune, one familiar to almost all musical box collectors as a melody frequently found on snuff-boxes, is set in the key of D major. After the simple statement of the air, four variations follow in the same key. Then comes one in D minor modulating to F major. B flat major forms the key of the penultimate variation which reverts to D major for the final version which concludes with a superb and exhilerating cadenza. The piece as performed on the Winkel organ is contained in the record *Speeldoos tot Pierement* on Phonogram (Philips) 6810 218 (see review on page 370 of Volume 6).

So here we have something very unusual—a notation taken from a barrel organ. The first half of this commendable publication comprises an illustrated text on the organ, how it came to be made, brief notes on its builder, some interesting conclusions as to the authenticity of the provenance and a few necessarily guarded notes on how it might be performed by a non-automatic player. All this is in three languages — Dutch, German and English. The notation follows. Perhaps Mr Oost has elected wisely to omit the addition of a metronome marking (and the metronome was another Winkel invention!) for this would surely deter many would-be performers and deprive them of some charming music. A O-H

Fractured-spring Stella

by John White

The restoration of this 17¼ inch box is described in the letter on page 200.

THE Stella spring is 1¾inches wide and ·030inch thick. One of a pair of springs, which, although protected by Geneva stop work, underwent multiple fracture into 12 pieces. The other spring appears to be in good condition. Both springs were much in need of greasing — the broken one being much dryer than the surviving one.

Detailed examination revealed a profile of eight sequential fractures, each showing a close similarity to the adjacent fracture, suggesting that the phenomenon of multiple fracture is caused from the shock wave produced in the first break travelling through the consecutive layers with sufficient force to initiate another break in

the next layer. If this were not the case, the shape of consecutive fracture lines would not be so similar.

An old spring is more likely to undergo multiple fracture only because the surfaces being worn and devoid of grease and more likely to be in intimate contact and not because of any weakness in the material of the spring. Even a very thin layer of grease on the surface will be sufficient to attenuate the shock wave produced in one break to such an extent that there will be insufficient force remaining to produce another fracture in the next layer.

The velocity of the shock wave would be as high or higher than the velocity of sound in steel (a shear wave in hardened steel has a velocity of about 3,000 metres/sec) so that the entire fracturing process could be completed in around 3 micro seconds. In other words, the fracturing process would be completed long before the spring had time to fly apart. The forces involved are considerable and much greater than, say, a full swing of a woodsman's axe.

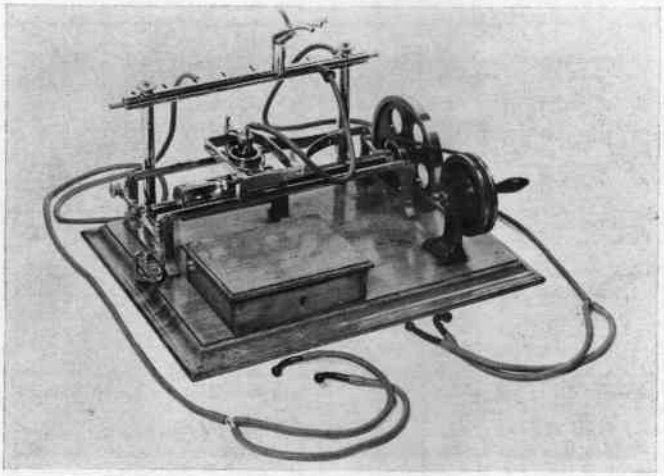
PHONODDITY...

THIS highly unorthodox phonograph has so far eluded identification and, in my opinion, it is unlikely that we will ever find a name for it. It is beautifully made and was probably the work of an instrument-maker or engineer, to a client's special order. The reproducer and the mandrel are apparently standard Edison components of the early 1890s, and I feel the design of the hand-drive must have been inspired by the early Graphophones, some of which had a rather similar arrangement.

Various power-sources were used for phonographs at this time, including treadles, water-pressure and electricity. A splendid clockwork motor was designed by an English schoolmaster (Greenhill) and made by William Fitch, but it was not until the middle 1890s that spring-driven models started to appear from the Edison and Columbia factories. For a travelling showman (who may well have been the original owner of this machine) a manual drive would have been the most portable and reliable.

There are take-off points for eleven hearing-tubes, suggesting a cricket or football team as the users — but there is little point in idle speculation and I can only hope that someone will be able to identify this apparently unique machine. It is included in the May 19th Mechanical Music sale at Christie's, South Kensington.

Christopher Proudfoot



Hannover's third Karussell- und Drehorgelfestival fixed for May

Biggest meeting yet is planned for organ enthusiasts in Europe

THE first and second Merry-go-Round and Barrel-Organ Festivals took place in Hannover in 1974 and 1975. At these interesting meetings, collectors and enthusiasts for these gradually disappearing mechanical musical instruments came from all parts of the world to listen to their play.

And now in 1976 the third festival will be held in a larger setting. In 1975 there were over 60 instruments of all sizes and types. If you are interested in showing an instrument at these meetings, apply now to the Advertising Organisation at Hauptstadt Hannover, 3 Hannover, Friedrichswall 5, for their brochure. Visitors can also obtain festival programmes from there.

Here is a selection of the important arrangements to start the 1976 Merry-go-Round and Barrel-Organ Festival:

1 Meetings with friends of mechanical music.
2 Presentation of instruments in central Hannover.
3 Large exhibition in the Hannover Historical Museum under Development of Mechanical Music.
4 Tour through the "Polydor" record factory, and a visit to the firm's museum which shows a survey of developments in this century.
5 Dinner in a first-class setting, with the opportunity to visit friends and collectors.
6 Collectors' exchange.
7 Visit to the "flea market" in Hannover.
8 Visit and conducted tour through the famous Herrenhauser Barockgarten.

A catalogue of the exhibition in the Historical Museum can be obtained from the museum.

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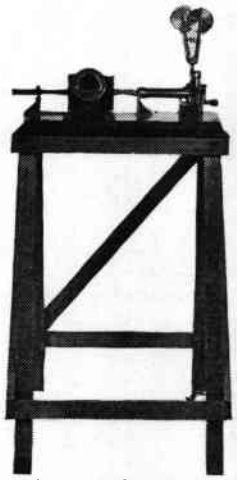
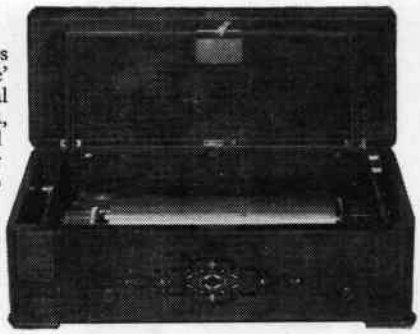


A rare tinfoil phonograph, sold in December 1975 for £2,000

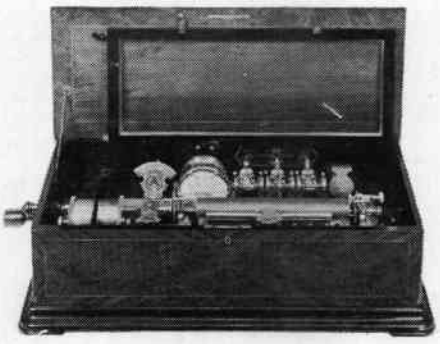
A Symphonion disc musical box, No. 288772, sold in December 1975 for £440

A Nicole Frères 'overture' cylinder musical box, No. 32 024, sold in April 1975 for £1,400



A Gavioli table barrel organ, sold in December 1974 for £620

A Nicole Frères orchestral interchangeable cylinder musical box and accompanying cylinder cabinet, sold in December 1975 for £2,300



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