The Music Box

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an international magazine of mechanical music

THE JOURNAL OF THE MUSICAL BOX SOCIETY OF GREAT BRITAIN

Volume 8 Number 8 Christmas 1978



SWEDEN'S PIANOHARPA, the automaton hookah smoker, the story of Robert-Houdin, an interview with Dwight Porter, and a report from Sarasota



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The Editor writes. . .

ONE certain way in which we can learn something is by going and viewing somebody else's collection of mechanical musical instruments. Even in what may at first appear to be but a mundane selection of instruments there is, in my experience at least, somthing which will be unfamiliar, some hitherto unrecognised feature, or an unusual musical programme.

Viewing sales at Sotheby's and Christies can for the same reason prove to be a highly educational process.

But what happens when we go abroad and see the items which make up the indigenous collections? It can often be very revealing. As a point in illustration, the so-called Dawkins or National boxes are found widely in England whereas directly attributable boxes to Ami Rivenc seldom are. Thibouville-Lamy boxes are often found with the various Woog marks, but rarely L'Epee. In Europe and America, on the other hand, the situation is reversed and styles of tune-sheet and even the box itself are found which differ from those to which we are accustomed.

Whereas the situation with European boxes centres mainly on the whims and the practices of wholesalers and distributors (i.e. Polyphons and Reginas bearing Nicole Freres labels), the majority of boxes we find fit into a known picture. The English-cased disc-machines and cylinder boxes are readily identifiable and we do not need to study the mechanisms too closely.

However, what we find in America is a situation where, as regards musical boxes originally sold on the American market, there seems often very little that we should take for granted.

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courtesy of Sotheby's Belgravio	1.
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One particular musical box in the Walt Bellm collection in Sarasota. Florida, will serve to demonstrate the point. Here is an Americancased mechanism with a gilded, smooth-iron bedplate, a double snail to impel the cylinder evenly for tune-changing, a horizontal Mermod type governor assemblyand a fan which is of the type invented and patented by Langdorff. The mechanism is attributed on the

tunesheet to J Cuendet.

Another oddity is represented by a second Bellm box whose tunesheet and plaque is illustrated on page 174. Bremond is the tunesheet (bearing the stamp of a Boston distributor), Ami Rivenc is the manufacturer (says the silver plaque) and, while looking in the box in September I discovered an instruction sheet hand-written on Ami Rivenc's letterhead. advised: "Repairer in New York: Charles Gonon, 66 Nassau Street. Did Rivenc make or just factor? Is it a Bremond exclusive tunesheet or was it used by others as well?

I am inclined to the opinion that importers such as Henry Gautschi of Philadelphia, Jacot, Paillard and Cuendet of New York and others acted as musical box assemblers, buying standardised, production components from Switzerland. We know that movements were imported rather than complete boxes as the parts carried a lower rate of import taxation.

If my supposition is correct, then it could be that the true American market musical box was made up out of bits from many makers, the final tune-sheet being that selected by the importer-assembler,

There is obviously much careful investigation to be carried out on this subject, research which can only really be done in America,

continued on page 336

THE ANDERSSON PIANOHARPA

by Bill Lindwall

THERE were only two basic types of self-acting instrument actually designed and manufactured in Sweden. The first, and the one which survives in the most numbers, was the Nystrom Reform-Orgel, described in an earlier issue. The second was the pianoharpa or, in English form, the Piano Harp. Although it would be nice to claim for Sweden that this was a revolutionary form of instrument, one has to admit that its design was obsolete by the time it was patented: there had been numerous instruments along similar principles in use elsewhere within Europe for a very long time.

The Piano Harp was the invention of I. F. Nilsson but its development was due to the work of the brothers Andersson who were granted a Swedish patent for the instrument (patent number 2239 of August 13, 1889).

I am particularly pleased to be able to present this story in *The Music Box* since I was unable to supply the relevant information for the excellent Bowers' *Encyclopedia of Automatic Musical Instruments*.

Anders Gustaf and Jones Wilhelm Andersson lived in the tiny village of Näshult outside the small town of Vetlanda in the south of Sweden. They were carpenters and had a workshop wherein they produced domestic furniture and similar utilitarian articles. At this time, Sweden was still a somewhat impoverished nation whose economy centered on its agriculture. So hard was the peasant style of life that many Swedes left to seek their livelihoods elsewhere. This was the time when the immigration of the Swedish people to America began. Most people lived poorly and under extreme circumstances. It was at this time when the Anderssons produced their Piano Harp.

Poor sound production

Understanding these conditions it becomes esay to realise just why the appearance of the Piano Harp was so unattractive. Possibly because of the lack of technology and experience, this would also explain why the instrument suffered from poor sound-production. This is not to decry the efforts of Andersson but simply to state the fact.

With such a dubious national economy, one might feel that the

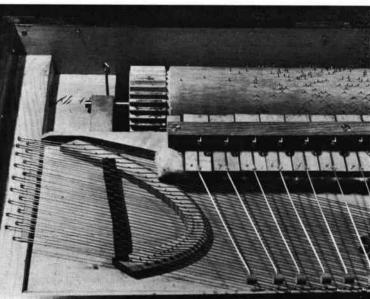


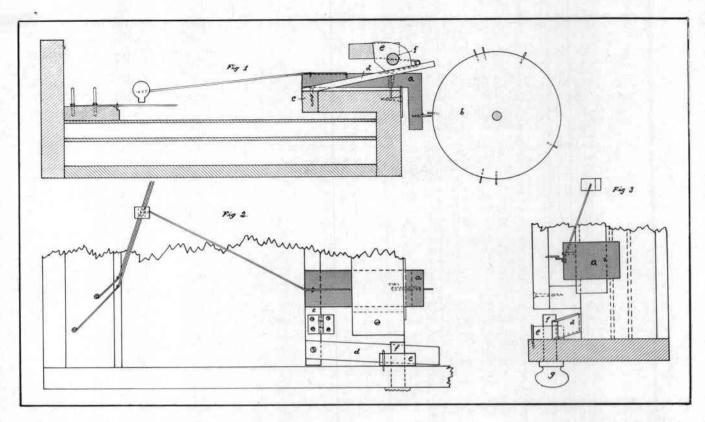
Andersson's venture into mechanical musical instruments would have proved unwise but, in fact, the opposite was the case. Demand for the instrument turned out to be rather big for those days and quite a number of Piano Harps were produced. For this reason, there ought still to be a small quantity of them around in Sweden and, possibly, in Western Europe also.

Andersson actually called his instrument "street piano" which probably is a more accurate name. It is, in truth, possible that the Piano Harp had been produced over many years before 1889 and it is also feasible that the principle for the design was copied from similar instruments from the London maker, T C Bates and Son who made a mechanical dulcimer. It is significant that patents were not appled for the instrument itself, but for two specific mechanical features that Mr Andersson designed himself.

The instrument was very shallow in depth and for this reason the design employs a style where the keys are in effect bent downwards to minimise the total height.







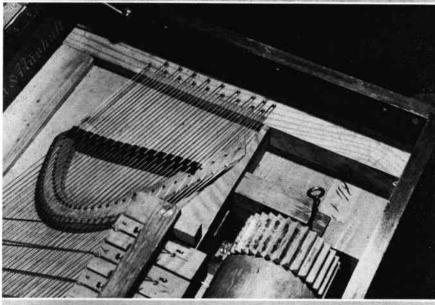


This was the first improvement patented.

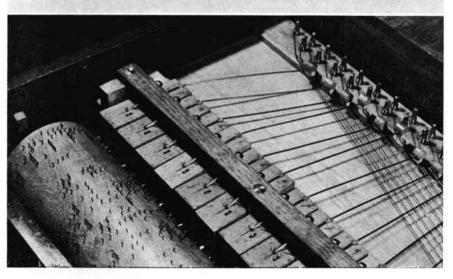
The second concerned a rotatable bar which enabled the keys to be depressed slightly so as to increase the distance between the hammers and the strings. In fact this operated as an adjustable rest rail so making it possible to moderate the volume of sound produced. An examination of the patent drawing shows how this bar, f, turned by knob g, depresses the strip d by means of the cam e. The strip d is attached to the hinged rail c which runs beneath all the trailing ends of the hammers. By raising this rail, the ends of the L-shaped hammers, a, are lifted up, so backing the key-points away from the barrel pins slightly. The sound is thus softened through the shorter stoke applied to the hammer by the barrel pin and the softer blow occasioned by the

The actual inventor of the Pianoharpa as an instrument type appears to have been I F Nilsson of Oster Korsberga, Lemnhult, Saxhult, one of whose instruments is shown left. It makes good comparison with Andersson's slimmer and better-styled variant the patent for which is shown at the top of this page. Bill Lindwall says that Nilsson had no patents but believes that he was a friend of Andersson. He adds that the Nilsson instruments have shorter barrels and are of a poorer quality.









weighted hammer on the end of its hammer wire.

The Piano Harp measures 76cm high, 93cm wide across the front, and 49cm deep from front to back. The keyboard has 18 notes, these being g, a, h, c, d, e, f, g, a, h, c, d, e, f, g, a, h, c.

The crank handle at the front of the case rotates the pinned wooden barrel which has a diameter of 10.5cm and a length of 64cm. By moving the barrel slightly to the left or to the right one changes the tune very easily. There are twelve tunes to a barrel. Most barrels featured the popular music of the period but there were exceptions: for instance, there were barrels with only hymns or Swedish folk tunes. In the old catalogue *Index to the barrels for Piano Harps* we find melodies itemised for ten different barrels.

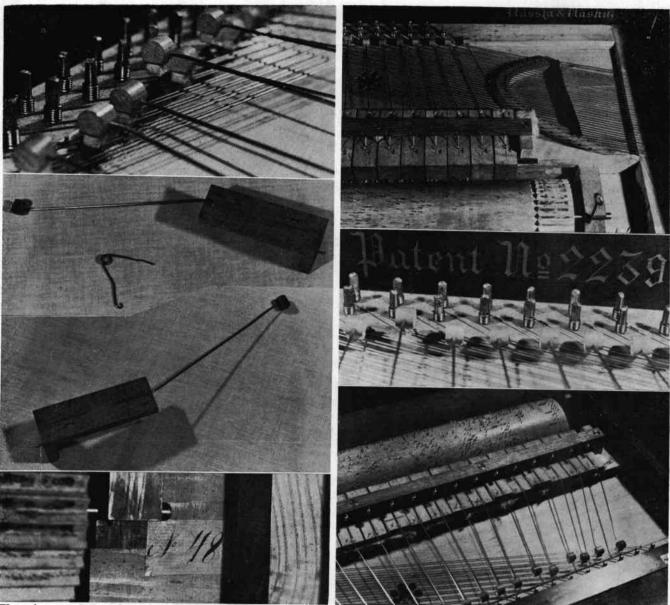
Schoolchildren workers

The production of the instrument was characteristic of the cottage industries of the time and more so was a time-consuming business. The task of hammering the pins into the barrel, for example, was carried out by school-children. The Piano Harp was designed to look like a table and thus it was exactly the right height for anybody who wanted to play it. Its appearance might possible account for the reason why it came to be used as a central place upon which to place the family china.

From the patent drawing Figure 1 we can see how the sounding board was made. The pin block (wrest plank) was of wood and there was no metal frame. This meant that it was a very difficult instrument to keep in tune and the changes in temperature affected it very much.

We have here in Sweden a musical box collected called Oscar Sandqvist. He is over 70 years old

Top: The extremely slim and somewhat austere proportions of the Andersson Pianoharpa are demonstrated in this view which should be compared with the Nilsson instrument on the preceding page. A detail of the barrel cog end of the soundboard is shown in the second picture. This shows the shape of the bridge, the dead portion of the string listing, and the loop stringing at the hitch-pin end. The slender dimensions of the barrel are revealed in the next picture while on the left is a view showing the inverted "L"-shaped keys and their return springs.



The picture above shows details of the construction and design of the Andersson Pianoharpa. The serial number, hand written, appears on the wood block to the immediate right of the barrel cog end as shown lower left. These details can be compared with the drawing on page 331 which is taken from the Swedish patent. The wording of this patent does not claim for Andersson that he invented the "so-called pianoharpa", implying that it was already a known instrument.

and lives not far from Vetlanda. He knew a nephew of the Andersson brothers who died this Spring, himself 70 years of age. This man told Sandqvist quite a lot about the early history of the Piano Harp.

As a young boy, this nephew used to help to put the pins in the barrels after he had finished school for the day. He is also certain that only ten barrels were made for the instrument and that when an instrument was sold, it was accompanied with three barrels. Unfortunately the soft wood from which barrels were made was prone to infestation by wood worm and many instruments became so damaged from worm holes that they were thrown out. This is why only a few are known today.

At some time the Andersson

brothers appear to have tried to produce a barrel organ using the same basic principles as the Piano Harp. They installed 50 pipes in the case and a pair of bellows. I am the owner of a prototype of this form of instrument but that I hope will make another story.

All the pictures which illustrate this were taken for me by Claes Hjelm.

Text of the Swedish patent

This invention relates to arrangements on a so-called pianoharp by means of which is achieved first that the instrument has a relatively low height so that it can be made in the form of, for instance, a window-table, and second that its volume of sound can be moderated.

On the drawing attached, Fig 1

shows the instrument in side elevation and Fig 2 shows part of it in plan view while Fig 3 is a view looking on the front of the keys with the barrel omitted for clarity.

The arrangement mentioned first is that the keys a in front are bent at an angle downwards and the playing barrel b attached accordingly. Thus the playing barrel will be played more directly opposite the keys or lower than when the keys are shaped in the usual manner. The total height of the instrument will thus be diminished.

The arrangement to modify the sound of the instrument is made up of a frame c located under the keys, pivotable around end-pivots and hinges through the turning of which the keys are up-lifted so

Förteckning ötver rullarne till Vefpianon.

Rullen N:o 1.		Rullen N:o 2		R	ullen N:o 3.	Rullen N:0 4		
1.	l'olka	1.	Polka	1.	Wals	ા.	Hambo polka	
2.	Kadrilj	2.	Polka	2.	Wals	2.	Marsch	
3.	Polka	3.	Kadrilj	3.	Gubben Noach	3.	Polka	
4	Kadrili	4.	Kadrilj.	4.	Wikingabalken	4.	Wals	
5.	Marsch	ā.	Polka	5.	Marsch	5.	Fredmans Epi-	
6.	Kadrilj	6.	Wals	6.	Anglās		stel 38	
7.	Polska	7.	Hambopolka	7.	Polska	6.	Angläs	
8.	Polka	8.	Wals	8.	Hambopolka	7.	Anglās	
9.	Française	9.	Polka	9.	Wals	8.	Kadrilj	
10.	Kadrili	10.	Marsch	10.	Marsch	9.	Polka	
11.	Wals	11.	Polka	11.	Marsch	10.	Française	
12.	Wals	12.	Polka	12.	Polka	11.	Marsch	
						12.	Wals	

Rullen N:o 5.					Rul	len N	i:o 6.	R	ullen N:o 7.
1	205: 74 Ur så	nybaken Zio	ns toner	1.	Psalme	n 429		1.	Hambopolka
2	. 284: 306-391	"	••	2.	"	431		2.	Hambo polka
3	. 162: 75	"	11	3.	.,	420		3.	Polka
4	. 369; 382 56	,,	,,	4.	,,	198		4.	Polka
5	. 373: 367	,,	,,	5.	.,	63		ō.	Wals
6	. 376 a: 59	,,	**	6.	"	433		6.	Polka
7	. 313	1,	,,	7.	1 Ur	Sankey	sångbok.	7.	Mazurka
8	. 18 5 : 3 9 9 340	22	"	8.	6	**	"	8.	Polka-Mazurka
51	. 194	.,	1)	9.	80	11	19	9.	Hambopolka ·
10	173: 148 276	12	1)	10.	78	11	"	10.	K adrilj
11	. 18 Ur Sankey	sangbok		11.	61	17	1)	11.	Wals
12	2. 78 "			12	18	**	**	12.	Marsch

R	ullen N:o S.	R	ullen N:o 9.		Rullen N:o 10.
1.	Wals	1.	Wals		Ur "Sveriges skonaste folkvisor."
2.	Wals	2	Marsch	1.	Hvad jag har lofvat
3.	Wals	3.	Polka	2.	Alls ingen flicka lastar jag
4.	Wals	4.	Polka	3.	Domaredansen
5.	Polka	5.	Kopparslagaren	4.	Det står ett ljus i Österland
6.	Kadrili	6.	Humbopolka	5.	Och hör du unga Dora
7.	Polka	7.	Wals	6.	Och jungfrun gick dt kilan
8.	Smålandsdans	8.	Wals	7.	À jānta å ja
9.	Polka	9.	Wals	8.	En gång i bredd med mig
10.	Hambopolka	10.	Wals	9.	Och flickan hon går i dansen
11.	Hambopolka	11.	Wals	10.	Glädjens blomster
12.	Polka	12.	Polka	11.	Liten Karin
				12.	Jag gick mig ut en aftonstund.

Novice's Corner

Points for the buyer

Naucy Fratti offers good advice to beginners

BECAUSE of the ever-growing interest in musical boxes there is a need for a guideline on things to look for when contemplating the purchase of any music box. While not all inclusive, this article covers the basics of buying a musical box.

No matter how "perfectly" someone tells you a box is running, it can't possibly be considered perfect unless it has been professionally restored in the last 7-10 years. Basically, the only way you can tell a restored box is, of course, by the polished movement. However, a polished movement does not mean that it was "restored". It could have been cleaned up just for the purpose of selling.

A box that runs well when dirty will not necessarily run well after it has been cleaned. I refer here specifically to the governor. After cleaning 40 or 50 years of accumulated dirt out of the bushings you will often find that they need complete rebushing. You will also find that removal of the dirt has accentuated the wear on the worm and worm gear and that the comb "clicks" after you've cleaned the dirt off. This is due to the star wheels falling into the worn grooves in the teeth which were once filled with grime.

When contemplating purchasing a non-working box be sure all the parts are there! This may seem like needless advice, but I have seen people buying boxes with drive gears missing, replaced spring barrels that were the wrong size, star wheels missing etc. Remember too that 99% of the re-

that the hammers will be at a further distance from the strings and thus the strength of the their impact on the strings is diminished. To turn the frame c, an arm d is attached to its end, the far end of which runs under an eccentric e attached to an axis f that runs through the side of the instrument case and terminates on the outside with a knob g so that the sound can be lowered during playing.

Left is a reproduction of the original Pianoharpa tune list as published by Andersson. Only ten barrels were ever made for this instrument. All pictures by Claes Hjelm save the Nilsson which is by Christie's South Kensington.

placement parts for music boxes have to be individually made for that particular box.

ticular box.

Don't let the brand name, or lack of it, enhance or discourage the purchase of a box. There are some well-known names such as Bremond, Baker, Nicole, Regina, Mira and a few others that can be counted on for being fine-quality manufacturers. However, there is good, bad and mediocre in almost all brands. Since it is virtually impossible to name most cylinder boxes anyway, judge a box on its individual merits and nothing else.

merits and nothing else.

Unless you are proficient at the craft, please don't try to restore a good box yourself. If you'd like to try restoration work, practice on a "junker" box first. Too many really good boxes have been butchered by good intentions!

first. Too many really good boxes have been butchered by good intentions!

If the box is in really bad shape don't assume it can never be brought back to original condition. If a box seems to be restorable, the only way to get an accurate repair estimate is to ask a professional music box restorer . . . not the corner jewelry store watch repairman and not a clock repairman. There is no such thing as a \$50 restoration!!!

If a box is out of tune (badly) don't expect anyone to be able to tune it again, In some cases it can be done, but not often.

The number of tunes a cylinder box plays has *no* relation to the quality or value of the box.

In disc boxes, some machines are harder to get discs for than others, and others are next to impossible. A few brand name discs are interchangeable with others but as a general rule you will have to hunt for just about any disc other than those for the standard Regina and other more popular machines. Rare sizes or exotic types of disc machines, while intriguing, are not necessarily desirable if discs are not available for them.

In the end, it should be your own discrimination that chooses your next acquisition. If you are in doubt, there are enough reliable, professional dealers in this field for you to call on for advice.

Happy hunting!

This is an extract from a most useful little pamphlet published by Nancy Fratti which details many of the problems awaiting the unwary purchaser. Copies for two 13 cent stamps to Panchronia Antiquities, PO Box 73, Warners, New York 13164.

THE AUTOMATON HOOKAH SMOKER

by A J L Wright

TO THE Victorians, the sight of a Turkish gentleman in National costume smoking not just tobacco but the apparent complexity of a hookah would have been excitement indeed! Small wonder, then, that the makers of automata should select this as a subject for their craft. Like so many pieces of this genre, the mcehanism appeared very simple, yet was superbly evolved ______

AN AUTOMATON that smoked was always popular in the Victorian era, perhaps because of the lifelike way in which it inhaled and exhaled clouds of smoke with serene deliberation. Such automata were produced in many different forms and one of the most popular was the Indian Hookah Smoker, which in the later part of the period was also marketed as "The Khedive", defined rather surprisingly *Chambers' Dictionary* as "The title (1867 - 1914) of the Viceroy of India".

The version described here is some 18in high and can be ascribed to Lucien Bontemps who usually provided a key incorporating his initials. In this instance the key has a hollow shank with an internal thread which screws on to the winding spindle.

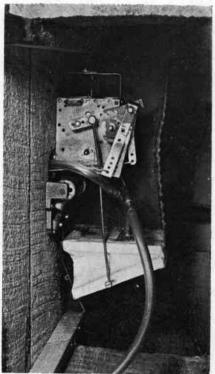
Inhales smoke

When set in motion by a small rod acting on the governor blades, he turns his head to the right, bends it forward as his right hand brings the hookah mouthpiece up to his mouth. He apparently inhales deeply as the tobacco in the hookah bowl glows brightly. Then as he lowers his right arm he raises his head, turns it to his left, luxuriously blows out a cloud of smoke and bends his head forward again to sip delicately from the cup which his left arm advances and tilts towards his mouth. Much re-

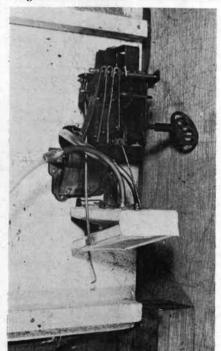
freshed, he lowers the cup and turns his head back to resume his smoking.

The accompanying perspective diagram follows the original mechanism closely but some rearrangement of the components has been made for greater clarity. May "LB" forgive me for this!

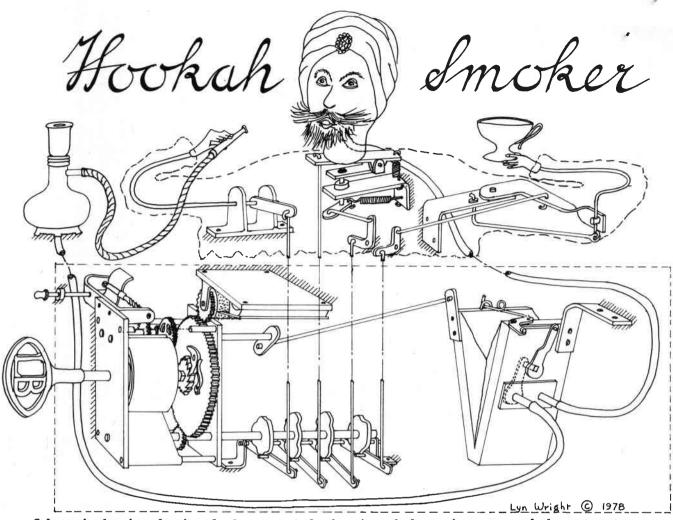
The motor is quite conventional as used in very many automata but is slightly unusual in having



the main spring open and not inside a barrel. The main wheel drives an auxiliary spindle carrying four cams for operating the head and arm movements and a single-tune musical movement is



The device whereby the Turk appears to inhale and exhale the smoke. Note the pneumatic motor, used here as a force bellows, and the connecting rubber tube. The adjustable linkages with their many holes suggest a degree of component standardisation.



Schematic drawing showing the layout and the function of the various parts of the automaton

also driven from the main wheel. The intermediate spindle of the governor train is extended outside the motor frame to mount a crank for oscillating the bellows.

The operation of the rods and levers from the cams to the head and arms is quite straightforward and can be followed from the diagram. The mechanism for turning and tilting the head is made in a single unit much neater than the diagram indicates and the same unit is found in many other automaton dolls. It seems likely that such units were supplied to builders of automata by specialist manufacturers. The movement of the left arm is ingenious in producing two apparent motions from one operating rod. As the arm moves towards the head it also tilts the cup and this is achieved by careful placing of the pivots of the rod connecting the fixed upper part of the arm to the moving lower part.

The smoking mechanism is simple but effective and indulges in a little deception since the Indian does not, in fact, inhale through the mouthpiece at all. The moveable limb of the bellows is

crank operated to give regular opening and closing movement. Towards the end of each in and out action it alternately pulls and pushes a wire lying across the tops of the two limbs. By means of a small crank and rod this moves a lever on the fixed limb from side to side and this is connected through a squared shaft to a valve inside the bellows to rotate it through a limited arc so that it alternately covers one or other of two pipes inserted in the fixed limb.

Thus, on the opening stroke of the bellows, smoke is drawn in through the inlet pipe from the bottom of the hookah, the valve covering the outlet pipe to the Indian's mouth. As the bellows reaches the end of this stroke it pulls the wire so as to slide the valve over to cover the inlet pipe. As the bellows closes it therefore ejects the smoke through the outlet pipe, which is now uncovered, and emerges through the Indian's mouth. As the bellows finishes its closing stroke the wire is pushed back and so moves the valve to cover the outlet pipe once again.

Whilst each part of the mechanism it quite simple and sometimes crude in construction, the ingenuity of the design is in the relative sequencing of the cams coupled with the choice of gearing to the two drives. However, it seems the amplitude of each movement is nearly always determined by trial and error in the final assemply stage and this automaton, like many others, has overlong cam levers with several alternative holes for attaching the operating rods.

continued from page 329

although there may be some records still in Switzerland. My comments here are but conjecture. Somebody should delve deeply into this matter while there may still be some available information or even recollection.

Much of this issue of *The Music Box* has been prepared in the office of our Vice-President Hughes Ryder in Summit, New Jersey, who kindly hosted your editor during his recent visit Stateside.

ARTHUR W J G ORD-HUME

Harmoniphone Restoration

by Jim Colley

THE writer has recently completed the restoration of an organ box by Ducommun Girod. It is called a *Harmoniphone* and the tune sheet was reproduced in Vol 8 No 6 of the Journal.

There can be no dispute as to the maker for the name is clearly engraved on the flat of the winding handle. The number stencilled on the case bottom is the same as that on the tune sheet. So it all started life together. Yet a closer examination shows some very odd features.

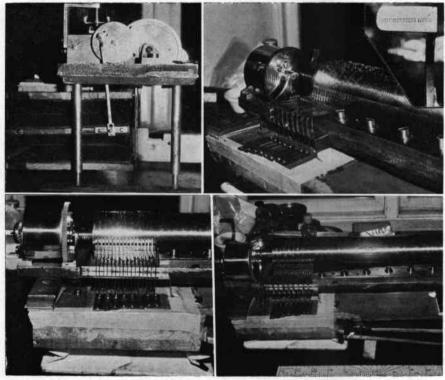
First, there is the organ. Instead of being mounted so that the stickers pass through holes in the bedplate, the bracket through which they pass is screwed to the wooden top of the bellows. The makers have used a standard width chassis instead of the wide type usually found. Second, the organ has 16 keys but there are 17 holes in the sticker support bracket and 17 reeds. The cylinder is pinned for 16 keys and it looks as if someone found almost too late that there just was not enough room between the bracket and the end of the comb for another key.

The spring barrel is 2\frac{3}{2} in in diameter but the spring width is only one and a half inches. A strong left hand is needed to wind the spring fully as the winding handle is rather short. Again, the use of a small chassis has made this necessary.

Strange feature

Now we come to an even stranger feature. The glass inner lid covers the motor and extends right to the back of the case. There is no fretted panel to allow the sound to escape, so the box needs to be played with the lid raised. There are slots cut into the front and back of the case to receive the usual partition over the motor but if this were present it would foul the lid, which itself seems to be original. Also, there are no slots in the control panel which would be there if the box had had a narrower glass lid at one time.

There seems little to support the cover boards at front and back other than pressure on their edges from the case. Yet the case itself is a blaze of coloured inlay and brass stringing, both on the front



Early reed-organ accompaniment cylinder boxes used the style of bellows known as "french feeders" having a hinged centre board moving between two fixed boards so providing two wind chambers. Jim Colley's unusual and undoubtedly early specimen is seen here. Inset top right is the Ducommun Girod stamp on the winding handle.

and on the lid. Much of the coloured material had curled up but was still in position. It clearly was not wood and it took some time to find out that it consisted of coloured sheet gelatine. Although quite hard, a piece of the material could be softened in hot water and when touched with a hot iron gave off a smell of burning bones. Gelatine treated in the same way gave off the same smell.

It may finally be noted that the governor flies are of the normal type and do not make use of centrifugal force to slow down the box once it has pumped up sufficent air to sound the first notes of the melody. Perhaps this box pre-dates the development of the special organ type governor.

Performance

The performance of the box is now most satisfying as the organ plays the melody and the comb provides the accompaniment on 97 teeth. The programme has been selected to display the ability of the organ, the pieces varying in tempo. One tune occurs at a dif-

ferent place on the tune sheet than it should but this seems a small matter after some of the other peculiarities.

Produced in a hurry

I think that this organ box was produced in a hurry for display at an exhibition, maybe that held in London in 1851. Perhaps the makers were anxious to show that they, too, were capable of creating an organ box using their skill and what standard components, such as the normal chassis, were to hand. This would also explain the very elaborate case and their name placed so prominently upon the winding lever.

The restoration has included persuading the reed pallets to operate without sticking, the recovering of the organ bellows with the much valued assistance of member David Walch of Bristol, extensive work on the governor, the replacement of quite a few organ bridges and the correction of the mistakes of some earlier repairer as well as the refurbishing of the case.

MUSICAL BOX ODDMENTS

by H A V Bulleid

OFTEN there is a regrettable lack of information on tune sheets, and yet extreme irritation can be caused by those gratuitous additions to them which are often carelessly scrawled and in anachronistic blue ink and of dubious accuracy. A neater solution to the problem is to prepare a separate card, sized to fit neatly beside the winding lever or in the key compartment, and on it to write . . .

details of the musical box
 additional notes for each tune, and

3. (on the back) your name, dates of purchase, repairs,

What additional notes? Well, there are three things people often like to know about the tunes, namely . . .

1. nationality and life span of composer

2. source and date of each tune

3. comments.

You will be rather lucky if all this information is readily available, so leave room to add items that come to hand in the future. If you recall how fascinating it is to find and read an apt comment written a hundred years ago, you will be spurred on to adding such notes. For example, if your box plays Toi que l'oiseau from the opera William Tell (first performed 1829) by Rossini (1792-1868) it is worth noting that this tune is now better known as The Scottish Soldier.

Composers

A COMPOSER frequently named on tune sheets in the period 1845 to 1880 is Jullien. He wrote a vast number of dance tunes and quadrilles but is best remembered as the showman-conductor who first enlivened the London Promenade Concerts in 1840 and then conducted them with unrivalled panache until 1859, setting the tradition which was next re-kindled by Henry Wood in 1895.

Jullien was born at Sisteron in the French Alps in 1812, while his parents and three sisters were travelling from Rome to Paris. Delayed by the birth, his father played the violin for the local Philharmonic Society, the thirty-six members of which all insisted on standing as godfather to the baby. That is why young Jullien was enriched with 36 christian names (not all different) of which the first was Louis. It was a suitable prelude to a life full of amazing incidents, true and apocryphal, both sorts well described in the Life of Jullien by A Carse, 1951.

After a musical childhood and

After a musical childhood and service in the French Navy, Jullien was accepted as a student of the Paris Conservatoire about 1833; but he was irked by the formal part of the studies and, helped initially by Rossini, quickly became notorious as a conductor of spectacular concerts which were the talk of Paris in the period 1836-38. They included fireworks and cannon, and the noise caused brushes with the police and excellent publicity. Nor was the Jullien private life tame; a dispute about the authorship of his waltz Rosita led to a dual in which he came off secon-best but unabashed.

Jullien first conducted in England at Drury Lane in June 1840; and by 1843 he was fully established as the maestro of the Promenade Concerts. His great success lay partly in his own person-

ality as a flambuoyant conductor. partly in his combination of popular and high-brow music, partly in his fine orchestras with top-line performers, and not least in his own topical music: his numerous quadrilles included the British Navy (with four military bands), the Great Exhibition, the Siege of Sebastopol, and Les Huguenots which had a battle and conflagration in its fifth movement and was based on Meyerbeer's opera. Jullien never minded borrowing, with acknowledgement, other composers' tunes. These musical successes, coupled with a likeable and extrovert personality and a taste for colourful sartorial effect, made Jullien very popular and very newsworthy and good material for Punch who, in a typical 1845 cartoon, showed him tearing his hair when Queen Victoria was rumoured to have banned the polka. His corresponding financial success was boosted by his music shop at 3 Maddox Street, where his signed sheet music figured prominently and was often advertised in *The Times*.

From July 1853 to June 1854
Jullien made a triumphal Ameri-

From July 1853 to June 1854 Jullien made a triumphal American tour, giving over 200 concerts and getting superb Press notices and earning around \$15,000 per

On three occasions Jullien departed from his *metier* as conductor-cum-entertainer, each time with disaster. In December 1847 he launched a season of Grand Opera at Drury Lane, and became bankrupt in February 1848. In 1852 he produced his own opera, *Pietro il Grande*, at Covent Garden but it only ran for five performances and he lost £16,000. In 1865 the new

The Inquisitive Budgie . .

by Arthur Heap



Singing birds are all very well, but put a mechanical one alongside a real live one and consternation can most certainly be expected on the part of one (or both) of the birds. Arthur Heap's budgerigar found the bird box a bit too much to take. However, the small interchangeable cylinder box, right, proved more acceptable to his likings. The little box warrants more description: see the facing page.

Surrey Garden Company engaged him for five years as musical director and conductor for their grandiose project of a 10,000-seater concert hall; but after one misleadingly good season it failed, causing another severe loss to Jullien. He also suffered the loss of many of his music manuscripts in the fire which gutted the Covent Garden Theatre in March 1856. Each time he came back fighting.

Jullien's last London season

ended in December 1858 and rated a farewell ode in Punch. After a provincial tour he returned to Paris and started planning a world tour for 1860; but he had a mental breakdown and died in March a few days after being admitted to

an asylum.

His tunes found on musical boxes include Rosita, Olga, and many other waltzes and polkas, and parts of quadrilles such as the Sebastopol March. Nicole 8-air boxes dated around 1860 are found with as many as three Jullien tunes, and his name appeared in print on the scrolls of some tune sheets. His biographer A Carse regretted that this eminent man was forgotten. But is he? One hears his music, and sees his name on all these tune sheets, and he even gets remembered in The Music Box!

Tune Change Cam

MOST cylinder musical boxes, both key wind and lever wind, have the same design of tune change lever a piece pivoted to the bed-plate, sprung to assume positive on and off positions, and carrying a curved finger to engage the tune change cam or snail. The depth of engagement is not very

BERLINER STRASSENORGEL



Peter Georg Schuhknecht of Hannover plays a 41-key 8-air clarinetviolin street organ built c.1880 by Bacigalupo of Waldstrasse 43, Berlin, in the Kurfürstendamm. Berlin's "golden mile". Organ barrel is pinned in five sections for 72 bars of music.

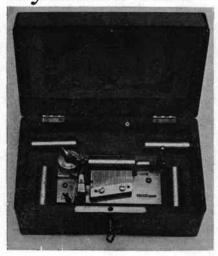
critical, but if it is inadequate a tune may repeat if its tooth on the cam has become slightly shortened; and excessive engagement can, where there are more than eight tunes, cause the cam to move on two teeth thereby omitting a tune. These are rare problems but ones which can be puzzling.

The period of engagement by the stud of the cam tooth depends on the number of tunes, being far longer on a 3-tune than a 12-tune box. But the period of cylinder shift is about the same on all boxes, being the time taken to slide the cylinder about 17 thousandths of an inch. This is the distance between the lines on the cylinder divided by the number of cylinder revolutions needed to play all the tunes. Ideally, it would be preferable for the mechanism to stop at tune end just before the stud engages the cam tooth, but this is impracticable where there are few tunes as it would involve an excessive non-playing sector of the cylinder. Moreover it was probably felt in the more leisurely 1870s that few users would make snap decisions to alter the tune change control while the box was not playing. Accordingly the better designers and craftsmen probably preferred the engagement of stud and tooth to be so arranged that the cylinder shift was just completed before the mechanism stopped. This avoids the extra load from the shift at starting and prevents the cylinder being be-tween times when stopped; between tunes when stopped; be-cause if the control lever is then moved to "repeat" and the box started, play will be garbled. The other snag about the cylinder being in the middle of a shift when stopped is that re-starting may be s'uggish due to the extra load.

So it is remarkable how many boxes one sees that do in fact stop during the shift; and I must say

continued on page 368

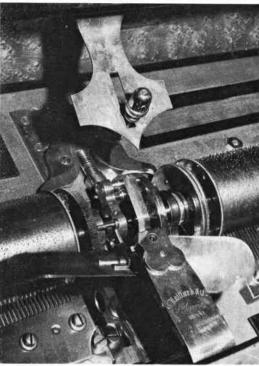
Miniature Changeable Cylinder box

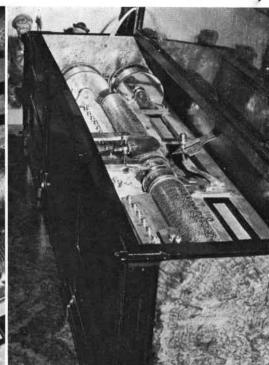




Owned by Arthur Heap, this diminutive box has a repertoire of five cylinders each playing one tune and each with a separate number as shown on the tune-sheet. The mechanism is marked as patented and appears to conform to the general description of the Manger patent which is the same patent referred to in the Multiphone and the small Ullmann manivelle/spring-driven interchangeables. This box, though, differs quite widely from both and is a product of Samuel Troll.

THE L D I U N P E L A E R X



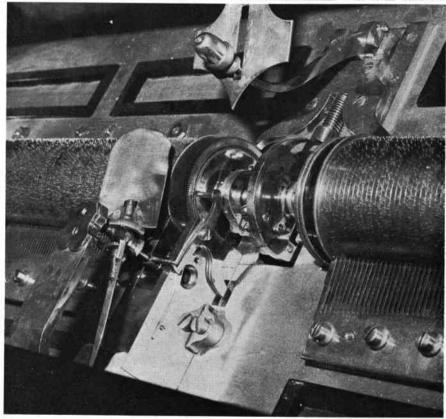


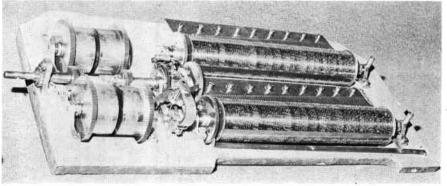
MUSICAL boxes which play two cylinders at once were a relatively short-lived novelty. As distinct from the plerodienique style where the two cylinders were sleeved end-to-end and played as one, the twin-cylinder mechanism, called "duplex", was an ultra-complex sublime harmonie system.

Duplex musical boxes came in two distinct forms. The one most commonly depicted is probably the parallel duplex, pictured below in a mechanism-only view showing the pair of twin co-axial spring motors.

But there was another style—the linear duplex—which was housed in a vast cabinet and was an even more complex and cumbersome system. It is uncertain how many of these were made, but it cannot have been very many and only three are known to the Editor. The pictures on this page show details of the specimen in Walt Bellm's museum at Sarasota.

Made by Charles Paillard — the name is on the governor cock — the two cylinders are registered by a complex clamp arrangement with adjusting screws so that one





may be brought precisely into proper radial location with the other. The large fan has wings connected by bevel gears so that they each adopt the same angle to preclude vibration. Tune changing is by yoke-shaped lever behind the governor, the left cylinder having a normal right-end snail, the right cylinder having its snail at its left end. So powerful are the motor springs that the female stopwork is secured by a screw in double shear.

REMARKABLE ROBERT-HOUDIN

by S H Sharpe

AT THE conclusion of his article "Animated Androids" in the Summer 1978 issue of *The Music Box*, Steve Ryder requested any further details regarding the subject dealt with; so it is hoped that the following notes may be of help in clarifying several doubtful matters

WITH reference to the chess-player by Kempelen, Mr Ryder seems to have been mistaken in assuming that Robert-Houdin was one of the showmen who toured with it. This is what Robert-Houdin himself wrote in his *Confidences*, after dealing with Vaucanson's Duck:

"One piece of good luck never arrives without another: thus, in 1844, I also saw at the house of a mechanician of the name of Cronier, at Bellville, the famous *Chessplayer*, who defeated the whole chess world. I never saw it at work, but since then I have received some information about the automaton of a certain degree of interest, and I trust my readers will feel the same surprise as I did when I heard it."

Robert-Houdin then went on to recount a romantic story about how M de Kempelen smuggled a legless soldier named Worousky out of Russia in the secret compartment of his apparently mechanical chessplayer; and of how this talented chess-master came to match his hidden skill against the haughty Empress Catherine II, the Czarina whom her courtiers proclaimed the most intellectual person in her vast empire.

Based on hearsay

It should be borne in mind that Robert-Houdin's story was based on hearsay: nevertheless, it is clear that he never had anything to do with exhibiting it. What he did do was to make a rough replica of it for a melodrama based on his own story about the Chess-player, at the Ambigu Theatre, Paris, in 1868, called La Czarine.

Decremps guessed that the cabinet contained a hidden dwarf (repeated by Mr Ryder), as explained in his *La Magie Blanche Dévoilée* (1784); but actually the manipulator — of which there were several in succession — was in no case a dwarf.

Probably the most copied attempt to explain the secret of Kemplen's Chess-player was that given by Robert Willis of Cambridge in 1821, under the title: An Attempt to Analyse the Automaton Chess-Player. Though incorrect in detail, it was copied, for instance, by Sir David Brewster in his Letters on Natural Magic (1832).

Milbourne Christopher gave a very good summary of the vicissitudes of this most popular trick-automaton in his *Illustrated History of Magic*, published by Thomas Y Crowell Company, New York, 1975.

I feel that Mr Ryder has been less than fair to Robert-Houdin in referring to him simply as a showman. In this opinion he may have been influenced by Le Monde des Automates, the authors of which remarkable book appear, in their turn, to have been influenced by the tone of The Unmasking of Robert-Houdin, a strongly biased book by Houdini, who turned sour after adopting the name of his erstwhile hero. However, in Les Automates Chapuis and Droz somewhat modified this doubt about Robert-Houdin's talents as a mechanician: particularly in relation to his charming automaton La lecon de chant, which depicts a young lady teaching a little bird to initate the air from a musical-box. At first the bird fails to get the correct tune; so the girl shakes her head. As it succeeds on the second attempt, she nods approval. Presumably this automaton would have been made about the year 1838, when Robert-Houdin was residing at 13, rue de Vendôme, Paris. (See Le Monde des Automates, pp. 132-134; Les Automates, pp. 212-216).

He may be said to have been born with tools in his hands, on December 6, 1805, at Blois, Loireet Cher, being christened Jean-Eugène Robert. His birth certificate actually gives the date as 16



Frimaire, An 14, of the new Republican Calendar. He assumed the double-barrelled name of Robert-Houdin soon after marrying the daughter of a Parisian horologist called Jacques Houdin, who was also a native of Blois—a town noted for its clockmakers. But it was not until 1856 that he was granted official recognition by the Republic; and his birth certificate modified with a marginal note to that effect.

Talented father

Eugène's father, Prosper Robert, was not only a skillful watchmaker, but also, according to his admiring son, "An excellent engraver, a jeweller of the greatest taste, he at the same time could carve the arm or leg for some fractured statuette. restore the enamel on any timeworn porcelain, or even repair musical snuff-boxes, which were very fashionable in those days. The skill which he evinced in these varied arts at length procured him a most numerous body of customers; but, unfortunately, he was wont to make any repairs not strictly connected with his own business for the mere pleasure.'

From as long as he could remember, a hammer and a file were young Robert's toys and delight.

"How often, in my infantile dreams, did a benevolent fairy open before me the door of a mysterious El Dorado, where tools of every description were piled up. The delight which these dreams produced on me were the same as any other child feels when his fancy summons up before him a fantastic country where the houses are made of chocolate, the stones of sugar-candy, and the men of gingerbread. It is difficult to understand this fever for tools; the mechanic, the artist, adores them, and would ruin himself to obtain. Tools, in fact, are to him what a MS is to the archaeologist. a coin to the antiquary, or a pack of cards to a gambler: in a word, they are the implements by which a ruling passion is fed."

Becoming fascinated by a mechanical snuff-box which had been brought to his father for repair, and, being unable to possess it, he decided to make himself a replica: which he did in secret, in order to surprise his father.

"The top of the box represented a landscape. On pressing a spring, a hare made its appearance, and went towards a tuft of grass, which it began to crop; soon after, a sportsman, accompanied by a pointer, emerged from a thicket. The miniature Nimrod stopped at the sight of the game, shouldered his gun, and fired; a noise indicative of the explosion of a fire-arm was heard, and the hare apparently wounded, disappeared into the thicket, pursued by the dog."

As Engène's father had ambitions for his son beyond that of following his own trade, he persuaded him to enter a solicitor's office when he was nineteen years old. However, the attraction of mechanism still pulled to the extent that he was transferred as an apprentice to his cousin Robert Jean Martin, who had recently taken over Prosper Robert's watchmaker's business at Blois, he having retired.

Two years later, Eugène took a situation with M Noriet, a watchmaker of Tours. This was early in 1828. Late in 1829 he went to Paris as an apprentice to Jacques Houdin, a native of Blois, who had become a distinguished maker of astronomical clocks, regulators, and precision instruments, of 7 rue du Harley. He was also in the wholesale clock business.

In 1830 he married his employerfriend's daughter Josèphe Cécile Eglantine Houdin; and shortly after assumed the name of Robert-Houdin for theatrical purposes: his other great passion being prestidigitation and stage magic.

Kopper's Componium

Robert-Houdin's interest in mechanical music was probably aroused in 1829, when he saw Koppen's Componium in Paris, though he says he did not see it working. Some of the details, as recounted by Robert-Houdin in his Confidences, may be of interest:

"My fortunate star again furnished me with an excellent occasion for continuing my studies. A Prussian of the name of Koppen exhibited in Paris, about the year 1829, an instrument known as the

Componium. It was a perfect mechanical orchestra, playing operatic overtures with remarkable precision and effect, and it owed its name to the circumstance that, by means of truly marvellous arrangements, this instrument improvised charming variations without ever re tpengai etao hrd cmfw bgkqnup repeating itself. It was asserted to be as difficult to hear the same etaoi shrd cmfwy vbgkq, tashrdbg variation twice, as to find two similar quaterness drawn insuccession at a lottery.

"The componium was enormously successful, but at last, public curiosity was exhausted, anl it was withdrawn, after bringing to the owner one hundred thousand francs clear profit in a year. This amout, whether correct or not, was adroitly published, and some time after the instrument was put up for sale. A speculator of the name of Dseduced by hope of obtainings equally large receipts in a foreign conutry, bought the instruments, and took it to England. Unfortunately for D—, at the moment when this goose with the golden eggs arrived in London, George IV. died; the court went into mourning, and no one visited the instrument. In order to avoid useless expense, thought it prudent to give up a scheme commenced under such evil auspices, and determined on returning to Paris. The componium was consequently taken to pieces, packed up, D---- hoped the instrument would enter duty free, but. on leaving France, he had omitted some formality indispensible before obtaining this favour. The Custom stopped it, and he was obliged to refer the case to the Minister of Trade. While awaiting this decission, the chests were deposited in damp warerooms, and it was not until the end of the year, and after numberless formalities and difficulties, that the instrument returned to Paris.

"This will give an idea of the disorder, confusion and damage in which the componium was left."

The owner set about seeking someone capable of repairing and reconstruction his unique instrument: the construction of which had always been kept secret. So Robert-Houdin jumped in at the deep end—so to speak—and offered to undertake the immense repairs.

"I was laughed at; the confession is humiliating, but perfectly truthful. I must say, too, that it was justifiable, for I was only known at that time as a humble workman; and it was feared that, far from making the instrument act

properly, I should cause still greater injury while trying to repair it. However ,as D—— met with no better offer, and I offered to deposit a sum, to be forefeited in the event of my doing any injury, he eventually yielded to my wishes.

"It will be allowed that I was a very consciencious workman; but, in reality, I acted for my own benefit, as this undertaking, by supplying me with an interesting object of study, would prove a perfect lesson in mechanism for me.

"As soon as my offer was accepted, all the boxes in which the componium was packed were carried into a large room I used as a workshop, and emptied, pell-mell, into sheets, spread for the purpose on the ground.

'Heap of rusted iron'

"When alone, I saw this heap of rusty iron, these myriads of parts, whose meaning I did not understand, this orchestra of instruments of every size and sahpe, such as cornets, bugles, hautboys, flutes, clarionettes, basoons, organ pipes, big drum, triangle, cymbals, etc, all arranged in sizes, according to the chromatic scale, I was so frightened by the difficulty of my task, that I was quite annihilated for several hours.

"To better understand my mad presumption, which only my mad passion for mechanics and my love of the marvellous can excuse, I must add that I never even saw the componium performing; hence, all was an unknown country for me. Add to this, that the greater portion of the works were covered with rust and verdigris.

"Seated in the midst of this musical chaos, with my head resting in my hands, I asked myself a hundred times this simple question, 'Where shall I begin?' and then my imagination was quite paralised. On morning, however, finding myself well disposed, and feeling the influence of the Hippocratic axiom, 'Mens sana in corpore sana,' I felt disgusted at my long sloth, and rushed head-foremost at my immense task.

"If my readers were only mechanicians, how willingly would I describe to them all my trials, attempts, and studies! With what pleasure would I explain the skilful and ingenious combinations that arose successfully from the chaos! But, as I fancy I can see my readers turning over my pages to seek the end of a chapter that is growing too serious, I will check my inclination, and content myself with stat-

ing that, for a whole year, I proceeded from the known to the unknown, in solving this inextricable problem, and one day I had the happiness of seeing my labours crowned with complete success. The componium—a new phoenix—had risen from its ashes."

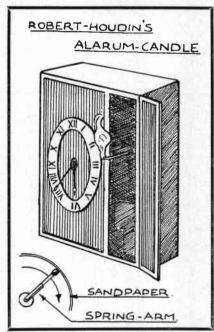
There must be many readers of *The Music Box* who can share the thoughts and feelings of Robert-Houdin, when, i na smaller way, they find themselves faced with some broken-down musical box from a forgotten attic, to which they hope, ultimately, to give a new kiss of life.

Unfortunately, this arduous task resulted in Robert-Houdin suffering a nervous breakdown, which kept him idle for the next five years; after which he resumed his business of making mechanical toys and automata.

Patented invention

On September 20th 1837, he took out a patent for a small alarm-clock (éveil-briquet) which woke the sleeper, and simultaneously provided him with a lighted taepr. This patent, No 7229, lasted for five years; and was followed three years later by another patent for improements and additions to the original, dated September 29th 1840. (Bulletin des Lois IX, tome 15, p. November 13, 1837, No 343 and 785; XXII, p. 116, January 10, 1841, No 558)¹.

About this time Robert-Houdin and his father-in-law were both almost ruined by the bankruptcy of their lawyers, in whom they had



How to strike a match with a clock—Robert-Houdin's "alarum-candle".



One of Robert-Houdin's mystery clocks—a transparent column and dial with the mechanism in the base.

placed complete confidence. So Jacques Houdin was obliged soon after to take up employment with another celebrated watchmaker, Détouche, of the Rue Saint-Martin, Paris.

Fortunately for Robert-Houdin, his "Alarm Light" proved to be so successful that he was able to hire several skilled workmen to enable him to cope with the demand: the result being that this was the first of his many inventions which brought him profit.

About this time he also constructed several automata, including a conjurer playing with the cups and balls; singing birds; a dancer on the tightrope, surrounded by four other figures (Les Autamates, page 268); a soldier on sentry-go (which is illustrated on page 314 of Le Monde des Automate); and Le Leçon de Chant, already referred to, and which was first described in the Journal de Loire et Cher, Feb. 29, 1844.

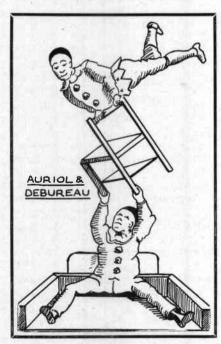
In addition to these automata, he made his Mysterious Clock, which appears to go without works. The single hand is on a transparent dial, which, in turn, is mounted on glass column. This clock not only

indicates the hour, but strikes without any apparent mechanism. Several of these mystery clocks still survive, being in the possession of the inventor's grandson, Paul Robert-Houdin, of Blois. The wellknown firm of Cartier, New Bond Street, made several "one off" variations of this Robert-Houdin speciality many years ago; but I am informed by them that their whereabouts are now unknown.

Theatrical automata

On top of all this activity, Robert-Houdin was working on his projected theatrical automata: his ultimate aim being to open a little magic theatre of his own in Paris. These theatrical automata were automata which, though apparently self-contained, were actually under the secret control of a hidden assistant. They included: The Pastrycook; Auriol and Debureau (the clown and pierrot); The Orange Tree; and The Transparent Clock and Bell (not the clock just mentioned, which was a normal timekeeper).

However, once again Robert-Houdin's plans were thwarted by financial troubles through investing most of his earnings in the development of his theatrical automata, which brought him in nothing. But when almost at his wits' end, his luck was turned by an admirer of his work, Alphones Giroux, a curio dealer of 7, rue de Coq-Saint-Honoré, in whose salon *Le Leçon de Chant* was exhibited, and to whom he referred as "M G——", commissioned him to construct a



Automaton tumblers Auriol and Debureau—marvels of mechanism.

writing and drawing automaton, for the sum of 5,000 francs: half to be paid in advance. This solved his immediate financial problems. But in order to concentrate on this major work, he found it imperative to isolate himself in a little room in the *rue des Bois*, Belville, a few miles from Paris, only seeing his family twice a week.

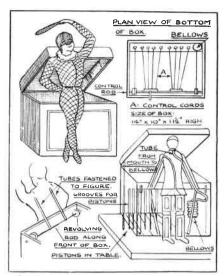
This writing and drawing automaton represented a young man seated at an elegant table, the figure being about 30 inches high. Apparently it resembled to some extent Maillardet's Writer and Drawer which, after being lost for a considerable time, was found and restored, being now on exhibition in the Franklin Institute in Philadelphia².

Strange to relate, Robert-Hou-din's version, like Droz's Drawing Automaton, drew a cupid, a dog, and the heads of ruling monarchs: which leads one to assume that Robert-Houdin was familiar with the Droz mechanism; or at least the shapes of the cams required for those particular drawings. But the Droz figures were entirely different. with the mechanism inside their bodies; whereas Robert-Houdin's automaton had the mechanism in the plinth on which it was dis-played, like Maillardet's: which also both wrote and drew. Maybe Maillardet's automaton came into Robert-Houdin's workshop for repairs, and he was able to learn essential details; though Brewster only mentions it drawing "three beautiful landscapes", not similar ones to Droz'. But unless Robert-Houdin's Writer and Drawer had been to a considerable extent original, it is inconceivable that he would have been awarded a silver medal for it at the Paris Exhibition in 1844, since there were a number of other makers of automata also exhibiting there who would be familiar with all the current information about such mechanism.

The American showman Barnum, who bought the piece, actually stated in his book Struggles and Triumphs that Robert-Houdin introduced him to other makers at the Exhibition. These may have included Dehais, Vichy, and Theroude, all of whom lived in the Rue Montmorency.

Robert-Houdin stated that "M G—" lent him this automaton for the Exhibition; so it was probably sold to Barnum on his behalf: he being a dealer who, as likely as not, bought it in the first place for resale.

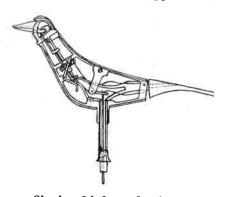
While still at Belville in 1840,



The Harlequin from which Robert-Houdin learned the elementary mechanical details of theatrical automata.

Robert-Houdin also completed a Singing Nightingale automaton, which a rich merchant of St Petersburg had ordered. This was not the first song-bird he had made; but the others had only made twitterings, whereas this one caused him a lot of extra effort in order to imitate the exact song of an actual nightingale, which he accomplished by patiently waiting and listening in the woods at Belville to his living

"I wanted to imprint on my memory the musical phrases with which the bird composes its melodies. The following are the most striking among them: tioutiou-tiou, ut-ut-ut-ut, tchitchou, tchitchou, tchit-tichit, rrrrrrrrrrrrrrrrrouit, etc. I had to analyse these strange sounds, these numberless chirps, these impossible rrrrrouits, and recompose them by a musical process. Now, here was the difficulty. I only knew so much of music as a natural taste had taught me, and my knowledge of harmony was hence a very feeble resource. I must add that, in order to imitate this flexibility of throat, and reproduce these harmonious modulations, I had a small copper tube,



Singing bird mechanism.

about the size and lentgh of a quill, in which a steel piston moving very freely, produced the different sounds I required; this tube represented in some respects the nightingale's throat.

"This instrument would have to work mechanically: clockwork set in motion the bellows, opened or closed a valve which produced the twittering, the modulation, and the sliding notes, while it guided the piston according to the different degrees of speed and depth I wanted to reach.

"I had to impart motion to the bird: it must move its beak in accordance with the sounds it produced, flap its wings, leap from branch to branch, etc. But this part of my task troubled me much less than the other, as it was purely mechanical."

Should this passage have whetted the reader's appetite, he should turn to Robert-Houdin's memoirs for the rest of his fascinating story (Memoirs of Robert-Houdin King of the Conjurers, Dover Edition, 1964)³.

Robert-Houdin did not claim to have ivented the tube-and-piston method of imitating bird-songs, which would, presumably, be familiar to all the makers of automata at that period. But no doubt he modified it to his own purpose.

Vaucanson's Duck

Sir David Brewester stated in his Letters on Natural Magic (1832) that the process of digestion in this famous automaton "—was effected by chemical solution, and not by trituration, and the food digested in the stomach was conveyed away by the tubes to the place of discharge." But in his Congdences d'un Prestidigitateur, written some 26 years later, Robert-Houdin told a different story. He quotes the memoir of Vaucanson, addressed to the members of the Royal Academy of Sciences, dated April 30, 1730;

"'In this duck,' the celebrated automatist writes, 'will be noticed the mechanism of the viscera, intended to perform the functions of eating, drinking, and digesting, The action of all the parts is exactly imitated. The bird puts out its head to take up the seed, swallows it, digests it, and evacuates it by the ordinary channels.'"

"For a time I contented myself with admiring and believing in the great master's work, but in 1848, Vancanson's duck was exhibited

in a room at the Palais Royal. Of course I was one of the first to visit it, and was much struck by its skilful and learned formation. Some time after, one of the wings having been injured, the duck was sent me for repair, and I was initiated into the famous mystery of digestion. To my great surprise, I found the illustrious master had not disdained to have recourse to a trick which a conjurer would have been proud of. The digestion, so pompously in the memoir, was only a mystification—a real canard, in fact. Decidedly, Vaucanson was not only my master in mechanism, but I must bow before a genius for juggling.

The trick was as simple as it was interesting. A vase, containing seed steeped in water, was placed before the bird. The motion of the bill in dabbling crushed the food, and facilitated its introduction into a pipe placed beneath the lower bill. The water and seed thus swallowed fell into a box placed under the bird's stomach, which was emptied every three or four days. The other part of the operation was thus affected: Breadcrumb, coloured green, was expeled by a forcing-pump, and carefully caught on a silver salver as the result of artificial digestion. This was handed round to be admired, ingenious trickster while the laughed in his sleeve at the credulity of the public.'

Robert-Houdin added the following footnote: "After Vaucanson's death, his works were disposed of and lost, with the exception of the duck, which, after remaining for a long time in a garret at Berlin, saw light again in 1840, and was purchased by a M George Tiets, who spent four years in repairing it."

However, the authors of Les Automates express the opinion in a note to page 246 of that extraordinary book that the duck which Robert-Houdin claimed to have repaired may have been an imitation; and that the original was found in Berlin in 1839, when it was entrusted to Rechsteiner for repair.

Robert-Houdin's Soirées Fantastiques

On July 3, 1845 Robert-Houdin opened his little magic theatre at No 164 of the Galerie de Valois, in the Palais Royal, Paris, where he had long planned to present his originalities in Theatrical Automata, Magic, and Prestidigitation. This proved to be such a lasting success that it continued under several different managers; finally closing its doors while under the direction of George Méliès, the pioneer film producer, in 1920, due to demolition.

On June 25, 1850, Robert-Houdin summonsed an employee named Legrand for copying and selling many of his mechanical originalimonths' imprisonment and ordered to pay all the costs and damages. Legrand was a working clock-maker in whom Robert-Houdin had put complete trust, having worked for him from 1842 to 1849, when he was dismissed. He would probably be the workman left in charge of his workshop when Robert-Houdin isolated himself at Belville, at which time Robert-Houdin employed four workmen, constructing automata and magical apparatus to his own specifications.

Robert-Houdins brain was teeming with ideas, with which he was

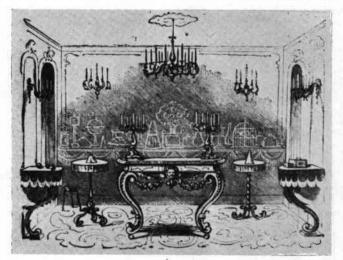
constantly experimenting. These included the application of electricity to both magical and domestic appliances, of which he was an undoubted pioneer.

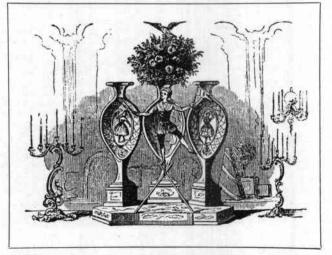
On September 14, 1850, he demonstrated his newly-perfected electriclight for a few friends at his home, as reported in the *Journal de Loire-et-Cher*, for September 18, 1851.

At the great London Exhibition of 1851, Détouche and Houdin exhibited a bronze clock, of which an illustration appeared in the Catalogue of Chief Exhibits. Presumably this would be the work of Robert-Houdin's father-in-law and the Détouche with whom he took employment after his bankrupsy, as already mentioned.

In February 1852, Robert-Houdin left Paris and retired to the hamlet of St Gervais-la-Foret, near Blois, where he had bought a property called Le Prieuré; in which he installed many labour-saving electrical devices of his own invention. He had passed on the proprietorship and management of his Théâtre Robert-Houdin to his brother-in-law Hamilton in January; and at about the same time the theatre was moved to No 8 Boulevard des Italiens, the lease in the Palais Royal having expired on December 31, 1851.

Robert-Houdin's experimenting with electricity during his retirement bore further fruit by his being awarded a gold medal for the application of electricity to clockwork at the Paris Exposition of 1855: his seven exhibits being the subject of an article in the *Journal de Loire et Cher* for January 17, 1856. These exhibits included an electrical Mantlepiece Clock which





Left: The stage of the Théatrè Robert-Houdin in the Palais Royal, Paris. It was here that he presented his Soirées Fantastique c.1845. Right: Robert Houdin's theatrical automaton rose-bush which blossomed and from the top of which a singing bird emerged. Then the Etruscan vase opened into three parts revealing an Indian tight-rope dancer.

ran off a battery, and acted as a master-clock to the other dials in the house. This type of electrical regulator described was described in the Journal de Loire et Cher for March 22,1855, the writer stating that Robert-Houdin had made an electric clock that would go indefinitely once the pendulum of the regulator had been set in motion, so long as the current was not broken. He continued: "The arrangement of this system is such that, however irregular the production of electricity, the force of impulsion on the pendulum remains constant; also, once the current is started and the pendulum suitably regulated, this Regulator can defy the best chronometer and is not influenced by those atmospheric variations which upset ordinary clocks. Isn't that a marvellous invention . . .

A regulator of this kind stood in the vestibule of its inventor's home, transmitting the time to five other clocks in the house. Another was exhibited in the Conservatoire des Arts et Métiers.

Electricity patents

His applications of electricity to mechanism were the subject of another patent (No 18171), granted to him on January 20, 1857; followed by a certificate of additions on May 8, 1858*.

Early in the year 1856, Robert-Houdin arranged with the vicar of St Gervais, l'Abbé Ranc, to install an electric clock in the steeple of the villiage church; and a hole for the dial was made in the church tower. But the municipal council would not agree to this. So Robert-Houdin, much annoyed, offered the clock to his friend the mayor, who had it fixed to the Town Hall at Blois.

In 1866 Robert-Houdin improved this clock by fitting a transparent dial, which was lit up at night. But though the reporter of the event stated that: "He has left his birthplace a remarkable souvenir which will be faithfully preserved by our descendents", the mechanism was replaced about 1875 by regular clockwork, on the advice of a clockmaker who said that the batteries were unhealthy! However, the transparent dial remained until the Town Hall was destroyed by the bombing in June 1940.

A regional Industrial Exhibition was opened in Blois in May 1858, at which Robert-Houdin exhibited his Electrical Clock; an Electric Current Interrupter; a Fire Alarm (probably similar to one which he had installed in his own woodshed at "The Priory"; which was controlled by a thermostat); and a Speed Indicator for Ships. For these he was awarded another First-class Medal.

His father - in - law, Jacques Houdin, now head of Maison Détouche, exhibited a magnificant and ingenious clock at the same exhibition (Journal de Loire et Cher, May 27, 1858). He went to live at Le Prieuré with Robert-Houdin in 1859; and died there on November 12, 1860.

In 1859 Robert-Houdin repaired and redressed a walking automaton, said to have been invented by Vaucanson. This figure is in the Conservatoire National des Arts et Métiers, Catalogue No 6152.

Yet another subject which absorbed Robert-Houdin during his retirement was the physiology of the eye. Indeed, he confessed that the study of opthalmology had become a veritable passion with him. On March 29th, 1866, he took out a patent (No 71058) for fifteen years for an Iridoscope; and a patent for an addition on August 24, following. Then in 1867 he had a fifty-seven page booklet published by Lecesne, Blois, titled: Note sur De Nouveaux Propres a l'Observation De Divers De Loeil Ainsi Qu'a L'oeil La Manefestation Des Images Entopitiques.

Roentgen's automaton

In 1866 Robert-Houdin also repaired the automaton "Joueuse de Tympanon" (Player on the Dulcimer), constructed about the year 1784 by David Roentgen (1743-1807), a German living in Paris, and a favourite of Marie Antoinette. Robert-Houdin stuck an autographed note dated October 1866 in the bottom of the cabinet (where it was subsequently found), stating that he had been trusted with the repair of the "Joueuse de Tympanon."

"This automaton," he wrote, belonged to Louis XVI, and reproduces the charming appearance and musical talent of Marie Antoinette..." (Le Monde des Automates, Vol 2, pages 281. The working details, illustrated by photographs of the actual automaton, are carefully described in the above book. See also Les Automates, page 292).

Robert-Houdin's eldest son, Jean-Jacques Emile, inherited the traditional family attraction to horology. After learning his craft from Bréguet, he traded under the name of Robert-Houdin Fils, Horologer et Méchanicien, at a corner shop: rue de Choiseul, No 1; and rue Neuve-Saint-Augustine, No 18, Paris. This would apparently be Louis Breguet, since his distinguished father, Abraham Bréguet, died in 1823, before Emile was born. In 1863, Emile had a booklet published, containing 62 pages, called: L'art de connaître et de regler les Montres et les Pendules, for which his father wrote the preface, in which he says:

"I am so often asked why my son, instead of following the career as a conjurer which I had prepared for him, preferred to devote himself to devote himself to horology. What I have replied on these occasions has a certain appropriatness at the beginning of this brochure.

"If one agrees with hereditary vocations, a just application of the theory can be made out here.

"Nicholas Houdin, the maternal great-grandfather of my son, was a clockmaker of great merit during the last century.

"Jean-Francis Houdin, his son, was said to be one of the foremost among the distinguished clockmakers of our epoque. It will be understood that a certain reserve does not permit me to eulogise over my father; I will be content with saying that he was very skilful and ingenious. As for myself, before turning to illusions based on mechanism, I was occupied for a long time with precision clockwork, and though I say it myself, I obtained considerable success.

"With such a genealogy, may one not be predestined to clock-making? So my son, carried away by an irresistable vocation, has returned without reserve to this art which has made the names of Berthoud and Bréguet famous, and it is from the latter of these two famous masters that he has learnt the elements of the profession of his ancestors. Robert-Houdin."

Robert Houdin's book

In 1868 Robert-Houdin's conjuring classic Les Secrets de la Prestidigitation et de la Magie was published by Michel Levy, Paris. Hoffmann's translation: The Secrets of Conjuring and Magic, appeared ten years later, published by Routledge.

Georges Méliès presented the followed pieces from the *Théâtre Robert-Houdin* to the *Conservatoire National des Arts et Métiers* in 1929: The Genie of the Roses; The French Guardsman; The Glove Column; The Mysterious Clock and Bell; Auriol and Debureau;

Cupid's Nest; The Harlequin; The Singing Bird; the Louis XV Centre Table, containing pistons to control automata; and "Sophos", the domino player (copied from John Neville Maskelyne's whilst-playing theatrical automaton "Psycho")⁵.

But on enquiring four years later why they had not been put on display, Méliès was informed that a beam had fallen during alterations to the museum and crushed them all! Considering that the pieces were all packed in individual travelling cases, this seemed to be a most unlikely story, which I thought highly suspect at the time it was circulated. However, it appears to have been accepted without any serious investigation of its accuracy. But Paul Hammond states in his absorbing and informative book: Marvellous Méliès (Gordon Fraser, 1974), page 83, that actually the curator of the museum, Landais by name, had sold the lot! But to whom?

M Paul Robert-Houdin, a grandson of the Master, who is an architect at Blois, and also the originator of *Son et Lumière*, has opened a small Musée Robert-Houdin, at 5, Voute du Chateau, 41 Blois, where some of the mechanical and electrical relics can be viewed.

On May 26, 1887, rue de Madelaine, Blois, was renamed rue Robert-Houdin. A street in Paris is also named after him, paralled with the rue Jules Verne; and at St Gervais-le-Foret, a road through the village, passing the church and leading to the park of the Chateau in the grounds of which stands Le Prieuré, bears a nameplate: "Rue Robert-Houdin, 1805-1871, Illusioniste."

Finally, a pictorial postage stamp and "First Day Cover" dated 16 October, 1971, Blois, were issued to commemorate the centenary of this remarkable fantasiast's death.

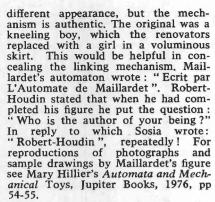


The grave of Robert-Houdin in the cemetery at Blois pictured some years ago for the author.

FOOTNOTES

- ¹Research in to the archives of Loire et Cher by Jean Chavigny: Robert-Houdin, Rénovateur de la Magie Blanche, Blois, 1943.
- ²Chapuis and Droz state on page 27 of Les Automates des Jaquet-Droz, Neuchatel, 1951, that the combined Writing and Drawing figures was begun by Droz, but finished by H Maillardet at London. They also state that, since being renovated after being in a fire, the figure has taken on a

Robert - Houdin with Diavolo Antonio, the trapeze vaulter. This was his most popular stage automaton. Set on the trapeze, he would perform all manner of gymnastics finally bowing to the audience, hanging upside down, and letting go to be caught by his master.



What could turn out to be an important clue towards solving The Great Writing and Drawing Automaton Mystery appears on page 151 of Michel Seldow's Vie et Secrets de Robert-Houdin, where the two final pages from Robert-Houdin's diary before his death on June 13/1871 are reproduced in facsimile.

reproduced in facsimile.

On June 3 he wrote: "Rose at six. I have worked with Emile and Mr. Rocault at cutting and tracing the cam of the little lover for my writer."

June 4 "I have worked on some new

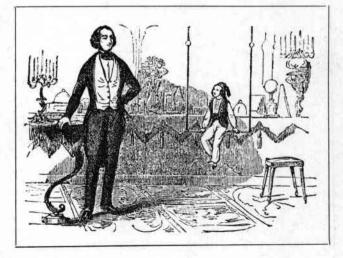
arrangements for cutting the cams for my writer."

So at the very end of his days Robert-Houdin was still absorbed with extending the range of his Sosia. The questions arise: (1) Was the automaton actually in his possession at that time? (2) If not, for whom was he making the new cams? (3) What happened to it next? (4) Where is it now? Robert-Houdin's Confidences d'un Prestidigitateur was first published in Blois in 1858. A translation into English by Lascelles Wraxall, under the title: Memoirs of Robert-Houdin was published by Chapman and Hall in 1859. There have been many further editions of this fascinating book since then: the latest being published by Dover Publications, New York, under the title: Memoirs of Robert-Houdin, KING OF THE CONJURERS, with an Introduction and Notes by Milbourne Christopher, who has also included many reproductions of rare Playbills, Prints, and Documents.

⁴A technical drawing of the clock dealt with in this patent specification is reproduced in *Vie et Secrets de Robert-Houdin*, by Michel Seldow (Fayard, Paris, 1971).

⁵ Descriptions of many theatrical or trick automata will be found in Les Automates Truqués, by Adolphe Blind (Geneva, 1927).

The Life and Work of Robert-Houdin have been dealt with in great detail in Salutations to Robert-Houdin, by S H Sharpe, published serially in the monthly magazine of The International Brotherhood of Magicians, The Linking Ring, from September 1967 to April 1974.





The Porter Musical Box Story

An Exclusive interview with Dwight Porter

IN RECENT issues of *The Music Box*, mention has been made of the burgeoning technology within our midst — a technology that has its roots back in the days when the musical box was a new notion yet one which has been extended into this present time. Studio Oyen produced the new Symphonion several years ago, Richard Mayson made a one-off cylinder box, Keith Harding made the Jubilee Polyphon and, more recently, the twin-disc Gemini. And Brian Etches made the outstanding twin-disc Jubilee table machine. In America, the gradual revival of the musical box industry is of no less importance and much of the present-day activity centres around one man, Dwight Porter of Randolph, Vermont. *The Music Box* interviewed Dwight and heard several of his machines at Sarasota, Florida, in September

IN THIS age of high-power business, there is neither place nor scope for the self-made man. That type of individual died out before the computer, supersonic flight and other aspects of high technology took over much of every-day life and commerce. Every rule, though, has to have an exception. Dwight Porter, an enthusiastic 29-year-old craftsman, is that exception, for four years ago he had nothing, not even a regular job, yet now he heads up America's newest and most successful musical box manufacturing companythe Porter Music Box Co.

Born in Brattleboro, Vermont, a town famed for its connections with the Estey reed organ company, Dwight had no background of music or technology. Father was a cook in a restaurant.

An early interest in clocks and watches directed Dwight to seek apprenticeship to clock - repairer Ronald Sweetland who was sufficiently competent to have in his care all the timepieces in the White House and the Capitol. Two year later, Dwight left and took employment in a jewelry store for a year, then worked for Lloyd G Kelley who had continued the old Regina Music Box Co into modern times. Here he learned about musical boxes and assisted Kelley in making a few new Regina table models. The young Porter asked Kelley why quality had changed over the years and why were modern musical boxes not made the way they used to be. "Nobody

would pay the price", came the answer.

"I had always felt", Dwight Porter says, "that if a person made a product which was good and they did their very, very best with it, then the price was no object. People are dying for quality — something they can put their money into."

Porter left Kelly soon afterwards and began doing musical box repair work for Ruth Bornand of the Bornand Music Box Co in Pelham, New York. Meanwhile he toyed with the idea of trying to make a quality replica of the table Regina.

Early disappointment

"I got some estimates for making dies for dampers. It was 1974 and I had no money. The damper die estimates were more than all the cash I could raise so that was out. Then I found another place where I could get almost all the dies I wanted made for the same price, I talked to the bank and to the people who finance small businesses and found that they were all terrified for there was no caeegory of business titled 'musical box manufacturer' any more."

Prospective backers wanted to see his house and workshop. His tiny family home did not make a good impression on the potential investors, but his sheer enthusiasm and his dedication won over his sceptics and the cash was to hand.

Reuge in Switzerland agreed to supply him with combs and he



was ready to go. Suddenly, with some \$40.000 of investment money in the project, Reuge wrote saying they could no longer supply him. "Things were not looking bright for the little kid who'd never earned more than \$70 a week," recalls Dwight ruefully.

He went cap in hand to the die makers who were stamping out his parts and told them that all was lost without the combs. To his surprise the company said that, so long as he was prepared to underwrite the project, they would press ahead with research and development and try to make combs for him themselves.

It took eight months to develop the special tools alone.

"We had the steel analysed and found what most people already know, namely that the steel was nothing more than common water-hardened stuff and that by today's standards it wasn't the greatest. We decided to try using a higher quality tool steel, designed a new slitting method and started in."

Two combs were made in the space of one year. A new method of attachink the leads was tried. They were pre-slit into a sort of comb, attached in one piece and the uniting fin snipped off to separate them, so avoiding the need for sawing. "That system failed wonderfully," says Dwight,

But one day the first successfully leaded comb was finished and using an old double-comb Regina for reference, Dwight file-tuned it, drove 35 miles home and screwed

it down into place on his antique Regina, "I played that first disc and knew that we had done something. The dampers didn't work and the securing screws were not in the right place, but the comb worked."

Next came the complete assembly of a totally new instrument from all-new parts. After that, there was the problem of making discs and he and a friend schemed out a simple machine. The machine shop they took it to quoted them "three fortunes" to make it and guaranteed that it would not work. Back to the drawing board!

Finally cash was found to make the basic punch and a matching die and punching trials began. These first dies were all ground up by hand which meant that all initial projections had different shapes. However, the dies could punch more than one and a half million holes before re-grinding, so again progress was being made.

Now with the first new machines and a small but steady supply of new discs porter was ready for the market. "We tied up with our first distributor, Sorento Specialities in Los Angeles run by Enrico and Ina Salierno. There was no problem at all in selling small numbers.

The team of workers

What sort of team does Dwight Porter now have working on the new boxes? "Well, I don't have to do very much myself now except adjusting dampers and so on. I have a young lady who does the comb tuning, a young fellow who does the complete assembly of the table model, my father Fred who manufactures the discs, and my mother Dorothy who repins musical box cylinders — that's the business which supports us!"

Business manager is wife Mary who ensures the smooth running of the enterprise. "I have no head for figures", says Dwight.

Dwight's comb tuner uses a strobe for tuning and whereas the first combs took between eight and ten hours to finish, she can now produce a perfect comb in 4½ hours from start to completion. Raw materials for manufacture have proved a major problem with items such as spring steel being hard to find. Specialist processes such as steel hardening have also given headaches. "You may find only one man in 20 at a shop who can give you just the right job," adds Dwight. "The hardest assembly jobs are comb tuning and

the starwheel assembly but, assuming that all the finished parts are ready on the bench it now takes just three days to build a table model from scratch." To date, 34 of these have been made and delivered.

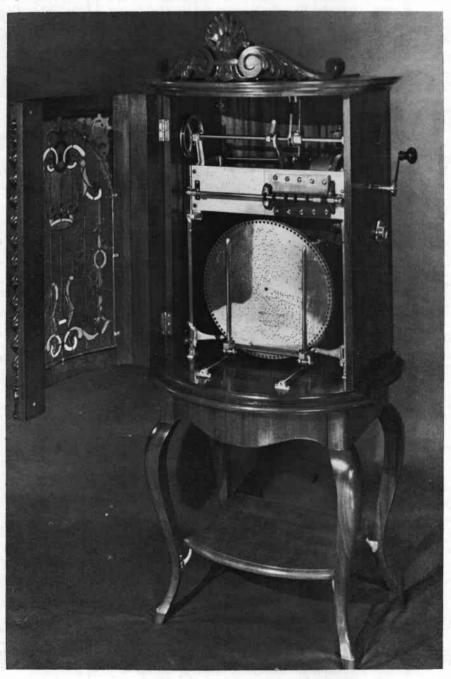
Craftsman cabinetmakers

A feature of the Porter machine is the superb case. How did Dwight find a craftsman cabinet-maker capable of such work? "I just went through the Yellow Pages and found this guy named Jack Perrin. Since I already have a music arranger for discs named Jack Perron, I reckoned that he ought to be the one. When I called him he turned out to know all about musical boxes as he had repaired a destroyed lid inlay on

a magnificent table box belonging to Lloyd Kelley!" Which goes to show that it's a small world, even in the United States.

Whereas the original Regina inlay was made of celluloid, Porter uses white holly and the inside of the lid proudly bears his name in a marqueterie design using holly, ebony, tulipwood, rosewood and other textured veneers. The cabinet lock and hinges come from England. The cabinetmaker turns out to have been born in Wales, served an English apprenticeship and to have taken his skills to the States. Certainly the cabinets with their five hand-rubbed coats of lacquer look very good indeed.

Recently, Dwight Porter decided to move into the self-changer scene



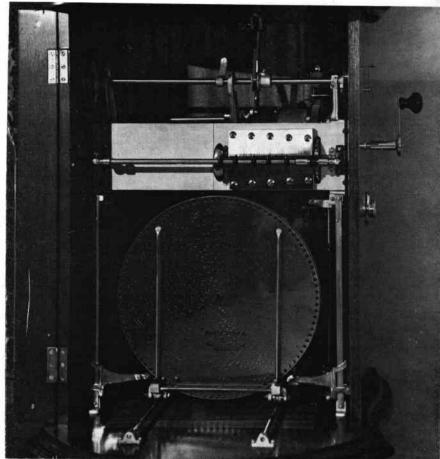
and reproduce the 151 in Regina autochange Corona. Al Meekins of Collingswood, New Jersey, had made a few of these and had many of the patterns and dies. News that he wanted to sell this side of his business and concentrate on repair work led to the acquisition of the parts by Dwight who has so far sold 11 of his new changers. He had one on display at Sarasota for the MBSI convention - and took orders and deposits for no fewer than seven more. With a retail price which now stands at \$5,750, this is a rare opportunity to acquire a craft specimen of a sought-after type.

One attractive feature of the Porter autochange is the curved "art glass" front, the bought-in work of another New Jersey craftsman.

Cottage industry revival

Last words from Dwight Porter: "We are reviving a cottage industry of exactly the same type which made the original Swiss musical box. We have all these craftsmen contributing to the whole."

Porter deserves the respect of all who are interested in the instruments of mechanical music for his skill and dedication in re-creating the once-great American musical box industry. Can we hope to see any further examples of revived technology from Vermont? Well, Dwight is hinting hard that he has



The fine detail workmanship of the Porter 15½ in self-changing Regina replica is seen in this view of the mechanism pictured with the door open.

long-term ideas for something new using the old skills. He suggests it might be large and "terribly complicated", but says that this

will have to come after he has perfected a machine for making and drilling new cylinders for musical boxes.

A Rare Survival of the inside Instant Stop



Francois Nicole three-overture box which survives with the inside instant stop control. It belongs to Hughes Ryder.

THE mechanism of the early cylinder musical box quite early on assumed the format which was to remain with it through to the end of its production life.

One feature of this was the provision of three operating controls. The first, working from back to front on the standard format, was the lever for operating the tune changing device.

The centre lever was a simple stop/start control which operated some form of detent governed by a positional feature on the end of the cylinder and the governor. Normally this control took the form of a Y-shaped lever.

The third control was the socalled instant stop, so called because its operation immediately engaged a stop finger in the rotating fan of the governor assembly.

There were other control levers, in particular found on concealed

drum and bell boxes where an extra lever would be provided to silence the drum hammers. With these boxes, the bells were usually of such good sound quality and played so softly that they were always left in play.

Gradually, the use of the third control lever, the instant stop, was done away with and finally the musical box ended up with just two lever controls. With the change over to inside-mounted controls on a plinth at the right hand end of the cylinder, the third

lever was virtually dead.

The instant stop is a control which has been commented on many times by writers and it is generally accepted as being the control installed purely and simply for the use of the musical box repairer and improver. It was the improver who, as the penultimate stage in the manufacture of a new box, had to listen carefully to each tune and adjust any of the cylinder pins as might be necessary. For him, the third lever was considered a vital control.

For a long while it has been known by the musical box expert that even this instant stop lever had its limitations. The geometry of the long control rod which had to pass under the bedplate from one end to the other, was such that there was not only friction



but also backlash. The instant stop was never able to be as instant as its name suggested. For the musical box improver, how infinitely superior the finger of one hand gently pushed into the rotating fan!

The discovery on a number of very early boxes of an unaccountable slot in the right hand keycompartment divider has created something of a mystery for some years now. This slot had been seen on several very early items both in Europe and in America, and always accompanied with a



Top pictures show both sides of the divider.



few random screw holes above it bearing witness to the former existence of something which has been removed.

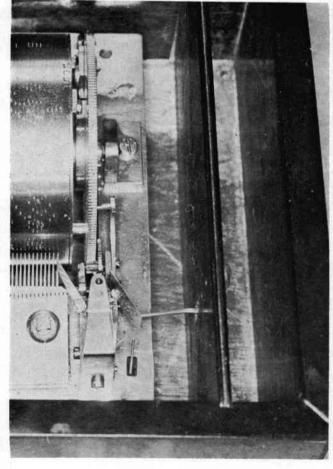
The solution to the puzzle has come from two boxes in the Hughes Ryder collection, Cranford, New Jersey. The first box is a three-overture box with a twopiece comb, each stamped "FRANC". NICOLE". The far right hand end of the bedplate is stamped "F. LECOULTRE 5651" a single additional numeral which could be either a 5 or a 3 being placed beneath the 6 and the 5. Before the name there are two more words which have been obliterated by stamping. These indicate one word of six letters followed by another of two, such as "Nicole et". The box has square-headed comb screws with small washers.

The right-end case divider is complete with an instant stop which is direct-acting and is independent of the normal third lever type. In the two pictures at the top of this page can be seen, on the left, the appearance of the control from the inside while the right-hand picture shows the slender stop finger protruding through the slot in the divider.

The construction of the control is very simple and is of one piece of brass having a thumb catch type top and a slot to enable it to

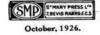
slide on two screws.

The second box is a Francois Nicole, also playing three overtures and bearing the serial number 3. This box, which will be featured in our colour pages in due course, has a slot in the end divider corresponding exactly with the form and position of that in the first box described but, as so often the case, the control is missing.





This is a facsimile reprint of a nine-page brochure on Duo-Art pianos first published as the imprint, right, shows in October 1926. The original of this was acquired by the Editor at a recent Christie's South Kensington sale and is presented here for the benefit of members.





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CHARIVARI

Roger Booty's Odd Jottings

IT IS Christmas yet again and I thought it would be a good opportunity to pass on some sightings of mechanical music, plus some humour (?) and notes I have collected. To start, an extract from *Memoirs of an Old Balloonatic* by Goderic Hodges (William Kimber and Co Ltd, 1972). This scene took place in a convalescent home for limbless soldiers in the First World War.

"In the hall of Dover House was an organ, which could be played by means of perforated rolls, like those used in pianolas. Among the patients was a sapper who had some understanding of music. we sat close together, pumping, he with his left foot, I with my right. The result was a considerable volume of sound. What real music-lovers thought of it, we never stopped to consider. It was a cheerful noise. In a world of unipeds, anything cheerful is welcome."

Dunrobin Castle, Golspie, Scotland, the seat of the Countess of Sutherland, has a large Orchestrelle but unfortunately you cannot make a close inspection of it. In Q David Bowers' well known tome, Encyclopedia of Automatic Musical Instruments there is on page 790 a picture of an Aeolian player pipe organ installed in a

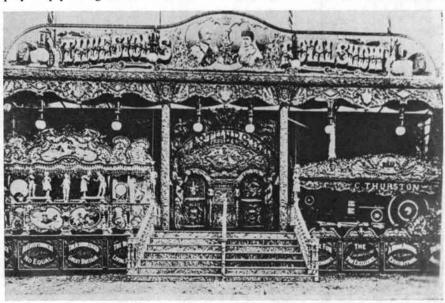
manor at Saffron Walden. Audley End is that manor and it is now open to the public but do not visit with the hope of seeing an Aeolian organ, nothing is now known of it. Back in Scotland, at Craigievar Castle near Aberdeen, there is a small barrel organ on show, if you ask-they will play it for you. Still on organs, but of the fairground greed, there are a few well known

rides, mostly gallopers, still touring which have organs playing on them. There are also a few rides around with just organ fronts on them and I have seen locally a set of chairoplanes, a cakewalk, and a set of gallopers. Only one was attempting, with the help of recordings, to give a passing impression that the organ was complete.

Poor Ada, she was so ill she had



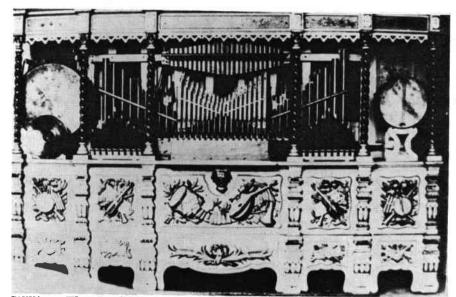
The organ — I do not know the builder — on John Evans' Golden Dragons at Glasgow in 1921. It is a fine instrument with five figures, two of them lifesize. A ride on the Dragons was "All classes, 3d." Photograph from the fairground collection of R A Taylor.



Charles Thurstons number I Bioscope show at Braintree, Essex, in 1909. The organ is a Gavioli and the showman's traction engine, partly covered on the right, is the Burrell Alexandra. Amongst other things this show claimed to be, "An entertainment that has no equal" and "The cinematograph par excellence." Photograph from the fairground collection of R A Taylor.

to visit the doctor. When she started to run through the list of aches and pains he was overcome by the number so gave her a roll of paper with instructions to wrap herself in it and make a hole whereever it hurt. When she returned with the result he was so pleased he rushed it straight onto his pianola and got two choruses of *Nellie Dean* and the finale from the William Tell Overture!

A local antique dealer (is there such a thing these days?) innocently bought an 88 note Steck upright player piano. But, woe, it turned out to be a 65 note conversion and that didn't suit at all. Remedy, restore to 65 note but from where do you get a 65 note tracker? Roll and parts suppliers couldn't help unless, that is, you were prepared to pay about £1 for each note. The gap was eventually filled when an early Triumph Kastner literally fell off the back of a lorry! Luckily no one was in



William Thurston's 89-key Gavioli at Cambridge in 1928. Photograph from the fairground collection of R A Taylor.

its way and the only casuality was the unfortunate piano.

Chelmsford, county town of Essex, has a small and interesting museum with mechanical music present in two forms, a small table Polyphon and a barrel organ by O Meyer and Co which has been there since at least 1933. They will play the organ but do not expect too much from it.

* * *

Often gramophones and phonographs are mentioned in the pages of our journal as being machines which helped to oust most of the earlier forms of mechanical music from the market. The player piano is a machine of this century which had as a competitor in its most popular years the up and coming modern marvel of wireless. The worlds' first factory was set up in Chelmsford by Guglielmo Marconi in 1899, just thirteen years after the first successful disc musical box. The building which housed the factory still stands but is now used as a storehouse although the old company name is still visible on one of the gables. There is however, no truth in stories that local moggies still keep clear of the area in fear of tales of whiskerless

In 1907 an automobile race was run from Peking to Paris across roads that were rough or non-existent, but civilisation was never far away. Apparently, while crossing the Steppes, the lead car came to a village that was having a fair with a horse circus, living freaks and barrel organs. Mechanical music in Russia in 1907, I wonder if there is any now? The Bowes

Museum at Barnard Castle, has a number of barrel organs of varying types and sizes as well as musical clocks. It is also the home of the oft-mentioned Silver Swan, but I do not think anyone has said before that it is set in motion frequently, about once an hour.

Can any fellow members expand a little upon the following? I have heard carillons playing at Dunster, Home Sweet Home, and Kendal, British Grenadiers. I would be interested to hear, in both senses, more of them.

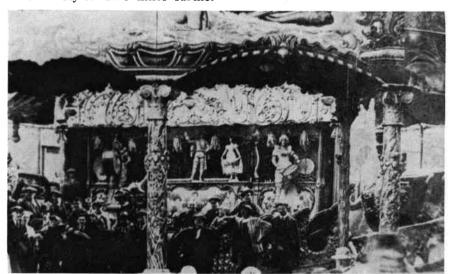
North Norfolk's chief claim to mechanical music fame is George Cushing's famous organ collection at Thursford. About six miles north east of Thursford is Letheringsett where the church has a fine Bates and Son barrel organ with three barrels set in a cradle, revolver style. Two miles further

north, towards Cley-next-the-Sea, you come to the little village of Glandford. Here is a small but very interesting shell museum and behind, set atop a hill, St Martin's a small but fine rebuilt church whose illumination is candle light. Our main interest here however, is the tower which contains a carillon of twelve bells by John Taylor and Co. of Loughborough. The clock chimes, strikes the hour and at 3, 6, 9, and 12 o'clock plays a hymn with a different one being played each day. The hyms played are; Once in Royal David's Citu. Jerusalem on High, On the Resur-rection Morning, The Saints of God, On the Happy Easter Morn, Every Morning the Red Sun, There is a Fountain Filled with Blood.

Currently on stage at the Albery Theatre in London is Lionel Bart's ever-popular musical, Oliver. The first scene of the second half takes place in a pub and features an organ grinder with a battered Seraphone strapped around his neck. He cranks it energetically as Bill Sykes and Nancy argue, the scene ending with the fellow being ejected from the pub and playing into the distance off stage. As the orchestra is silent during the scene the playing of the organ is quite effective. It is thought to be the original that was used in the first production of the show in London 18 years ago, and both show and organ are still going strong.

Graham Webb once had a popular emporium in Portobello Road, I visited it once in a while and occassionally even went to the expense of actually buying something. On one of these visits there

continued on page 376



Another view of John Evans' Golden Dragons pictured in Glasgow way back in 1921. Three years after the Great War the pious hopes of prosperity had for many worn thin and jobs were scarce.

Sultry Sarasota in September '78

THE Musical Box Society International held its 29th annual meeting at Sarasota's Hyatt House hotel in Florida on September 20-24th. The Editor of The Music Box was one of the convention delegates and reports on this major event.

SARASOTA in Florida is hot and humid in September. Its tourist attractions include Walt Bellm's extensive museum called Cars and Music of Yesterday, the Ringling museums and, in nearby Orlando, Disneyworld. Its prime attraction between September 20th and the 24th was that it was the venue for the 29th annual gathering of the Musical Box Society International, our leading sister organisation.

With temperatures and humidity level-pegging in the mid-nineties, more than 375 MBSI members and guests registered from all over the world. A growing number of these members are, of course, also members of the Musical Box Society of Great Britain so it was no surprise to see many friendly faces. Overseas guests at Sarasota included Overseas guests at Sarasota included Olivier Giradin from Switzerland, Siegfried Wendel, Peter Glaser and Horst King from Germany, three members from Canada and, furthest travelled of all, Harold and Gwen Horsfall from South Australia. Our own MBSOGB Vice-President Hughes Ryder is MBSI treasurer and both he and his wife, Frances, were very much in organisational evidence together with Bulletin editor Howard Fitch and his wife

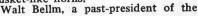
Walt Bellm's museum

Among the many attractions laid on Among the many attractions late on for the meeting was an open house evening at the museum of meeting chairman Walt Bellm. When last I visited this collection (which is advertised as having 1,100 musical boxes, a claim which I think is probably a bit on the low side), it was concentrated in a truly vast air-conditioned hangartype of hall, both sides of which were given over to the musical box display. That was four years ago. Now two



Q David Bowers, left, receives a special award from President Jim Fellers in recognition of his great literary achievements in connection with his famed Encyclopedia of Automatic Musical

large extensions have been added to the end of the original hall, virtually doubling the available area, Fully carpeted throughout, this huge buildcarpeted throughout, this huge building offers the student of mechanical music a feast of opportunity. Besides the musical boxes, player reed organs and player reproducing pianos, there is now a hall of large organs including a 65-note Dutch street organ on a cart (maker's name-less, but now called Monique), a Hooghuys barrel organ converted to play paper rolls from the BAB Organ Co (this has a 78-note scale and operates on 7½ maker gauge pressure), and a 101-key Mortier dance organ. So big is the building that it might be overlooked that there is another even larger Mortier dance organ (called Saturnus) at the other end of the hall. For the phonograph addict there is also a hall jammed tight with gramophones lined up like a briga 65-note Dutch street organ on a cart with gramophones lined up like a brigade of guards, the early ones with musket-like horns.





One corner of the Walt Bellm collection with the 110-key Mortier in the distance.



President of the Musical Box Society International Jim Feller addresses the business meeting while treasurer Hughes Ryder — our own Vice-Presi-dent — eyes his monetary calculations for his own report.

MBSI, ably aided by wife Ellen and daughter, provided not just music but refreshments for the crowd and the music continued far into the night, almost drowning the never-ending sound of the cicadas in the balmy night

air outside.

The first full day of the convention was given over to a series of "work-shop" meetings which comprised an shop" meetings which comprised an excellent presentation by Ron Bopp on the Seeburg. David Beck on the care of the musical box, a survey of US patents for musical boxes by Joel Levine, Lanny Hunter and Ed Laubach on rebuilding the player piano, and Allan Lightcap on maintaining the Ampico reproducing piano in good condition. Bob and Vicki Glasgow also presented the BBC film of Jack Donovan's collection of automata. Because the convention hall was divided into three sections, each presentation was repeated to give everybody a chance to attend the event of their

Steve and Jere Ryder, co-authors of the recent article in The Music Box on animated androids, gave a most interesting illustrated talk on automata, their paper being introduced by our president Arthur Ord-Hume. The young Ryders have produced a reprint of their paper, complete with colour illustrations, which they were selling at the meeting.

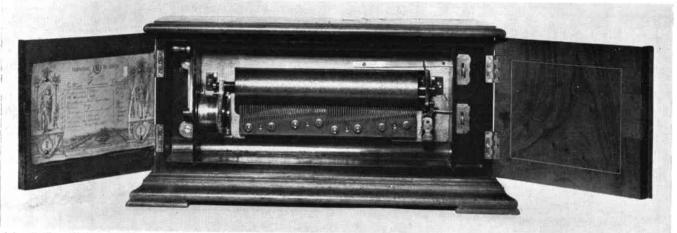
Seventy-plus mart tables

A prime feature of the MBSI meetings is what the Americans call "the mart". We would call it sale and display tables but, whatever one chooses to call it, it was certainly an event not to be missed. The mart tables — more than 70 of them rented out by members with something to sell at a cover charge of \$10 a table — were set up and at 6.30 after an early dinner the doors were opened. From then onwards, the mart rooms were packed with members in discussion, in transaction, in haggling or just there transaction, in haggling or just there to look. The mart remained in operation until 11.00 and re-opened the following afternoon for a further 2½ hours. This is one feature which we might sometime try to introduce at our meet-

ings: it certainly offers a great deal of excitement to the proceedings.

The business meeting of the society was held on the Saturday morning with MBSI President James Feller in command. Points worth recording include

A Buffet-style Langdorff box



Of all the styles of the cylinder musical box which were produced during the latter half of the era, one of the most attractive and eye-catching was the buffet style in which the mechanism was mounted vertically in a case with two forwards-opening doors. Buffets presented most types of cylinder box, the most common in later years being the bell and full orchestra box. These are essentially visual instruments and where an inner glass lid was fitted this was hinged vertically so that it, too, opened outwards like the two main doors. Pictured here is a rather unusual specimen, a Sublime Harmonie Concerto by Langdorff and playing eight popular airs. Picture by Sotheby's Belgravia

the fact that current membership stands at 2,400 and in the past year, as a result of a membership drive, no fewer than 494 new members have been en-rolled. The MBSI is sub-divided into a number of area societies or a number of area societies or "chapters" which all come under the aegis of the main executive. With a country the size of the United States, this is very necessary. The chapter charter was presented at this meeting to another chapter just formed, bringing the

mumber up to seven.

MBSI treasurer Hughes Ryder said that thanks to special US postage rates now applicable to their mailings, it would be possible to hold MBSI membership dues down for another year at least, and publications committee chairman and Bulletin editor Howard Fitch said that plans were going ahead for the MBSI to publish an English edition of the Chapuis title *Histoire de la Boite* a Musique (see separate report).

Presentation of awards

Achievement awards are presented annually by the MBSI and this year's Trustee's Award was presented to Ruth Bornand for her services to mechanical music. The Q David Bowers Literary Award, first presented in 1976 to our own president, Arthur Ord-Hume, was this year awarded to Olin Tillotson. A special award was presented to Q David Bowers for his great efforts in

compiling his Encyclopedia of Automatic Musical Instruments.

An open-air hamburger and hot-dog luncheon (delightfully termed a "cook-out") turned out to be a little on the damp side as the Florida weather, very unstable and thundery during the meeting, unleashed one of its sub-tropical rainstorms on the event. A bedraggled chef, trying hard to maintain heat from a barbecue half full of rainwater, commented: "whenever we have one of these events you can bet it'll rain". His words had a familiar ring to them. . .

More research needed

The main society dinner took place that evening, after which MBSI past president Walt Bellm invited MBSOGB President Arthur Ord-Hume to respond. In his address, our president stressed the need for all societies throughout the need for all societies throughout the world to concentrate more on re-searching into the history of their instruments. There was, he said, some evidence to suggest that many of the musical boxes originally sold in the United States differed dramatically from those sold in Europe and he postulated that perhaps American importers such as Jaccard, Jacot, Gautschi Cuendet imported components from different Swiss makers which they themselves assembled. Our President

commented that he had heard talk of rivalry between our societies and emphasised that this was not so and that there was room for everybody, so great was the area of our subject.

After the dinner speeches which included meeting chairman Walt Bellm thanking all those responsible for the organisation, our President, Arthur Ord-Hume, delivered a paper on the definition and classification of the musical clock. His talk, extensively illustrated with slides and accompanied with too recording with the content of the state of the slides and accompanied with the recording with the slides and accompanied with the recording with the state of the slides and accompanied with the same recording with the same recording with the same recording the same recording with the same recording the same rec ied with tape recordings, was well received in spite of the late hour, the heavy dinner and the inadequacy of the air conditioning.

The MBSI certainly can organise some impressive meetings and one of the first things which the visitor notices is that there is never any shortage of member volunteers to get down and do the chores which play so important a part in making a meeting possible and successful.

Also impressive is the amount of mechanical talent and skill being shown by an increasing number of members. The musical boxes manufactured by Dwight Porter (which now include a replica 15% in self-changing Regina Corona) are the subject of another story. To meritary just a force of other story. To mention just a few of the activities revealed there was the exhibition of plastic pneumatic unit valves which are being made for the creation of new pneumatic instruments by Doyle Lane of North Carolina, the superb wheel-cutting and musical box component parts being made by superb wheel-cutting and musical box component parts being made by Richard Givler of Ohio, new bookplaying organs being built by Donald Stinson in Ohio, (and also by Jean-Marc Mouligné of France), and the large assortment of pneumatic assemblies produced by George Cooper of Wichita in Kansas. On the musical automaton scene, Steve and Jere Ryder showed many fine new pieces clearly demonstrating 'that they, along with the others already mentioned, will help to take the art, the skill and the craft of mechanical music forward for future generations.



The Coin-freed Table Symphonion

by Alan Clark

SINCE adding this item to my small collection, I have sought for information on it in Q David Bowers', Encyclopedia of Automatic Musical Instruments. He quotes it as being one of a group of three different sized instruments usually listed together in the Symphonion catalogues and all playing special discs (disc diameters of $8\frac{1}{4}$ in, $9\frac{1}{2}$ in, and $10\frac{5}{8}$ in). As he made no mention of the coin operated option on this model, or of its unusual double comb design, I decided to write this description.

Externally, the walnut case appears identical to that of the normal manually operated 27cm (10% in) table model machines but for two exceptions, the feet are much longer to accommodate the coin drawer which is fitted beneath the base of the case, and the panel in the centre of the lid is of glass, not wood. Presumably this latter change gave the potential customer a chance to see which tune he was paying to hear.

The coin actuation mechanism is shown in the photographs and explained in the accompanying sketch. The main lever appears to steel strip and Interestingly, the Wm Hasse cata

be stamped out of steel strip and looks like a production item. One wonders if it is interchangeable with those on larger Symphonions? With the exception of the anti-tilt pendulum, the remainder of the clockwork mechanism is probably standard but for the groove cut in the underside of the main brass gear wheel.

This machine uses a double comb arrangement with 84 teeth in all. The two combs have separate star wheel assemblies, spaced either side of the disc centre spindle and plucked by radially alternate projections on the disc. Thus the disc can pluck twice as many separate normal width teeth as the equivalent single comb machine. The left hand comb contains all the lead weighted bass teeth and those us to a mid-point on its musical gamut. The right hand comb continues the scale by repeating the highest note from the bass comb and going up to the highest treble note. Thus the two combs form a complete musical scale and so rule out the "sublime harmony" tag sometimes given to all these divided comb machines.

Interestingly, the Wm Hasse catalogue reprinted in our editor's book Clockwork Music, fails to give any special name to this model although the next larger sized machine, 11\frac{3}{4}in (also with 84 teeth) is referred to as sublime harmony when fitted with two combs, or subline harmony piccolo when fitted with four combs.

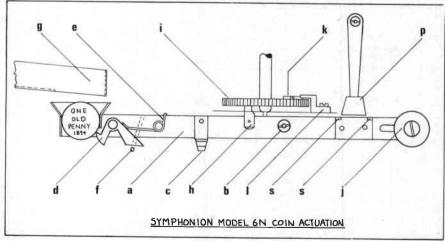
Interesting feature

The most interesting feature of these two combs is their positioning relative to the disc projections. The bass comb is arranged in the normal manner with the deepest pitch teeth plucked by the slower moving central projections and the higher pitch ones being plucked by the faster moving outer disc projections.

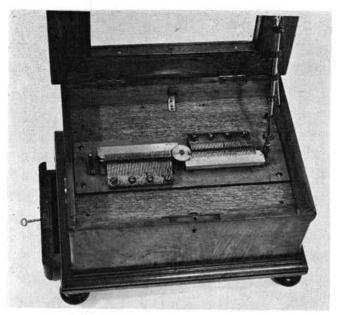
The treble comb, however, is mounted the other way round so that its highest pitch teeth are plucked by the slower moving central disc projections. Thus the most rapidly repeatable notes are those in the centre of its musical range—unlike most disc machines where the treble teeth are the most used for long rapid trills and grace notes etc. It may be this arrangement that gives this machine its excellent tone and musical ability. When listened to from a distance it could well be mistaken for a medium sized cylinder box. It has most of the ornamental notes that are often missing from other smallish disc boxes, plus the tone usually obtained from fairly broad toothed combs.

Coin actuation

The coin rolls along the coin chute G into the coin holder on the end of the arm A. This is pivoted at B and counterbalanced at J. The coin is retained in the otherwise open bottomed coin



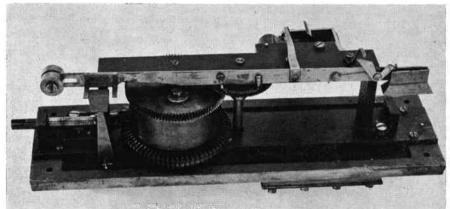
The coin-freed action of the Symphonion. Key to the letters is within the text. All photographs illustrating this article have been taken by R K Coles for the author.



Above can be seen the unusual comb layout of the coinfreed Symphonion in which the centre of the scale is given prominance. Right can be seen the complete box. Note the bun feet and the coin drawer which fits beneath the case between the feet. Below right is the mechanism seen from underneath showing the counterbalanced coin-freed mechanism.

holder by the crank D which is spring loaded E. The weight of the coin overcomes the counterbalance and the coin end of the arm falls releasing the stop finger C from the path of the fan and allowing the movement to play. The follower H is fixed to the coin arm A and rests in a groove cut in the underside of the main wheel I. After part of a turn the groove in wheel I becomes less deeply cut and the coin arm A is depressed, causing the tail of the crank D to be pressed against the fixed pin F. This turns the crank and the coin falls out, through a slot in the base of the case and into the coin drawer. The movement continues to play until the follower H is allowed to rise up under the action of the counterbalance and stop the fan. The four toothed disc K mounted on the wheel I is turned





1/4 turn for each revolution of the disc by a fixed finger L. Disc K has two peripheral slots cut in it which allow the follower to rise up and stop the movement only after the disc has been played twice. The body of the pendulum P which is pivoted at the top, just

passes between the fingers S when the movement is horizontal. Any attempt at starting the machine by tilting it causes the pendulum to swing to one side and the fingers S prevent the counterbalanced coin arm from moving upward to release the movement.

CHARIVARI - Roger Booty's Odd Jottings continued from page 358

sat on the floor a tired little Gem Roller Organ: crank it and all you got was discord accompanied by the howling of Graham's distraught dog. Despite its half hearted musical efforts I bought it, (no, not the dog!) and carefully carried it down onto the Underground. The train was empty but for a rather strong, lingering smell. I checked both shoes, no I hadn't put my foot in it, the seat, no I hadn't sat in it,

all round, nothing. I sniffed again and then realised I was holding it. It was now apparent that Graham's dog had more than howled at the organ, he had treated it with the true contempt only a dog could show!

My thanks to Ron Taylor for lending me some further photos from his collection and also thanks, and apologies, to the originators of the joke. It has been so long since I copied down that I have no idea where it came from.

For a finale I will move completely away from mechanical music. The village of Stock, in Essex, once had three windmills, it now sports only one. The other two were demolished because there was thought to be insufficient wind to work three!

HAPPY CHRISTMAS

Society **Affairs**

Utrecht Museum meeting

THE Musical Box Society of Great Britain held its first-ever overseas meeting on September 3 - 5 when some 46 UK members went to Holland at the invitation of member Dr Jan-Jaap Haspels, meeting chairman. Dr Haspels is director and curator of the Nationaal Museum van Speeldoos tot Pierement (Museum From Musical Boxes to Street Organs), now re-named Speelklok tot Pierement (From Musical Clock to Street Organs) in Litzecht Clock to Street Organs) in Utrecht.

Accommodation for the British party was arranged at the Amster Centre hotel in Amsterdam, a pleasant enough building on the Heerensgracht close to the centre of the city. Our meeting was also joined by several of our members from the Netherlands and Belgium including Mrs Moltzer from the Kijk and Luister Museum, Benne-kom, Holland, and M. Mathot from Belgium.

Members assembled at the hotel during the evening of Friday September 3, and after dinner President Arthur Ord-Hume introduced museum technician and organiser Dick van Minnen who officially welcomed the members to Holland and outlined the scheduled

The programme officially began the following morning at 9.30 when, by arrangement with the Dutch Queen, we were invited into the Royal Palace in the Dam Square. This superb building, rich in decoration and marble exhibition of mechanical musical instruments recently. The exhibition had closed the previous week, but it had been arranged not to dismantle it until we had had the chance to view.

The exhibit, mounted by the Ultrecht

museum, comprised a number of musical boxes, several musical clocks including an outstanding carillon clock with a hood housing 15 bells in tiers, and a book organ. Centrepiece of the whole collection was the 24½ in Polyphon from the de Vere Green collection.

We then travelled in small groups by special electric lift to the attic of the palace from whence we moved into the cupola to view the bells of the Hemony carillon which play out over the streets of the city every hour, quarter and half. We examined the great carillon drum and then ascended where, in the fresh morning breeze, we were treated to a recital of music by Jan-Jaap Haspels via the manual

playing klavier.

We noticed that the cupola's clock was still in the process of being overhauled and that the hands were somewhat on the loose side. For this reason the striking of the hour bore but scant relationship to the position of the giant hands on the skeletal dial. When, at 12.25, the clock began striking 12 noon, somebody in the party with a beard, bald-head and glasses, commented that the clock must be striking half-past thirteen. Dr Haspels, foot placed in readiness on the right klavier pedal, counted the 12th strokes and then pedalled another. That clock really had struck half-past thirteen, but few, if any, among the multitudes in the square below seemed to think it odd!

The afternoon was left free for shopping and sightseeing until 4.00 when everybody boarded our coach for the journey through some very heavy traffic to Utrecht and the museum.

For most of the party it was the first visit to this outstanding museum where the mechanical musical instru-ments are maintained in tip-top condition and are played regularly. And for all of us it was a thrill to see the great room devoted to the collection of our founder and first secretary, Dr Cyril de Vere Green.

After an initial esssion on some of

After an initial session on some of the more unusual musical boxes in the museum we were entertained to a fine buffet dinner in the museum's new restaurant after which it was a Dutch organ free-for-all. The museum's organ free-for-all. delightful little Gasparini street organ played some well-known English songs and the editor of The Music Box and Frank Holland of the National Musical Museum (formerly the British Piano Museum at Brentford, Middlesex) were press-ganged into singing whatever words they thought they knew to the melodies.

The continuing art of arranging music for these great organs was then demonstrated by a very recent musical composition for the large Carl Frei concert organ, De Schuyt, and we were treated to an exhibition of stylistic street-organ grinding by the museum's youthful doyen of the drivewheel,

Then everyone was permitted to take a turn at making music by the handle and the varying degrees of success which our members achieved demonstated clearly the fact that "grinding" an organ is neither easy nor effortless. Secretary Reg Waylett and Archivist Keith Harding both requested not to have their pictures published . .

Into the big organ hall for some renaissance music on the Aalstar Gavioli (pictured in colour on page 251), some extraordinarily melodious boogey-woogey on the giant Mortier 101-key dance organ, and some dance music on the Hooghuys.

The best of Dutch beer and hospitality made for a most enjoyable and convivial evening ending with a very late bus ride back to Amsterdam.

Sunday morning was a visit to the Kunkel's organ warehouse at Haarlem. The half-hour bus ride took a turn for the unexpected when, the Dutch driver naving failed to locate the riverside venue in ancient Haarlem, stopped a policeman for help. The officer called up for help as he didn't know where it

One for the table-top



The market for the smaller type of table-top musical boxes was very large indeed and many dozens of different styles were made representing all the disc box makers. As a percentage of all disc boxes made, more than 70 per cent of the market was in boxes with discs under 12ins in diameter. Above is one example of this enormously popular genre, the centre-drive Polyphon playing discs 81 ins in diameter. Picture by Sotheby's Belgravia. was either. The upshoot was a police escort for the final stage of the journey which somehow added an air of impor-

ance to the visit.

Kunel's, named after the late funder of this organ-owner's club, is a large and rather resonant building containing a number of instruments which are looked after by the club members and their families. Our visit was by ar-rangement with chairman Coon Alta and the building was opened up especially for us. There followed an hour of coffee and cookies to the accompani-

of coffee and cookies to the accompaniment of some fine instruments which included "De Carillon", "Jupiter" and "De Puntcap".

One organ of particular interest was a beautiful cart-mounted instrument named "De Adriaen" built entirely from scratch by club executive H Vander Heuvel who is by trade a construction engineer. At the conclusion of the visit, president Arthur Ord-Hume warmly thanked our hosts and, as a token of our appreciation for their enthusiasm and efforts, presented the club with a one-year membership to

our society.

Although the programme officially concluded at mid-day, a number of members were staying on and it was arranged that they should visit the workshop of Gijs Perlee, the last of the street organ builders in Amster-day's Workshop the Street organ builders in Amster-day's warranged that the Street organ builders in Amster-day's warranged that they should be street organ builders in Amster-day's warranged that they should be street organ builders in Amster-day's warranged that they should visit the workshop of Gijs Perlee, the last of the street organ builders in Amster-day's warranged that they should visit the workshop of Gijs Perlee, the last of the street organ builders in Amster-day's warranged that they should visit the workshop of Gijs Perlee, the last of the street organ builders in Amster-day's warranged that they should visit the workshop of Gijs Perlee, the last of the street organ builders in Amster-day's warranged that they should be sho dam's Westerstraat. Here we were given a most cordial welcome and treated to a detailed and musical tour of the instruments in the Perlee stable. These included music on an instrument which has just been sold to Japan, as well as on the much-travelled organ De Arabier, the Flamingo (a 100-yearold Limonaire rebuilt as a book organ

in 1910 and a few years ago restored and re-named) and several others.

And so came to an end a meeting which, judging by the comments of the members taking part, was a great success. The invitation of Jan-Jaap Haspels to repeat the tour and hold a second visit to Holland in a year or so was gratefully accepted and it is expected that a further meeting will be staged with our Dutch members in due

Winter Meeting

THE Autumn Meeting of the Musical Box Society of Great Britain was held on Saturday October 14th, 1978, at the Kensington Close Hotel, London. Registrations totalled 112 and in spite of early morning fogs which delayed those travelling from the South and West, the majority had arrived by the time our first speaker took the platform.

Our president and editor, Arthur Ord-Hume, spoke on the Development and Classification of the Music Clock, at alk copiously illustrated with slides which proved to be provocative as well as educational and which was well received by those present.

Our second speaker was archivist Keith Harding who, it turned out, had a surprise up his sleeve. Two stalwart assistants carried up to the platform a nicely-grained rectangular box which turned out to be the prototype of the twin 19\(\frac{1}{8}\)in Polyphon (see Keith's advertisement on the back cover) which he has named the Gemini. This was duly demonstrated by means of a pair of standard Polyphon discs and then by the A and B discs of Scott Joplin's *The Entertainer* which were used to demonstrate the Etches Jubillee back in the summer.

While the Etches machine was electrically-driven, Keith Harding claims for his Gemini that it is the world's largest new spring-driven music box!

After the luncheon interval, Brian

Oram, who had only just managed to make it up from the country due to thick fog, delivered his talk entitled "Organ Bonking" which resolved into a discussion on the punching out of organ music. He illustrated the methods of making and perforating cardboard music with a description of a machine which he himself made. This he was able to contrast with a brand new punching machine created by our member Brian Beaver which was on exhibition.

After the tea interval began a slide show comprising slides taken by members who attended our Dutch meeting earlier in the autumn (see separate

meeting report). Following on these mementos of a memorable week-end as guests of the Utrecht museum, Arthur Ord-Hume produced a disarmingly large quantity of colour slides which he had taken on his recent visit to the United States when he attended the MBSI meeting at Sarasots, Florida, and then visited the collection of Murtogh Guinness and that of our vice-president Hughes Ryder.

The first slides he showed were of an The first slides he showed were of an instrument which he introduced as being without doubt the very first attempt at making an instrument of the type later to be called a juke-box. This was the prototype, never completed, of William Atlee Drysdale's automatic Symphonion. He showed a number of fine, detailed pictures of this complex mechanism which worked this complex mechanism which worked not unlike a modern record-changer in that it dropped discs one at a time onto a horizontal playing mechanism from a stack situated above the musicwork and which could be programmed to play any particular disc any number of times. He then described his search through the New York patent office library for the patents and his final discovery of the documents relating to this Philadelphia-built instrument in of all places the London patent office library!

Included among his other slides were pictures of the fabulous Guinness collection and detail views of Hughes Ryder's Francois Nicole box with the

serial number 3.

During the meeting, two musical novelties were raffled and the proceeds came to £48.50 which money goes into the Society's funds.

Among foreign visitors welcomed to our meeting were two members from Germany including Peter Georg Schuhknect, president of the German society for mechanical music history, and Ralph Masure and guest from Miami. There was also an encouraging number of new members who were attending their first meeting. attending their first meeting.

The display of musical boxes included a most unusual cylinder box with a mother-of-pearl tune-sheet let into the lid. Owned by Paul Ziff, this will be pictured in the journal shortly. Also there was a 25 in Symphonion on displaying the first type by payer had at disc bin, the first we have ever had at a meeting.



Keith Harding's Polyphon Twin

HIGHLIGHT of the Winter Meeting of the Musical Box Society of Great Britain was Keith Harding's unveiling of his latest new creation — a cabin-trunk-style double disc 19 in Polyphon.

Called the Gemini_after the zodiacal sign representing Castor and Pollux, twin sons of Leda, King Thestius's daughter whose lover disguised himself as a swan, there is nothing mythical about this latest from the Hornsey Road team.

The Gemini makes use of two perfectly standard Polyphon comb/star-wheel and bedplate assemblies. The big difference is in the clockwork driving motor which, although using Polyphon-type strings two standard Polyphon-type springs, comprises a newly-fabricated double assembly detailed pictures of which will be published in our next issue.

Claimed to be the largest new clockwork-powered musical box in the world



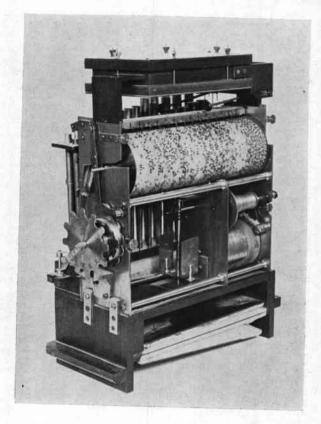
today, the Gemini will play standard discs or A and B settings of tunes. So far, Keith Harding has had one such set arranged and punched by Patch Pearce — this is Scott Joplin's Scott Joplin's The Entertainer.

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Record Reviews

MUSEUMS of mechanical music proliferate and with them recordings of the instruments contained therein. This is good commercial sense for many visitors to collections are interested in taking away with them the sounds which they have heard.

The market potential for recordings sold in museums is attractive. It is not surprising therefore to find this proliferation. What the customer actually expects from his memento in sound and what he actually gets are unknown quantities. Satisfaction, or otherwise, does not come until he gets home and tries out his purchase.

The techniques of recording mechanical musical instruments do, strange to relate in this era of terribly high hi-fi, still pose great problems for the average sound engineer and it is seldom that they actually produce anything near perfection.

My first items this month are all cassettes from museum collections.

Speeldosen, Saloninstrumenten en Orchestrions is the latest recording from the Utrecht museum, this one being numbered "1" on the insert (it is actually the second cassette the museum has published) implying that there will be more to follow.

Side one gives us a very fine F Nicole box playing three overtures, a forte-piano box of equal parentage and quality, a piece on the Paillard plérodiénique and two tunes on a Polyphon. Side two starts with a nice serinette playing a piece of Mozart, a flute-playing clock and then the Winkel organ playing Cimarosa's Il matrimonio segreta.

A chamber barrel organ which was formerly in the present society president's collection plays two tunes including Robin Adair after which the Hupfeld Phonola performs. The Phonoliszt Violina has a sourdine stop and so far only one roll has been found which uses this attractive effect: it is on this recording and this alone must elevate this tape to collectable for the cogniscente.

The quality of the recording is extremely good with fine presence and stereo image although the emphasis of the mechanical noises of the Libellion book instrument gets a bit tiring. The reviewer has successfully recorded this self-same example faithfully without this, so it can be done. Aside from this, then, this is a fine addition to the library. It is Dolby recording as is my second cassette, World of Mechanical Music (Saydisc CSDLB 292) which sells for £2-25.

Douglas Berryman's museum at Gold Sithney near Penzance is known to many members and this is the latest recording to be available of instruments in the collection, since renamed as the title of this cassette.

What I like about this latest recording is the fact that the Saydisc people tell you quite clearly how long the tape lasts — 45 minutes! The Weber

Unika plays three catchy tunes including Every Little Breeze and I Lift up my Finger and I Say Tweet Tweet. The Mills Violano Virtuoso demonstrates with two tunes why the Hupfeld violin player is superior by setting one's teeth on edge through Yellow Dog Blues and Heart Broken Mama.

The Ruth 52-key show organ gives us three pieces and the side ends with Chopin's Andante Spianato, Opus 22 in E Flat Major played by Alfred Cortot on the Steck Duo-Art.

The ever-popular Wedding of the Painted Doll starts Side two on the Kuhl & Klatt mandoline and xylophone piano. Mischa Levitzki plays An Den Schonen Blauen Donau, the concert arabesque on the Strauss waltz "On the Beautiful Blue Danube" on the Marshall & Wendell Ampico. Popper's Happy Jazz-Band plays three gay pieces and the Weber Brandezza rounds off with En Douce and La Java.

Nicely recorded, his is a fine addition to the discography of these instruments. A good stereo image and clean sound well up to the standards set by the Saydisc people, it demonstrates fine attention to the mechanics of recording and the challenge set for the engineer by each different instrument.

I wish I could say the same for my third cassette, Kijk & Luister Museum available from the museum at Bennekom which was founded by our late member, Mr Moltzer. Priced at 12:50 guilders, this is a mono recording of instruments in the collection, offering 12 tracks on side one ranging from Ducommun Girod forte-piano through Komet, Ami Rivenc, Celestina and Amabile clockwork organette to the Julio Portos street piano and the Weber Pianola. Side two is a similar mixture including a French cafe piano by Cleophaas Tricart.

The music is good and this is the first recording to present the sound of the Amabile to the collector. However, the recording quality is very much below that of many comparable memento cassettes available. In fact, other than as a souvenir of the museum, I cannot really recommend this. I understand that this is a rush copy of the recording and this probably means that the actual edition may well be better. For a first effort from the Moltzer Museum, we may now look forward with enthusiasm to a second, and much improved, tape of the instruments in this fine collection.

Round discs, black with a hole in the centre (after our trio of cassettes) begin with Music Box Dance Tunes published by Carol and Dave Beck (DB Musical Res'orations, 230 Lakeview Avenue, NE, Atlanta, Georgia 30305). The 14 tunes on side one and the nine on side two represent a cross-section of the Beck collection and the two important things which come across are first the high standard of the boxes themselves, and the high standard of technique which has gone into the recording. It must be stated that the United States has not produced many really good mechanical musical instrument recordings that I have heard. This one, though, is very fine. If criticism there has to be it is that there is insufficient space between some of the tunes, but that is a minor detail.

The sleeve front bears a colour picture of a spectacular early Ducommun Girod box with reed organ at the right

New Player Organ

WHAT is claimed to be the only player organ available in the world is being marketed in Britain by the Cambridge Pianola Company. Manufactured in Chicago by the Automatic Music Corporation, the player action is a separate component which will fit any DC-keyed electric or electronic organ.

The player is made to fit on top of an existing electric organ and the installation is said to be within the capability of any handyman. Connection between the player and the organ mechanism is by electric cable. Operated by standard player piano rolls—some special organ selections are also available—the player has its own vacuum pump since the signalling action remains pneumatic.



An interesting feature is that, unlike the majority of original player reed organs where automatic playing necessitated the isolation of the keys, the use of this new player does not render the keys inoperative and it is thus possible to add to or otherwise embellish a roll performance if the user so wishes.

The roll-playing unit can be supplied as a conversion unit to fit to an existing instrument or it can be supplied fitted to a wide range of organs.

Cambridge Pianola, a company which stocks some 1,500 plus music rolls ranging through QRS to Jazzmaster, Ragmaster, and Mastertouch, offers the unit at £650 and will undertake fitting for approximately £50.

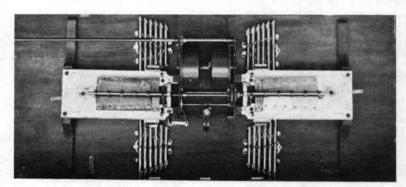
The organ buff will know that some of the electric organs on the market today are possessed of very fine tones and in terms of pure musicality even though they are electric and devoid of pipes or reeds as we know them. This device could well be the stepping stone to high-quality music in the home from perforated roll. Unfortunately the present concentration by the music-roll industry on 88-note piano rolls limits the repertoire of the organ but it should not be beyond the cababilities of the adroit enthusiast—possibly Cambridge Pianola Company itself—to modify the player so that it will accept the 58-note Orchestrelle/Symphony rolls. Then a whole world of very worthwhile music would be available to the latterday organ owner.

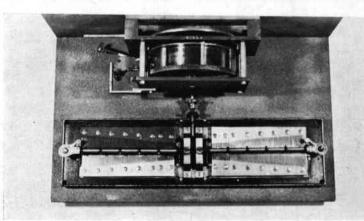
Enquiries to The Cambridge Pianola Company, 33 Glisson Road, Cambridge CB2 HA, England, tel. 0223 311506/861348.

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end of the comb. The box, described as an *interchangeable*, is in fact a glovehook *changeable*, there being a vast amount of difference. The box plays very well and is featured on seven tracks as do boxes by "Nichol" Fréres which, before you catch your breath at the discovery of a new manufacturer, is just another example of that common error of mis-spelling "Nicole".

The disc, with its beautifully-designed and colour illustrated sleeve, comes with a separate sheet offering additional details of the boxes and the music. Personally, if this is the standard of Beck's records (this one, temptingly, is described as Volume 1), I await subsequent volumes with enthusiasm. And if you want to hear what a recording should sound like, treat yourself to this one.

A treat of a different sort is to be found on Klokken en Klokkenspel den Dom Utrecht available from the Utrecht museum and other record outlets in the Netherlands. Although it says so nowhere on the disc, this is a Philips pressing and the number is 6812 554.

As the title suggests, this is a concert of music played on the great Hemony carillon of Utrecht's Dom cathedral. The music played is melodious in the extreme with a well-chosen mixture of the new and the old, the traditional and the not-so. It begins with the air and variations on Handel's The Harmonious Blacksmith followed by a modern piece by Henk Badings which is not unpleasant. Bach's Prelude BWV 1007 follows and the side ends with a most unusual and moving ringing of the six bells of the Gothic peal ranging through the 1660 kg Maria Magdalena to the great 8200 kg Salvator — the peal representing

CALENDAR 1979

January 12th, 13th, 14th

Musical Box Society International. East Coast Chapter Meeting, Stamford, Connecticut, USA.

March (date to be finalised)

Musical Box Society of Great Britain, Regional meeting (venue to be advised).

March (date to be finalised)

Musical Box Society International. West Coast Chapter Meeting, Bill Toeppe, Orange, California, USA. June 2nd, 3rd

Musical Box Society of Great Britain. Annual General Meeting, London, England,

September 13th, 14th, 15th, 16th

Musical Box Society International.

Annual meeting, Olympic Hotel,
Seattle, Washington, USA.

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the setting in motion of 26,000 kilogrammes of bells!

Side two gives us Bach's BMV 147 which, as everybodys knows, is Jesu, joy of man's desiring, followed by a beautiful rendition of that most moving of John Dowland's laments, Flow, my teares, arranged by Jacob van Eyck.

Sir Herbert Hamilton Harty, whose work with the Hallé Orchestra in the early thirties was so invaluable, would have been delighted indeed to find his Little Fantasy and Fugue ringing out over the mediaeval rooftops of Utrecht; the more so to find it is, track on this record, which it is.

Carilloneur Chris Bos closes off the disc with his improvisations on the tune *Greensleeves*.

Good carillon recordings are even today rare. This one goes a long way to redressing the balance. The recording is excellent and the sleeve front with its antique look — a fascimile of an early 17th Century view of the Dom surrounded by, today, unfamiliar windmills and engraved before the 18th Century storm which blew down the centre of the cathedral (damage which was never to be repaired) — and uncluttered appearance contributes to a worth-while package. A O-H

continued from page 339

I think this is a defect which has encroached as it is hard to believe that it was a feature of a new box. The shift takes about 1/16in on the cam, equivalent to about 3/32in at the cam tooth, so if the stud is raised by this amount it will advance the whole shift period

to before the stop. In practice less than half this addition to the stud height will usually complete the shift before the stop, as can easily be tested by placing a shim of suitable thickness under the tune change lever near the stud.

The top of the stud is usually placed about level with the cylinder axis, in which case the depth of engagement of the stud is scarcely affected by a small alteration in its height. It can be checked by mounting the cylinder and governor on the bed-plate. Time is saved by removing the endless from the governor, then you can quickly check the exact position of the cylinder shift relative to the stopping point. This is also a reminder that any distortion of the pin on the stop arm also affects the stopping position of the cylinder and therefore the relative period of the shift.

Having corrected any fault in the stop arm and decided from the shim thickness the amount by which the stud is to be altered, pause a moment to examine the curved stud more closely. You may well find the scars of a previous attack upon it by some iron fighter who had a big vise and heavy hammer but limited thought. So, outline the existing shape on a piece of stiff card, mark the new required position of the point, and gently bend the stud to the new shape. Then test again, and verify that the whole operation is within the non-playing zone of the cylinder.

A FOUNDER DIES

FOUNDER member and first treasurer Frank S Greenacre died on August 29, 1978, after a long illness. He was 48.

Older members will recall Frank's cheerful presence at our very earliest meetings. A lover of quality musical boxes, Yarmouth-born Frank lived with his wife, Glynis, and three daughters at Gorleston-on-Sea in Norfolk. His profession was that of local government officer.

He was taken ill some five years ago and was forced to retire from all activities and for the past three years or so has been confined to his bed.

Many will join in extending their sympathy to Mrs Greenacre and her daughters. His collection is to remain within the family.

Death of Fortnum Chief

THE death in Toronto on October 22, 1978, of Willard Garfield Weston will be regretted by all who recall his enthusiasm for mechanical music which was demonstrated by the large display of antique instruments formerly in Fortnum and Mason's store in London's Piccadilly. He was 80.

Canadian-born Garfield Weston, a deeply religious man who never liked to be photographed, collected musical boxes more than 45 years ago. "I had maybe a dozen boxes", he told *The Music Box* once. "Then my children—I had nine—got married and they

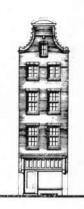
all wanted to carry a box away." His resurgence of interest came one day when he walked into Rita Ford's shop in New York and suggested he would like to set up an exhibition at the famous old London store of which he was chairman. Through Rita he was introduced to Keith Harding who for several years worked assiduously to create the collection.

At the opening ceremony held in London on November 6, 1973, he said: "Musical boxes all over the world are becoming more and more sought after and they are not just an ordinary investment: they are beautiful things to have."

He entertained the committee of the Society on that evening and said: "How very much I enjoy reading *The Music Box.* I think it's just great and you fellows are doing such wonderful things. I have all the copies at my bedside."

A full member of the Society, Garfield Weston asserted: "I'm backing musical boxes." However, business pressures—he headed up several major retailing chains—and the changing pattern of business economics after the 1974 depression forced him to close his large museum-like display rooms. In a typical gesture of his respect for the instruments, he presented most of his valuable collection to the Victoria and Albert Museum where some of it is on open exhibit today.

We extend our condolences to Mrs Marguerita Weston and the nine children of his former marriage.



W. J. van Os & H. M. G. Yu

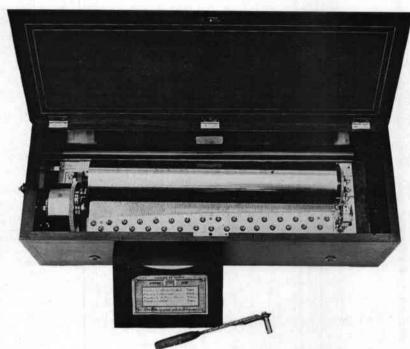
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The lid of the above musical box is beautifully inlaid in various woods.
This rare cylinder musical box, 76.5 cms long, 26.5 cms wide and 20.5 cms high was, after restoration, sold to the National Museum van Speelklok tot Pierement in Utrecht, Holland.

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Book Reviews

THE GREAT CHESS AUTO-MATON by Charles Michael Carroll. Dover Publications, New York. 116pp, 215mm (8½ins) by 137mm (5½ins), illustrated, sewn with drawn-on covers. \$2.00.

There is no artificial mechanism in the world of automata more famous than Wolfgang von Kempelen's chess playing machine. What perhaps makes this the more extraordinary is that, unlike such genuine masterpieces as Vaucanson's duck and the Jaquet-Droz androids in Switzerland, this piece was a fake. But it was as a fake that it gained for itself and its exhibitors—Kempelen later sold it to Maelzel who made his name with it—considerable notoriety and etched its way firmly into the space between the reality of fact and the realisation of automation.

This is a most extraordinary little book which Dover Publications has seen fit to issue under the classification of chess and games books. Don't let that put you off reading Carroll's skilful and commendable history of this piece.

I must admit to an early disillusionment with the author when, on page ix of the introduction I read: "Maelzel built a so-called Panharmonicon (a kind of mechanical orchestra worked by weights acting upon cylinders) . . .". This terrible piece of nonsense was first penned by some befrocked hack quillman long since turned into dust and has been quoted as gospel far too often by far too many. However, this turns out to be

BARREL ORGAN by Arthur W J G Ord-Hume. George Allen and Unwin, London, and A S Barnes, New York. 567pp., 253mm (10ins) by 190mm ($7\frac{1}{2}$ ins), illustrated, £15, (\$25.00).

For the barrel organ enthusiast this book dealing with all aspects of the history and construction of the mechanical organ which is the oldest of all mechanical instruments would make a valuable addition to his library.

Throughout its long and honourable history the barrel organ, king of mechanical instruments, appears to be but briefly documented, and to most enthusiasts today there have been less than half a dozen books available dealing with the subject, and out of these few go into any great detail on the history and construction of these elaborate and wonderfully Carroll's "deliberate mistake" as from then onwards he shows his prowess as a practised researcher.

There have been many accounts purporting to be explanations of how the chess-player worked. To a great extent, the actual detail of the mechanism is still as much of a mystery as ever, but Carroll has dug remarkably thoroughly into the complete history of the thing. He tells us, for example, the names of the many chess masters who directed it from within. Among the intriguing little details he gives us are that the operator had recourse to a "mechanical noise machine" which he (or she, because there was a lady operator as well) could set in motion to camouflage any untoward sounds from within such as a sneeze, also that the candelabra placed on the chessboard top was not solely to provide light but to mask the smell of burning wax from the candle used inside.

When the chess-player went on tour in America, even though it was exposed as a hoax on several occasions, it retained its public attraction. Ultimately after its owner, Maelzel, had died and his body been sent to the ocean bottom weighted with lead shot, the pseudo-automaton spent its final days in a store where, forgotten, it was burned when fire spread from the National Theatre at the corner of Philadelphia's Ninth and Chestnut streets to engulf the Chinese Museum.

An engagingly written little book which should find a place in the libraries of all interested in automata—both real and alleged. A O-H

made musical instruments.

Now this new book "Barrel Organ" throws new light on the early history of the mechanical organ from references in Greece in about 225 BC to organs attributed to Archimedes and Apollonias of Perga, to a description of an automatic organ from the 9th century AD documented by the Banu Musa "Sons of Musa" which was probably the most celebrated group of Arabian wise men of their day.

On to the 17th century Athanasius Kircher and his work *Musurgia Universalis* of 1650 which shows barrel pinning principles.

The book has plenty of photographs and excellent drawings by Mr Ord-Hume showing clearly the working of the different kinds of instruments. All kinds of barrel organs are described, from the 16th

century masterpiece by Thomas Dalham (the automatic organ presented by Queen Elizabeth I to the Sultan of Turkey in 1599), to the oldest barrel organ in existance today. This, dating from 1502 at Saltzburg Castle is illustrated and described, as is also a remarkable barrel organ preserved in the Karl Marx University in Leipzig which plays Mozart's K 618.

Chapter 3 deals with the development of the barrel organ and includes an excellent cross-section drawing showing clearly the construction and working of an English barrel organ. The popularity of the barrel organ in England during the period 1750-1850 is emphasized, with a description and more information on the largest barrel organ ever — the "Appolonicon" built by Flight and Robson and completed in 1817. This took five years to build, stood 24ft high and was regularly opened for public recitals in London.

A most interesting sale catalogue of the stock of Messrs Flight and Robson at 101 St Martin's Lane, London, is reproduced. The story of the Earl of Bute's barrel organ and a series of plates showing a large barrel organ belonging to the Earl of Kirkwall are also included.

The English church barrel organ is described and how it became commonly used in country churches during the first half of the 19th century. Many references are given to church barrel organs and their advantages for the accompanying of singing. The small English chamber barrel organ is described their builders and their use in accompanying dancing. There are many excellent photographs of organs in private collections.

Chapter 4 emphasizes the popularity of the barrel organ in Victorian times, giving details of the barrel organs at the Great Exhibition. The French barrel organs and their production at Mirecourt and small bird organs and their difference from English barrel organs are described. The development of the barrel organ in France and Germany is given and a description of Maelzel's Panharmonicon on which Beethoven's Battle of Vittoria was set, known to be his 10th symphony. A remarkable barrel organ that would compose variations on a theme that was called the "Componium" built by the Dutch organ builders, Diderich Nicholas Winkle, is described.

Chapter 5 is devoted to the flute playing clock. These remarkable small barrel organs worked by clockwork and discharged by a clock movement usually every three hours, were popularized by the King of Prussia, Frederick the Great, at Potsdam during the middle of the 18th century and some magnificent examples of these musical clocks survive today, including three clocks made by Primitivas Nemec, Court Librarian to Prince Esterhazy. The charming pieces set on the barrels of these flute clocks were specially composed by Joseph Hayden.

In England a huge and magnificent musical clock with organ and automata was built by Henry Bridges in 1718. It was called the "Miervcosm". There is a detailed description and print copy from the British Museum of this clock with a list of eight tunes

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that the clock played, these by Handel, Correlli and John James. Another remarkable automation musical clock by Jacob Lovelace of Exeter, c.1720, which stood 10ft high, 5ft wide and weighed half a ton, is included.

Several clocks are described from Cox's Museum in Spring Gardens, London.

Count Deym's waxworks exhibition in Vienna is described and how he became associated with Mozart and commissioned him to compose music to be marked on the barrels of three organ clocks in the waxworks exhibition gallery.

There are plenty of excellent illustrations of organ clocks that are in existence today both in England and on the Continent.

Chapter 6, on organs of the street, gives us a clear insight into the street scene and the popularity of these small pipe organs very compactly made with wooden pipes packed close to each other and mitred to fit into the organ case, the whole organ being portable and carried by a strap round the musicians' shoulder. There is description of how the Italians during the Depression of 1860 to 1875 left Italy and settled in France, Germany, England, Turkey and Russia, bringing their craft of street organ building with them.

The words of a ballad called *The Organ Grinder* by P Brereton of Dublin, are given, and most charmingly portray the street musician and his experiences! There are vivid descriptions of the street organ grinder in London and how the Italian and French seemed to outshine the English at this form of music making.

There is an illustration of a handsome street organ with a marquetry case by Netchada, and also an advertisement of 1905 from a Thibouville Lamy catalogue for street organs with 15 notes and 3 stops for £7·10.

Chapter 7 deals with pneumatic player organs. The second page carries a print of Debain's antiphonel, which was a player mechanism which could be fitted to the keyboard of a harmonium, and was claimed to be a substitute for an organist, and without any knowledge of music a person could play hymn tunes and chants! Numerous kinds of free reed organettes are described including Merritt Gally's self-playing reed organ. The Aeolian pipe organs with roll pneumatic action and also the Orchestrelle are included in this section.

Section 8 pursues the book music and show organ with pages of excellent illustrations of examples of these instruments.

Chapter 9 clearly describes with detailed drawings the restoration to good playing order of a typical barrel organ, with reference to street organs included This section starts with emphasising the importance of proper understanding of the working of the organ, and warns against the use of modern glues. The importance also to resist the temptation of replacing the original handmade screws is also emphasized. The great care necessary in the removal of rusty screws and in general the taking of the barrel organ to pieces and the removal of the pipes from the rack and soundboards is outlined in detail.

The complete re-making and covering of the bellows with new sheepskin, making new intake valves and so on is described. When successfully completed

Classic work in reprint

THE book Histoire de la Boite a Musique, written by Alfred Chapuis and published in 1956 in French, is to be published in English translation shortly.

The project is being undertaken in America by the Musical Box Society International whose publication chairman Howard Fitch tells *The Music Box* that the book, one of the most sought-

after of the earlier works, will probably take between two and three years to produce.

Negotiations have been finalised between the original Swiss publishers, Scriptar, Madame Chapuis and the MBSI and the society has sufficient funds to ge the project under way.

Further news as to availability will be published as soon as we hear.

work on the bellows can be most

satisfying to the restorer.

Instructions for the careful straightening out and repair of metal pipes using hornbeam wood mandrels for the conical shape pipe feet are detailed. Given a full understanding of this section on metal pipes, it would be fairly simple to make new replacement pipes reusing the metal from scrapped pipes. Wood stopped and open flue pipes are also described and tips are given on how to carefully clean them, stop leaks, re-set the caps and repair the feet, etc. Free and beating reeds are described with some excellent drawings

ings.

The reciprocators, key frame and action are dealt with in detail, an importance stressed on the correct procedure on carefully removing the rust from each key and burnishing the inclined lifting edge of the key, and how a good restorer will take at least a quarter of an hour to restore each key. The recovering of the chest pallets, and the vital re-setting of the pallet springs with just the right amount of tension is shown. The repairs to the barrel pinning and hardwood barrel wheels is given, and finally the correct method of assembling and adjusting the organ is set out.

The tuning of the pipes is touched on, and a book is recommended for those who wish to further their study of this fine art.

Chapter 11 gives detailed instructions on how to pin the barrel of a serinette by the dial method based on Joseph Engramelle's La Tonotechnie of 1775. An engraving of the tools required, a serinette with noting dials and also how a piece of music is set out for pinning with the stave notation included for comparison. Calculations are given for setting tunes on a barrel that will take 20 seconds to turn.

John Flight invented a "Micrometer" for use when noting the barrels: a diagram of this ingenious machine is given, and its working principles clearly explained.

The final Chapter 12 is devoted to a list of makers of mechanical organs which includes many makers up until now unknown and unrecorded.

The text throughout the book is well expressed and imaginatively compiled, and through obviously years of painstakingly trouble and research into this hitherto neglected subject "Barrel Organ," I feel that credit should go to Arthur Ord-Hume for such an excellent book. FREDDY HILL

MECHANISCHE SINGVOGEL

by Peter G Schuhknecht, published by the author at Friesenstrasse 54, D-3000, Hannover, West Germany. 151pp, 215mm (8½ins) by 152mm (6ins), illustrated, part in colour. Price on application.

Books on mechanical singing birds are virtually non-existent so any title in this field will be one-hundred per cent bonus to the enthusiast. This smart little work—the first edition of 1,000 copies is now sold out and a reprint is in hand—is an admirable primer to the subject which, although better suited to the German-reading user, will prove of interest to everyone.

The book opens with an introduction by Dr Helmut Zeraschi of

THE recent massive fluctuations in the strength of certain world currencies, in particular the American dollar, the English pound and the German mark, have made it very difficult to show true prices of books outside their country of origin. Those interested in foreign titles are advised to purchase through a reputable collectors' book outlet local to them, or to write to the publisher first for a quotation.

Leipzig, author of so many fine works on the barrel organ in Germany. The first chapter is devoted to the development of the singing bird from beginning through to the present day. This somewhat resumé style opening is followed by an examination of the singing bird in antiquity, in Switzerland and in France. There is also a brief article on the cuckoo clock after which is a guide for the would-be purchaser advising him of the points to look for when buying or cataloguing. A list of museums and major colcontaining mechanical lections singing birds follows and then there is a version of the story of the Chinese emperor and the nightingale, so completing the first 48 pages of the book. The balance is devoted to the plates and a concluding reprint of part of a c.1910 Bontems catalogue which many will find of particular interest. Generally speaking, the majority of the illustrations are well chosen and the captions adequate.

Our member Peter Schuhknecht is also president of the newlyformed Mechanical Music History continued on page 378



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Letters to the Editor

Beecham's boxes

Member John Lucas of Potters Bar, Hertfordshire, located this extract from a new book of anecdotes about Sir Thomas Beecham:

"MY FATHER nourished a passion for musical-boxes of every description, and the house almost overflowed with them . . . The visitors who hung up his hat on a certain peg of the hall rack, or who absent-mindedly abstracted the wrong umbrella from the stand, would be startled at having provoked into life the cheerful strains of William Tell or Fra Diavolo. But others were serious and solid affairs, elaborate of building, full of strange devices . . how I loved them then, and how I lament them now!"

Sir Thomas Beecham, quoted in "Beecham Stories", compiled by Harold Atkins and Archie Newman (Robson Books, £3.50). Published September 1978.

Mark identified

Robert Burnett writes from Nottingham:

I FOUND the table of maker's marks assembled by our President and published in *The Music Box* for Summer 1978 (Vol 8, No 6, p240) most interesting. It will certainly be of great value to members in enabling them to identify the makers of items from their collections.

I am able to identify one of the two marks in the table of which the origin was not known, viz No 54. The three bees of this mark, or flowers, depending on how you look at them, are the mark of Frères Rochat and I have seen them on many of the singing bird boxes which have passed through my hands. That these boxes were by Frères Rochat was quite clear from the design and workmanship, which was exactly the same as that of boxes bearing Frères Rochat's stamp. However, the final proof was provided by one box which was signed by Frères

The unusual and interesting

Jean-Marie Verheggen writes from Embourg, Belgium:

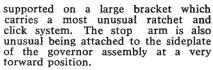
I AM sending photographs of two pieces in my collection which I feel might be of general interest. The first is a Nicole Freres Grand Format Ouverture which has a cylinder 41.5cm in length playing a 240-tooth comb. It plays the overtures Parsina by Donizetti (1833); Barber of Seville by Rossini (1816); Gustave by Auber (actually this is Gustave III, first performed in 1833); and II Matrimonio Segreto by Cimarosa (1792).

The box performed extremely well and has very many points of similarity with the box illustrated in The Music Box volume 7 page 143. This one, belonging to Keith Harding, has the serial number 31021. Mine is 31023 and the gamme number is 1404.

The second piece which I have pictured is a sectional-comb movement having 53 groups of two teeth. The cylinder is 24.5cm in length and 31mm in diameter. It features a curious system for tune-changing as seen in the pictures. The mainspring barrel is

On the right are two pictures of Jean-Marie Verhegen's Nicole Freres Grand Format box which is ratchethandle wound. Pictures of the sectional - comb movement referred to above appear on page 376.

The mysterious mark now identified by Dr Burnett as being that of Freres Rochat, below.



The attachment of the right-hand spring barrel arbor support is equally unorthodox: it is screwed through a slot in the bedplate in which the lower portion of the spring barrel also projects.

This musical movement plays four airs from Weber's Der Freischutz first performed in 1821.

Editor's Comment: Well, this is certainly a most unusual piece and the more one looks at it the more it demonstrates hitherto (to me) fresh qualities. The comb is, of course, a "right-to-left". What I find very intriguing are the two curved levers, presumably the control levers, at the governor end. It may be that these are attached not to the musical movement, but to the case. The change-snail is in the form of a lantern pinion rather than the usual star-wheel form.







Rochat, as well as having the three bees stamped on the base plate. Thus I do not think that there can be any doubt that this is the mark of Frères Rochat.

If I may add one very small point, it is that the "FR" mark used by Frères Rochat is often found in an oval as well as in a horizontal diamond. This is mark 14 in the table.

Editor's Comment: The original mark, shown right in the picture, is of the same subject as Dr Burnett's insect. The enlarged and Glled-in picture, left above, is from a Frères Rochat singing bird. Points of similarity are the arrangement in threes about a serial number of three characters. However, the stamps suggests that several must have been in use for there are detail diverences.

Sold at Chrisby's Southgravia . . .

Christopher Proudfoot writes from Christie's South Kensington:

MANY thanks for yet another splendid Music Box, in which I am particularly gratified by the pieces on the Lawater box and the power-locking changeable. However I fear that you have well and truly put your foot in it in the penultimate paragraph of the latter article. On page 71 of the present volume there is indeed illustrated a glove-hook changeable musical box, but it bears no resemblance at all to the movement described in the present article beyond the fact that it was sold by Christie's South Kensington and not Sotheby's! The Sotheby's glove-hook box, as I mentioned in the September 13th sale

catalogue, was very similar to this forte-piano movement. You might be interested to know that following the appearance of this article a member telephoned me to say that he has an identical movement, unfortunately with only one cylinder and no case. The latter is particularly disappointed, as I would have liked to know whether the case also bore the trade-plate of Messrs Emmanual of Portsea.

Editor's Comment: Apologies all round. A fascinating sequel to the power-locking changeable will appear in the next issue. This brings together the names of Karrer and Capt!

More letters on page 376.

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More trade marks

Two more trade marks are advised, the first is from C H Kok of Wassenaar in Holland who writes:

IN The Music Box No 6, 1978, concerning identification marks, you mention that you welcome additions.

So I can tell you, there is in my small collection, a box, with a mark, I do not find in your list.

The mark is etched into each of the two combs (45 tones) of a cylinder-box with 19 "flutes". Its restoration, done by myself and Mr Baud, is almost finished.

The mark has under it a serial number, 8170.



" Serial nr." 8170.

Perhaps you know the maker of this beautiful instrument, and you will be

so kind to let me know?

I thank you in advance!
Editor's Comment: Any comment from members?

Lyn Wright of Stowbridge in Worcestershire contributes the following on the same subject:

I WAS very interested in your article on trade marks. I enclose a sketch of a mark found recently on a small movement probably out of an album. I suppose this must be the mark of Cuendet which you date c. 1810, but the movement certainly was much later than this, probably in the last quarter of the century.



M 5189

Editor's Comment: This mark is the one used by Auguste L'Epáe from around 1870. The crossed swords were a family symbol sincs French for sword is "déposá" (I corrected Mr Wright's first symbol) means "regis-tered". Beneath it is a movement serial number.

Theft and valuation

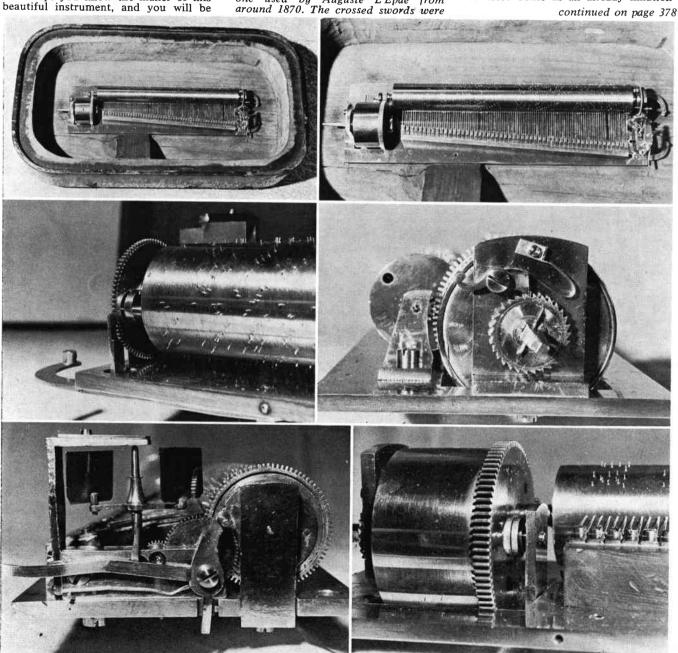
Frank Vogel writes from London:

IN YOUR editorial column of the Autumn 1978 issue of The Music Box you write at some length about Keith Harding's unfortunate burglary and comment about the need to protect and document collectors' boxes.

It seems to me that in addition to taking the precautions which you sug-

taking the precautions which you suggest, the problem of adequate insurance cover is also important. It must be heartbreaking to have a collection stolen; even worse if it is vandalised, but the loss must be a bit easier to bear if the collector is reimbursed realistically by appropriate insurance cover.

However, with the spiralling prices of these boxes in an already inflation-



Jean-Marie Verheggen's interesting and unusual clock-base movement. See letter on page 374,

1978

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ary world makes it extremely difficult for the small collector to be sure that he is adequately insured, and furthermore, that in the event of a burglary that he will receive realistic reimbursement.

Quite rightly, an insurer might insist on up to date valuations of collections; the collector must be fairly certain that he is covered for the many possible eventualities.

I would like to suggest that some thought is given by the Society to setting up an advisory sub-committee which would look into and have available to members advice about how to

BOOKS continued from page 372 Society in Germany and this, his first work on the subject, is a commendable and attractive introduction to an aspect which has so far not earned itself the benefit of a place in literature. A O-H

THE COMPLETE CATALOG OF AMPICO REPRODUCING PIANO ROLLS by Elaine Obenchain, William H Edgerton, Box 88, Darien, Connecticut, 06820. 197pp, 296mm (11¼ins) by 223mm (9¾ins), hardbound, mostly reproduced from typewritten originals. Price on application.

The one thing which Ampico never did, much to the regret of the latter-day Ampicophile, was to produce a complete catalogue of rolls. Indeed, so complex was the original numbering system that this is probably understandable. What Elaine Obenchain has done, then, is to attempt to unravel the complex numbering systems and do what Ampico never got around to doing — numbering, dating and iteming recordings.

The first part of this monumental catalogue deals with the Stod-

go about and obtain realistic insurance cover for their (possibly continually changing) collections.

Editor's Comment: The problems which this might incur could well prove to be more than your already overworked committee could cope with. It is, nevertheless, a course of action which has not escaped our attention and will be discussed in detail at an early date. All this highlights is the fact that running the activities of the Society is a task which still falls upon the shoulders of too few people—and more work is a task which is understandably shelved.

dard-Ampico system, the dated number system, the standard numbering system, the un-numbered rolls and the technical, instruction and accompaniment rolls.

Part two gives us the composers of Ampico selections, followed by part three which is artists and their recordings — a most useful check list. The concluding part four is an alphabetical listing of recordings.

No catalogue is meant to be read through from cover to cover, so the typography matters little. I would, though, have liked to see bigger page numbers. This is a book which must naturally assume the position of the Ampico Bible and it is living proof of an editorial task which must have involved many years of continuous research. Although proclaiming itself to be complete, there are some omissions in the form of numbers, a few titles and some oddments which diligent research has failed to tie up. These are, though, the residue of Ampico production and no doubt represent works which never got beyond the punching room floor. A O-H

WURLITZER — BUILDING PLANS AND VOICING TIPS MODEL 104-105 by R M Stanoszek. Published by the author, Robert M Stanoszek, 16004 Ramage Avenue, Maple Heights, Ohio 44137, USA. 47pp plus supplements 11p, 9pp and 8pp, A4 size, spiral-bound, reproduced from typescript and line drawings. \$35.00.

An awareness that original instruments are becoming scarcer and scarcer has brought to the forefront a need for accurate information to enable the competent enthusiast to construct for himself replica instruments along traditional lines, or new mechanical musical instruments.

Robert Stanoszek has met one aspect of the former category by

providing a complete set of drawings for the manufacture of a Wurlitzer 104/105 model showman's or band organ. The specification of this 41-key instrument is ample: 14-note melody section comprising 14 wooden flageolets and brass piccolos (these are unisons based on 2ft pitch) with 14 stopped diapasons of 4ft, 13 note trumpet counter melody, 9 note accompaniment of string-toned or cello pipes matched with 6 stopped pipes, these reinforcing the lower notes of a 14-note violin pipe melody section. The bass section comprises a 5-note open cello rank and matching bourdon.

Mr Stanoszek limits himself to illustrating quite comprehensively the details of the pipework, the case, the bellows, the additional percussion wings and details, and the slider chests. The roll frame—the instrument is, of course, paper-roll playing — he advises buying in and lists a supplier he recommends.

The plans are obviously drafted for the enthusiast rather than the shop floor. To this end they are far from being examples of the draughtsman's skill and some of the simplified spelling (along with the unconventional and inconsistent penmanship) makes interpretation somewhat less than immediate. Much of the smaller detail work such as the positioning and size of fixings, is left to the discretion of the builder.

For the enthusiast who knows his organs, though, here is a rare chance to create almost every major part of the Wurlitzer 41-key organ. For the more venture-some builder, Mr Stanoszek's instructions will serve as a fine basis upon which to develop the tonal resources of this size of instrument by means such as the incorporation of different registers, extra ranks and, of course, new and original music. The author offers to answer any problems which builders may have.

A O-H

FACSIMILE REPRINTS of rare and otherwise out-of-print material are now very much in vogue and this autumn a crop of recent reprints was received from the house of Frank Adams, PO Box 3194, Seattle, Washington 98114.

The first of these is the July, 1920 Catalogue of Record Music Rolls for the Ampico originally published by Aeolian. Some 140 pages (un-numbered) comprising three sections, the largest being the one devoted to performers and their recordings, then composers and finally the alphabetical list.

Ampico issued monthly bulletins of new music plus an on-going list of available recordings. These little bulletins make fascinating reading and Frank Adams has a volume of 12 of these dated from August 1928 through July 1929. Ever heard of the Ampico Secretary? It was specially designed for Ampico owners and is advertised in these fifty-year-old relics. Never heard of it, you say? Well, its illustrated as well . . .

Slightly earlier is the 1915 catalogue of **Duo-Art Pianola Music**. Here again three sections with the performers' one being the largest, followed by a list of composers and, most interesting of all, a section showing prices. Nice 82-page booklet this.

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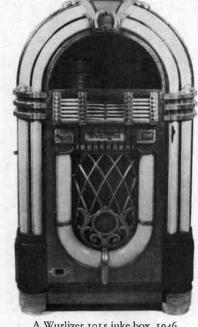
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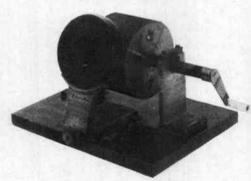
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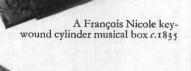
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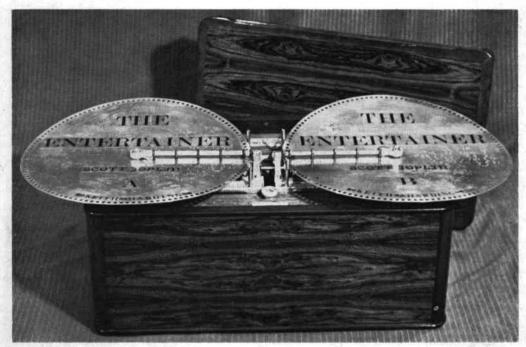




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