The Music Box

an international magazine of mechanical music

THE JOURNAL OF THE MUSICAL BOX SOCIETY OF GREAT BRITAIN

Volume 7 Number 1 Spring 1975

THE WEST OF ENGLAND AUTOMATIC PIANO COMPANY

(WEAP LIMITED)

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DOUGLAS BERRYMAN in conjunction with GRAHAM WEBB

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THE JOURNAL OF THE MUSICAL BOX SOCIETY OF GREAT BRITAIN

The Editor writes. . .

THE MUSIC BOX embarks on its thirteenth year of publication with the certainty that we have travelled a very long way since our first faltering folios in the winter of 1962.

Since that time, our Society has been responsible, through the efforts, endeavours and enthusiasm of its world-wide membership, for a great deal of original research into the history and development of the instruments of mechanical music. Significantly, every major book and reference article on the musical box and its related instruments in the whole field of mechanical music which has been published during the existence of the Musical Box Society of Great Britain has been written or edited by a member of our Society.

We can truly claim to have just about a world-wide membership and, very significantly, more than a third of our readership is in the United States and Canada. Our sister organisation, the Music Box Society International, last year celebrated its 25th anniversary, an event which was attended by a significant delegation of British members.

More and more it is becoming necessary for the real enthusiast for mechanical music to become involved with others through Society membership if he wishes to benefit from the dissemination of knowledge through the work of others. Indeed, it is interesting to relate that a number of members of the Musical Box Society of Great Britain are also members of the Musical Box Society International. And a large number of American society members also share membership with our Society.

Our new and enlarged journal, launched at a time when austerity on a world-wide scale is dictating a cut-back in most magazine publishing plans, marks the start of not just a new volume of *The Music Box*, but a new era in our magazine.

Ever mindful of the needs of the less experienced and less knowledgeable members of our Society, we shall continue to publish grass-roots articles and much general interest material on mechanical instruments. We shall also devote space to engineering topics and have a series lined up on the technical design of the cylinder musical box. A regular feature on player pianos and reproducing pianos responds to the fact that a large number of readers on both sides of the Atlantic are player enthusiasts.

Our pages will continue as before to be open to articles on the history and development of various unusual instruments. And throughout our pages we will feature many pictures of instruments, both familiar and rare. We have some more really outstanding photographs coming up of some of the rarest instruments in the world, and many first-rate articles.

But above all, this is *your* magazine. Your contributions are always sought. If you can't write lucidly, but have something to say, then say it and we can polish it up for presentation in print. As Editor, I will be happy to help and encourage you to write, draw, take pictures and do what else is necessary to get your contribution into *The Music Box*.

The Music Box is, for many, their sole link with our Society — the only return they get for their membership dues. We are very much aware of this and intend to see that if you fall into that category whereby pressure of other

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THE REGINA MUSICAL BOX

A History of Regina, Past and Present

by Mary Kosiarski

THE year is 1892. Poet Walt Whitman has just died. President Harrison has just laid the cornerstone of General Grant's monument in New York's Riverside Park. The July heat-wave brought the highest temperature for 21 years with New York's traffic impeded by dead horses and 223 people who succumbed. The year of Long Island's cholera panic, and the celebration of the discovery of America by Columbus. Also the year when a brand new industry was born in New Jersey — an industry which was to give birth to a disc-playing musical box dubbed **Queen of the musical boxes** and today thought by many world-wide to be the finest ever produced. Within a few short years, the musical box was to find its way into countless thousands of homes, cafes, beer gardens and the finest hotels in the land. It was called the Regina . . .

AFTER the invention of the disc musical box, more or less as a joint venture by the German, Paul Lochmann, and the Englishman, Ellis Parr, Lochmann began production of the Symphonion machine at his Leipzig factory in 1885. Among his employees at this time was Gustave Brachhausen, a 25-year-old engineer who, within a few years, had risen to the position of first foreman in the Lochmann-scher Musikwerke at Gohlis, a Leipzig suburb.

Brachhausen had inventive leanings and, in collaboration with another Lochmann engineer, Paul Riessner, had made various suggestions for the improvement of the Symphonion. Perhaps it was that their suggestions were not appreciated, or perhaps their worth was just not valued because in 1889 Brachhausen left Lochmann and, with Paul Riessner, set up in business on his own as Brachhausen and Riessner to make the Polyphon disc musical box. Soon the business became known as the Polyphon Musikwerke at Wahren in Leipzig.

Polyphon went from strength to strength and Brachhausen began to look for fresh fields. Realising that a great market lay in the United States and conscious of the tariff restrictions which were forcing German-made products out of America, Brachhausen decided to go to America. Whether this was with the backing of Polyphon or as the result of a particularly serious disagreement is hard to determine. Certainly relations with Polyphon continued in an amenable way for some years afterwards.

Whatever the circumstances, though, Brachhausen left Riessner in charge at Leipzig and in company with three machinists and two cabinet makers, booked a passage to New York. Now 35 years of age, he left on September 15th, 1892, and was never again to return to Europe.

Gustave Brachhausen from a picture in the author's collection.

It was in that year that Brachhausen established the Regina Music Box Company, its first home being in leased quarters at 20 Morris Street, Jersey City, New Jersey. It was his idea to exhibit musical boxes — he appears to have brought a stock from Leipzig with him — secure a few orders, and then commence production under the name Regina.

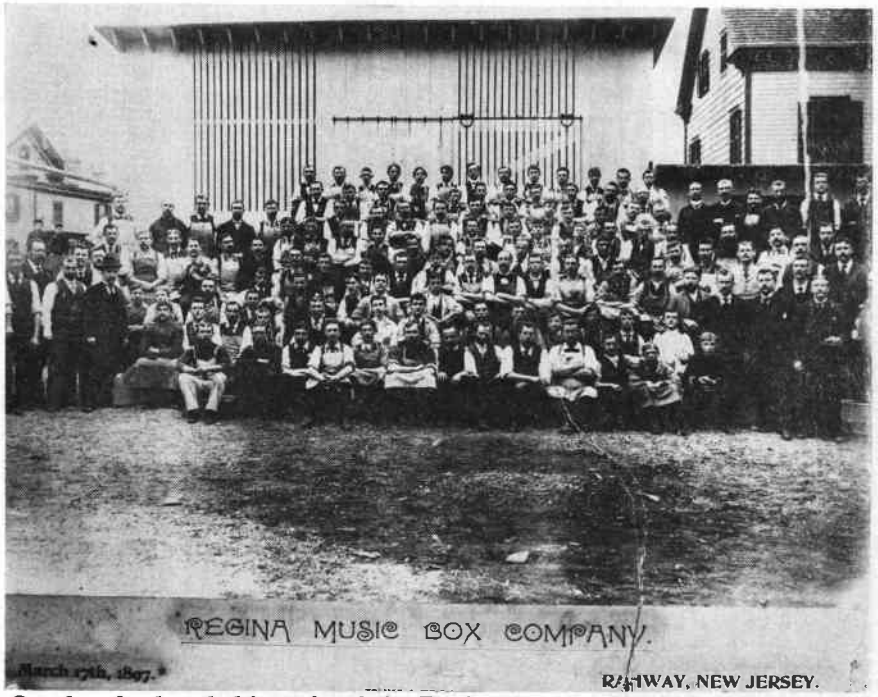
The premises of Regina at 54 West Cherry Street, Rahway. This is a reproduction of a contemporary artist's impression in the archives of the Regina Corporation. The salient features are still recognisable to this day — see the pictures on page 4.

Consolidation

The opening years were spent consolidating the company and securing American patents, many of which had Paul Riessner as co-patentee. However, his venture gained acceptance more quickly than he had anticipated for, within the space of a year, the newly formed company was shopping for more space. It was found in Rahway, New Jersey, in the shape of a 25,000 sq. ft. building at 54 West Cherry Street.

The residents of Rahway were soon aware of this strange new industry in their midst as the mellifluous strains of the *Blue Danube* rose above the sound of busy tools within the building formerly owned by the Mershon Company, a printing and publishing firm.

On March 27th, 1894, the Regina Music Box Company was formerly incorporated with a capital fund of $75,000. The three principal shareholders were Paul Riessner, Johannas J Korner (both of Leipzig) and Gustave Brachhausen. Financing was by the German-American banking firm of Knauth, Nachod



One hundred and thirty-six of the Regina works and administration staff posed for this picture on March 17, 1897. The original picture, in the Regina archives, is somewhat damaged. Notice two small boys looking over the fence, far left !

and Kuhne, who had worked closely with Brachhausen ever since he first set foot on American soil. It was they who financed the move from Jersey City to Rahway, and it was attorney Briesen Knauth who signed the Regina patent applications.

Business grew and more help became needed urgently. Where in America could skilled labour in this unique field be found? Brachhausen turned to the only source there was — Germany and Switzerland.

At least sixty European specialists were brought to Rahway during the first few years of Regina's existence. One of these was to become a key man in the enterprise — Octave Felician Chaillet. Chaillet. had been in charge of musical education in Switzerland and he was hired by Brachhausen to take responsibility for arranging music for discs. Chaillet was also soon to become Brachhausen's father-in-law.

Regina marketed its boxes primarily through distributors set up in a nation-wide network by Gustave Brachhausen himself. From then on, someone from the company, often Brachhausen himself, would take a suite in a Chicago hotel for a week or two, demonstrating the various types of box to the area distributors and writing orders for delivery anything up to six months or a year ahead. He would then move on to other cities and repeat the routine. These sales were augmented by direct selling through newspaper and magazine advertisements.

The very first Regina was sold to William F Hasse, of 107 East 14th Street, New York, on October 5th, 1894. The double-combed 15½ins. model, serial number 4001, was the first of many which Hasse, successor to agents T F Kraemer and Co., was to sell. As agent for Symphonion and Polyphon as well, Regina was a logical addition to his stock range.

Following the introduction of the Criterion disc musical box by F G Otto and Son, Regina considered there to be a patent infringement and so on December 8th, 1896, filed a suit against Otto's agent, M J Paillard and Co., managed by Alfred E Paillard.

During 1897, Brachhausen launched out into the field of commercial musical boxes. The first self-changer had been patented by Riessner in 1896 and the American patent was taken out in the name of Brachhausen. The first self-changing Reginas were made in 1897 and these were placed in suitable sites close to Rahway. Company personnel were charged with the installation and service of these coin-operated machines, collecting the money and changing the discs periodically.

By 1898 - 1899, the automatic disc-changer was being despatched to agents throughout the country. This was the forerunner of the present-day juke box and automatic home record-changer. Mechanically similar to the German Polyphon, the Regina scored through its superior tone and sonority and its casework which differed refreshingly from the Teutonic influence of Leipzig products.

The musical box industry in Rahway thrived and at the peak of production about 175 employees

Regina's finishing department *c.* 1897 - 98. The wooden plank supporting fiive men, two 27ins bedplates, a 15⅜ and an 11ins assembly, rests on Le Pages Glue boxes ! Third from the right, back row, is a comb-tuner holding a comb in his special hand-vise.

A true art-study by camera! A consignment of musical boxes leaves en route to the railroad station bound for Lyon & Healy in Chicago. It is hard to recall that amidst sophisticated musical instrument production, final delivery still depended on the horse and cart. The exit from which this cart emerged can still be seen in the present-day view, right, although several windows have been bricked up.

made up the workforce.

Around the turn of the century, the demand for home musical boxes became large. And, at about this time, a visitor called to see Brachhausen to show him his new invention. It was a machine which, instead of playing cylinders as Edison's phonograph did, played from a flat wax disc. Whatever it played, Brachhausen thought it sounded terrible, and the man was sent on his way. The man returned home to Camden in New Jersey.

The stranger who had passed through Rahway turned out to have been Eldridge R Johnson, who was to become one of the founders of the Victor Talking Machine Company. Without appreciating it, Brachhausen thus had let slip through his fingers what history might have described as a great opportunity, for perhaps it was the phonograph that almost caused the demise of Regina in 1903. Significantly, Rahway was barely five miles from Menlo Park where, ten years earlier, Edison had carried out his first phonograph experiments.

The first sign of economic trouble came in 1901 when a general business recession took a nip at Regina's sales. Fortunately, the recession was short-lived and before long sales were back to normal. However, sometime during this period, Brachhausen was advised to issue some stock to solidify the company's financial position. Perhaps now he began to realise that although he was a meticulous machinest and inventor, he was not a particularly good businessman. Nor, it must be said, was he all that easy to get along

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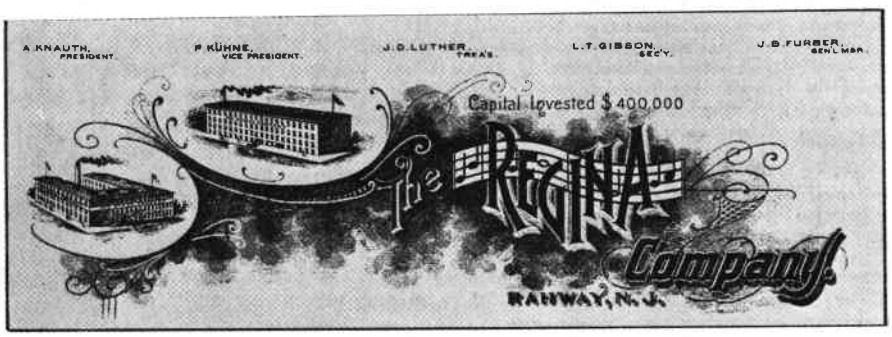


The letterhead of the Regina Company. Regina was the biggest manufacturer of musical boxes in the United States.

SOME COLLECTING EXPERIENCES

by Q David Bowers

OVER THE years it has been my privilege and pleasure to have purchased — either for my own collection, for the Mekanisk Musik Museum in Copenhagen, or for resale (through my former firm of Hathaway and Bowers and for the Mekanisk Musik Museum's resale department) — a number of really great automatic musical instruments. Often the acquiring of these involved interesting experience — experiences which were as fascinating as the music boxes and orchestrtrions themselves ! Today the collector or museum requiring instruments finds his ideal source to be the automatic musical instrument dealer or other collectors with duplicates for sale. Only rarely are instruments available in their original locations. The increased demand for old time intsruments, the higher value attached to them, wide publicity, and other factors have combined to ferret most such pieces out of their original locations year ago. However, this has not always been the case — and even in the 1950's many fine pieces could be obtained from their original owners or members of the owners' families.

Over the years my search for instruments has taken me nearly to the four corners of the earth. Most fertile in the search have been America close at hand here (I have always lived in America) and Europe (I have been a frequent traveller to Europe having been there over 30 times during the past 20 years). I suspect that certain other areas of the world where I have not been also would be rewarding — South America, for example. However. I will leave it to others to find this out !

One day in 1963 or 1964 I received a letter from Harvey Roehl, owner of the Vestal Press in New York. Harvey knew I was visiting Belgium, and I suggested tha during my trip I stop and pay a call on Emil Baude, a showman who operates rides and owned several fairground organs. He furnished me with Mr Baude's address, on a street in a suburb of Ghent, Belgium. During this particular trip to Belgium I attended to important business first — and called upon Leonard Grymonprez to see what he had for sale. Leonard, whose interest has now turned to other things, was once a very active dealer in Belgium. Many were the miles he travelled over the Belgian countryside in search for coin-operated pianos, organs, and orchestrions. Some of the nicest pieces in my own collection came from Leonard — the beautiful Weber Maesto which I have owned since 1963, for example. After visiting Leonard and purchasing some instruments from him, I then went to see Eugene DeRoy. Mr DeRoy, who passed away several years ago, was active in the automatic musical instrument business from the World War I era to his death. During the early days he bought and sold instruments and made rolls for them, the latter under the " Symphonia " trademark, his own factory label. I believe Mr DeRoy had more experience with orchestrions and pianos than anyone else I have ever met. A great deal of the information conerning European pianos and orchestrions which appears in my " Encyclopedia of Automatic Musical Instruments " book was gained through the help of Mr DeRoy.

Who would think that this white-painted decoration in the New Batavia Restaurant, Brussels, complete with nailed-on billiard scoreboard, was a Popper Gladiator orchestrion ! See page 7.

Emile Baude, showman

When my visit with Mr DeRoy was concluded and after I purchased several instruments from him, I then went over my list of things to do — and decided to visit Emil Baude. Harvey Roehl did not say anything about Mr Baude, except that he was a showman and owned a few fairground organs. There was no indication that he had any instruments for sale now or ever did in the past.

I knocked on Mr Baude's door and was rewarded with a greeting in Flemish, Mr Baude's language. Not being familiar with Flemish, most of our " conversation " was conducted by expressions and movements from that point on. However, the language of automatic musical instruments knows no barriers — and we were able to get along fine ! After a while I was able to carry on a thread of conversation with him, picking up his knowledge of a few English terms and using my very, very limited knowledge of a few German words (German is somewhat related to Flemish).

In the enclosed courtyard lead-

ing to Mr Baude's home there were three immaculately-restored Hooghuys fairground organs. Each one looked as if it had been made yesterday! "Do you want to hear them?" Mr Baude asked me. I did, of course, and for the next hour or two I was treated to a wonderful concert.

Those of you who are familiar with Hooghuys organs know that this particular brand plays louder than just about any other fairground organ on earth. It is safe to say that the concert could have been heard just as well by someone standing a mile away! Hooghuys organs, originally manufactured in Grammont, Belgium, were mainly distributed within that country, so few of them are known on the international collecting scene. However, in recent years a number of Hooghuys instruments have been exported — and now there are a few in America and perhaps some in England as well. As a matter of fact, the three Hooghuys instruments I listened to that day long ago were subsequently sold by Mr Baude to Wallace McPeak, a dealer in Texas, USA, who has since retired.

Orchestrion hunt

When I first arrived at Mr Baude's home it was early in the afternoon. One hour soon followed another, and time went by like magic as song after song was played on the fairground organs. Soon it was time for dinner — and a lovely meal was prepared by Mrs Baude for us. During dinner Emil Baude told me his collecting experiences and how he had travelled the length and breadth of Belgium in search for fairground organs. His search was successful, and over the years he had located some fine Gavioli, Mortier, and other types — and selected from these his favourites, the Hooghuys pieces on display.

"Did you ever find any orchestrions?" I asked him. He then related that his love was fairground organs, and not orchestrions — but that yes, he indeed had heard of a few orchestrions here and there, one in Germany and two in Belgium. Did I want to learn about them? Indeed I did!

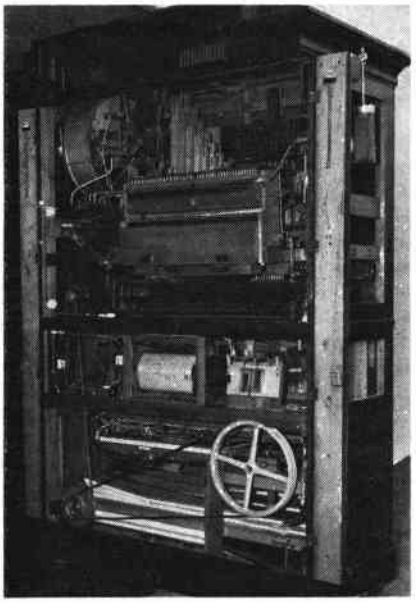
Business being business, an arrangement was made whereby I would pay him for the information should any one of these leads result in an instrument purchase. With the three addresses in hand I left Mr Baude late in the evening.

Not being familiar with the Flemish language I then returned the next day to see Eugene DeRoy, who lived near Antwerp, and enlisted his assistance in checking out the two addresses in Belgium.

The first was a cafe on a dingy small street in Brussels. Peering through the grimy windows from the outside I could see nothing, for the inside was dark. Eugene DeRoy and I then went in. Built 40 or 50 years earlier, the cafe had changed little in the meantime. To the left was a simple bar and behind it a rack lined with bottles. To the right were a half dozen linoleum-topped tables, each with an ashtray advertising Cinzano vermouth. Against the back wall was a sign above a doorway indicating the way to the "pissoir" or men's urinal. And, that was about it . . . except for something large, lurking, and mysterious in the far corner at the back!

Standing nearly 10 feet high was a light oak cabinet. Across the top I made out the words: "POPPER'S SALON ORCHESTER". So, a Popper's Salon Orchestra — what a find! I had never seen one of the orchestrions personally, but in my avid reading of literature issued before World War I by Popper and Company, one of Leipzig's main manufacturers, I had read often of the Salon Orchestra. It was one of this German firm's most popular models. And, now I had the chance, or at least I hoped I had the chance, to buy one in person!

Before entering the cafe Mr DeRoy whispered instructions to me: Under no circumstances was I to speak in the English language, for the cafe owner would then think that a wealthy American (all visiting Americans are considered "wealthy" and higher prices might be charged accordingly) might be visiting. Instead, I was to play the part of a silent observer. Mr DeRoy, representing himself as a repairer and purchaser of obsolete instruments (which indeed he was) planned to go in the cafe and ask about the orchestrion. He was then going to write on a napkin the price wanted, and I could indicate whether or not it was of interest. Officially I was his "assistant" and was there to help him with some of the "dirty work" — such as peering into the orchestrion while Mr DeRoy talked to the cafe owner. But, I am getting ahead of the story!



A back-street Brussels cafe revealed this Popper's Salon Orchester seen here with the front removed.

Cola collusion

The first thing to do upon entering the cafe was *not* to ask about the orchestrion. Rather, it was customary, as it is in all places of Belgian hospitality private or public, to have a drink. Well, I don't mind having a glass or two of beer or two in a day, but in no way can I keep up with the typical Belgian pace of having a glass every half hour or every hour! So, I had that international beverage, a Coca Cola. Mr DeRoy ordered a glass of Stella Artois, one of the most popular of all Belgium's beers. Following the first glass of Stella Artois, he walked up to the bar and ordered a second—at the same time engaging the cafe owner in conversation. There was no problem with this, for the establishment was devoid of patrons during this early afternoon hour. Soon the owner joined us at our table, with Mr DeRoy treating him to a glass of his own merchandise. By this time I was on my third or fourth Coke. Conversation was at a mile a minute pace, and I didn't know what was going on except that it must be something favourable, for both people glanced frequently at the orchestrion as words were being spoken!

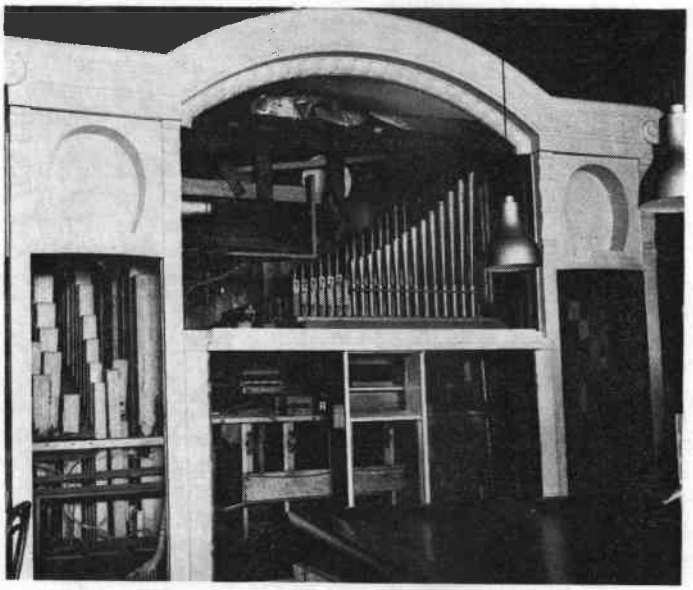
Then came a respite — the owner went to the pissoir, and Mr DeRoy had a minute or two of hurried conversation with me. Yes, the instrument was for sale—and the price seemed reasonable to Mr DeRoy. Did I agree? Upon learning it I did agree.

"Why don't you examine the orchestrion carefully while I continue talking with the owner?" Mr DeRoy said. "I will tell him that you are checking it over for me."

Opening the door to the roll housing, I then felt around in the dark innards of the instrument and found the wooden cleats which fastened the tall doors to the left and the right. Quickly these were undone, and the doors creaked open. Despite a liberal coating of cobwebs and the accumulated dust of what must have been a quarter century, the orchestrion appeared in basically nice condition. This was my first view of the inside of a Popper Salon Orchester, and I was delighted to see that it had quite a few pipes, a bass drum, a snare drum, xylophone, and various other appurtenances which delight the orchestrion lover. On the front was a circular glass panel with reverse painting on it. A mechanical device in combination with lightbulbs transformed this into a flickering "motion picture effect" when the instrument was new and operating properly. Unfortunately, it was far from this condition now —so how this actually looked was left to my imagination.

I returned to the table and Mr DeRoy instinctively knew that I approved of the orchestrion's overall condition. However, not a roll was in sight—and I was wondering whether any supply of music came with it. Another opportunity to converse with Mr DeRoy occurred a few minutes later, and I asked this question. Later this question was in turn asked to the cafe owner, whereupon he bounded up from his chair and led us through the back door. Up a small flight of narrow stairs we went until we reached a small room three or four floors up, a tiny attic storage area. There were a number of rolls, perhaps several dozen in all, most of which were quite crinkled from having been water soaked and then dried several times. It seemed that these rolls were hidden there during World War II when the Germans occupied Belgium. Following the war the orchestrion was not used again, and the rolls were all but forgotten. Interestingly enough, all of the rolls bore the "Symphonia" name and were sold to the cafe owner in the 1920's by Mr DeRoy!

Somewhere in heaven there must be a repository for statues from the front of orchestrions and piano benches from the front of pianos, for more often than not when I have purchased a grand piano or a large orchestrion, these instruments respectively have been devoid of a piano bench or a decorative statue. The statue on the Belgian instrument was no exception. Long ago it had disappeared. Replacing it was a plaster figure of a dog with the name of a Belgian beer lettered across the bottom.



The Popper Gladiator pictured on page 5 looked considerably more exciting with front panels removed to reveal the works. Untouched since it was installed in 1928, the cafe owner agreed to sell the works, but not the case . . .

The transaction with the cafe owner was duly consummated, and with a bill of sale in his hands Mr DeRoy left the tavern with me. We congratulated ourselves on our luck! A few days later we returned to the cafe with Mr DeRoy's son-in-law, Jeff, and packed the instrument for export.

The next orchestrion on Mr Baude's list was located in a restaurant called the New Batavia located on St John the Baptist Square in Brussels. Again, Mr DeRoy accompanied me.

In contrast with the earlier experience, the New Batavia restaurant was large, spacious, and well lighted. Obviously it was one of that district's favourite gathering places. The walls were paneled with light wood. In the centre were perhaps 100 to 200 chairs around long tables arranged in beer-hall style. To the right was a large bar. But, where was the orchestrion?

To begin with, we didn't know what type of orchestrion to expect, but traditionally an orchestrion is an orchestrion, so I searched for something l a r g e, dark-coloured, and hopefully ornamented with mirrors, art glass, hanging lamps, and statues. However, I saw nothing like this.

Eugene DeRoy, perhaps more experienced than I in such things, finally concluded that the orchestrion was at the back of the room. This was done after eliminating the other possibilities. No, it wasn't against the left-hand wall for the only thing that was there were a few decorations, a billiard scoreboard, and some coathangers. No, it wasn't against the right-hand wall for all that was there was a bar, and a bar with hundreds of sparkling bottles could not be mistaken for an orchestrion, at least not any kind we were familiar with. So, that left two possibilities: Either there was no orchestrion or else the white-painted irregularly-shaped back wall of the restaurant somehow played music!

It turned out that the latter was indeed the truth. What had once been a massive (about 15 feet wide by 12 feet high!) Popper and Company "Gladiator" orchestrion had been transformed. The mirrors and the statue had been removed, as had been the decorative lights. The front had been painted a bright white colour somewhat l i k e a refrigerator. Looking carefully at this arctic-coloured blob one could indeed make out several carvings and the outline of the front doors. Yes, it was an orchestrion! And, it was the most huge orchestrion I had ever laid eyes on!

Noting that the condition of the exterior was less than it was when the instrument had left the Popper factory in the 1920's, I wondered about the interior as well. There was not as much need for secrecy in the New Batavia restaurant for the place had perhaps a dozen patrons (some of whom looked as if they had been there since the night before), and the establishment was large enough that conversation held in one corner of the place could not be heard at the bar. Eugene DeRoy and I had a hurried conference and then he went over to the bar and talked with the owner, a Mr Moeyersons. Things weren't so easy this time, and Mr Moeyersons related to Eugene DeRoy that the orchestrion was as much a part of the restaurant as he was—and, in fact, it

had been a " trademark ".

" But the orchestrion doesn't play, so what use is it to you?" Mr DeRoy asked. Apparently the reply was that it was of sentimental use, and it didn't make much difference whether it played or not. Besides, if the orchestrion was taken out a huge section of the back wall would have to be redecorated, for it seems that the instrument was installed brand new in 1928 when the place was built and all of the interior paneling, the flooring, and other things were installed after the orchestrion was in place. In fact, a curious thing was that the floor tiles went up to the front of the orchestrion and then turned upwards for a few inches and were cemented in place along the bottom. This meant that during its entire history from 1928 until that day in the early 1960's the orchestrion was cemented firmly in place and had not moved an inch! To tune a large Popper orchestrion, it involves moving the instrument away from the wall, disconnecting several screws, and lifting the piano out of the back. There is no way that tuning can be done by reaching through the front doors. Indeed, from the front of the orchestrion to the piano in the back was five or six feet—and this space was crammed with pipes, belts, pulleys, tubing, and a hundred and one other things. This meant that the piano had never been tuned before! I couldn't quite believe this once I realised it, and I asked Mr DeRoy to verify this with the owner just to satisfy my curiosity. It turned out that this was true.

Two or three hours and many glasses of beer (Coke for me) later an agreement was made to purchase the orchestrion. I paid for the instrument with traveller's checks and in due course received a receipt for it. Again, Mr DeRoy and I celebrated our good fortune once we left the restaurant.

The trip from Brussels back to Antwerp was filled with planning how the large Popper orchestrion was to be moved. The thing apparently weighed several tons and was the size of a small battleship! Undaunted, we returned bright and early the next morning with a huge flatbed tractor-trailer truck which had been leased from the export shipper for the purpose.

The first thing we did was to take off the front doors and panels and lean them against the wall. Before doing any heavy moving we intended to pack the interior components. Prior to arriving at the New Batavia restaurant we had stopped by the Bon Marche department store in Brussels and had purchased for $3 each their entire stock of fluffy cotton camp blankets! Figuring that we needed several dozen more we went to Bon Marche's main competitor at the time (this has since been gutted in a fire—a disaster which killed several dozen people)—L'Innovation, and purchased dozens more. These made excellent packing. Within an hour or two the several hundred violin, cello, clarinet, flute, piccolo, oboe, horn, and other interior pipes of the Popper Gladiator were safely packed in blankets and tied with string. Mr DeRoy, his son-in-law, Jeff, and two or three others who came along to help were by this time all covered with dirt and cobwebs—and I was in a similar state. Now came the toughest part of all: disassembling the structural parts. After much exertion the massive top was lifted off the instrument. About this time I decided we should start loading some of the larger pieces onto the truck. Several of the helpers grabbed the front panels of the orchestrion and walked out the front door. Seeing this, Mr Moeyersons, who had been quietly observing the proceedings from the sideline at the bar while serving drinks, sprang into action and ran towards the disappearing parts.

Unexpected hitch

" Where are you taking those pieces?" he asked Eugene DeRoy in Flemish. Then followed a rather heated argument. I was at a loss to know what was going on, except I knew that something was wrong.

After what seemed a minute or so of this, Mr DeRoy came over to me and said:

" I think we have a problem. When Mr Moeyersons gave us the bill for sale for the orchestrion he did not intend for the front of the orchestrion to be included. He just wanted to sell the inside. The front of the orchestrion is a feature of the restaurant, and the old-time patrons would miss it. Also, he wants it to stay in place so that he will not have to decorate that part of the restaurant again. I have talked to him about it in every way I could, but he is very firm. "

I then broke my silence for the first time and went over and spoke to Mr Moeyersons in English. He was able to understand most of what I said, and what he couldn't understand was filled in by Mr DeRoy. I told Mr Moeyersons that unless I could purchase the front of the orchestrion I did not want any part of the orchestrion. He did not seemed to be impressed by the argument. He was, however, dismayed that his prize orchestrion was now strewn all over the floor of his restaurant, and no doubt he was wondering how he could ever get it back together again!

Being a businessman and knowing that Mr Moeyersons was also a businessman, I then did some thinking. " When the orchestrion is gone you will have room in the restaurant, you will have room for two or three more billiard tables ", I said. I knew that billiards were a prime activity of the establishment, for several cue racks were on the wall as were scoreboards. In fact, one scoreboard was nailed on front of the orchestrion itself! Well, apparently Mr Moeyersons found this a better argument than Mr DeRoy's entreaties, for he said that he would " think about it ".

All dismantling work came to a halt and two or three more rounds of beer (and Coke) were served. Then came Mr Moeyersons' decision: yes, he would sell it. He had been thinking about getting more billiard tables but didn't know where to put them. Yes, when the orchestrion was gone that would be a good place for this sport.

Things soon returned to a happier state, and by evening the Popper Gladiator was safely on the truck as was the smaller Popper Salon Orchester from the other cafe in Brussels. A few months later they were in the United States. The Popper Salon Orchester was sold to Roy Haning and Neal White in Troy, Ohio, and the Popper " Gladiator " is now a featured attraction (the front having been restored to its original state) in the collection of Mr J B Nethercutt in California.

If you are still with me you will recall that Emil Baude had mentioned that he knew of *three* orchestrions: two in Belgium and one in Germany. During that earlier evening in Mr Baude's home he described to me the one in Germany. This was done dramatically by taking his left hand and indicating a spot on the wall of his home. Then by stepping sideways several paces he indicated with his right hand another spot about 12 feet away. Then he looked heavenwards and shielded his eyes —indicating that the orchestrion in Germany had great height.

" What type of orchestrion is it?" I asked. Mr Baude, being a collector of fairground organs, might know the answer I thought.

"It is a Weber Elite!" he said. He then went on to relate that it was the only known specimen of its kind. I questioned him about other details, but he was not able to help me. It seemed (this point was not clear in my mind) that he had never seen the instrument personally or had seen it long, long ago. Anyway, he did say that it was a Weber Elite—and that was enough for me. Immediately I rented a car and drove to the address he gave me in Germany—a small town deep in the Black Forest, and a long, long way from Belgium.

The Weber Elite is an almost legendary instrument. During the late 1920's Gustav Bruder, a music roll arranger par excellence for the Waldkirch, Germany, firm of Weber, designed an orchestrion which was meant to outrival any similar instrument ever made by man. The unit contained hundreds of pipes and played from a roll 140 perforations wide! 50 of these perforations were devoted to register controls, expression effects, and some other things besides the typical notes. Mr Bruder himself described the instrument in detail to me and said that it represented a true symphony orchestra more closely than did any other similar device. Unfortunately, only a few of these were made. More unfortunately, until the time of my visit to Mr Baude, no specimens were known to exist. It certainly would have been a thrill to have had the chance to have heard one!

I went to Freiburg, Germany, the largest town in that area of the Black Forest, and secured a room at the Columbi Hotel. The next morning would be just right to go to Batzenhausle, the home of the Weber Elite.

According to the instructions I received, Batzenhausle was located very close to Waldkirch (the original home of Weber orchestrions) and was about 12 kilometers away from Freiburg. One would think that a town would be easy to find, but it became that Batzenhausle was not the case. After what must have been at least one hour of searching in a rather limited area I did indeed come across the metropolis of Batzenhausle — which consisted of perhaps a half dozen visible buildings!

Gasthaus Sonne, Batzenhausle, near Freiburg.

There it was: the Gasthaus Sonne (Guesthouse of the Sun). A trim little sign on the outside identified the edifice.

"Might you be Frau Eicher?" I said as I entered the place. It turned out that all present could speak only German, so communication was rather limited. I then wrote "Weber Elite Orchestrion" on a piece of paper. A puzzling look showed that the lady who must have been Frau Eicher (I was not sure at the time) did not recognise the first two words. The word "orchestrion" seemed to ring a bell, however, and a few minutes later, after consulting with her husband, she pointed to a door. Soon I found myself in what once must have been a glorious ballroom but which now contained a washing machine, many old chairs and tables stacked up on each other, assorted cartons, and other clutter, all (except for the washing machine which was apparently in use) covered with a layer of dust. There in an alcove in the right-hand wall was a great and glorious orchestrion! The Weber Elite? No, I knew instantly that it wasn't an Elite—for I memorised the catalogue illustration of the Elite by heart. But, it obviously was a grand, grand device.

Welte's giant Wotan

Getting closer to the instrument I noticed it bore a large carved plaque which identified it as a product of M Welte and Sons. Something stirred in the far recesses of my mind, and I soon identified it as a Welte Wotan Brass Band Orchestrion. Even though it wasn't an Elite, I still enjoyed the discovery. Yes, the instrument was for sale. However the price was quite high and intense negotiations followed. I then paid more than I thought I should for it, but my reward was a bill of sale giving me title to this musical relic.

I then telephoned Eugene DeRoy and asked him if he would make the journey to Batzenhausle to supervise the packing and shipping. Mr DeRoy, who was fond of me and enjoyed the hours we spent together talking about the "good old days" immediately volunteered to come to the town right away to see what was going on. The next

Original catalogue illustration of the Welte Wotan.

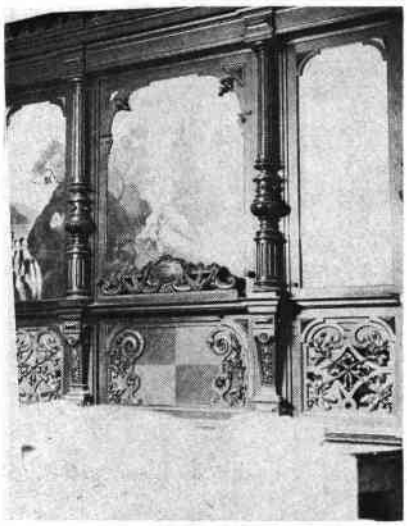
evening I met him at the railway station in nearby Freiburg as he stepped down from the Trans-Europe Express. Soon we were back at the Gasthaus Sonne in Batzenhausle.

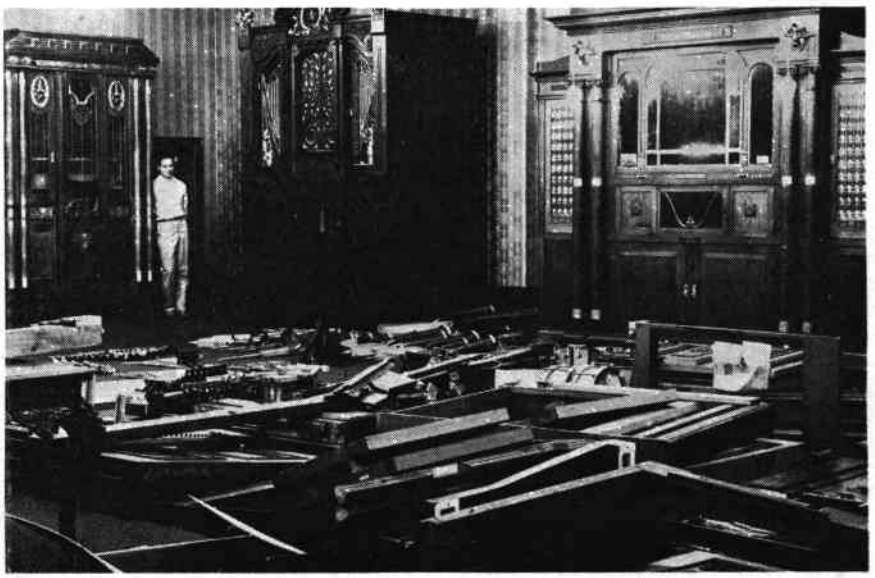
"You are a very lucky man", was Mr DeRoy's first comment to me. "I have never seen an orchestrion like this. It is really beautiful!"

He then explained that the products of M Welte and Sons were never distributed in Belgium after the First World War, and that during his many years of experience he had seen very few such units. They were mostly sold in America, Great Britain, and Germany. The Wotan could not have been in nicer condition if it had been taken out of the original factory crate. True, it did show the usual accumulation of dust and dirt, but the interior components and exterior case were immaculate. Across the front was a magnificent illuminated painted scene of Wotan and Brunnhilde from "Die Walkure" by Wagner. Inside were row after row of gleaming brass horns, silver-coloured flutes, a set of orchestra bells, drums, and many other things. The whole instrument was absolutely massive in its scale. It dwarfed anything else I had seen except, of course, the Popper Gladiator — which was an orchestrion of a different species and appearance.

Nearby was a Welte Mignon reproducing piano of the cabinet style (without keyboard). Curiously enough, both instruments were coin-operated. A large metal plaque on the wall was above two coin boxes. One said "Piano" and was for playing the Welte Mignon. The other said "Orchestrion" and was for the Welte Wotan.

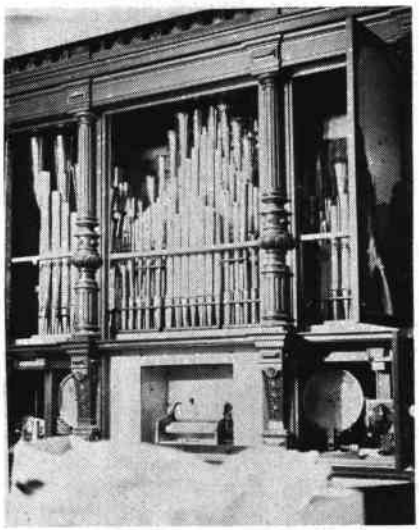
Mr DeRoy's subsequent conversation with Frau Eicher revealed that the Welte Wotan was installed





Dave Bowers took the pictures, top and bottom left, inside the darkened ballroom by the light of a low-wattage bulb. Removal of the giant Wotan was a major task because it had been installed before the building was completed and the only main door had since been closed up. Total dismembering had to be resorted to to pass the instrument through a tiny doorway. Above can be seen the entire organ prior to its restoration back in California.

in August, 1910, when the Gasthaus Sonne was built. Like the Popper Gladiator at Brussels, it was put in on the floor joists before the main flooring was constructed. A special niche in the wall was built for the immense Wotan so that the front was flush with the wall. According to Frau Eicher, years ago the salesmen from the Welte factory (which was located in nearby Freiburg) often visited the Gasthaus Sonne with a customer in tow when a prospect for a Brass Band Orchestrion was found. Anyone who had sales resistance would find it melted after seeing the Wotan play to a large group of happy dancers and drinkers on a lively Saturday night! It seems that Welte did not maintain an inventory of orchestrions in Freiberg but, rather, made them up on special order — especially with the large orchestrions such as the Wotan—when sales were achieved. How many other Welte orchestrions were sold by visits to the Gasthaus Sonne will never be known, but Frau Eicher said it was more than just a few. Tears were nearly in her eyes as she told about the splendid days of years ago and the happiness and merriment. Her son, a young man, joined the conversation at this point. Frau Eicher realised that her son had heard about the Welte Wotan for all his life but had never had the chance to hear it play. The orchestrion had been silent since the 1930's (subsequent investigation showed that a small repair to one of the reservoirs would have corrected this!). Accordingly I suggested that Frau Eicher's son visit America some day to hear the Wotan. I hope he does this sometime in the future.



Decades ago, the ballroom of the Gasthaus Sonne was closed. The large glass doors which led into this palace of pleasure from the outside were nailed shut, and a bowling alley was constructed across their length. The only opening in later years into the once-magnificent ballroom was a small doorway less than two feet wide.

Eugene DeRoy returned to the Gasthaus Sonne a few weeks later and spent two or three days disassembling and packing the Wotan. Unfortunately parts of the front had to be cut apart (this was done very carefully, and the cut cannot be detected now) so that this behemoth could be moved through the narrow opening. This was all accomplished in good order and soon the instrument was on its way to America. Today, the orchestrion is in the collection of J B Nethercutt in California and, in fact, keeps the Gladiator company.

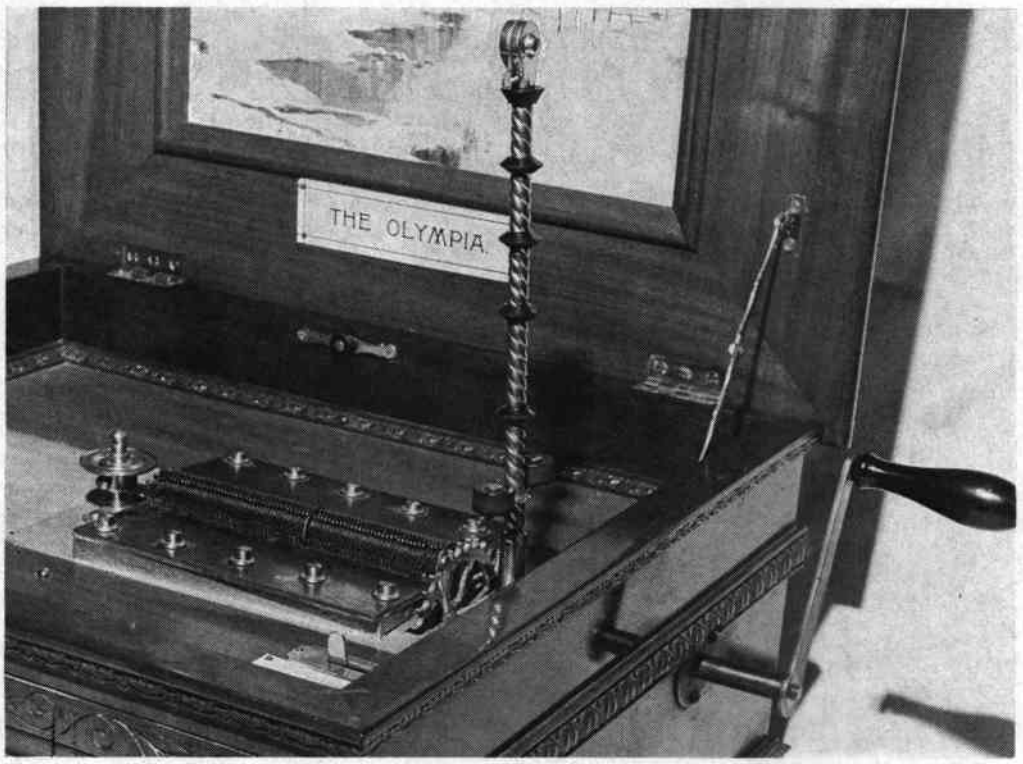
As a sideline I might mention at this point that Mr Nethercutt's collection, housed in a palatial edifice known as San Sylmar, is located in a suburb of Los Angeles and is opened to the public. MBSGB members visiting America would do well to plan a trip to Los Angeles, California area, just to visit this magnificent display. On view are over a dozen large orchestrions, a superbly restored Wurlitzer theatre organ, and what must be 100 or 200 musical boxes of all shapes, sizes, and appearances. The music roll library alone comprises nearly 50,000 titles. Mr Nethercutt has had the Wotan and Gladiator restored, and today you can hear them just as they were when they were new decades ago.

So ends a "treasure hunt" which was one of the most delightful experiences of my life. In the intervening years I have tracked down many other instruments in Europe and America. If this sort of thing is interesting reading perhaps in a future issue of *The Music Box* I can tell some more tales — such as the one about the great Hupfeld orchestrion at 's Hergotenbosch, Holland, or the equally magnificent Hupfeld I rescued from the red light district in Amsterdam! And there is the story about the marvellous orchestrion which contained guitars, violins, French horns, zithers, and all sorts of marvellous musical artifacts — which was a great surprise to me when I eventually tracked it down and was able to examine it in person. But, I am getting ahead of the next story now. . . .

THE OLYMPIA

Frederick G Otto founded his manufacturing company in Jersey City, New Jersey, in 1875. Products comprised surgical instruments and electric batteries. F G Otto and his two sons lived close by the manufactory and, in 1893, Gustave Brachhausen took up residence directly across the street. It must have been Brachhausen, who was developing the Regina musical box (see page 2), who sowed the seeds of interest in musical boxes which resulted in Otto's design and production of the Capital " cuff " box during 1894. In the following year, a disc-type machine entered production — this was called the Criterion — and three years later, in 1898, the company's third line in musical boxes appeared. This was the Olympia. It shared the same inside-lid picture as the Capital machines and within a short while a separate manufacturing plant had been set up for its production. Three sizes were produced which took discs having diameters of $8\frac{3}{4}$ins., $11\frac{5}{8}$ins. and $15\frac{3}{4}$ins. This last one was described as Style IV.

Priced at $45·00, which included one tune disc, the Style IV seems to have been the most popular. Extra tunes were 60 cents apiece and it was stated in advertisements that the Olympia " plays over a thousand tunes ". By 1899 the inventory listed " over 500 tunes are ready now ". Ten years later, Otto was out of the musical box business, having reverted to making electrical goods. One of Frederick Otto's two sons remained in business repairing musical boxes, but the era of the Olympia was past. In truth, production had lasted just three years. The example pictured here is from the collection of Jocelyn Walker of Reigate, who comments that the tone is " ravishing ", adding that the music is extremely well set up.



AEOLIAN ORGANS 1890-1930

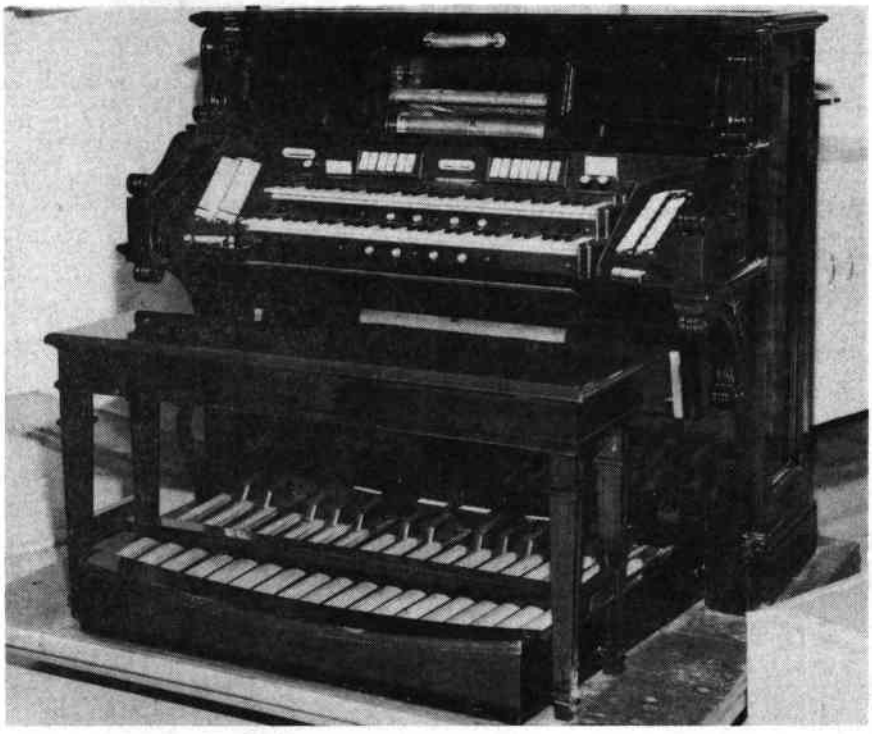
by Douglas Berryman

DOUGLAS BERRYMAN founder of the West Cornwall Museum of Mechanical Music at Goldsithney, sets out the history of the player organs made by the Aeolian Company and describes some of the varieties most commonly found today. He owns a number of Orchestrelles of various models as well as two Aeolian Pipe Organs

THE Aeolian Company was unquestionably the leading manufacturer of player organs in the world during the period being considered. Early instruments were no more than mechanically operated American reed organs playing mechanically on a reduced scale (46 note). The Aeolian Company soon realised that although a mechanically operated reed organ was in itself a desirable instrument, with suitable voicing the organ could be made to imitate orchestral effects. It has been my experience that as progress was made into the beginning of the 20th Century the organs produced by the Aeolian Company sounded less and less like organs and more and more like a collection of orchestral instruments.

Aeolian Grand. One of the first instruments to break away from the mechanically operated reed organ effect was called by the Aeolian Company the Aeolian Grand, this used a 58 note scale, perforations six to the inch and a roll width of 10⅛ inches. The holes on the perforated rolls were large, about an eighth of an inch in diameter and no means of tracking the roll was provided. This being the general rule for both piano and organ rolls of this spacing, diameter and period. The rolls were called "Aeolian Grand" by the Company and in fact can be used on all the later instruments produced that used a 58 note roll. Judging by surviving examples the Aeolian Grand sold well and is an instrument small enough to accommodate in the average home and yet large enough to give a good account of itself.

Aeolian Orchestrelle. No doubt inspired by the success of the Grand, the Aeolian Company launched a new range of instruments which they called "Orchestrelles". Many models were available from the model "A" a mere five feet high selling for £110 to the eight foot high model "Y" selling for £600. All of the Orchestrelles used the same type 58 note roll. All the models produced had their stops divided into bass, treble and pedal. The pedal stop operated on the 13 bass notes, the bass stop operated on the 21 bass notes which included the 13 pedal notes and the treble stops operated on the remainder. It was the custom to label stops with suitable orchestral counterparts. The bass section of each tone rank was often labelled differently from the treble section of the same rank but usually indicated a bass version of the same orchestral instrument, i.e. basoon, oboe; cornopean, trumpet; viola, violin. Although I have found no reference in Aeolian



Top: Model F Solo Orchestrelle from the Museum of Science and Arts, Birmingham; left: Aeolian Duo-Art reproducing pipe organ console from the Butchart Gardens, British Columbia.

literature to the use of the name tone rank to describe the individual reed housing assemblies it is a name which frequently occurs in my search through old correspondence between various restorers and customers. It is a very apt description because the reeds themselves are housed in very carefully built tone chambers which were designed to produce a sound imitating as nearly as possible the orchestral instrument they were meant to represent. In fact the name Orchestrelle was obviously meant to indicate to the prospective customer that they were buying a small orchestra. Some of the excellent advertising put out by the Aeolian Company exploited this to the extent that some adverts at first glance looked like a concert programme, although on closer investigation you were able to read that the programme advertised could be played in your own home tonight if you bought a suitable instrument from the Aeolian Company !

The Orchestrelle most likely to be encountered today is the model " V ". This model sold for £350 is 5 feet 6 inches in height and with a width of only 2 feet 6 inches it is able to be manoeuvred into most domestic situations, and presumably sold in larger numbers than either the smaller or the larger models available. The participation which the performer is required to make in the production of the music from an Orchestrelle was exploited by the Aeolian Company and turned from the chore it may appear to be, into a very desirable feature. All the stop changes are at the discretion of the performer as is the operation of the crescendo knee swell and the knee tonal control, and as the tempo (speed of the roll) is also at the discretion of the performer it was put forward by the Aeolian Company that not only did you conduct your own Orchestra you also performed and orchestrated as you went. As today's Orchestrelle converts will almost certainly agree this in fact is a very attractive feature and without the participation necessary a great deal of enjoyment would be lost. One of the desires of Orchestrelle owners today and in the past is to introduce more voices into the instrument than it was originally supplied with. This although possible is not very practical as although in theory the tone rank containing reeds, pallets and tone chambers from any Orchestrelle will fit any other, in practise however there are two or three snags. One, the tone ranks were produced in two different lengths although it must be said that very few of the extra long ones appear to have survived. Two, the tone rank varies in thickness depending on the original instrument it is representing. Three, the reeds themselves may not be tuned to the same precise pitch. Only the last being reasonably easy to adjust. It is not surprising therefore to find in the home of an Orchestrelle addict not one orchestrelle but several, each one displaying different characteristics, different voicings and able to interpret music in a subtly different way.

Aeolian Solo Orchestrelle. This latest and in fact last addition to the Orchestrelle range was put forward by the Aeolian Company as " Marking the beginning of a musical era the infinite possibilities of which are yet unfathomed ". The basic idea of a solo Orchestrelle was to further sub-divide the stops into an upper and lower manual. A new type of roll was introduced which although the same width as the Aeolian Grand roll has twice as many perforations (116 note) with hole diameters about one twentieth of an inch. The tracker bar or read out as it would be called today has two rows of staggered holes each 58 in number, the top holes being connected to the upper manual stops and the bottom holes to the lower manual stops. The music was arranged in such a way that solo effects could be obtained by perforating appropriate sections of the score for one manual with the accompaniment on the other. A lever was provided marked " unison ", " normal ", " reverse ", with which it was possible to switch the top manual to the bottom set of holes and the bottom manual to the top set of holes, or vice versa at the flick of a lever or in the unison position to connect both manuals to the bottom set of holes. In the unison position and with another control set to bring in an additional set of bleeds it is also possible to play the original 58 note Aeolian Grand rolls so making a very versatile instrument. The additional bleeds are necessary to give proper repetition, wth the greater volume of air admitted through the Grand roll's larger holes. Only three sizes of Solo Orchestrelle were available, the " F ", " XY " and " XW " in descending order of size although special case styles were available fo each basic model. The solo Orchestrelles were very much more expensive, the larger ones costing in excess of £1,000.

Model Y in an unusual fretted, panelled case in the West Cornwall Museum of Mechanical Music.

The Aeolian Pipe Organ. In parallel with the Solo Orchestrelle production the Aeolian Company also produced a pipe organ for residential use. Several thousands of these pipe organs were built, the smallest and cheapest model costing around £2,500 with a case size of 10 feet by 10 feet by 6 feet, a single manual keyboard and no pedal board. Generally speaking the Aeolian Pipe Organ was custom made and designed (using some degree of standardization) to suit the customers requirements. Many really large installations were commissioned. The voicing of the pipe work was such that it is possible to play orchestral music as well as more conventional organ music with the appropriate tonal qualities. The Aeolian Pipe Organ uses the same type of roll as the Solo Orchestrelle.

Aeolian Duo-Art Pipe Organ. In later years the Aeolian Company developed a fully automatic player pipe organ. This was called the Duo-Art Pipe Organ (not to be confused with their Duo-Art piano). The Duo-Art Pipe Organ used a special roll, the centre section of which was a duplicate of the normal pipe organ and Solo Orchestrelle roll but with the addition of register changes (stop changes) down both sides, as many stop changes were needed the roll was made wider, 15¼ inches, and had a total of 176 perforations, no less

than 60 of which controlled the registers, swells, etc. Many Aeolian Pipe Organs were built that could play both the standard organ rolls in addition to the Duo-Art organ rolls. To overcome the difficulties of tracking a roll of this width and fineness of perforations the tracker bar was divided into five sections longitudinally and two roll width detectors were used, one of which caused the roll to be tracked in the conventional way, the other pneumatically adjusted the spacing between the five sections of the tracker bar so that the perforations of the roll always corresponded with the appropriate perforations on the tracker bar.

Appendix 1. The music rolls produced for the various Aeolian Organs were of a very high quality both in manufacture and content. The range of music offered was very wide and in the case of the Aeolian Grand offered orchestral parts only for accompaniment by various solo instruments and the human voice. The Aeolian Grand rolls were usually marked with the key, a suggested tempo and suggested over-all volume. The Aeolian Pipe Organ rolls with the exception of the earliest production, were in addition marked with suggested tonal selections. Unfortunately the instructions printed can very rarely be followed precisely as they appear to have been selected for a hypothetical, even perhaps mythical organ that probably was never built. When playing these rolls on the Aeolian Pipe Organ even more confusion is likely to occur as the stop labelling following a whim of the period was done in the Italian style, whereas the printing on the rolls follows the more traditional nomenclature. The performer therefore not only has to make an instant decision as the suggested change briefly passes his eyes as to which of the various stops available to him he should use to represent the suggested tonal build up but also has to translate from the not too familiar Italian nomenclature at the same time. Of the three systems used by the Aeolian Company the Aeolian Grand roll self tracked (i.e. no adjustment) the Solo Aeolian roll is hand tracked by means of a key brought out somewhere to the front of the instrument and on some instruments a pointer indicating the centre line of the roll is made to upstand pneumatically as soon as pressure is available. The Duo-Art Organ roll is completely automatic in its tracking and is also the only roll of the three which has an automatic re-wind. Some of the arrangements for the Duo-Art rolls were by famous organists of the period and are meant to represent a hand-played instrument.

Appendix 2. Brief specifications of Orchestrelles most likely to be encountered today and therefore presumably representative of the most popular models of their period:

Aeolian Orchestrelle
Model V — 58 Note, uses Aeolian Grand Rolls 10⅛" wide 6 to the inch. Double valve pressure system with roll in pressurised chamber. Mechanically operated pallets for stop changes.

Bass Stops
Muted stings
Aeolian Harp
Viola
French Horn
Flute
Oboe
Trombone

Treble Stops
Muted Strings
Aeolian Harp
Violin
French Horn
Piccolo
Oboe
Trumpet

Pedal Stops
Contra Bass
Double Bass

Accessories
Tempo
Re-roll
Vox Humana
Pneumatic to Manual
Case Size 5 - 6′ high — 6′ 3″ long — 2′ 6″ deep available in walnut oak or mahogany.
This is a typical British Specification but variations may be found particularly in the U.S.A.

Aeolian Orchestrelle
Model Y — *As Model V — But :—*

Bass Stops
Salicional
Dolce
Muted Strings
French Horn
Flute D'Amour 4
Melodia
Piccolo 2
Stopped Diapason
Clarionet
Bassoon
Cornopean

Treble Stops
Salicional
Dulcisimo
Muted Strings
Gemshorn
Flute D'Amour 4
Clarabella
Piccolo 2
Doppel Flute
Clarinet
Oboe
Trumpet

Pedal Stops
Contra Bass 16′
Double Bass 16′

Standard Model Y belonging to Bruce Angrave pictured during restoration by the Editor.

Accessories
Tempo
Re-roll
Vox Humana
Pneumatic to Manual
(Stops not marked all 8′)
Case Size 8′ 4″ high — 6′ 4″ long — 3′ 3″ deep — available in walnut, oak or mahogany.

Aeolian Solo Orchestrelles
Model XW — 116 note uses Aeolian Pipe Organ rolls (sometimes the word "Pipe" is omitted) 10⅛" wide, 12 to the inch. Double valve pressure system with a separate high pressure system for the roll box and touch box. Pneumatic stop changes.

Bass Stops
Manual I
Dolce Viola
Viola
French Horn
Trombone
Contra Bass (13 note 16′)

Manual II
Muted Strings
Eolian Harp
Orchestral Flute
Bass Clarinet
Contra Bass (13 note 16′)

Treble Stops
Manual I
Dolce Violin
Violin
French Horn
Trumpet

Manual II
Muted Strings
Eolian Harp
Orchestral Flute
Clarinet
Accessories
Coupler:—
Unison-Normal-Reverse
Tremelo Tempo Lever and Indicator
Re-roll and Manual
Octave Coupler
Tonal knee swell
Crescendo knee swell
Tracking key
This is the only solo Orchestrelle with an Octave Coupler.
Case size 5′ 11″ high — 6′ 6″ wide — 2′ 9″ deep. In several styles and finishes.

Model XY
As Model XW — But :—

Bass Stops
Manual I
Dolce Viola
Viola
French Horn
Bassoon
Bass Clarinet

Manual II
Muted Strings
Eolian Harp
Orchestral Flute
English Horn
Trombone
Contra Bass (13 note 16')
Pizzicato

Treble Stops
Manual I
Dolce Violin
Vioin
French Horn
Oboe
Clarinet

Manual II
Muted Strings
Eolian Harp
Orchestral Flute
English Horn
Trumpet

Accessories
Coupler:—
Unison-Normal-Reverse
Tremelo Tempo Lever and Indicator
Re-roll and Manual
Tonal knee swell
Crescendo knee swell
Tracking key
Case size 6' high — 6' 10" long — 3' 4" deep in several finishes and styles (Mazarin mahogany being very popular).

Model F
As Model XW — But :—

Bass Stops
Manual I
Dolce Viola
Viola
French Horn
English Horn
Trombone
Corno
Piccolo
Contra Bass (13 note 16')
Double Bass (13 note 16')

Manual II
Muted Strings
Eolian Harp
Bassoon
Orchestral Flute
Flute
Bass Clarinet
Contra Bass (13 note 16')

Treble Stops
Manual I
Dolce Violin
Violin
French Horn
English Horn
Trumpet
Corno
Piccolo
Pizzicato

Manual II
Muted tSrings
Eolian Harp
Oboe
Orchestral Flute
Flute
Clarinet

Accessories
Coupler:—
Unison-Normal-Reverse
Tremelo Tempo Lever and Indicator
Re-roll and Manual
Tonal knee swell
Crescendo knee swell
Tracking key
Case size 8' high — 8' long — 3' 6" deep in several styles and finishes.

Conclusion. Aeolian Organs today as in the past enable the would-be musician who lacks the manual dexterity to operate the right notes in the right order, to fulfil his desires and make music. Although limited by the rolls available (which fortunately are varied and reasonably plentiful) and the arrangements perforated on them, the final result is so very personal that it is possible for two performers to interpret the same roll in such a different way that they are barely recognizable as the same piece of music. This was really brought home to me quite a few years ago at an Orchestrelle play-in where a group of us, having listened to an admittedly gifted performer playing a piece by Beethoven, retired to the next room for much needed coffee. Discussing amongst ourselves what piece it was that we could hear being played by a shy performer who had remained behind, so many varied suggestions and composers were put forward that we went back en-mass and were amazed to find that it was a re-performance of the same piece ! For those who have the space and technical ability to restore or perhaps the money to buy a fully restored Orchestrelle they can be without doubt one of the most rewarding instruments to own.

A catalogue of different types of Aeolian Orchestrelle was reprinted in *The Music Box*, Vol 3, pp. 559-586, and a general article on the overhaud of player organs appears in Vol 4, pp. 330-442. A further illustrated catalogue of instruments appears, along with facsimilies of numerous advertisements, in *Clockwork Music* by Arthur W J G Ord-Hume (George Allen & Unwin, London, 1973).

An article on the correct way to play the Aeolian Orchestrelle contributed by a long-time Orchestrelle operator and written in non-musical language is to appear shorty.

REGINA HISTORY

Contd. from p.4

with in or out of business.

It was in 1902 when the Regina Music Box Company changed its corporate title to The Regina Company. And ten years after the Regina Company started manufacturing, the United States Bureau of Census listed musical box and materials manufacturing as second only to the piano industry.

Diversification

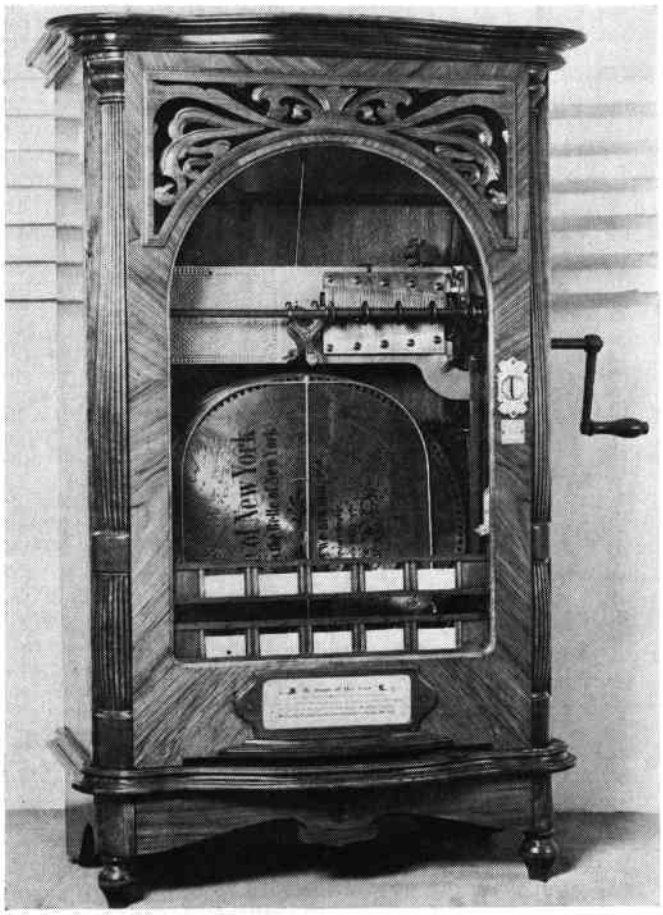
Realising that the era of the sheet metal disc was passing, Regina looked to other lines and to other industries for products to manufacture. Regina's inventive minds and development skills went to work and produced a vacuum floor cleaner for the home. It used the pneumatic principle which literally pulled the dirt and dust from bare floors and carpets and was called the Model A. This was a cumbersome device which required two people to operate it — one to pump and create suction, the other to direct the hose and nozzle which cleaned the floor.

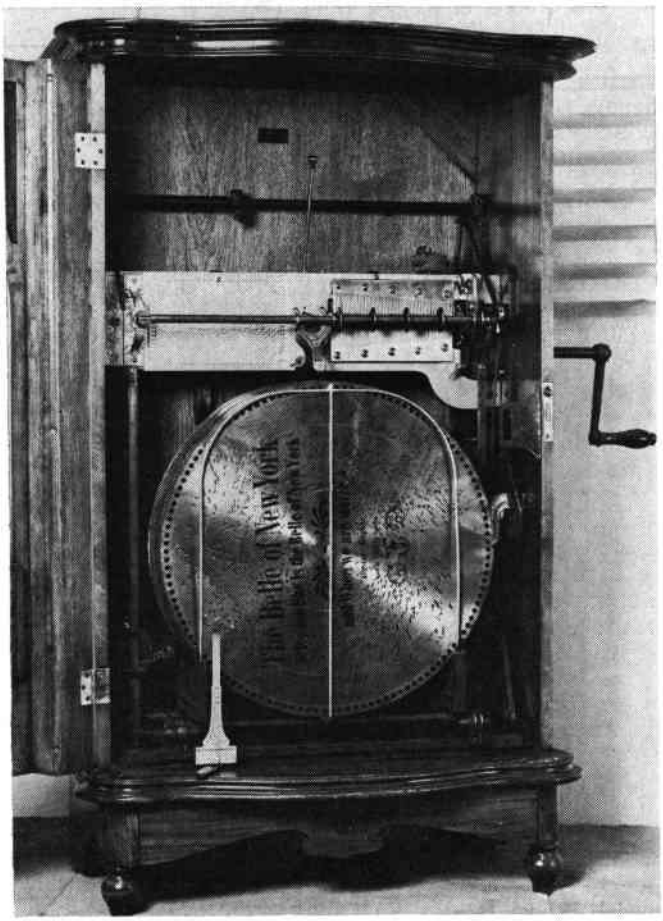
Another setback occurred in 1903. Regina issued more stock, but it never really recovered as far as musical box sales. These steadily declined following the plunge in 1903. It was about this time that the musical desk was introduced, along with many other attempts to stay in business. Only the musical boxes and vacuum cleaners managed to survive that fiasco — and the musical boxes were all but finished.

A 1900 vintage Regina advertisement.

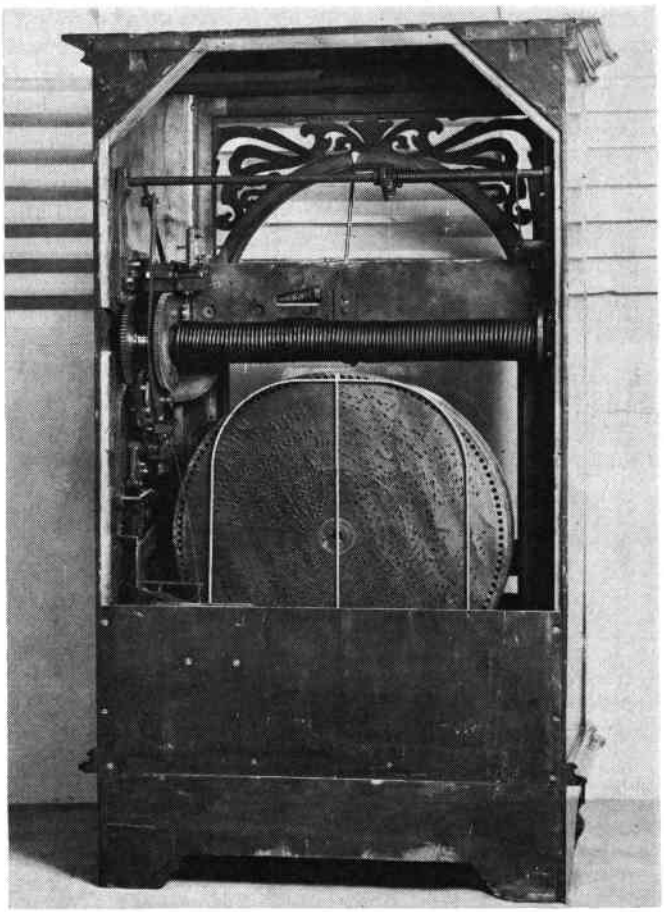
IN PART TWO of this article, Mary Kosiarski relates the subsequent developments at Regina and tells of the Regina player piano, phonographs and Reginaphone, the tragedy which took Brachhausen from command, the decline of Regina into Receivership and its subsequent reconstruction.

AUTOCHANGE POLYPHON



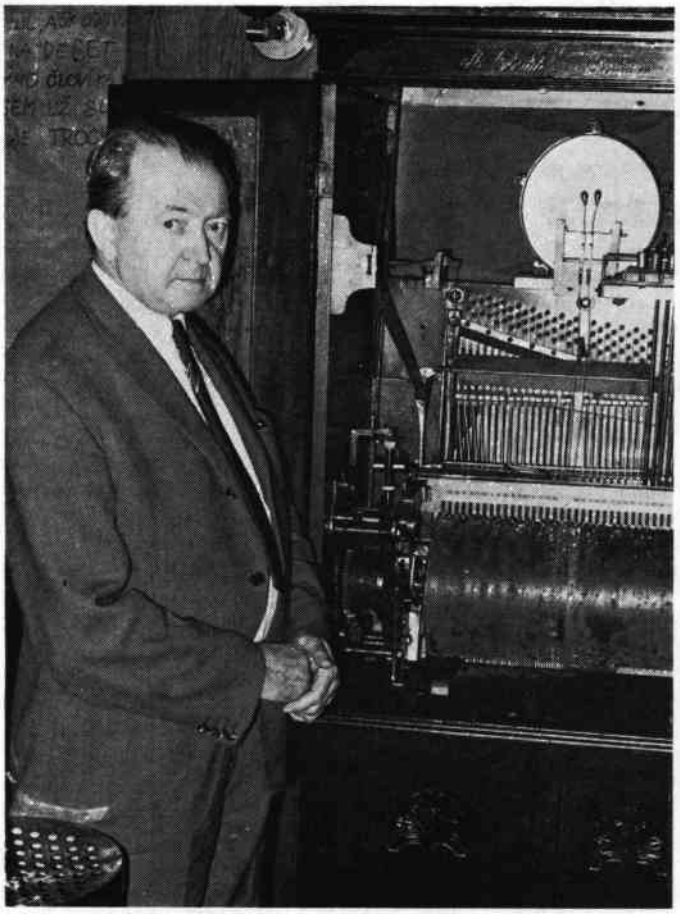


SELF-CHANGING disc musical boxes are among the most sought after variety today and almost every collector has seen examples of the Polyphon and Regina auto-change models. Far less common are self-changing Symphonions, although several of the larger variety have recently been located and pictured in previous issues of *The Music Box*. There were others, too, examples of which have not yet been recorded. The Britannia, for instance, was made as a table model and slid its discs from one side to the other. Another was invented by Thorens.



The most common self-changers in England emanated from the giant Leipzig factory of Polyphon. Although the first disc-changer was patented by Stransky Freres in 1892, the introduction of the successful self-changer was the result of E P Riessner of Polyphon, whose first patent for such a system dates from 1896. A further patent was taken out in the name of Gustave A Brachhausen in 1899 and in the same year Riessner patented a system whereby the discs each had a slot cut out from centre to the edge so that the disc could be pushed over the closed disc pressure bar and then fed under it to play.

The model illustrated here, from the Fortnum & Mason collection, is the Style 4 which plays 19⅝ins. discs. Ten discs can be stored in the lower part of the case, selection being either by the manual lever, or the instrument will play through the entire lot, one after another. A special and unusual feature, clearly seen in the rear view picture above, is the use of the torsion main spring formed from a coil of stout spring wire. This is generally considered to be a feature of late-production Polyphons and a discussion on spiral springs followed the article *The Emerald Polyphon* which appeared on pp. 76 - 79 of Volume 6 of *The Music Box*.



THE GOOD SOLDIER SVEJK'S PIANO ORCHESTRION

by Richard A Kahane

INSIDE a popular cafe in Prague there stands a barrel-operated piano orchestrion driven by steel cable, pulley and heavy weight. Three barrels play popular Czech music and the coin-operated instrument performs today exactly in the manner it did when new. But there is another story which surrounds this relic of the past, for both cafe and orchestrion have acquired fame . . . Cafe manager Franta Ulrych, left, stands by his machine

" WHEN the war's over, come and see me. You'll find me every evening from six o'clock onwards in The Chalice on Na Bojisti."

With these words, Josef Svejk bade farewell to his friend Sapper Vodicka in Jaroslav Masek's classic Czech novel of the First World War, *The Good Soldier Svejk*. Svejk may have been a fictional character, but his favourite pub, The Chalice (*U Kalicha*), really exists on the street called Na Bojisti in Prague. Although The Chalice is best known for its typical Czech dishes and authentic Pilsner beer, not the least of its attractions is the penny-in-the-slot piano orchestrion which occupies a place of honour among the sketches and quotations from *The Good Soldier Svejk* which adorn The Chalice's walls.

The Chalice's piano orchestrion was built in or near Prague in 1883. Although the manufacturer has not been identified with certainty, it is very likely that he was J Klepetár. The instrument in The Chalice bears a striking similarity to the Klepetár barrel-operated band piano illustrated in Plate 41 of Arthur W J G Ord-Hume's book, *Collecting Musical Boxes and How to Repair Them*. The name and address, "A Chalil-Praha VII", are incised in the upper part of the case of The Chalice's orchestrion, but Chalil merely restored the instrument and rebuilt the case in the early part of the twentieth century; he was not the orchestrion's original builder.

The barrel-operated orchestrion is powered by a 210-pound weight which hangs down the outside of the back of the case. The weight is raised by a cable which runs through a pulley on top of the case down to a hand crank on the side. When the weight reaches the top of the case, it trips a small lever which, in turn, strikes a bell to signal the operator that he may release the crank and reach for a beer.

Each of the instrument's three barrel cylinders plays six airs, and the two cylinders which are not in use at any given time are stored in the lower part of the case. Tune selections range from " The March of the Forty-Second Regiment " to the Czech national anthem, " *Kde domov muj?*" (" Where Is My Home?").

The orchestrion has a total of 37 keys. There are 25 piano notes, supplemented by eight wood blocks, two drumsticks, a triangle, and a cymbal.

It is pleasant to picture the orchestrion tinkling in the background while the Good Soldier Svejk sipped his beer and nibbled his sausages beneath the famous fly-spotted portrait of Emperor Franz Josef, but it is unlikely that this particular instrument was in The Chalice in 1914. The present manager of The Chalice, Mr Franta Ulrych, purchased the orchestrion from a private owner in 1943 for the sum of 3500 crowns. He carefully restored the instrument and brought it with him when he came to work at The Chalice following the end of the Second World War. Since that time, both Prague and The Chalice have undergone many changes, but the piano orchestrion cheerfully continues to provide a lively tune for any visitor who drops a one-crown coin (about 4p) in its slot.

THE CONSTRUCTION OF A CYLINDER MUSICAL MOVEMENT

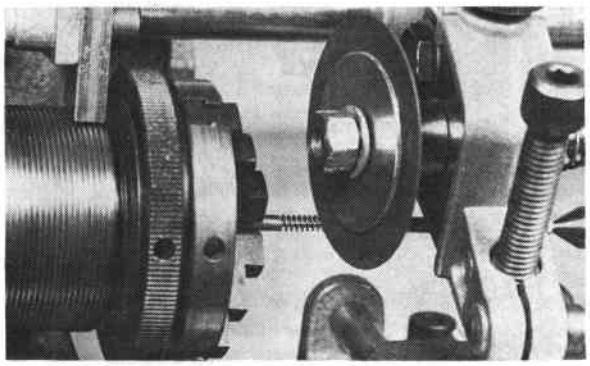
by G T Mayson

UNTIL about three years ago, my practical activities in connection with cylinder musical boxes had been confined to cleaning and the occasional simple repair job. I was reluctant to tackle major repairs, aware of my lack of experience and fearful of doing irreparable damage to a rare and expensive mechanism. It then occured to me that one way to achieve some knowledge, experience and confidence would be to make a musical box movement from scratch, using only rod, bar and tube stock available from engineering suppliers. If a satisfactory result could be achieved, then repairs to an existing movement should present few greater problems.

A start was made in 1972, not to copy exactly an existing movement, but to produce a recognisable cylinder movement using the machine tools available in the workshop of this not-too-affluent model engineer. It was the limitation on turning, milling and gear cutting facilities which led to the choice of a six inch long cylinder and a forty-two tooth comb as sufficiently ambitious for a first attempt. From the outset it was realised that the work would divide itself into two more or less separate parts. First, the mechanical operations of constructing the bedplate, spring motor, governor, cylinder and comb, plus all the awkward small items such as pawls and ratchets, springs and Geneva stopwork. Second, the setting out of a tune onto the cylinder and tuning the comb. In the latter case the machining and music making aspects become closely connected and something of a chicken and egg situation develops.

This present article is in the nature of a half way stage report. So far, all the purely machining problems have been overcome and the movement operates exactly as the real thing — except, of course, in total silence! The comb sounds right, but at this stage is lower in pitch throughout than it will be when finally tuned. The only remaining item, apart from pinning a tune on the cylinder, is to fit the dampers, but I propose to leave this until all the comb adjustments have been completed.

Whatever the final result of this scratch-built movement, the effort put into it so far has been time well spent. Gear cutting, endless screw making, spring fitting, comb tooth making, etc, now holds no terrors



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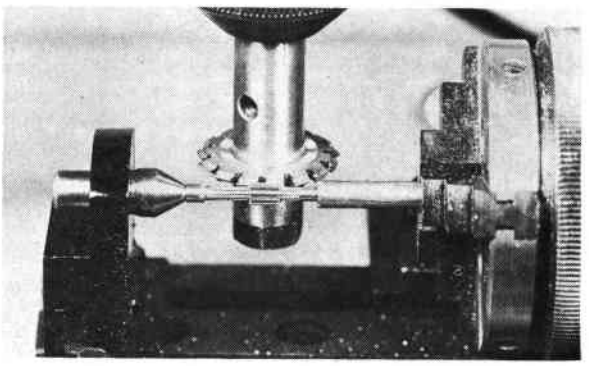

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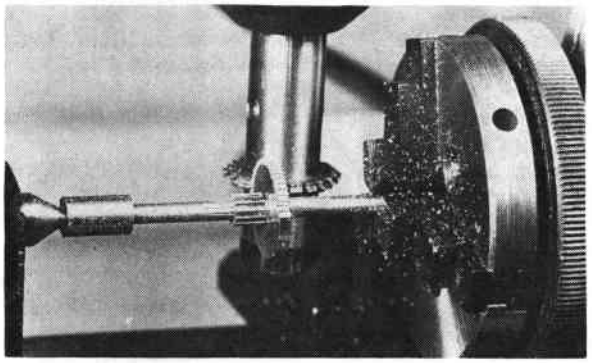

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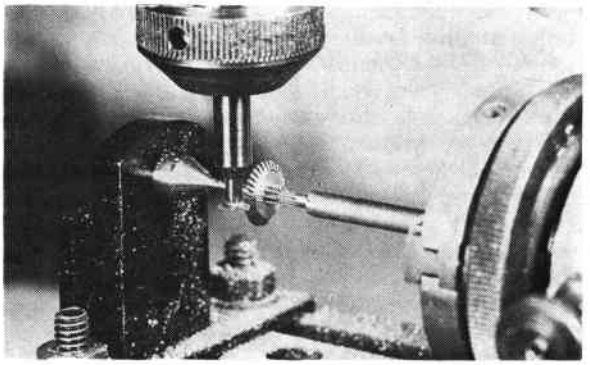

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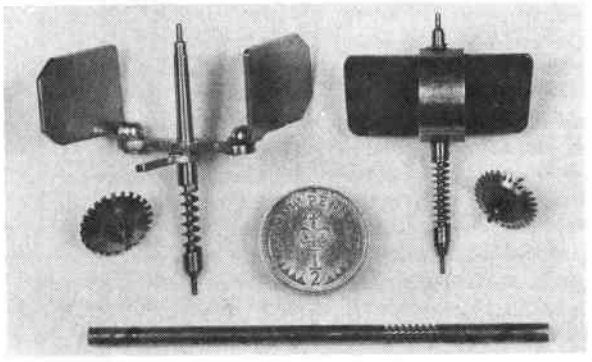

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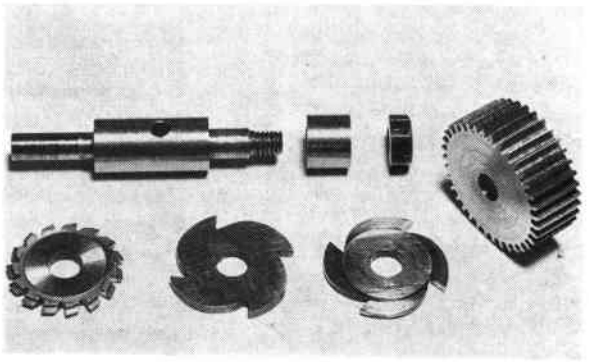

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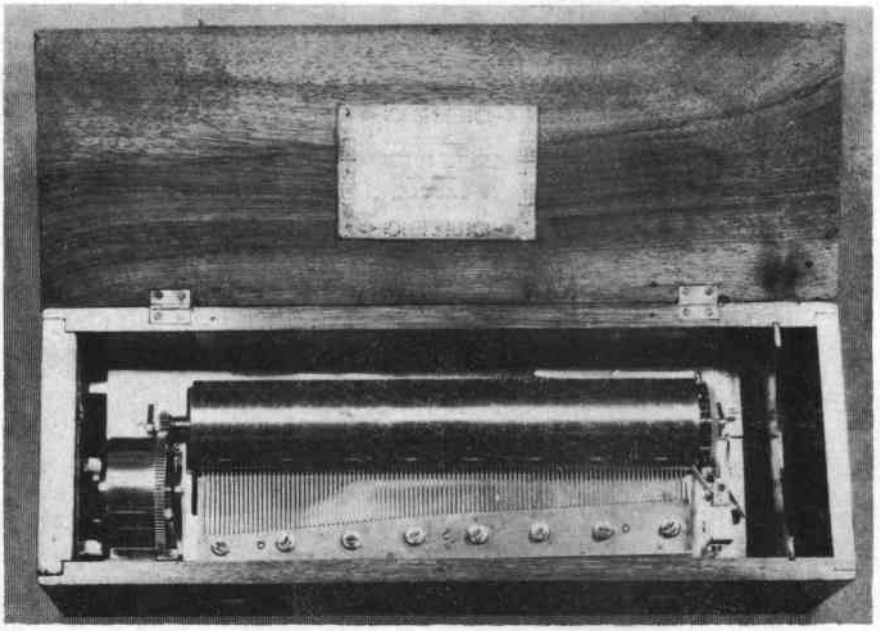
and I no longer hesitate to start work on the most shattered movement — with considerable reservations about the state of the comb — provided it is of a quality to justify the time required. The purpose of the rest of this article is to illustrate some of the methods I have used, although it should be made clear that a professional engineer would not necessarily use these methods, many of which have been dictated by considerations of cost and availability of equipment. However, for him to whom a modest lathe has to be his major machine tool, I hope the illustrations provide both comfort and encouragement. None of these techniques is new, some of them may not even be the best, but they do at least all work!

Of the whole movement, the governor was the part I felt would pose most problems and so this was tackled first. The frame is a straightforward machining from solid brass, but the gearcutting and endless screw cutting caused a few headaches. The answer proved to be the use of a Unimat lathe, the Myford ML7 is just too big, the illustrations show some of these operations in progress together with some finished components (Figures 1, 2, 3, 4 and 5).

The spring motor is again straightforward in general construction, although cutting the teeth round the barrel raised a problem. The usual form of tooth profile found on old musical boxes is different from the involute tooth form which modern gear cutters are most commonly designed to generate. Apart from this, commercial gear cutters are very expensive if only one or two gears of a given size are required. The solution is to make a simple four-tooth cutter to produce the specific tooth profile wanted. Figure 6 shows a rough blank, a finished cutter and a Swiss 0·38M multi-tooth precision cutter for comparison: the 36-tooth steel pinion was cut with the home-made cutter shown. General views of the completed spring motor and the Geneva stopwork may be seen in Figure 7. The one item in this assembly which has been purchased ready made is the mainspring.



An early key-wound cylinder manufactured by Henriot of Geneva. The six-air cylinder is 7in long and the brass bedplate is stamped with the maker's name in the top left-hand corner, along with the number 12242. The original tune sheet is on blue card with embossed edges — a characteristic of this make of box. The programme comprises an overture in two parts, and then four airs including *Robin Adair, Death of Nelson* and *Fly Not Yet*. The serial number is penned on the lower left-hand corner of the tune sheet. The comb has 103 teeth and demonstrates a marked line of variation in tooth length at the centre, and has three visible dowels. There are eight comb attachment screws, each with small-diameter brass washers. Attachment of the movement into the plain fruit-wood case is by two screws front and back, and the lid is closed by two simple hooks and eyes. The piece is in the collection of Fortnum & Mason.

The brass bedplate, cylinder assembly, great wheel and tune-change snail are shown in Figures 8 and 9. None of these items presented any real worries apart from a certain wonderment at the current price of brass plate, sheet and tube. Incidentally, the snail has been made — perhaps optimistically — with four points but the steps have not yet been cut into the face. One item akin to gear-cutting is making ratchets or click-work wheels. After producing some rather oddly shaped monstrosities, I learned the trick and in Figure 10 a partly formed ratchet wheel is shown being cut. The pawls are just hard work with a file: I have found no way to take the labour out of their production.

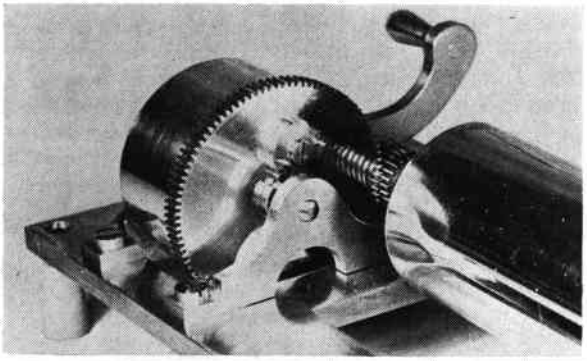
The comb has been left to the last in both this brief description and in practice. Photographs of the failures would fill this issue, but as is so often the case it all seems quite easy now it has once been done. The base material for the comb is 0·094 ins. oil hardening ground flat stock, purchased in 18ins. lengths of 2ins. width. This is end milled out to the correct profile and, before slitting the teeth, the tip shape is produced by careful use of the side cutters of the correct diameter end mill.

Figure 1: Silver steel rod 0·110ins. thick being ground to form a 24 tpi endless screw using a thread following device in the Unimat lathe. Figure 2: Cutting a small diameter (0·090ins) pinion using indexing arrangement with lathe set up for vertical milling. Figure 3: A brass blank has been pressed onto the turned down pinion end and is now being cut to form the first wheel and pinion in the governor. Figure 4: Using a home-made two-tooth cutter to form the endless driving wheel. The cutter is set deliberately above centre to produce the sloping tooth form shown on the right-hand side of Figure 5. Figure 5: Two endless screw assemblies. The left pair use a 16 tpi screw and a square-toothed wheel: this ran very smoothly but gave a short playing time. The right-hand pair use a 24 tpi screw and are in the movement at present: their adjustment is more critical than the others for 100% self-starting but a longer playing time is obtained. The swivel type single blade fan proved to give a much wider range of speed adjustment than the more usual two blade type and has no tendancy to slip out of adjustment when the stop tail is caught. A partly formed screw is shown along the bottom of the illustration. Figure 6: On the right is a home-made gear cutter. In the centre, a rough blank ready to be shaped. These cutters run rather roughly compared with the 15-point Swiss cutter on the left, but they produce reasonable results if run slowly and with plenty of lubricant. The mounting arbor is shown at the top of the illustration with a pinion cut in silver steel at the right.

These two operations produce the result shown in Figure 11. The holes for the damper pins are then drilled using the already formed tips as location guides.

The last operation is to slit the teeth. This is done after soft-soldering the comb to a thick brass plate, filling in the gaps with shaped slips of brass plate: this produces a solid job with no risk of the saw "picking up" a tooth and snapping it off. The actual cutting is simple and the set-up is shown in Figure 12. The gap size between teeth depends on the saw chosen and was increased along the comb — getting larger to the treble end — by changing blades at suitable intervals. In doing this, care must be taken to recentre the cut, or all the extra will come off one side so producing teeth with apparently off-centre tips.

Having produced the comb blank, it is necessary to harden and temper it to cause it to give a



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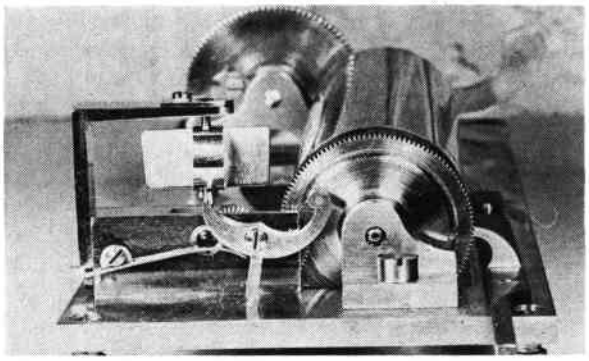

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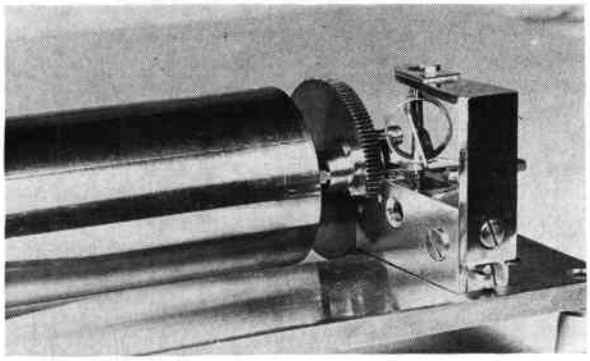

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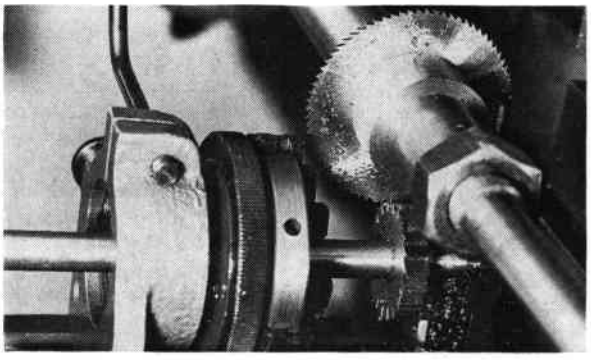

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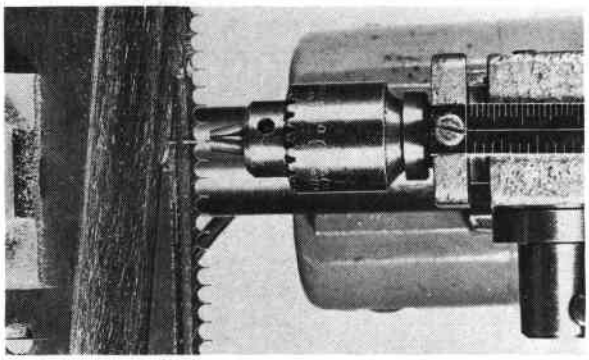

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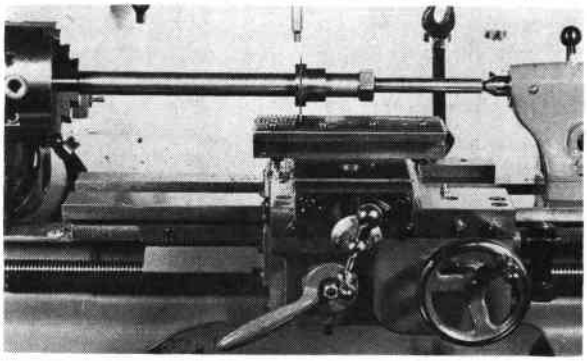

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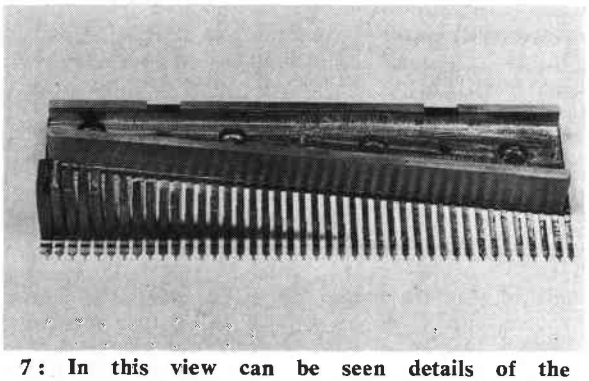

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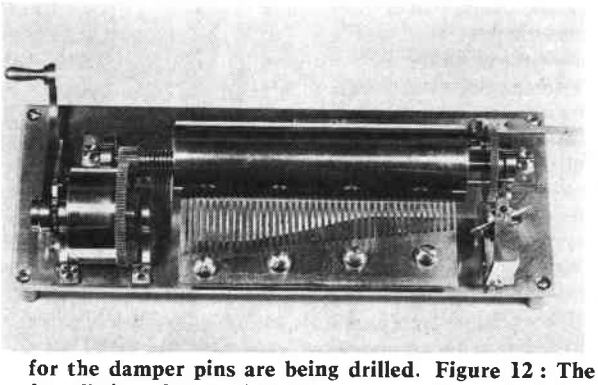

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Figure 7: In this view can be seen details of the spring barrel and Geneva stopwork. Figure 8: The governor, great wheel and stop arm. Figure 9: The governor and tune-change snail. Figure 10: The steps in ratchet-cutting. The blank is indexed round once with the blade off-centre forward to make the first short cut and then a second time off-centre backward to cut the long slope. The finished teeth are nearest to the camera in this shot. Figure 11: Part of the comb blank showing the tips, damper bar and resonator pads already formed. The holes for the damper pins are being drilled. Figure 12: The set-up for slitting the comb. Absolute rigidity and careful indexing are essential at this stage. Figure 13: The finished comb with lead resonators in position and attached to the brass mounting block. Figure 14: The complete movement so far. It is in need of a thorough polish to remove the scratches which inevitably occur as a part is tried, removed and adjusted and then tried again. However, this is no problem and in this particular case it is even permissible to polish the comb!

satisfactory note when sounded. To avoid distrotion, the steel must be heated uniformly to the correct hardening temperature and then cooled uniformly by rapid quenching in oil. For heating, a muffle furnace is essential and professional help will probably be needed here by most amateur comb makers. Once hardened, the comb is tempered, cleaned up, and lead resonators soldered into place. The finished comb, soft-soldered to its brass base, is shown in Figure 13. Finally, the whole movement, with its yet untuned comb and pinless cylinder, is shown in Figure 14.

Anyone who has attempted this kind of work will realise at once that I have left out far more than I have included. However, this article does not pretend to be a treatise on repair and construction practice, but it may perhaps encourage others to try their own hand. For anyone who does, and comes up against a problem he is unable to solve, I shall be glad to help if I am able to do so. Now, with some problems overcome, I am thinking about the second phase, putting in the music. Would anyone care to offer any suggestions on how this may best be done?

LUCKY DIP

by Grace Thompson

ONE of our most skilled lady members, Grace Thompson has tackled some formidable restoration jobs in her time and her Harrogate home contains some remarkable examples of mechanical musical instruments. Here she relates the circumstances surrounding her acquisition of nothing less than an overture-playing snuff box by F Nicole

I HAVE often pondered the meaning of the word "luck" and why some people seem to be more lucky than others. Is it just pure chance? Or is it an ability to recognise the right time, place or object? Something of each, perhaps.

Several months ago, I spotted in an auction catalogue the description of a long-cased Polyphon clock. The auction was held regularly on Thursdays, and making a mental note to view on the preceding Wednesday, I thought no more about it.

When viewing day arrived, I was rather busy, but at 3.0 in the afternoon I picked up my catalogue — and saw something I had completely missed on my previous cursory glance. The sale was on Wednesday! Furious with myself for not having noticed earlier, and with the auctioneers for being so inconsistent as to change the day, I worked out the time the clock was to be sold — and groaned. I was already too late by a couple of hours. Torn between conflicting thought patterns (it was probably a good clock and I had gone and missed it, or it was probably a load of rubbish and I was better off without it), I finally gave a philosophical shrug and accepted the situation.

I'm not really a philosophical character at all, and when I heard from several people who had visited the auction that half the clock was missing, I began to wonder whether it had sold cheaply enough to be worth following up. I rang the auctioneer to see what it had fetched. After asking who wanted to know, and why, he became quite chatty and confidential.

"As a matter of fact" said he, "it didn't sell. I'm afraid we put too high a reserve on it as we didn't realise there were parts missing, and it didn't have any discs either." I asked if I could come along and look at it. He said certainly, and added "There's a little musical snuff box here which might interest you too."

It was raining hard and I hadn't the slightest desire to go out of my cosy warm room into such an uninviting gloomy wetness, but one doesn't often get second chance. I made the effort and went.

The clock, with forty years dust lying thickly upon it, appeared to have no spring barrel, and wondering whether I had a movement of the same type that would fit it, I suddenly realised that there never could have been a spring at all. Somewhat puzzled, I investigated further. Of course! It was weight driven! In fact, only the weight and the discs were missing. Pleased with myself for my elementary deductions which would put me slightly ahead of the field because I had some discs as well, I asked if I could see the snuff box.

The auctioneer handed me a very dirty, somewhat decrepit but nevertheless tortoise-shell box. It wasn't playing but had an extremely fine comb and, peering through the usual yellow horn cover (which was almost opaque with dirt), I saw the name "F Nicole" stamped on the base plate. Feeling the first faint stirring of interest I asked when it was to be auctioned. With a slightly apologetic air he replied "Well, as a matter of fact it's mine."

My interest grew. One doesn't often get the opportunity to be so far ahead of the others. "How much do you want for it?" He tentatively mentioned a price which couldn't have been more "spot on" if he had been an expert. I hesitated, peering hopefully through the foggy cover.

"It did play," said the young man defensively. "I borrowed a key and it played a little bit. Very pretty music it was, too. I think it's overwound."

I tapped its side. Nothing happened. My mind raced over the possilibities. His price didn't leave much margin for any work needed. I couldn't see the cylinder pins very clearly, but the comb was intact — surely a good sign. Was it just the spring? If any of the wheels were damaged or even the endless itself, I could be in trouble. The case was banded in material so black that it was almost certainly silver.

"I bought it several years ago," he said helpfully. "Nice little box, isn't it!" He was, I think, finding my concentrated silence somewhat unnerving, but he needn't have worried. My collectors' instinct which always betrays me when it comes to arguing on price, was now working on his side. I peered again. Did I really want it? I already had one or two, though not in tortoise-shell.

I offered him a fiver less explaining that it would go towards repairs should there be more wrong with it than just a broken spring. He beamed happily. It was only a gesture on my part, for there is little work one can get done for five pounds today, but there was something definitely special about this box which silently whispered "buy me."

Within minutes of my arrival back home, I had the movement out of its case and found there was

no tension at all on the spring. The governor mechanism appeared to be intact, so I found a key of the right size and gently started to wind. A few very unmusical clicks were the only result. Carefully removing the spring barrel, I took it apart to examine the spring only to find that it was in twenty pieces. Seldom have I seen a spring so thoroughly and irremedially broken !

Searching my spares, I found a spring of the right length. Troubles were not yet over, though, for the barrel hook for the outer end of the spring was broken. This was not a job I felt competent to tackle but my husband said he thought he could do it, and was as good as his word. Meanwhile, I polished up the case to a rich gleaming translucency and apart from a few small missing pieces of shell, it looked very presentable. As I had suspected, the banding proved indeed to be silver.

Re-assembled, I prepared for the moment of truth. The young vendor had told no lie. Music cascaded into the room with breathtaking beauty, every note delivered with limpid purity — my husband, who had joined me for the premier performance, was equally entranced. I made a mental note that the box hadn't stopped after the first tune, knew that we both recognised the music, although we couldn't put a name to it, but concluded it must surely be Mozart. It stopped at the end of the second tune.

I switched it on again and once more it held us spell-bound with its magic — and once more it missed the first stop. Somewhat non-plussed, I examined the movement carefully and found that it couldn't stop until the second revolution was completed. My thoughts excitedly tripped over themselves as I realised that it was an overture box.

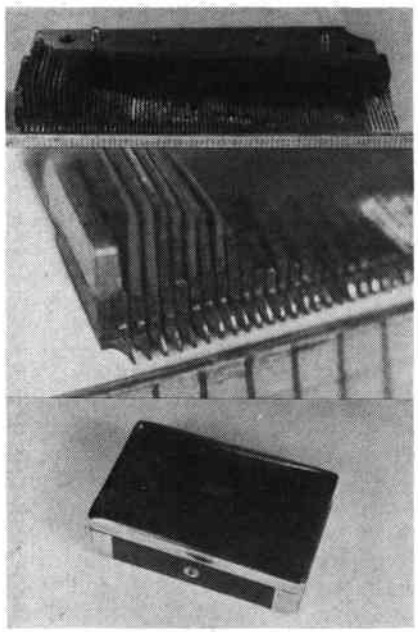
The cylinder barely 2⅞in. long, the comb with eighty teeth, it was a masterpiece of miniaturisation. This small movement played all the major themes from Mozart's "Marriage of Figaro" with consummate artistry. There was even a single incredibly fine tooth on the treble end and the last row of pins had been radiated outwards to contact this tooth. I had visions of a musician with flashing eyes, stamping his feet and insisting that the composition would be ruined without this one vital note!

No careless workmanship surely, but rather the careful afterthought of a master who could not bear to have one note missing.

The tiny curved dampers of steel were each wedged into a slot in teeth too fine to take a conventional damper pin, but the builder had not resorted to feathers. Impossibly difficult, so fine as to be almost invisible, each damper was formed into its perfectly symmetrical curve. The tuning weights on the bass teeth — I cannot call them leads — were made of brass.

What more can be said ? This movement is not just the result of highly skilled craftsmanship: it was made with real love. A hand from another century has reached out and briefly touched mine.

The clock ? Well, that's another story . . .



Details of the F Nicole silver-mounted overture-playing snuff-box described here.

PIANO MUSEUM'S PLEA FOR KENT HOME QUASHED

IN SPITE of repeated and prolonged efforts by its founder, Frank Holland, the British Piano Museum has been denied the opportunity to move into the science theatre at Sir David Salomons' house in Kent.

Sir David Lionel Salomons was born in 1851 and became one of the most noted inventors of the late Victorian era. Interested first in watchmaking and metalwork, he went on to invent electro-magnets, domestic appliances powered by electricity, an electric organ and a mechanical piano. The family home at Broomhill, near Tunbridge Wells, was developed by Sir David into a mechanician's paradise with the construction of a workshop-laboratory and what became called the science theatre. Within this latter was erected in 1914 the biggest and most expensive Welte Philharmonic Reproducing Pipe Organ ever installed in Great Britain.

Sir David died in 1925 and in 1937 his widow gave the whole estate — 35 acres of it — "for the people of Kent." A deed with the Kent County Council stipulated that the estate was to be used as a technical institute, college library, museum, memorial hall for scientific research, or public park or as a convalescent home or hospital.

Initially, it served as a convalescent home but, in 1946 it passed to the Government under the National Health Act of that year. It has stood empty ever since.

It was into this building that Mr Frank Holland has tried to move his collection — now operated as a charitable trust — and to open the home as a national museum. He planned to use the science theatre which was still complete with all the original electrical installation of the last century — a unique relic in itself and well worth preserving — and instal the British Piano Museum collection around the great Welte which would be restored as a centrepiece.

Although an extensive campaign has been mounted to foster such a move the house has now been leased to the South East Thames Regional Health Authority as a training school and much of the valuable antique electric installation has been removed. The Welte organ has been screened off, although the Authority claims that interested persons may still view the instrument by appointment.

The virtual prohibition is a great disappointment in view of the number of emminent supporters which Mr Holland was able to win over for his cause. Strong and

well-informed press coverage of the matter drew support for his cause not just from the people of Kent who would benefit by having the museum in their midst, but from conservationists, the Museums Action Movement and the Museums Association.

Meanwhile, the British Piano Museum still operates in its old quarters, a derelict church close to the River Thames at Brentford, Middlesex. Due to fire regulations, the false ceiling of plastic sheet which had been erected tent-fashion inside the church to keep dust and roof-leaked rain off the instruments and to retain some heat in winter, has had to be removed.

Frank Holland's collection majors on reproducing pianos but includes such rarities as the Imhof & Mukle orchestrion which until a few years ago still stood in the third floor rooms of Imhof's record and hi-fi store in London's West End, a vast Wurlitzer theatre organ with its own automatic Steinway piano, several large orchestrion organs, single and twin Violano-Virtuoso, Hupfeld Phonoliszt and Aeolian Orchestrelles.

Many members have seen the excellent film made about the museum two years ago and shown at one of our London meetings. It was also screened at the MBSI convention at Saddle Brook, New Jersey, last September.

German Musical Box Society to be formed in summer

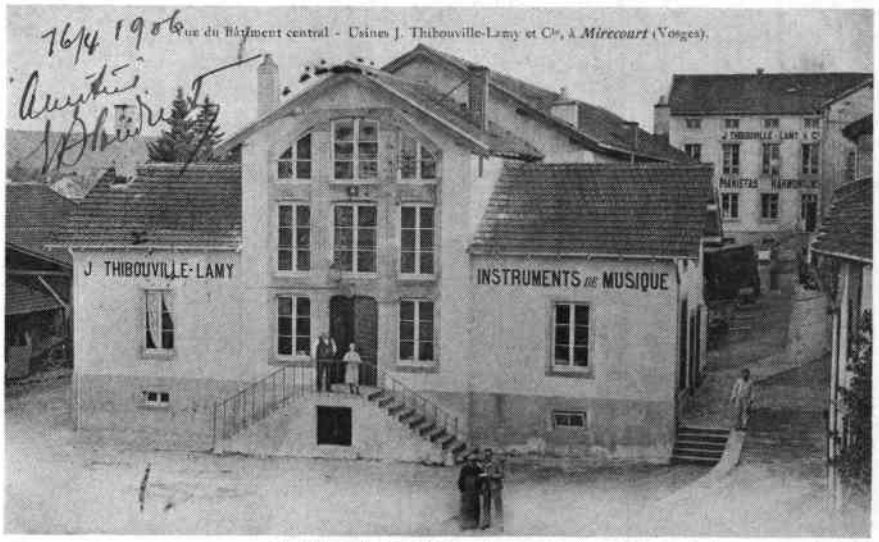
THE FORMATION of a German musical box society is expected to take place this summer. Membership of the group, which is expected to centre on Fuldatal in West Germany, is open to members of both the MBSOGB and the MBSI for an annual subscription of £8·50 — about $20·00.

Prime mover behind the new society is MBSOGB member Werner Baus who owns and operates the Mechanisches Musik Museum at Fuldatal and whose collection has featured in the pages of past issues of *The Music Box*. During last year, Herr Baus contacted 600 collectors in Germany and elsewhere in Europe and has already received about one hundred responses affirming their interest in establishing such a society.

A new mechanical musical instrument museum is to open in Baden Baden during May and it is expected that this occasion will also mark the first meeting of the embryonic society.

The exact aims of the group, named Gesellschaft für Freunde mechanischer Musik eV Deutschland, are to foster the interest in all instruments of mechanical music and phonographs. A periodical journal is planned.

Further details are available from Werner Baus, Mechanisches Musik Museum, 3501 Fuldatal 2, Hopfenbergweg 34, West Germany.



From the collection of Claude P Marchal comes this picture postcard which illustrates the factory of Thibouville-Lamy at Mirecourt (Vosges). The inscription with date at the top left is contemporary. Thibouville-Lamy's Paris business closed a few years ago, but the London company still survives.

OBITUARY

Glenn P Heckert

THE world of musical boxes lost one of its oldest anchormen on June 28th, 1974, when Glenn P Heckert died. He would have been 90 years of age on November 19th. His wife died on September 9th, 1964.

The following appreciation is by member Robert P Atkinson of Kendal, Westmorland:

Glenn P Heckert was "craft member" to the Musical Box Society International, our sister organisation.

There can be few collectors or repairers on either side of the Atlantic who have not referred at some time or other to the excellent detailed articles in Mosoriak's book *The Curious History of Musical Boxes*, first published in 1943, on the care and repair of musical boxes. Apart from the Jacot manual, originally published in 1883 and later re-printed by the Bornand Music Box Company of New York, there was no other work available in English until that of the late John E T Clark published in 1948.

Glenn Heckert told me how he came to write the articles. A travelling salesman one day called at his jewellers' shop in Massillon, Ohio, and told how he had suggested to Mosoriak that his book would sell better if it included a chapter on repairing. The traveller knew that Mr Heckert repaired musical boxes occasionally and suggested this to him. Heckert duly responded and, in his own words, "has been hearing about it ever since".

Mr Heckert had a great deal of practical experience. As a watchmaker, he was an instructor at a horological school in Philadelphia for two years. Previously he was at the Waltham Watch Factory and worked on adjusting. Later he was a jeweller in his own right, working for fifty years in Massillon.

A prolific correspondent, he would think nothing of writing four or five pages of detailed instruction. He also compiled a history of Massillon. As for musical box technology, his spring winder has earned itself a place in history and he was a keen advocate for fitting weaker springs in barrels when the originals were broken.

Glenn Heckert died at the home of his son, Robert, in California. He will be missed by many.

Ken Fritz

the little ole' music box maker

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AND DISC MADE EXACTLY LIKE THE ORIGINAL

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ENDLESS SCREWS
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STOP LEVERS
GREAT WHEELS
GEARS
ENDSTONES
MAINSPRING BARRELS
MAINSPRINGS
CLICK & STOP SPRINGS
NEW COMBS
SUPPLIES & TOOLS
SNAILS

DISC

GOVERNORS
ENDLESS SCREWS
WIND BRAKES
PRESSURE ROLLERS
NEW COMBS
NEW GANTRYS
DAMPER RAILS
LOOSE DAMPERS
AND MUCH MORE
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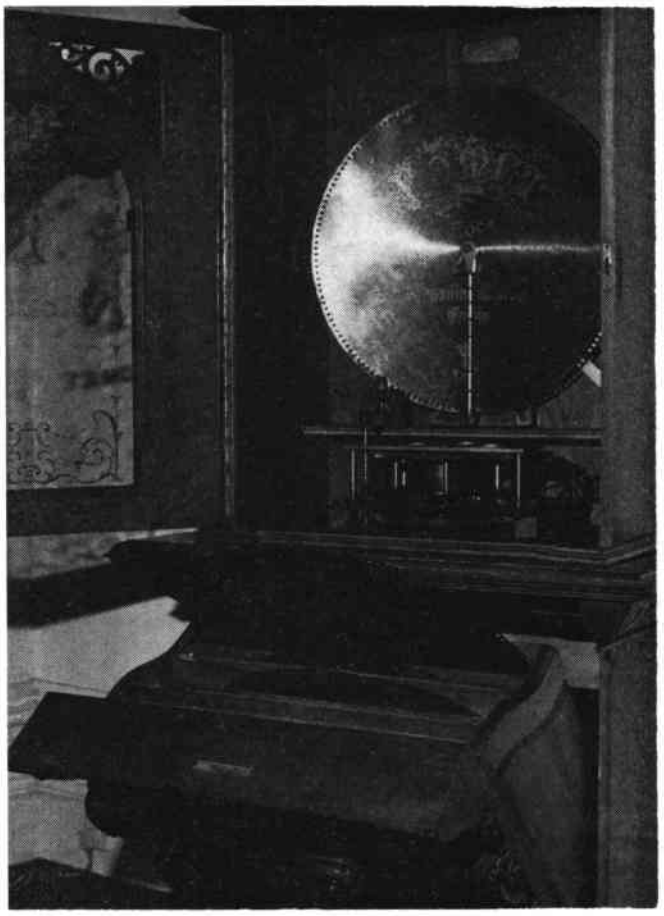
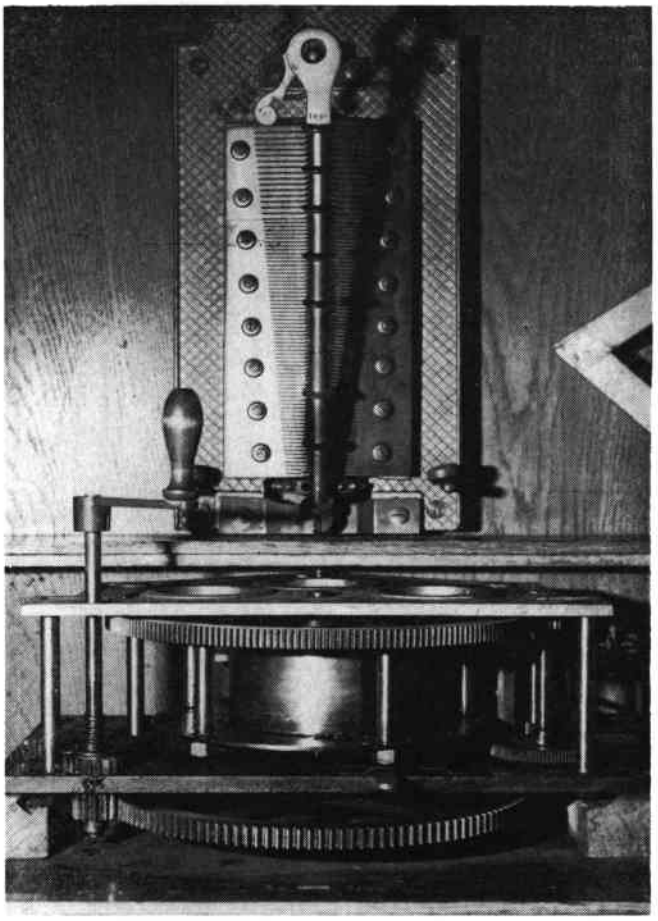
Our congratulations on the new format to THE MUSIC BOX

WEISSBACH'S GIANT KOMET

CLOSE to the Polyphonmusikwerke in the Gohlis suburb of Leipzig, there lived Kurt Weissbach — at Platnerstrasse 9/10, H, to be precise. He was an action-maker for musical instruments and also repaired mechanical instruments. Weissbach was ultimately responsible for the construction and production of a range of disc-playing musical boxes which bore the name Komet.

Much mystery surrounds the date of manufacture of the Komet. From the styles of case and details of the mechanism it would appear to be a very late machine, probably dating from the closing years of the disc musical box era—the first decade of the present century.





At least five different sizes of discs were produced, 13ins., 17ins., 21⅝ins., 25¼ins. and 33½ins. On pages 346 and 347 of the last volume of *The Music Box* was illustrated an example of the very largest of the Komet models which had 198 teeth on no fewer than ten combs, two of which are used for operating the 14 tuned bells.

The mainspring on this model measures 15ins. across. The Komet trademark is a figure in peasant costume blowing a brass horn, standing on a curved "ski" with a spur-like star at the forward tip. On the discs this figure is shown facing left. On some models, the name is displayed as "Komet Victoria" and the trademark is reproduced on the front door of the case facing right.

Illustrated here is a style not seen before. From the collection of J A Holland, Isle of Man, this variant plays discs 25¼ins. in diameter and the top-heavy design of the cabinet is of massive Teutonic architectural proportions.

Player-Piano Topics

DUO-ART EXPRESSION

Three experts discuss shortcomings and suggest improvements

ZERO-SETTING by Denis Lane

PROBABLY the most talked about adjustment on the Duo-Art system is the "zero". Everybody dreams about a piano (providing it's theirs) which plays every pianissimo note with unfailing certainty, but few of us own one. True, one can set it up to play the test roll correctly or even one's favourite romantic roll with the slow quiet arpeggios — but then what happens on the Beethoven sonata with the three note chords repeated rapidly at pp level — you don't need me to tell you!

If you set it up to play the Beethoven the other roll isn't romantic any more — and the test roll shouldn't have been issued!

Let us examine the player action for a moment. The pneumatics which operate the piano action will operate with more or less force depending on the suction pressure applied to them. Each pneumatic, and associated hammer action, will have a slightly different minimum suction pressure at which it just operates correctly. Take the pneumatic with the highest "just operate" pressure — set this up as a minimum and that's it. The problem is that the Duo-Art knife valve regulators are *not* pressure regulators — they are throttles — true the spring loaded bellows which moves the far end of the knife helps — but it cannot do enough.

The Duo-Art editing tries to take care of this — witness the different settings for a single note and a large chord, both at the loudness level. Leaks will affect the situation somewhat too. Imagine you have set it up to play a single note, allowing for the leak on a single pneumatic, then you try a three-note chord — the Aeolian company allow for the difference between one note and three notes in their perforations — but they did not allow for three leaks (neither did you — remember!).

All very trying, but is there anything we can do? I hadn't given much thought to this and I don't suppose I will have enough time to try anything, but suppose we could prevent the stack pressure ever falling below a certain minimum — corresponding to the most sluggish note just playing. If we could do this we'd be home and dry — it wouldn't matter how many notes there were or what the tempo was — and it wouldn't upset any of the other dynamic settings.

Anybody got a simple solution?

This article first appeared in the Bulletin of the Player Piano Group (No. 48) from which it is reproduced with acknowledgement.

IMPROVING THE DUO-ART by Peter Harrison

IT SEEMS a pity that only a handful of Duo-Arts are correctly restored and adjusted well, yet most existing Ampicos are just about perfect. Ampicos are comparatively rare in England and consequently more valuable. I think, perhaps, it is true to say, that a greater proportion of Ampico owners are knowledgeable enthusiasts.

The Aeolian Company devised the system of "theme" and accompaniment which is really an extension of the "Pianola Themodist" device and more or less left it at that till the end of the reproducing piano era (apart from improvements made after the companies merged), whereas Ampico continually refined and improved their system throughout the same period. Nevertheless, I honestly believe the Duo-Art can equal the Ampico and in some aspects of theme accenting is actually superior.

Two adjustments are important. Firstly, the accordion dynamics *must* be adjusted to the particular piano, and this does not mean the binaries are left at 1/16ins., 1/8ins., etc. This adjustment is only provisional. It *must* be adjusted to the test roll, which usually means considerable alteration of the binary stop screws.

Now comes the time and patience-consuming job, but the one which is essential for correct reproduction. This is adjusting the strike pneumatics to operate evenly on zero intensity. What usually happens is that zero is adjusted till all notes just speak, this means adjustment to the heaviest, stiffest or faintest note. If carried below this level some notes are found to skip. There are various reasons for this, different weights of actions, stiff bushes, odd valve travel, varying porosity of pouches, etc.

My present instrument, a Steck, has been modified to overcome this difficulty. The striker pneumatics are suspended on poppet wires, so that individual pneumatic openings may be varied (as in Ampico Model B), a wide pneumatic being more powerful than one nearly closed. If this modification is impossible, other means must be found to even up the action. Difference in pouch porosity can be compensated by partly blocking the bleed with fuse wire of various gauges, as the pouch is itself acting partly as a bleed if porous.

I have known cases where the bleed can be completely blocked, perfect repetition being possible throughout the porous pouch (if the pouch is this bad — replace it of course).

The Duo-Art spill valve is poorly designed and clumsy. It has a tendency to leak and is difficult to adjust to a spill level of 20ins. or so. Much better is to make a spill valve on the Ampico principle, but worked from the eighth intensity on either "theme" or "accompaniment".

I know it will come off instantly at eight instead of progressively till ten, but this can be compensated by setting accordion binary screws. It will still line up with the test roll spill valve.

One can also streamline the odd corners out of the expression box passages. This seems to smarten things up a little, but one can go too far with this sort of refining. A few years ago I had the not-so-brilliant idea of reducing the size of the spring pneumatics and spring weight to suit. This worked fine with the theme which needs to build up pressure suddenly (and lose it equally suddenly), but the accompaniment was horribly jerky. Smooth crescendos were quite impossible. Although the Duo-Art is a "step-system", smooth crescendos are possible because of the size of the spring pneumatic and the volume of the air in the system, so I had dropped a monumental clanger.

I intend shortly to replace the

theme pressure set (accordion and spring pneumatics) with an Ampico type intensity system minus the crescendos. It will, of course, be a sixteen binary instead of the Ampico's seven. It will still accent through the normal Duo-Art valve, but as pneumatics are switched *off* to raise suction it will save considerable air and will be much smarter in action. When I have completed this experiment I will let you know how successful it was.

One thing I find odd about reproducing pianos is the "on/off" of the soft pedal.

When the pianist made the original recording he would have used the key shift. This is avoided in most reproducing pianos and half blow substituted (except in some early Duo-Art systems and Weltes) on account of the mechanism being too heavy, needing a very large pneumatic, consequently slowing the action down.

On my instrument (Steck grand) I have let into the key bed six bronze pads and into the key frame six steel plates. This reduces friction immensely and shifts over smartly using the normal soft pedal pneumatic: even Adam Carroll cannot beat it! It is amazing the difference key shift makes, a much more mellow silvery tone, which I think is nearer the truth than the half blow system.

This article first appeared in the Bulletin of the Player Piano Group (No. 52) from which it is reproduced with acknowledgement.

TOWARDS PERFECTION WITH THE DUO-ART

by Cyril H Grainger,

Hon Editor Player Piano Group Bulletin

ONE BASIC problem bests every Duo-Art owner: how to obtain a satisfying performance from every roll in his collection!

This most frequently boils down to: how can it be made to play with delicacy and certainty, and in particular to perform fast reiterated chords at low dynamics (power 2 or 1 or even zero!) with the soft pedal in operation.

This problem arises particularly with dance rolls and "dinner music". Unfortunately there is no straight answer to this problem in the company's literature although a few hints may be gained by "reading between the lines".

Also it can be asserted from the experience of long-time Duo-Art enthusiasts that in Britain at least no two absolutely identical Duo-Art pianos have been found. There is always some minor difference in layout or in the units of the mechanism, or in the choice of piano action which seem to indicate either some strange perversity amongst the technicians at the factory, or that right to the end the system was in detail experimental.

However in this very diversity lies the advantage that any solution to the problem must be as "right" as another.

In the first instance, the piano action must be in tip-top condition and very carefully adjusted; an examination of many a popular dance roll will disclose repeated chords consisting of single perforations separated by about $\frac{1}{4}$ins. At speed 100 (i.e., 10 feet per minute) the notes have to repeat with an interval of only $\frac{1}{8}$ of a second. This is near the design limit of upright actions if not grands, and the mechanism must respond very quickly or the single perforations will pass without "speaking". Needless to say, the tracking of the roll must also be very nearly perfect.

All this applies without the problem of the effect of the "soft pedal" has on the mechanism.

Half-blow soft pedal?

If we refer to the 1927 Duo-Art Manual we find no reference to the soft pedal in connection with the adjustment of the piano and the use of the test roll. A clue here is that elsewhere in the book there is an illustration of a pneumatic key-shift action for a grand piano: in such a case the soft pedal would have no effect on the efficiency of the action. In practice however very few Duo-Arts have a pneumatic key-shift, relying on a half-blow arrangement, with attendant "lost motion" for soft effects. This, of course, leaves unanswered for the purist the question — did the recording piano have a half blow soft-pedal? This seems most unlikely. Next question — what dynamic adjustment is there on the roll for soft pedal effects? Answer — nothing discernible.

So what to do? Peter Harrison, in the contribution above, described the installation of pneumatic key shift on his Steck grand. Unfortunately this is no solution for upright owners. The British Aeolian Company attempted to solve the problem on later models by connecting the soft pedal pneumatic with power two on the accompaniment side of the expression. Unfortunately this destroys the even build up of power — viz:

Power 0 is then 2; 1 is 3; but 2 is 2 and 3 is still 3; 4 is 6; 5 is 7; but 6 is still 6 and 7 is still 7, etc.

This arrangement of course also destroys the relationship of theme-to-accompaniment.

Suggestions

Here are some suggestions:

Reconstruct the expression accordions with a fifth section which will actuate with the soft pedal to give one additional power to both theme and accompaniment to compensate for the lost motion.

Simpler but less desirable: set up the piano from the test roll with the soft pedal on. As a compromise the lift of the soft pedal may be reduced somewhat to minimise the lost motion but as a result some "light and shade" in the performance may be lost.

Lost-motion pneumatic

Another possibility, if the particular action will permit it, is to introduce a lost-motion pneumatic (an Ampico device which lifts the player pneumatics when the soft pedal is in use to eliminate the lost motion).

Many owners will accept an occasional failure rather than lose delicate nuance from the performances generally. This is probably a proper philosophy as there is some evidence that the engineering of the rolls changed slightly over the years and later rolls were set to lower dynamics than the early ones (competition with the Ampico?) — compare the various test rolls and the chords which should or should not play with the coding of late dance rolls and there *must* be some failures!

Just as a final point: piano actions are made of wood, leather and felt — all affected by changes of humidity. So keep your piano in constant conditions if you can and keep the case closed when not in use. For the best results you may have to make a seasonal adjustment to the zero settings.

Any further suggestions and ideas will no doubt be welcomed by Duo-Art owners so if you have any ideas please write to the Editor.

This article first appeared in the Bulletin of the Player Piano Group (No. 55) from which it is reproduced with acknowledgement.

A NEW DISC

by Robin Timms

HAVING always been fascinated with the way in which tunes are arranged for musical boxes, I decided in a rash moment to arrange a tune myself for my 11inch Polyphon to play.

I chose the tune *Blow the Wind Southerly* because (a) it seemed about the right length, (b) as far as I know it has never appeared on disc before, and (c) I like it.

First it was necessary to have before me the tuning scale of the Polyphon, then to write out the melody in the key in which the box was tuned. Following the principles outlined in previous articles (Volume 6, pp 174ff and 233ff) I set the melody in the highest available octave, and the bass as low as possible. Often the melody could be strengthened by duplication in a lower octave, occasionally by using simultaneously two teeth tuned to the same note, sometimes also by ornamentation making use of the note above. I aimed to place a foundation bass note on the strong beats and then work upwards in an arpeggio using the notes of the chord indicated by the bass.

Next I placed chords beneath each melodic note and finally worked out a " running " part consisting of the scales and arpeggios which give the musical box its characteristic sound. The melody contained six quaver beats in a bar. Sometimes the running part, as I call it, is in semiquavers, sometimes in demisemiquavers. A sixteenth of a beat is the smallest fraction I used.

Biggest problem

The biggest problem was to avoid using the same tooth in too rapid succession. I had to thin out my arrangement considerably when I came to work out how frequently a tooth could be struck.

Having scribbled out the music in my characteristically illegible fashion (Figure 1), I then made a fair copy, putting in just the note heads for clarity (Figure 2). Finally I transcribed this into a graph

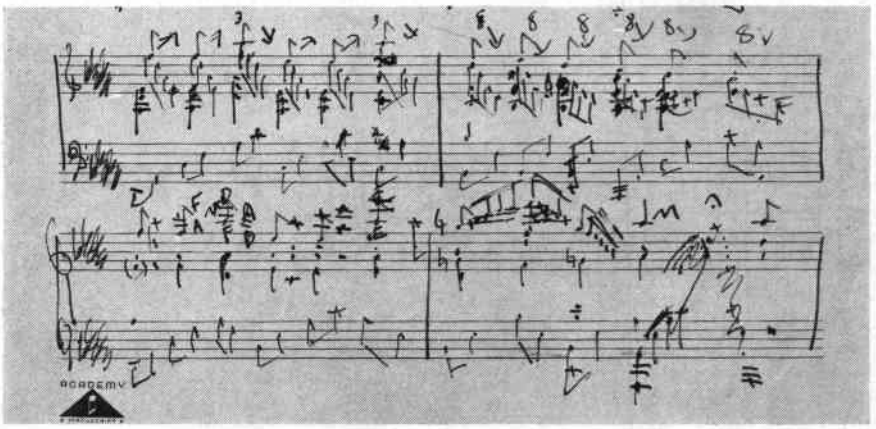


Figure 1

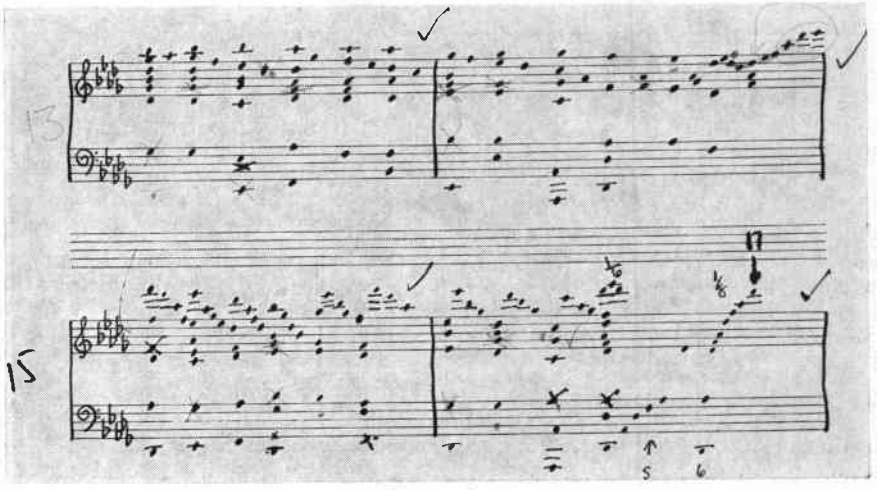


Figure 2

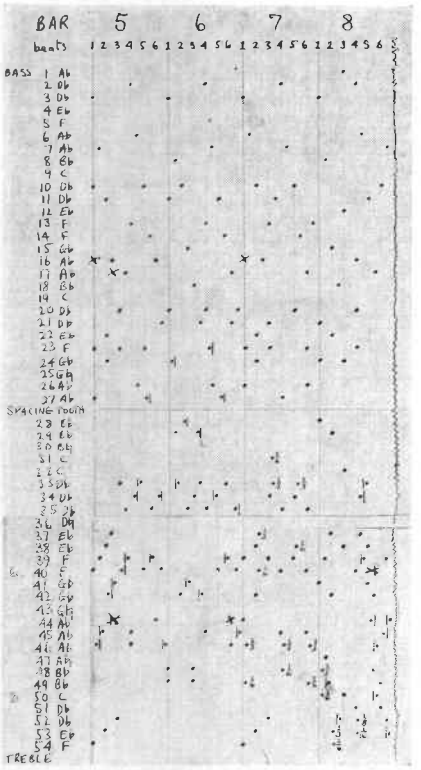


Figure 3

(Figure 3) from which Mr Pearce of Essex, who made the disc, was able to work.

It was an anxious and exciting moment when we first placed the finished disc on my machine and I drew the starting knob. But all was well, and it was wonderful to hear in reality what I had been hearing in my mind for some time previously.

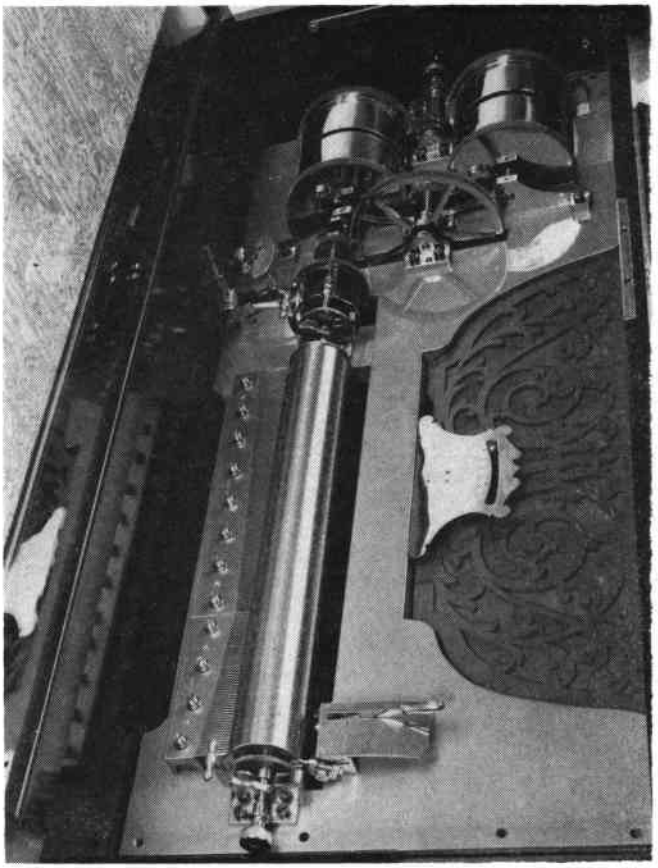
Tips from the Experts

WHEN dismantling a musical box, it is important to keep all the screws in the right order so that they can be replaced exactly as before — many early boxes have hand-cut threads which means that each screw is slightly different.

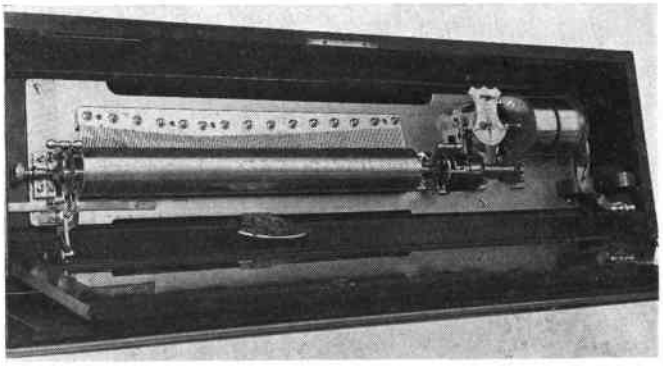
Expanded polystyrene ceiling tiles make a useful pin-cushion into which the screws can be pressed as you remove them from the mechanism. Save old polystyrene packing material for this purpose. Not only does it avoid getting the screws mixed up: it saves them being knocked on the floor and getting lost.

Very tiny screws and pieces can be kept in the proper order by lining a shallow working tray with that most useful of commodity — double-sided Sellotape. Stick the pieces into the tray with a pair of tweezers. Better in most instances than the old idea of using a velvet-lined tray.

DISSIMILAR TWINS



Pictured here are an unusual pair of Nicole Frères forte-piano musical boxes. The one on the stand in the picture above is also featured on our front cover with its 15 cylinders in their storage cases. Both machines play 19½ins-long cylinders of about 2½ins diameter and the larger mechanism has four spring motors whilst the smaller has only two. Member Brian Etches of Bournemouth owns the larger, and his friend Eric Scot, from near-by Wimbourne, has the other which has three cylinders. The total number of cylinders is 18 and all are quite interchangeable between the two instruments. The bedplate castings of both are very similar, except that the smaller, two-spring example has the back extension cut away. Each instrument has a tune indicator and a tune-selector. During the later years of the Nicole business, a number of these very large instruments were produced and in many respects they bear very little family resemblance to the early products of the Geneva-based partnership. Both of the musical boxes illustrated here have been superbly restored by their owners. Only the smaller one had its original spare-cylinder case. Brian Etches made those shown on the front cover to match.



Book Reviews

DISCOVERING MECHANICAL MUSIC. *T E Crowley, Shire Publications Ltd, 48pp, 4½ins. (115mm.) by 7ins. (178mm.), illustrated, paper covers, 35p.*

For a long time there has been a growing need for a really basic, simple booklet on mechanical music aimed no higher than for the mildly interested reader, yet sufficiently interesting in presentation to serve as a possible spark to a more detailed study. I am thinking in particular of the number of school children and students who write to the Society for informaton on musical boxes to assist in a study project.

Discovering Mechanical Music is one of the slim pocket editions published in the *Discovering* series and is written for the non-technical person. Even so, it would have been nice to have got away from the use of the word "prong" to describe a comb tooth.

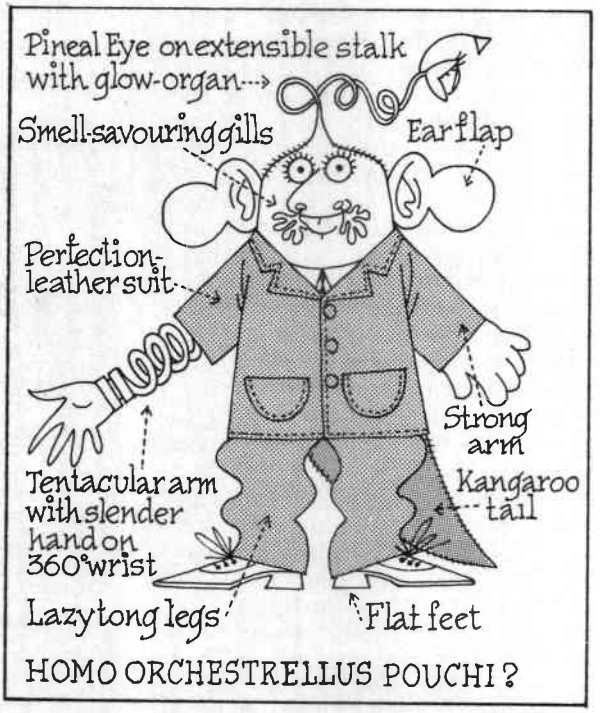
Of the 27 illustrations, six are of carillons (half of them modern) and four are of gramophones. The cylinder musical box is not well represented and it must be said that, in general, the selection of pictures is far from ideal. Even for such a popular treatment of the subject, one or two simple diagrams showing principles of operation would have been of greater value.

Still a most useful addition to general reading, this handy paperback comes with a brief bibliography, index and also provides the address of the Musical Box Society of Great Britain. Shire Publications are at Cromwell House, Church Street, Princes Risborough, Aylesbury, Buckinghamshire. A.O-H.

IN SEARCH OF HOMO ORCHESTRELLUS POUCHI

by Bruce Angrave

FOR SOME years, artist and musical box collector Bruce Angrave has been suffering from an acute attack of Aeolian Orchestrelles. Here he relates some of his experiences in trying, albeit with no success, to resist these instruments, and puts forward the claim that he has at last deduced what the people who first made and played them must have looked like



IT IS now ten years since first I suffered from an Aeolian Orchestrelle Player Organ.

For the benefit of the uninformed, of whom, as I am well aware, there are none in the Musical Box Society of Great Britain, I must explain that an Aeolian Orchestrelle Player Organ, in its least aggressive form, bears some external resemblance to an upright piano, albeit much higher and thicker and quite a bit longer.

In fact, when my first Orchestrelle — a Model V — arrived in 1963, borne in the arms of two squat, gibbon-like men with barrel chests, no necks and flat heads, a passing mum was heard observing to her offspring "Cor look Mavis, wo' a big pianner". The resemblance stops short at that point, however. In place, for example, of the pedals there are two huge treadles, covered with some early form of rubber; and above the rather short keyboard is displayed a vast quantity of knobs labelled with the names of every known musical instrument and quite a few ones as yet uninvented. The casework, besides being huge and solid, is so intensely fretworked that only the finest wood can hold its own against that number of holes; while double orders of Ionic columns support a massive entablature of dogtoothed mouldings and Tudor roses. In the centre an even more heavily fretworked door leads to a rollbox whose vital parts are too deeply recessed for any but the daintiest hands to insert and hook a music roll without muttered curses.

Operation of the Orchestrelle is an activity requiring great musical experience and an understanding of all the major classical works, together with high-speed reflexes, fully muscled legs, a sound heart, deep lungs and sensitive feet. Steady and careful treadling is necessary to get the machinery under way, and, as the multiplicity of holes begins to traverse the tracker-bar the feet must adjust their power output continuously like a bicyclist in a traffic jam; while the fingers flick the stops — trumpet, flute or oboe as the case may be — and violins thrill in the background as the waffle stop wobbles away on the right like monks in a Monastery Garden.

And who advises you on this intricate and detailed operation — more difficult, as it is, than that of the conductor of the Berlin Philharmonic (because he doesn't have to treadle)? No one. No sign nor hint is given on the slightly stained and dog-eared paper as it passes. The composer is silent on his intentions. There is sometimes a dotted line indicating "loud" or "soft" but never a hint as to what sort of loudness or softness. Further, the type of loudness or softness, after being decided on in lightning flashes of thought by the performer, is achieved with sideways thrusts of the knees, no mean feat for the arthritic or hobble-skirted (hence the noticeable absence of good elderly and lady performers). On top of all this, one needs to know one's right from one's left — which is where I personally fail. A rightways thrust of the knee opens the swell shutters, a leftways thrust the Grand Jeu, while a twoways thrust produces Full Volume and a sharp human cry as unaccustomed muscles crack under the strain.

We are now making a little progress towards unearthing the possible appearance of the strange creatures who built and originally played these instruments. I have called these beings the *Homo Orchestrellus Pouchi,* for it is certain they were not human and are now long extinct. We have established, then, that Homo Orchestrellus Pouchi was immensely strong and deep-chested, with stout but gibbon-like arms, thighs peculiar for the development of their outer muscles, and flat feet with very flexible ankles. He had a low forehead and small forebrain with consequent limited awareness of anguish and frustration but a highly developed emotional centre. His nostrils were large (eliminating puffing noises during energetic passages). His ears were finely tuned and sensitive but with large retractable flaps for protection against excessive noise. His fingers were long and thin.

Then we must remember the smell that wafts delightfully from Orchestrelles during loud passages. This, I imagine, is composed of leather, glue, wood, paper and rubber tubes. One must suppose that the senses of Homo Orchestrellus Pouchi were developed to savour this. Perhaps gill-like fronds protruding from the nostrils?

But a final picture of Homo Orchestrellus Pouchi cannot be

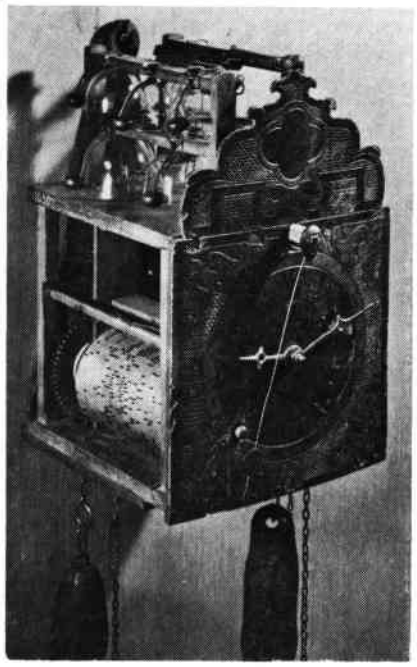
arrived at with such sparse evidence as that provided by the Model V. Many and varied were the types that poured from the factory in the early years of this century, en route for the mill-owners' follies in the North of England. There was for instance the Model Francis the First. I lost no time in acquiring one of these from a church in South London where it had remained shrouded under a dust sheet for ten years after being superceded by an electronic marshmallow organ.

Four squat men were needed to deliver the Francis the First in the pouring rain, ordinary Homo Sapiens having degenerated rapidly since the delivery of the Model V ten years before and lost much of his erstwhile strength. Even so, a hoarse cry was heard from the foot of the impossibly steep steps leading to the front door of my house. "We fought it werra armonium" the voice bawled accusingly, "Yorl av ter give us a and mister" which I did at the expense of my right knee and foot and that of an osteopath some months later, called on to set the trouble to rights.

The value of the Francis the First lay in its advanced state of decrepitude which necessitated the intervention of your Editor who, as is well known, has preserved to some extent his resemblance to Homo Sapiens while acquiring many of the skills associated with the extinct Homo Orchestrellus Pouchi. Thousands of screws were removed; backboards eased from their dowels; tone ranks extracted layer by layer; sheets of leather punched out for pouches and miles of rubber tubing accurately connected.

It became apparent very rapidly that Homo Orchestrellus Pouchi, besides having 360 degree swivel wrists with ratchet action, was equipped with a devious not to say mischievous mind warped enough to arouse envy in the heart of any modern mass-produced-furniture factory manager. Homo Orchestrellus Pouchi manifestly must have been American, Orchestrelles having originated in the "noo world" with a healthy patriotic grudge against them Limeys as had pushed him around afore Independence. He must have had an honest American name. "Say Elmer" one would say to his mate, "how many screws does youall figure we needs to fix this hyer tone rank?" "Why, four, Hiram." "OK Elmer, lets you an me put in 260 and fix them Goddam Limeys when the toobs 'n' pouches perish." "Jeez Hiram (guffaw) youall does wind up athinkin of the durndest things." "And say, Elmer, lets you 'n' me glue a strip o' wood over the 260 screws so as them Limeys won't know they're there." "Land Sakes, Hiram, you sure will split ma sides (guffaw). An them bleed holes — whur kin we put em so's them Limeys caint get at em?" "Right down hyer behind the rollbox Elmer." And so as the ghostly spirits wisecracked, their worst doings were gradually deciphered by your Editor as, match for any Pouchi, he slowly cracked the codes.

GLASS BELL CARILLON CLOCK



Dating from the second half of the 18th century, this carillon clock by the Prague watchmaker Josef Uhl plays on 12 glass bells. Characteristic of the period is the cow-tail pendulum in front of the clock. From the collection of the National Technical Museum in Prague.

Much rich additional evidence was deduced, during the restoration of the Francis the First, on the characteristics of Homo Orchestrellus Pouchi. But gaps still remained.

Then came my most recent acquisition, a Model Y Orchestrelle. As all MBS members know, a Model Y Orchestrelle is so tall that its top is rarely seen in the cloud-wracked skies of our poor, benighted land. One million screws were removed from the Model Y Orchestrelle before it could be got into my house, for this device comes in the category of things which are too large to go anywhere in one piece, like hotels and Saturn rockets. And this very fact shed yet more light on the mystery of H Orchestrellus Pouchi. For thousands of the tough little creatures must have been bred to deal with the installation of Model Y's and subsequent even larger monsters. The picture widens and clarifies.

Strange tools were devised before we could deal with the Model Y. A screwdriver four feet long, with Archimedian plunger drive and magnetised bit was fashioned to remove the carcass from its base and subsequently re-attach it. Another screwdriver one inch long. Probes with curious ends and pliers with curious jaws. And when, after many a viscissitude, and the installation of a steel joist by my bus-driver friend (to stop the Orchestrelle falling through the house) the machinery was dragged up the impossible steps to my front door, eleven men were present, seven to wring their hands in fear and trembling and four — professional Irish ones — to do the actual humping, with many a strange oath and a final "Oi've niver seed one o' t'ose afore, mister, and, Begorrah, Oi'll niver be afther shiftin' one agin at all at all, Holy mither o' Jesus!" The picture became sharper still.

Homo Orchestrellus Pouchi, gibbon armed, barrel chested, flat headed, big nosed and flap eared, must have had eyes on extensible stalks with associated glow-organs for peering along dark, inaccessible apertures, together with at least one tentacle-like "arm" with swivel wrist and slender hand for turning myriads of screws and placing them in remote places far from the view of normal man. He probably had a strong, kangaroo-like tail for balancing when climbing steps and also, come to think of it, to enable him to "sit" when playing the instrument, for no stool seems to be provided in the basic design. He had many-jointed lazy-tong legs for raising the top tone ranks and pediments of Model Y's. He had an intense love-life, proliferating profusely for installation and servicing purposes. He may have been dressed in "perfection" leather, though this is just a guess.

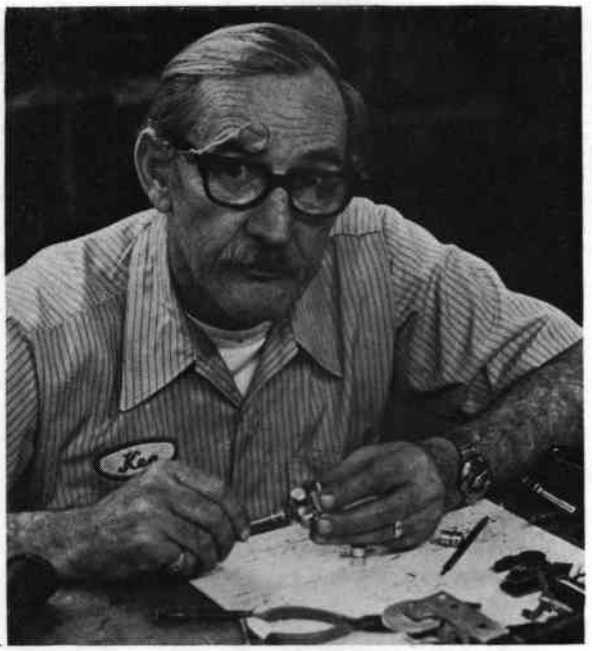
My researches are not yet complete for I haven't yet acquired a Model F or a Pipe Organ. And I shall need a larger house for those.

Meanwhile, if you should see a shadowy figure near your Orchestrelle. . . .

Technical Topics

THE ENDLESS

by Ken Fritz



KEN FRITZ self-styled "little ole' music box maker", lives in California and has spent over thirty years in repairing musical boxes. His sound workshop practice is matched by his ability to reason out just why a thing was originally done that way in the first place. This is the first of a series of articles on aspects of the musical box which will include component design, gear design and cutting, mainsprings, combs and tuning

MAKING a new endless does not require any particular talent. The most important requirements are patience, exactness—and fortitude.

The procedure as outlined here is successful in that it works quite well. You will be using proven and time-tested methods that produce fine crafted endless screws.

First you should know what you are doing, so a brief outline of the various steps or operations is given as food for thought.

The raw stock from which the endless is cut is hardened steel dowel pins. I purchase them $\frac{1}{8}$in. or 0·125in diameter, and in lengths from 2in to 3in.

Step 1 is to cut the pivot on one end, leaving the corners square. The end is then polished.

Steps 2 consists of cutting to length, cutting the second pivot, and again polishing.

Step 3 is to lightly mark the position of the lower spiral end.

Step 4 is to cut seven spirals.

Step 5 is to taper the upper end and polish.

Step 6 is to cut the lower taper.

Step 7 is to polish all surfaces.

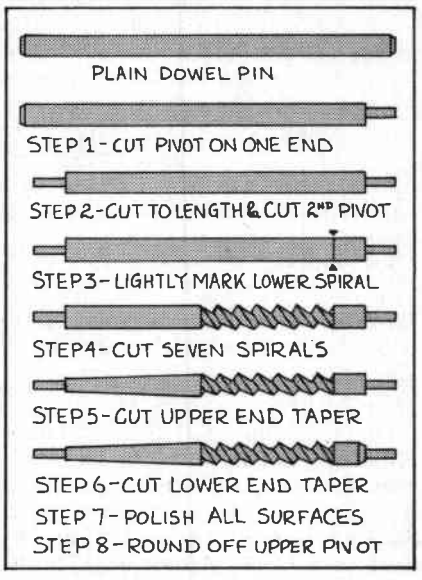
Step 8 is to round off the top of the upper pivot.

This may sound a rather lengthy job, but the opposite is true. The complete task, particularly when you are making twenty or more at once, takes about twenty minutes apiece. To make just one requires about two hours work because of the tooling changes.

I should state most strongly that you must never use a three-jaw chuck of any kind for chucking the endless. They just are not accurate enough. You must chuck and re-chuck eight times and should the jaws of the chuck be out of alignment by as little as 0·0005in, you could end up with an error of 0·01in in concentricity between the pivots. This means that you could actually be 0·01in off on one pivot and 0·01in off in the opposite direction for the other pivot . If this were to happen, the endless would be out of centre by 0·02in. This is called an error by accumulation of tolerances.

This sort of risk cannot be afforded in endless screw manufacture. While errors of 0·03in in length are of no great consequence, it is the side erors which will give you grey hairs.

The thing to learn. then, is how to make the endless in such a manner that the error problem can be minimised. Remember the root of the endless and the width of the worm tooth tips ? These are the critical areas and all our errors must be confined within this small space. A 10% error here is acceptable, but no more. Now if you remember that the root dimensions on most cylinder box endless screws are about 0·003in and 0·0045in, this isn't very much, but out method of tooling will make it look like a mile !



A word on equipment. You cannot properly cut the endless on a watchmaker's lathe or come to that, any small lathe. Incidentally, when I say "cut", that is my terminology, for what you really do is "grind." Grinding to the close tolerances we require for this very important part demands vibration-free equipment. The weight of a grinding attachment requires a sturdy base with a solid anchor. The answer is obviously a good large, solid lathe.

The speed of the grinder in rpm is from 30 to 40,000, and this is a little vibration factory in itself. Exercise caution here — it will pay off in beautiful dividends.

Secondly your lathe must have a thread-cutting capability with the lead screw and gear changes required for any of the several sizes or pitches of the endless. These sizes will be:

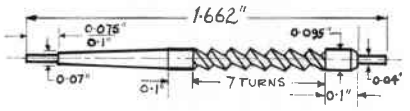
14 pitch (rare)
16 pitch
18 pitch
20 pitch
22 pitch
24 pitch (rare)
26 pitch (rare)
28 pitch (most common snuff box size)

My own lathe is rather large with a 12in swing on a four-foot bed.

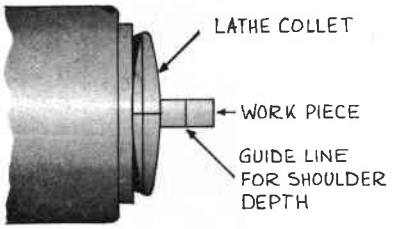
You will also need a good, sturdy and accurate collet attachment as basic tooling.

Assuming these items, namely

the proper lathe, grinder and collets, are available let's make an endless screw . The size will be 22 pitch, O·095in diameter at its widest point above the spiral, and 1·662in measuring from the lower shoulder to the tip of the upper pivot.

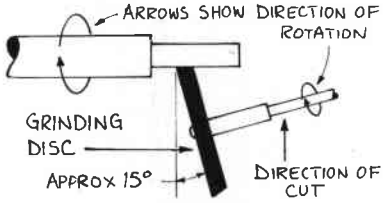


Step 1. You will notice in the sketch that all dimensions in length are taken from the base of the lower pivot. This is the first cut we will make. The finished pivot size is 0·04in but we must leave a little for polishing, so we will cut to a rough-grind dimension of 0·045in.



The raw endless stock is placed in the collet and allowed to protrude about one inch from the collet face. I blue it with dycum (engineer's blue) and when dry, mark a line around the circumference 0·1in from the end. This is the base of the shoulder. Move the stock back into the collet until only $\frac{1}{4}$in protrudes from the face of the collet.

The grinding disc which I find most acceptable for all the grinding on the endless is 0·05in thick, 1·25in in diameter and with a 0·05in hole in the centre. I set the angle of the disc at approximately 15deg away from the work.



You will discover that a radius will begin to appear on the leading edge of the disc after a few cuts are made. In order to minimise this radius size, you must always ensure that your cuts are in alternate directions. Whichever way you cut the first time, the second must be the other way. Also do not cut more than 0·0025in deep in one cut. This is where patience comes into play.

A good micrometer will be required for frequent measurement checking. Do not depend on the dial reading on the feed handle of the lathe when you are grinding. You are not only removing metal, but at the same time the diameter of your grinding disc is gradually being worn away a little with each cut. It is for this reason that you must repeatedly check your measurements. The type of wear on the grinding disc is another reason for grinding in alternate directions. If you ground every cut in the same direction, even on the small pivot, the cut would be tapered because of the reducing diameter of the disc. You take advantage of the wear factor by alternating directions so that the pivot becomes both flat and square.

Grinding disc wear can greatly be reduced by adding a coolant to the operation. I have found a fine-mist cooling device most advantageous. Most lathes have provision for a coolant system: some lathes offer the attachment as an optional extra. As an indication of the benefits of using coolant, without it I would use six or more discs to grind twenty endless screws. With the spray, one disc grinds the whole lot and still has enough body left for another dozen or so grinding operations.

Because we are working with very hard and brittle steel—something like 75 Rockwell — we must keep the work cool. The heat from the grinding operation, especially when forming the spiral, will cause the stress in the steel to relieve and in turn it will make the steel warp. If this happens, all you can do is to throw your work away and start all over again. Without coolant, you must work very slowly, and pause between cuts to let the work cool, so here is another reason why use of a coolant is preferable.

Incidentally, water by itself is no good for cooling: you must mix proper coolant type material with the water for the best cooling and grind reaction.

Steps 2 and 3. The "standard" lengths, or those lengths of endless screws most suitable for all the popular-sized musical boxes, are as follows:

4in cylinder = 1·35in
up to 6in cylinder = 1·475in
up to 13in cylinder = 1·675in
13in interchangeable = 2·275in
up to 17in interchangeable = 2·575in

You may find that these dimensions may not be exactly the right lengths as they may differ as much as 0·02in one way or the other. The important thing is they can be fitted into the proper size with little effort. Remember that these dimensions are from the lower shoulder to the tip of the upper pivot. I cut my length in this dimension 0·02in longer, making the upper pivot this extra amount longer. The fitting then becomes much easier.

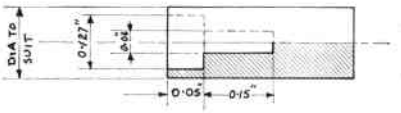
The 13in cylinder endless blank would then have a total dimension from the shoulder of 1·695in.

Blue the end of the pin with engineers' colour and now the length can easily be marked with the dial calipers. The shoulder-to-shoulder measurement should also be marked.

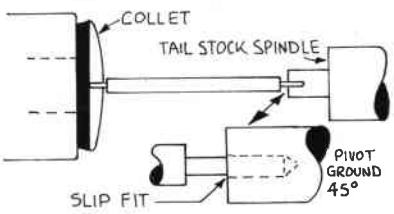
These lines should be scribed as thin as possible. To facilitate this, I ground the outside jaw of my calipers to a sharp knife edge slightly rounder crossways to produce lines about 0·005in wide. After grinding the jaw, I then used an Arkansas oil stone to hone the edge sharp.

My dial calipers are the Mitioyo type calibrated in increments of 0·001in over six inches and they certainly make my layout jobs that much easier.

As before, set the pin in the chuck collet and grind the end cut using the cross slide of the lathe. Now you can grind in the upper pivot after which you are ready to proceed to the spiral. Before doing this, though, you must stop and prepare another special tool.



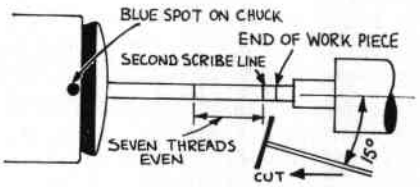
The length and diameter of the tool should only be as large as required to fit into a Jacobs chuck in the tail stock and a bit larger than the diameter of the pin. The purpose is to steady the end from vibration caused during grinding. I set my own system up a little bit different and it requires a light touch because of the delicacy of the operation. My set-up is shown here as it provides for much greater accuracy in the endless but offers less support to the work.



Now for some delicate setting up for which you should have a dial indicator with a magnetic base or a good heavy stand. The idea is to set the indicator onto the flat part of the top slide. The work

piece is mounted between pivots in position for cutting. Run the indicator to the edge of the endless blank at its near centre. Run it in until the dial shows about 0·01in, and now re-set the dial to zero. Run the slide lengthwise along the pin to read the "run-out" in the tail-stock. You should be centred within 0·001in for this length. Adjust the tail stock until the reading is within the 0·001in. Turn the spindle under power for a few seconds and then check your reading again. Keep doing this cycle of running and checking until the reading on the dial is constant.

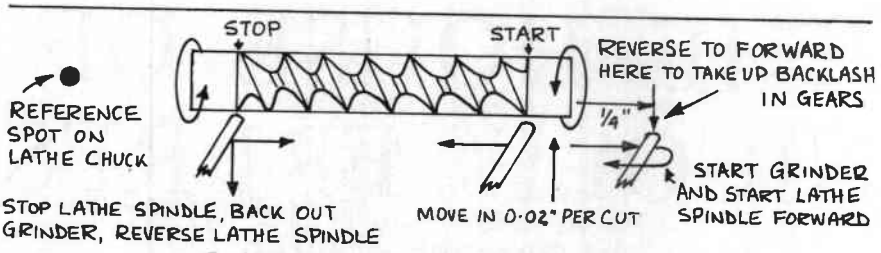
Step 4. You are now almost ready to grind the spiral. Your lathe must have a lead screw and the facilities to chase threads or to cut threads from raw stock. Set your thread-cutting gears for cutting the desired pitch, in this case pitch 24 or 24 threads per inch. Set your lathe spindle speed as slow as possible and run it in the back gear — or "grandma" gear or whatever your pet name for it may be.



A word about the actual profile of the spiral cut. The original had a flat bottom made by forming the grinding wheel. The old style was not perfect in design as the finished cut required a great deal of power to drive it. As a consequence, worn gears wore grooves into the spiral — and they are far from easy to polish out. The old style is flat and straight and offers no starting action to the power of the worm.

Angle "A" formed between the spiral and worm tooth is very shallow and not very efficient. The curved root on the new style offers a much greater angle "A" and in effect eases in the power from the worm. This new style spiral is

more sensitive to the wind brake and can be governed more evenly and more accurately. Wind brake efficiency is directly proportional to the endless inertia of the spiral.

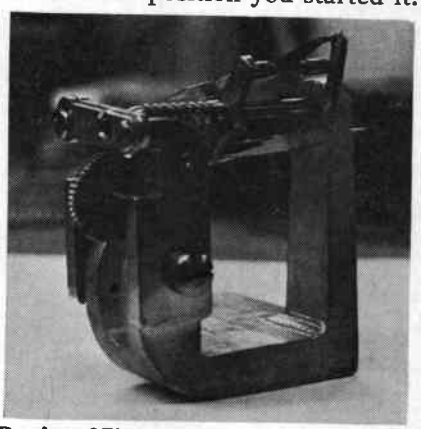


SKETCH SHOWING CUTTING SEQUENCE

This is why we round the end of the grinding wheel and keep it that way. Check this contour after every two or three cuts.

Start up the lathe and engage the lead screw. Set the grind disc midway along the endless blank and engage the cross-slide for thread travel. Reverse the lathe and let the grinder move towards the tail-stock. When it has passed the end of the blank, reverse the lathe to the forward position and bring the grinding wheel to the scribe line (turn the spindle of the lathe off slightly before reaching the scribe line). Once you start the carriage moving towards the head of the lathe, never reverse until the cut is completed. With the spindle off and the grinder in the proper position, mark any spot on the spindle even with your eye — I use a spot of blue. This is your index for starting and stopping your cut. My spindle around the collet is about four inches in diameter. The pin is 0·125in or $\frac{1}{8}$in so that is a 32:1 ratio. This means only that a small error in my judgement to the position of this dot of blue is 32 times smaller on the endless. For instance, should I overshoot by as much as 10deg on the spindle, the error on the endless is only 19min or about one-third of a degree.

Without turning on or engaging the grinder, start the lathe spindle forward and this time count the rpm by counting the blue dot as it comes around. After the sixth count, be alert and stop the spindle in the same position you started it.



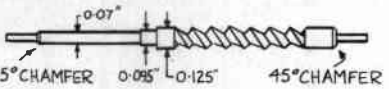
Regina 27ins. autochange governor newly made by the author.

Measure with a scale or other suitable tool 0·15in beyond the point where the grind wheel came to rest. What you are doing is locating the point where the stop tail fits. From this point, measure to the bottom shoulder. Check the dimension against the governor body on the musical box. You should be pretty close and able to proceed. A leeway of 0·05in here is acceptable.

Study the cutting sequence sketch and you will understand the process much better than words can describe. Never try to cut more than 0·02in in one cut — and remember the coolant! Again, do not disengage the carriage screw until the spiral is finished. This way, your cuts will always come in the correct place and you avoid possible errors in the feed index.

The root of the endless should be no more than 0·05in diameter. For an ideal theoretical operation to cope with the stress and bending moment maximums caused by worm tooth (this is also called the second wheel) engagement starting efficiency, the endless diameter should be 2·5 times the root diameter.

After the spiral is completed, replace the grinding wheel with a craytex rubber polishing wheel of superfine grit. When you polish, only feed each pass 0·002in at a time and don't forget that this polishing wheel is actually cutting, too, only at a much finer rate. You will be amazed at the beautiful polish which this wheel renders used in conjunction with the coolant spray.



Steps 5 and 6. Cutting the taper is cumbersome in that you must set the top slide of the carriage to 2deg and manually run it in and out along the taper. If you must have the taper (most large endlesses demand it), then do it but for the smaller endlesses I use the straight shank method as repairmen have done since year one.

The lower chamfer should be cut

continued on page 36

THE HOUSE OF NICOLE FRERES

by Suzanne Maurer

THE HISTORY of the Nicole Frères' firm is by now well-known. A correspondence on this subject with Mr W Zurbuchen, Chief Archivist of the Canton of Geneva, was published by Mr Cyril de Vere Green in *The Music Box,* volume 4, pages 234 - 240.

Those visiting Geneva might like to hear that the house where the Nicole family lived in Geneva from 1830 onwards still exists. It is near the Mont Blanc bridge and the Hôtel des Bergues at 17 rue Kléberg. The address and the following picture of the front of the house should permit the visitor to find it easily.

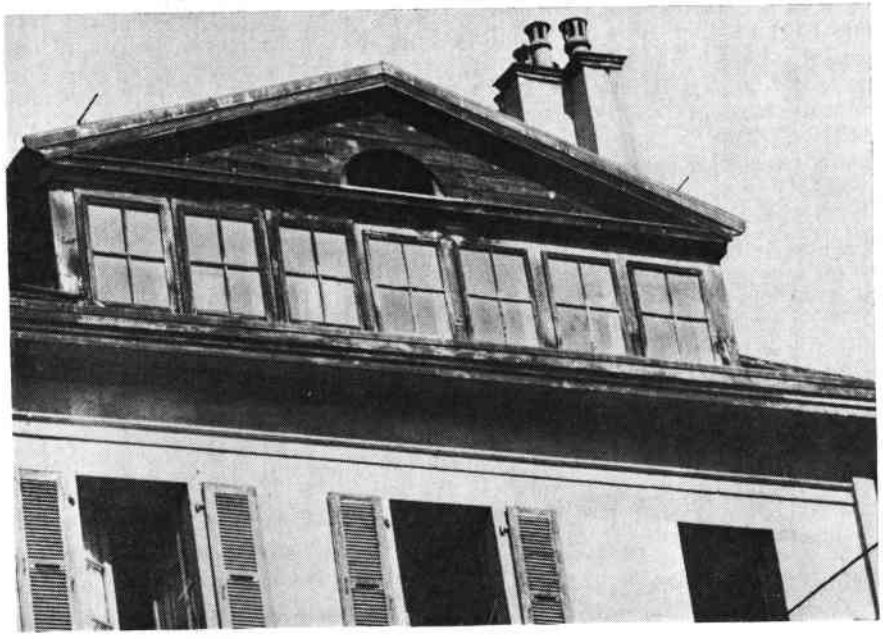
Using census papers, directories and cadastral surveys of the last century, we are almost certain that the house shown is indeed the one where the Nicole family settled around 1830. Sometimes directories also indicate "rue du Cendrier" and even "Passage Kléberg" or "Passage du Cendrier". As it has already been supposed, the reason is most certainly a passage (presently Passage Kléberg) connecting the streets Cendrier and Kléberg, the house having therefore frontages on the two streets. The passage is clearly indicated on the 1837 cadastral survey and its entrance is also visible on the picture of the front of the house on the Kléberg street.

According to Mr Zurbuchen the very top wooden floor of the house is typically an ancient watchmaker's workshop of the "Saint-Gervais" ward. This district in which the house is located was above all a watchmakers' neighbourhood and until the mid-19th century most of the manufacturing of the musical boxes was done there, the merchants' shops being on the other side of the Rhône River. Later on, after 1850 when the old fortifications of the town were being demolished, new districts were created and part of the manufacturers as well as the musical box merchants settled down around the Place des Alpes near the monument to the Duke of Brunswick, also well-known to tourists.

It was around 1830 that the two brothers Pierre Moïse and David Elie moved from an adjacent street to the "rue Kléberg" and with them their mother and their two sisters, Hélène and Françoise.

Around 1835 David Elie married Emilie Charlotte Plojoux and the 1843 census indicates that, with their son, Pierre François Emile, they were occupying the second floor, the rest of the family, i.e., Pierre Moïse and the two sisters occupying the third one (the mother died in the meantime).

At the present time, the Nicoles' house, although still occupied, is in bad condition. It would not be a surprise to see it demolished in the near future.



Suzanne Maurer is the daughter of Dr Pierre Germain of Geneva who is preparing for The Music Box a series of articles based on their joint investigation into the history of the Geneva musical box makers.

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continued from page 35

and polished. Now remove the endless then reverse it in the collet. Set the spiral into the collet until you can grip just above the last upper spiral — about 0·05in is enough.

One thing you must check before setting the tail stock. When you draw the collet down and lock in the endless, run the lathe and observe the concentricity of the pivot. The chances are that it will not be running true. Release the draw bar, rotate the endless slightly and re-set the draw bar. Try again for concentricity and repeat the operation as many times as needed until the pivot runs true. Now you can set the tail stock, grind and polish.

Guess what ! You have now just completed your first endless screw !

For those who have encountered difficulty in trying to get governors to run, even after stripping, cleaning and adjustment, Ken Fritz's next article offers advice as well as telling you how to cut and fit new wheels — and even work out the design of missing parts.

Christies
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During the past five years Christie's have held regular and very successful sales of musical boxes at King Street; now, in order to expand these sales, we are transferring them to our new premises at:

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Telephone: 01-859 2422

The next sale is planned for May 15th, and will include a magnificent STELLA 25¾-inch disc musical box in a Louis XV style cabinet and a rare mechanical piano by DEBAIN of Paris, formerly the property of the Princess Eugenie. Catalogues will be available at the above address from mid-May.

Musical Box sales are held at two - three month intervals and are catalogued by Christopher Proudfoot, who is always pleased to advise on the sale or purchase of disc and cylinder musical boxes, phonographs, gramophones and allied subjects.

Record Reviews

IT HAS taken a long time for the vast treasure store of piano rolls to be appreciated and more and more the smaller specialised record companies are looking to paper rolls for the merits of both authentic and (usually) copyright-free performances by top artists of the past.

Significantly, the skill of the original composer or performer does not always come across. This is generally the case in my first record this time. Lovers of ragtime — and there were plenty even before the film *The Sting* pushed Scott Joplin's name back into the limelight — will know of the music of James P Johnson, the man who made his name by developing a new dimension into this type of piano-playing. Whereas Joplin's appeal was basically melodic, Johnson placed greater emphasis on harmony and rhythm.

During 1917 and 1918, Johnson recorded piano rolls for Artempo, Universal, Perfection, Metro-Art and, later, the QRS labels. Biograph Records, Inc., of P.O. Box 109, Canaan, New York 12029 have issued a recording of 12 of Johnson's rags on **Biograph BLP-1009Q**. Described as Volume 2 of their ragtime series, Biograph's disc features two different performances of each of three of the 12 rags, and one rag is compared with a live piano recording made by Johnson in 1939 which serves to illustrate primarily the poor quality of recording which we used to accept.

The piano rolls are played on a 1910 Steinway dual 65/88 and all tracks were apparently recorded in one day! The performance of the piano in the hands of its operator is not brilliant and rather empirical tempo is noticeably erratic on some tracks. Either the piano or its operator appears unable to offer adequate accent or divisional theme/accompaniment separation and the result is markedly mechanical and monotonous in places.

However, really detailed and authoratitive sleeve notes on the music and the rolls plus the unusual rarity of some of the rolls recorded makes this a ragtime piano roll enthusiast's delight.

Piano rolls of a different kind make up what, by all accounts, must be a remarkable collection of discs. When the 1939 - 45 war loomed ever closer, Emil Welte and Karl Bockisch, who sired the famous Welte-Mignon reproducing action, realised that it would not be long before British and American aircraft bombed Freiburg. They removed the entire collection of around 500 masters for the reproducing pianos to a hideout deep in the Black Forest. When, as they rightly feared, the Welte factory was burned and bombed out of existence, the destruction was complete, yet the masters were safe.

An American enthusiast, Richard C Simonton, visited the aged Welte in 1948 and bought the entire library of master rolls. Now, thanks to the co-operation of another enthusiast who was a record producer, a series of discs bearing the overall title **The Welte Legacy of Piano Treasures** has been launched. Some 23 discs have so far been issued with performances by artists such as Josef Hofmann, Debussy and Ravel.

It has not been possible to hear any of these recordings so I cannot pass comment on the standard of recording (which, by the way, was carried out using an ordinary Steinway Grand played by a Vorsetzer reproducing push-up player), but the series carries flattering testimonials.

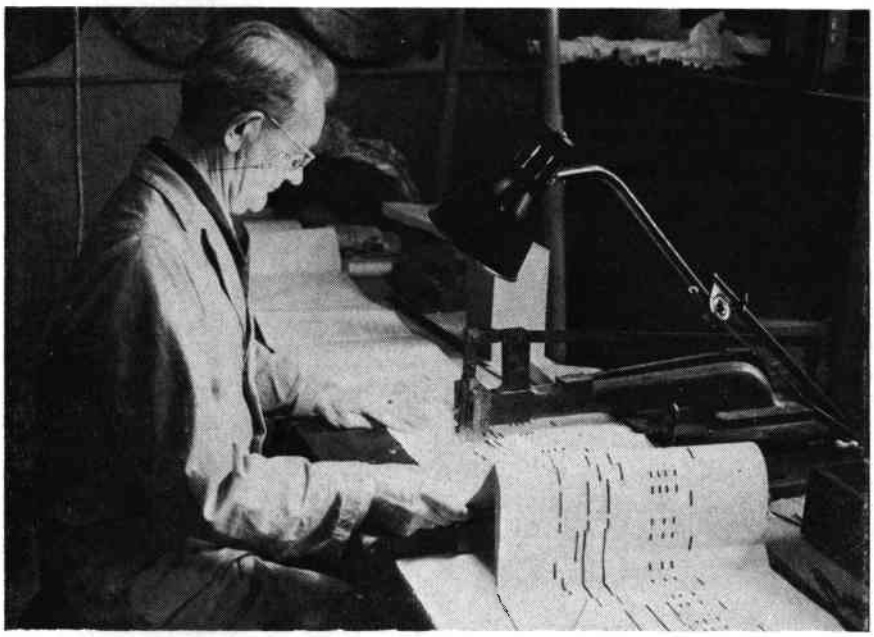
Available from Recorded Treasures, Inc., P.O. Box 1278, North Hollywood, California 91604, the records are accompanied by a well-produced LP-sized booklet describing the Welte company, the reproducing system and the recording techniques used. Assuming that the discs live up to their descriptions, then this could be the most important library of piano roll recordings so far produced.

While on the subject of authentic performances, let me draw your attention to a marvellous series of orchestral recordings produced by Harmonia Mundi and available on the recently launched BASF label. The so-called *Collegium aureum* is a small court orchestra performing on what they term "original" (meaning contemporary) instruments. Paul Badura-Skoda plays Beethoven's Piano Concerto No. 4 in G on an 1820-vintage Conrad Graf *hammerflügel* **(BAC 3002)**, and on **BAC 3003**, Jörg Demus plays Mozart's piano concertos number 26 and number 8 on a Johann Schantz Viennese *hammerflügel* of 1790. No fewer than 27 discs are available of this group and the two mentioned here are representative of the interesting new dimension which is imparted to music both familiar and not so familiar when performed on period instruments.

With the much easier availability of record imports on both sides of the Atlantic, these discs are readily obtainable from most record stores. The American discs mentioned earlier can usually be obtained to order from the many specialist stores both in London and the provinces.

A.O-H.

The Dutchman stitcheth . . .



Punching out book music for the 105-key Carl Frei organ *De Schuyt*. Museum technician B P Bos is seen here in the workshops of Utrecht's Nationaal Museum van Speeldoos tot Pierement preparing copies of books which were damaged by bullets during the 1939 - 45 war. A paper tracing of the original is clipped to the blank book and then perforated on this foot-operated machine which has interchangeable cutters and dies to suit slots representing musical notes of differing values.

WELTE LEGACY OF PIANO TREASURES

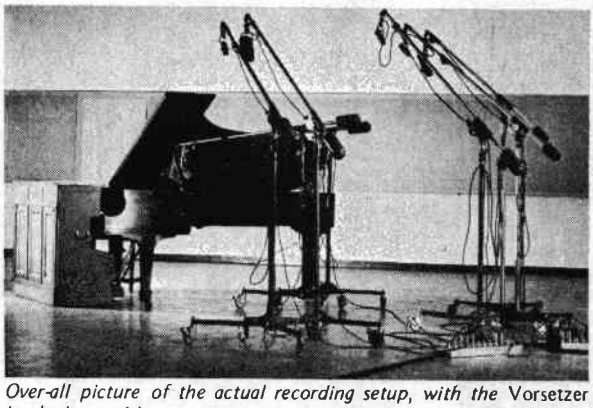
First Offer – First Come, First Served

My supplier, RCA Victor, has insisted that all small independent record companies remove their inventories because of the vinyl shortage; therefore, limited quantities of new stereo WELTE LEGACY albums are now available at FIVE DOLLARS EACH

(Usually $12.50 Each!)

TIME MAGAZINE says: "These recordings are every bit as good as they might have been had the masters themselves been around to play for the stereo age. They are hi-fi's first completely successful encounter with a golden age of the piano and they come with towering endorsements . . . "

662 JOSEF HOFMANN (Vol. I) PERFORMS IN 1913
Mendelssohn, Handel, Beethoven
664 PADEREWSKI PERFORMS IN 1906
"Moonlight Sonata" & Chopin Program
665 OLGA SAMAROFF-STOKOWSKI PERFORMS 1908
Brahms, Chopin, Wagner
667 WLADIMIR DE PACHMANN PERFORMS IN 1906
Chopin – an unusual interpretation
668 FERRUCCIO BUSONI PERFORMS IN 1905
Beethoven-Liszt, Bach-Liszt, Chopin
670 TERESA CARRENO PERFORMS IN 1906
"The Tigress of the Piano"
Chopin and Beethoven
671 RUDOLPH GANZ PERFORMS c. 1910
Korngold, Liszt, Debussy, Granados +
672 EUGEN D'ALBERT PERFORMS IN 1913
"The Little Giant" – Schubert, Grieg +
674 JOSEF LHEVINNE PERFORMS IN 1906
Schloezer, Czerny, Scriabin, Chopin +
675 BERNHARD STAVENHAGEN & ALFRED REISENAUER PERFORM
(one side each) IN 1905
Liszt's last pupils –
Liszt "as played by the Composer", Chopin +
679 WALTER GIESEKING PERFORMS c. 1920
Debussy Program, Rubinstein & Grieg
682 ALFRED GRUNFELD PERFORMS IN 1905
Schumann, Strauss, Beethoven, Chopin +
683 JOSEF HOFMAN (Vol. II) PERFORMS IN 1913
Wagner-Liszt, Wagner-Brassin +



Over-all picture of the actual recording setup, with the Vorsetzer *in playing position.*

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THE GENEVA COLLECTION

of Automatic Musical Instruments

FOR SALE

Claes O. Friberg and Q. David Bowers, directors of Copenhagen's Mekanisk Musik Museum, are pleased to announce the purchase intact of the Geneva Collection — one of the finest groupings of automatic musical instruments ever to appear on the market. This fabulous collection, together with other important acquisitions, will be featured in our MMM Review No. 5 scheduled for publication in March. Listed, illustrated (in most instances), and priced for sale will be several hundred — that's right, several hundred — disc-type music boxes, a fine array of cylinder boxes, organettes, reproducing pianos (Ampico, Duo-Art, Welte, and Hupfeld), coin-operated pianos, several magnificent orchestrions (including the world's only known example of the Hupfeld Helios III/42), an interesting selection of fairground organs, many beautiful dance organs, and other automatic musical instruments of interest.

Over the years we have been important suppliers to members of the Musical Box Society of Great Britain. If you are a dealer, it will pay you to get acquainted with the world's largest wholesale stock of instruments. If you are a collector, you will appreciate the savings you can make by purchasing here. We invite you to subscribe to the "MMM Review", a large illustrated magazine which is published approximately each eight or nine months. A copy of our forthcoming "MMM Review" No. 5 featuring the Geneva Collection is yours upon publication for $2.00 (£0·80), or you can subscribe to our next six issues for $10.00 (£4·00). Your complete satisfaction is guaranteed. If you do not find this to be the most fascinating catalogue you have ever read, then just let us know and we will refund your money — and you can keep the catalogue free of charge ! By the way, our next issue will feature some interesting editorial matter in addition to instruments for sale — an article by MBSGB Member Graham Webb telling of the "good old days" when he had his shop in Portobello Road, a feature by Harvey Roehl (owner of the Vestal Press in New York) which tells how he discovered automatic musical instruments and really became involved in the hobby, and other items of interest.

Right now we have in stock and available for immediate sale f.o.b. Copenhagen approximately 500 automatic musical instruments of all kinds. If your travel plans include Denmark, be sure to pay us a visit ! It is best to let Claes Friberg know in advance you are coming for our for-sale items are located in several warehouses around Copenhagen. However, no advance notice is required to visit our permanent museum display of instruments. The museum is open daily except Monday and Tuesday.

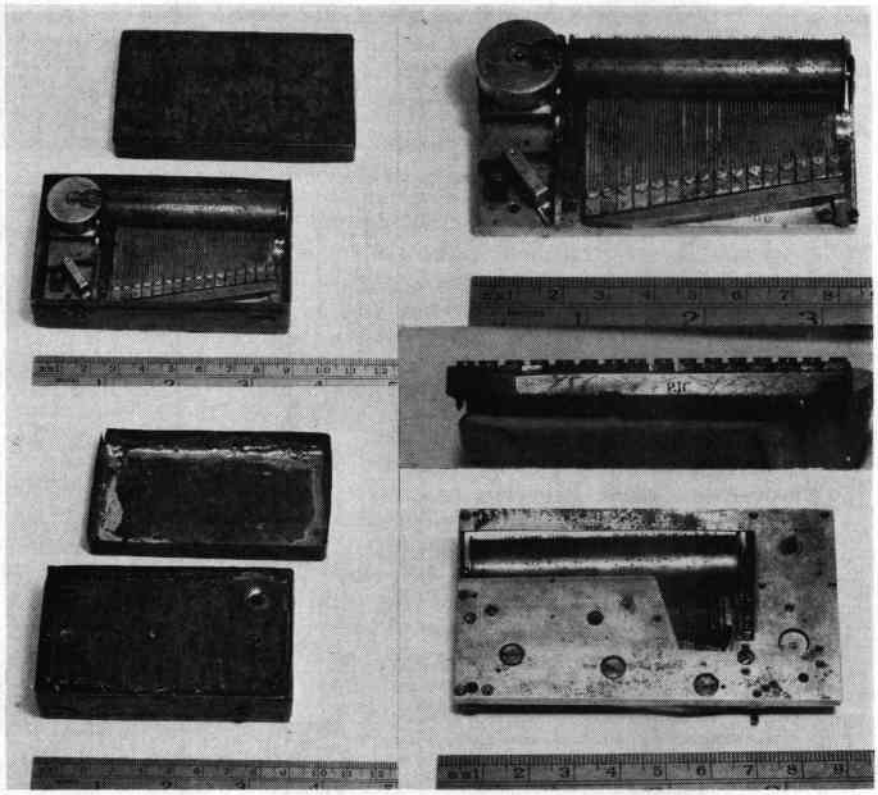
Are you an active collector or dealer ? Then it will really pay you to get acquainted with the Mekanisk Musik Museum !

Mekanisk MUSIK MUSEUM

Letters to the Editor

David R Young writes from Rochester, New York :

THESE photographs (reproduced here) are of a snuff box in my collection made, we think, by Alibert, about 1820-25. They serve to illustrate a couple of points. First, though the teeth are in groups of four, I can report that the "alignment pins" (described in your article in Vol 6, No. 5 of *The Music Box*) are present for all teeth in the comb. I note two exceptions, though. One has not been drilled and pinned, and an extra hole and pin have been set between two of the other teeth. Let me re-state that more clearly. There is a pin for each tooth but one (the fifth from the right end), and there is an extra pin between the 25th and 26th from right. Inspection with a small eye loupe (about 8×) reveals that the alignment pins are not of uniform diameter, though there seems to be no particular pattern to this. It may just be a result of uneven popping them down. A few on each end are not countersunk but are a few thousandths of an inch above the surface.



Secondly, I'd like to add one more suggestion to your long list of fine points on photography (article: *Photography and the Musical Box,* Vol 6 No 5, page 359). Whenever possible, I would like to see a scale in the photograph to give the viewer a size reference. People, the common yardstick included in most photographs of instruments, are a non-standard measure and come in a wide variety of sizes. A coin is helpful, but non-standard in a world-wide study such as ours. If a scale cannot be included, I would encourage the author of each article using photographs to state in the text that "the case of this one measures just over 1·7 metres tall" or something similar so the reader can get some appreciation of the size. The pictures on pages 332, 333 and 334 of Vol 6 No 5 would benefit from this notation. What, for example, was the cylinder length ?

Jack Tempest of Burnage, Manchester, writes :

I WAS interested to see the illustration of the Nicole Frères pianoforte box — page 510 of Volume 6 — because the box is numbered 29618 and I have a similar box numbered 29195. The cylinder is 13ins. long, playing six airs and the tune-sheet is of identical design, also dark green. The six airs are the same titles and in the same order as the first six airs on the illustrated box — which plays eight airs. The only difference is that mine states *God Save the King* instead of *Queen.*

This box, recently beautifully restored by member Jim Hall of Kendal, was amongst quite a collection of items left by a local recluse a few years ago. I tried to purchase a few items, then I was offered all the items, then the condition was made that I must purchase the complete contents. I couldn't really afford this at the time and the whole thing collapsed when I was told that I must purchase the property! However, I visited the place at a time when the solicitor had called in a local antique dealer. He looked at this and that, making his offers. Then he saw the musical box in question — the box had been roughly varnished and an ugly glass knob screwed to the lid. "That", he said with an upturned nose, "is worthless and may as well be dumped in the dustbin!" Having already spotted the forte-piano formation of the comb and the magical words Nicole Frères, I blurted out, "Well, I'll give you £15 for it!". I have no idea why I picked £15, but it did the trick. The solicitor eyed me as though I was a little odd and told me I may as well have it. I wonder what would have happened had I said fifteen bob? Ah, well, I can't grumble — it's now my favourite cylinder box.

P.S. The Gamme Number is 946.

P.P.S. I am dreading the appearance of your new-size journal — still don't see any sense in it.

Francois de Villeneuve writes from Lyons, France :

I HAVE an 11⅞ins. Symphonion with both upper and lower combs 36 teeth each (opposed combs). What is the tuning scale? I did not find it in the book by M Webb. Is it possible to look for discs in England? I also have to make good a spoiled middle wheel on my cylinder musical box. Some of these work very well, but some no. What is the angle of the teeth? Probably not far from that of the endless screw of the box? And what is the position of the wheel versus the endless screw?

Do you know of a tool to put bridges on a large cylinder of an organ musical box and to put them at the same height? Ordinary pinning has been generously described, but bridges not!

Has a member tried to completely re-make a comb? I have two to make. Tuning is possible because of the notes engraved on the actual base of the combs.

Editorial comment : Discs for the 11⅞ins. Symphonion are relatively easy to find in England. Perhaps some member with an instrument of this type would like to submit for publication the tuning scale. A series of technical articles by Ken

Fritz of California is to appear regularly in *The Music Box* which will include such details as how to design, make and fit up a second wheel for the endless screw. Putting bridges on an organ musical box is to be the subject for a forthcoming article. Arranging all the bridges at the right height is easily done with a fork-shaped depthing punch. In any case there is appreciably more latitude in setting up organ notes than comb notes on a musical box since the actual height to which the organ key is raised is not critical within a few thousandths of an inch. Several members have had a go at making and tuning a new comb — one attempt is described elsewhere in this issue. Comb tuning is another aspect to be covered by a forthcoming technical article.

Phil Bailey writes from Whickham, Tyne & Wear:

With regard to your article concerning fractured springs in MB Vol. 6, No. 7, I believe the effect can be explained metallurgically. The notch toughness — (crudely brittleness) of metals is effected by temperature, slight variations of composition and previous treatment. Carbon steel which is the material normally used for springs is particularly sensitive. The notch strength falls rapidly towards 0°C. so that resistance to stress is much reduced and brittle fracture can occur — perhaps with great suddenness.

Brittle fracture is characterised by a crystalline appearance of the surface. The crack need not open up much in order to propagate as is necessary with ductile failure.

The phenomenon has long been known and is still being investigated in various materials. The answers or cure lies in improved material, i.e., removal of impurities, e.g., sulphur, and correct thermal treatment. This is no help to the owner of old mechanisms, simply, to "steal" a phrase from a local paper campaign (in another context) "keep them warm".

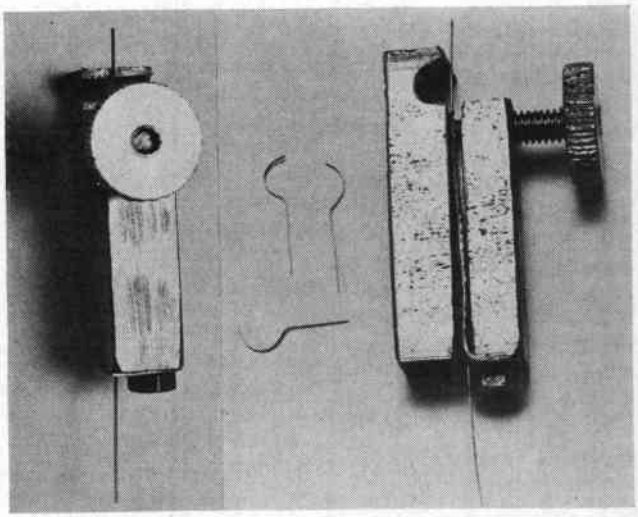
(Ref.: Metallurgy for Engineers, E C Rollason, published by Arnold.)

Vince Bond writes from Romford, Essex:

IN VOLUME 6 numbers 7 and 8 there were articles referring to shattered springs in the smaller type of musical box. Working in the display trade, I came across a similar case with glass. I am not suggesting that glass has anything to do with springs, but their hardness and age could have some bearing on the matter.

My interest led me to our glass supplier and after explaining to him the nature of my visit, he gave me the low-down on some of the peculiarities of glass and finally suggested that springs could act in somewhat the same way.

He described how glass becomes more brittle with age and has sadly found this so during his experience. When being asked to cut some old glass taken from picture frames, etc., for recutting, it has shattered or split in every other direction than where he put his diamond cutter. Another interesting point he mentioned was that old glass is more vulnerable to changes in temperature and, as he put it, "it's just waiting to shatter at the slightest opportunity". It could be, he said, that springs could act in the same way since they are, like glass, extremely hard and become more brittle with age. The continuous tension applied in winding causes stresses that could lead to metal fatigue and then complete breakdown.



This brief report may not count for much and it obviously hasn't solved anything but at least I thought it worth mentioning.

It certainly seems that we learn just a little more when searching for answers — but not always getting the answers we're searching for!

Editorial comment: I thank Vince Bond for his interesting observations and I am sure that age-hardening takes place in glass just as much as it does in springs, and that work-hardening can also take place in both. An interesting additional observation is that glass is an altogether odd substance, being in truth a super-cooled liquid. For proof of this, many very old stained glass pieces in church windows are much thicker at the bottom than at the top where they can be seen to have drawn out of the leading, so showing that over several hundred years the glass has actually sagged under its own weight. Member Norman Brown of The Haggis Bashers has kindly drawn my attention to a most interesting letter in the *Horological Journal* for January, 1975, which shows that this journal is also concerned at the mystery. A reader submits a lengthy paper complete with illustration showing the shattered spring in a timepiece he recently overhauled which was broken at "31 discrete places". It will be interesting to see if our fellow journal, quizzed unsuccessfully on the same phenomenon in 1898 (vide our previous papers) can now produce a solution.

J B Grout-Smith of Bognor Regis. Sussex, writes:

I WAS recently faced with the need to replace all the damper springs in a Nicole Frères box which I acquired in a non-playing condition. As this involved the production of about seventy springs of various thicknesses and as my attempts to produce each spring individually on the tooth met with failure; I cast about for a way of producing the springs in a jig so that they could be fitted to the tooth after they had been formed.

The jig is made from a piece of mild steel bar about ⅜ins. × ¼ins. × 1ins. and as will be seen from the photograph, a hole (in my case 9/64ins. diameter) is drilled close to one end and a saw cut is made on the centre line of the hole to bisect it. One half is cut away to the circumference of the hole to allow a smooth rod to be used to press the damper wire into the remaining half of the hole. Several strokes will be needed to form the spring but practice soon makes this a quick job.

A clamping screw is needed to clamp the piece of damper wire in the slot and I found a piece of thin steel inserted in the slot between the clamping screw and the wire prevented the wire from moving under the clamping pressure.

This jig can be made with only a few simple tools and certainly overcame my lack of skill. Also if, as happened to me frequently, one of the little springs flicked across the room, it was much quicker to make a fresh one than to search for it on my hands and knees.

Unconsidered Trifles

from John Thompson and Adolphe Smith's "Street Life in London", 1877

. . . in the streets, many a moment of quiet enjoyment has been afforded to the tired artisan by these modern minstrels. They have repeated to the uncouth English labourer the warm melodies of the Italian opera, they have helped to spread among the poor the love for the most humanising and innocent of enjoyments, and have nurtured in our courts and alleys echoes of purer music than could otherwise have reached these dismal abodes. In this, the piano-organs have been of special service. As a rule, their selections are excellent, and the execution far surpasses that of a number of ladies who do not hesitate to play before company.

Classified Advertisements

Members: 3p per word (bold type 5p per word). Non-members: 6p per word (bold type 10p per word).
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FOR SALE

AEOLIAN organ model 1500 46-note in working order with 60 rolls. Offers to R G Hough, Gordon Lodge, Chudleigh, Devon. Tel.: Chudleigh 852198.

INTERCHANGEABLE cylinders for exchange or sale. Paillards Sublime Harmony (4-air) 13ins. × 2½ins.; Mermod Freres 11¼ins. × 2¼ins. (6-air) single comb; (exchange only), perfect condition. Also require 13⅜ins. Symphonion discs. P W Carter, Haroldstone House, Crickley Hill, Gloucester. Tel.: Witcombe 3505.

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POLYPHON, coin operated. Nice condition. 12 discs 19⅝ins. On disc cupboard. £550. Old key wind musical box B.B. & Co. Six tunes. Wants reconditioning. Austin, Hemming Cottage, Old Brampton, Chesterfield. AH/AD/13

FIVE hundred and thirty-two pages of invaluable information on mechanical musical instruments. All eight issues of Volume 6 of *The Music Box* are available, with special comprehensive index. Price £8·75 ($23·00) post free while stocks last from The Secretary, The Musical Box Society of Great Britain, Bylands, Crockham Hill, Edenbridge, Kent. All the issues comprising Volumes 5 and 4 are available in limited numbers at the same price. Not just hours of fascinating reading, but a reference work for continual use.

NICOLE FRERES cylinder musical box number 26543, c. 1845. Movement only — no case. Good working order but needs overhaul and clean. £180. Arthur Ord-Hume, 14 Elmwood Road, Chiswick, London, W.4.

FOURTEEN Polyphon discs 24⅝ins. £10 each. Reduction for quantity. Details from Robin Lloyd, Acre Batch, Lower Wood, All Stretton, Shropshire. Tel.: Leebotwood 233. AH/AD/11

EXCHANGE

TWO Monopol or Symphonion 13⅜ins. discs offered for any of the following Monopol discs: numbers 6330, 6337, 6338, 6070, 6175, 6082, 6198. Mr S Carr, 82 Norman Road, Hastings, Sussex. Tel.: Hastings 428053. N-M

WANTED

WANTED for my own personal library. I am very anxious to obtain a copy of Chapuis & Gelis *Le Monde des Automates* (2 volumes, Paris, 1928) at a reasonable price. Would consider swapping a musical box. Arthur Ord-Hume, 14 Elmwood Road, London, W.4. Tel.: 01-994 3292.

DO YOU HAVE any interesting, unusual or otherwise remarkable mechanical musical instrument in your collection? If so, then other members of the Society would like to hear about it. The Editor of *The Music Box* is always interested in receiving details of such pieces for inclusion in the magazine. If you can contribute an article, photographs, or just information of value to others, then please let me hear from you. The Editor, The Music Box, 14 Elmwood Road, London, W.4.

I WISH to purchase good quality cylinder musical boxes, either restored or unrestored, musical automata and automaton figures, singing bird boxes, a self-changing disc machine, pipe organs or in fact anything of good quality which is interesting or unusual. These are items for my private collection and are not for resale. David Shankland, Hove-to, 124 Pencisely Road, Llandaff, Cardiff, CF5 1DR.

WANTED: Left-hand lower comb for Lochmann's Original 24⅝ins. disc size, also tubular glockenspiels for same. Also cabinet suitable for above — I have movement only. Could exchange empty Polyphon Model 5 autochange cabinet for same. David Walch, 12 The Chimes, Nailsea, Bristol, BS19 2NH. Tel.: Nailsea 2858.

MUSICAL mantel or bracket clock playing on the hour. Preferably small and attractive French ormolu type with cylinder in base. Cash purchase or would discuss exchange of cylinder, disc or organ from my collection. Arthur Heap, 51 Station Road, Delamere, Northwich, Cheshire. Tel.: Sandiway 882122. AH/AD/10

Society Affairs

Meeting at Lincoln

THE Provincial meeting held at Branston, Lincoln, on Saturday, March 1st, 1975, and at Saddington near Leicester on the following Sunday morning was well attended and extremely successful.

At the Moor Lodge Hotel, Branston, two large rooms were available to us in addition to the exclusive use of the dining room where all those attending the meeting had lunch. More than 70 members and their guests were present. The Society is very much indebted to Mr George Worswick for the admirable way in which all the arrangements were made.

After the usual meeting of friends old and new over cups of coffee, the opening talk, entitled *Making Perforated Cardboard Music for Organs,* was given by Mr Ted Bowman. He outlined the range of notes available on his organ and the way in which these can be used with different stops. He then described how it was necessary to adapt the music so as to take advantage of the organ's capabilities and deal with some passages where all of the notes originally written may not be available. Finally he played a recording of a book of cardboard music cut by himself, showing on one screen a slide of the music, and on another screen at the same time the cardboard book which moved forward in time with the music played.

This was a remarkable achievement and the President who was operating the projector very soon got into the way of "turning over" the music by changing the slide just at the right moment during playing.

Unhappily, our Editor, Arthur Ord-Hume, was prevented by illness from attending the meeting and instead of his talk on *The Historical Development of the Musical Box, 1790 - 1820,* we saw slides of some of the illustrations from a recent Swiss book, *Au Temps des Boites a Musique,* while recordings of the instruments were played. This item was inserted into the programme at the last moment by President Cyril de Vere Green.

The afternoon session opened with a talk by Mr Robin Timms entitled *The World of the Disc Musical Box.* Using an 11ins. Polyphon, he demonstrated how skilfully the arrangers had augmented the music to make it more attractive and had made modifications to overcome the lack of some of the notes called for in the original score. He pointed out differences in the style or arrangements found on Polyphons and on Regina discs and finally gave a disc of *Blow the Wind Southerly* in which the music had been arranged in the original Polyphon style by Mr Timms himself. It was difficult to believe that it was not an original Polyphon disc.

The meeting at Branston closed with an auction at which Mr Bosworth of Robson Lowe kindly acted as auctioneer. This raised no less than £160 for the Society funds and again we must be most grateful to Mr Worswick for all the trouble he went to in organising the event.

After the meeting at Branston, some 40 members went to Raithby Church to see a very interesting barrel organ built by Gray and Son in 1839. It was restored in 1963 to its original condition. The organ has three stops and three barrels mounted on the revolver principle as in a revolver musical box. It was demonstrated by The Revd J E Nunneley to whom we are most grateful.

Finally, on the Sunday morning Mr and Mrs Harold Smith very kindly held open house for members at their home, Saddington Hall, near Leicester. Here we saw a fascinating collection of which the highlights were a most beautiful weight-driven chamber barrel organ of about 1800, a self-change Polyphon with dulcimers and playing 22¼ins. discs, and a Piano Melodico book music-operated mechanical piano. The Society's thanks are very much due to them for their very kind hospitality.

Robert Burnett.

Open-house at Cardiff

DAVID Shankland's Open-House meeting at Cardiff took place on January 25th. More than 12 members and guests attended. David Walch of Bristol, who headed up a contingent of seven Bristolian members, says: "On behalf of my party I would like to express my sincere appreciation for the great hospitality which David and Juliette Shankland showed us. It was a most impressive reception and their collection of musical boxes and automata was well worth visiting."

Novice's Corner

Case-cleaning

NOTHING looks worse than a fine musical box case which is dirty with perhaps a century of old polish and dirt concealing the real lustre of the wood. An inlaid design on the lid can look quite unspectacular when grimed with age.

You can do a great deal to brighten up the woodwork on a musical box with nothing more complicated than a tin of metal polish and a duster, plus a bit of effort.

First look for loose veneer, inlay wood or brass strips: if such damage is present, then take care not to snag the pieces with the cloth and avoid getting polish under the loose parts.

Ammonia-based polish is best — try *Brasso* or even *Duraglit* polishing wadding. You will find that the dirt comes off quite easily, leaving the wood quite bright. It brings up stringing and cross-banding an absolute delight. Over the years, joint lines in inlay veneer seem to ooze slightly and this eventually becomes a thick, proud ragged black line. Metal polish and a bit of rubbing cuts it right away.

Make sure you wipe all the polish off otherwise it will dry as a white deposit. Now wax polish (NOT silicone polish) and the job is done. Next time, I'll show you how to clean up ormolu handles.

FULL ORGAN BOX

The introduction of the reed organ into the cylinder musical box is said to have been the work of Ducommun and Kimmerling (vide *The Music Box* Volume 6, page 307). Your editor has seen a very early Ducommun box with a reed organ and similar instruments of the late 1860s period onward are far from uncommon. However, the manufacture of a cylinder musical box comprising a full reed organ and no musical combs was an innovation dating from around 1880. The instrument necessitated a very large spring in order to provide sufficient power to pump large-capacity wind feeders and the whole mechanism was of large proportions. One maker seems to have specialised in the manufacture of these unusual and scarce musical boxes — George Bendon of Ste Croix who also had a London address at 36 and 37 Ely Place (Nicole Freres were at number 21) with a warehouse at 1 Charterhouse Street. The example pictured here has 39 reeds and plays 12 tunes. It is from the de Vere Green collection.

Louis Hooghuys was the eldest son of a Bruges-born church organ-builder named Francois Bernard Hooghuys. He set up in business in the Belgian town of Grammont and began manufacturing dance-organs. From the workshop of Hooghuys emerged some of the most colourful and strident of those organs which are so particularly Belgian. Voiced louder than contemporary instruments, these colourful dance organs were much sought after in their time. A number found their way to Holland where many have been rebuilt as street organs. Born in 1856, Louis Hooghuys made his first barrel organ in 1882. His business was continued after his death by his son, Charles. Louis grandson, Charles son, Romein Charles Hooghuys, is still in business to this day making book music in Grammont. The example illustrated here (left) is from the W J Barlow collection at Cleobury Mortimer. It has 84 keys.

LIST OF MEMBERS

875 William H Keeling, 5 Twin Oaks Drive, Alfreton Road, Sutton-in-Ashfield, Nottinghamshire, NG17 1FJ
876 Sanford M Libman, Sandy's Music Center, 8 Patrick Avenue, Pinehurst, Massachusetts 01866, USA
877 H Schofield, Pant-y-Rhedyn, Llanwnda, Caernarvon, Wales, LL54 5TL
878 J C Eustace, Dean Lodge, Croutel Road, Felixstowe, Suffolk
879 K M Hobbs, Church House, Church Road, Stanford-on-Thames, Oxford
880 A C Herweyer, P/A Acterom 5A, Hilversum, Holland.
881 Douglas F Palmer, Draycot Place, Battistock, Dorchester, Dorset
882 F D M Bullock, c/o Afia Control, 46 Audes Arts, Brussels, Belgium
883 Floyd C Miles, Miles Mountain Musical Museum, PO Box 488, Eureka Springs, Arkansas 72632, USA
884 Mrs C R Challenor, Wittenham Court, Long Wittenham, Abingdon, Berkshire, OX14 4QH
885 D Howett, 4 Wenchilsed Drive, Gretton, Northamptonshire
886 P R Burridge, "Old Track", Hill End, Hardington, nr Yeovil, Somerset
887 Mrs Beryl E Barker, "Castaways", Maldon Road, Hatfield Peverel, Nr Chelmsford, Essex
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889 John Mitchell, 22 Fernbank Avenue, Oakworth, Keighley, Yorkshire, BD22 7LE
890 J Van Witteloostuyn, De Savornin Lohmanlaan 34, Amstelveen, Holland
891 Dr P H Schram, Huisarts, De Krammer 14, Middleburg, Holland
892 Knud Schroeder, Neptunvej 9, 8270 - Hojbjerg, Nr Arhus, Denmark
893 Dr & Mrs A R Palmer, 800 Chestnut Lane, Arlington, Texas 76012, USA

REJOINED MEMBER

228 H Drummond, Megginch Castle, Errol, Perthshire, Scotland
331 Mr & Mrs A Smith, 418 E 88th Street, New York City, New York 10028, USA

CHANGE OF ADDRESS

42 W R Nevard, The Armour, West Bergholt, Colchester, Essex
110 G Foster, 24 Hackthorne Road, Cashmere, Christchurch 2, New Zealand
134 A K Clark, Dorland Villa, 65 Tonbridge Road, Hildenborough, Tonbridge, Kent, TN11 9VH
243 R Parkin, 57 Park Road, Hampton Hill, Middlesex
393 Gehard Hoschek, Landstrasser Hauptstrasse 102, 1030 Vienna, Austria
484 R Mason, Hawksdale Lodge, Dalston, Carlisle, Cumbria, CA5 7BX
545 R T C Street, Brook Cottage, 57 Smugglers Lane North, Highcliffe, Christchurch, Dorset, BH23 4NQ
629 J Boerlage, Molendijk 136, Krimpen aan/de Lek, Holland
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779 Mr & Mrs J Hawlett, 12 Monks Road, Virginia Water, Surrey
786 Professor F G Heath, 38 Campbell Road, Edinburgh, EH12 6DT, Scotland

CORRECTION TO ADDRESS

193 The membership of the late David Ellison is transferred to Mrs J Ellison, "Ambleside", 13 Garton Lane, Hunmanby, Yorkshire, YO14 0LN
529 G E Bowman, April Cottage, 24 The Slade, Clophill, Bedford

continued from page 1

business or just the sheer geographical impossibility makes attending meetings out of the question, *The Music Box* will provide you not just with value for money (and that is all-too-often a rarity today), but with a living contact with what is happening throughout the world in the field of mechanical music. Plus, of course, an opportunity to share in the enormous fund of knowledge and experience contained within our membership.

And be reassured that much is happening. We have members carrying out fascinating research into the history of individual musical box makers, others who are perfecting better repair techniques, some who are serious students of music which is preserved in the mechanisms of instruments, and all who are only too willing to share their hard-earned findings with you just for the sheer pleasure of being able to play their own part in recording information in a magazine which has now established itself as a major learned and authoratitive reference work throughout the world.

All the officers, officials and assistants who make up the committee of the Musical Box Society of Great Britain are, naturally, unpaid and are working because they enjoy it. Help us to help you, the individual member, by remembering that *The Music Box* is a clearing house for news, information, opinions, suspicions and, above all, discussion.

The Music Box is *your* magazine. It is an international magazine and one which *you* have helped to build up. I am sure that it is your wish to keep it that way. By and large, it's up to you.

ARTHUR W J G ORD-HUME

Forthcoming Articles

AMONG articles scheduled for publication in *The Music Box* in the near future will be a comprehensive series on the identifying of cylinder boxes by their tune sheets, in-depth biographies of some of the better-known musical box makers in both Geneva and Prague, a practical article on stripping, toning and repolishing cases, and others on the care of reproducing pianos, preserving music rolls, musical automata, how to play the Aeolian Orchestrelle, the return of our popular Question and Answer feature, identifying trade marks, and more words of wisdom for the not-so-advanced collector who wants to look after his boxes to the best of his limited ability.

Ken Fritz will continue his practical description of the musical box and discuss gearing, designing and making a mainspring, combwork and tuning and much else besides.

And of course Q David Bowers will be writing about some of the forgotten orchestrion makers in Europe. It is also planned to publish the first ever history of the Imperial Symphonion produced at Asbury Park, New Jersey.

Among photographs scheduled to appear in this Volume are illustrations of some of the rarest instruments in the world of mechanical musical pieces. Duplex cylinder musical boxes, the workings of the remarkable *Plerodienique*, a remarkable new Duo-Art reproducing mechanism which operates as a *vorsetzer* and can play any piano, and so on.

Easi-binders

SLIP binders for holding all the issues in a volume have been a feature of *The Music Box* since first it started. Stocks of binders for the new size are expected to be available later this year. As soon as they are ready, an announcement will be published.

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