

THE

MUSIC BOX

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the MUSICAL BOX SOCIETY
OF GREAT BRITAIN

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editorial

The success of anything is always a factor which must bear a relationship to a certain scale of fundamentals. Politically, one hundred voters throughout the country rate as being neither here nor there. However, at the other extreme, three persons suspected of a dreaded disease assume front-page status in the daily papers and at once we start worrying about an epidemic. Our Society was started in December of last year with thirty members. At the time of writing, we have over seventy. This is to us a large measure of success.

Whilst there is no immediate shortage of material for the Journal, I would like to have very much more available.

Once again, we have more pages in this issue (and a conventional numbering system!) We now have sufficient members to warrant this.

The story goes that a disillusioned wife watched with a psychiatrist as her husband sat cross-legged in the hearth patiently trying to catch fish from a bucket of cold tea with rod and line. "He'll have to be certified" said the psychiatrist. "I know", said the distressed wife, "but you see we do need the fish". Similarly, if we are to publish more pages you must contribute more material. Blank paper looks so dull.....

OVERSEAS MEMBERS

We are very pleased to welcome several overseas members to the Society and we are proud to find such interest in our activities in other countries. Copies of the MUSIC BOX are now being sent to the United States, France and Switzerland. An interest in musical boxes is the only pre-requisite for membership for there exists no language barrier in music, often described as the only universal language.

THOSE MAGICAL ONE HUNDRED YEARS

There is a cult which believes nothing to be either old or in any way valuable unless it is over a hundred years old. A lady offered me a very rare disc musical box "over 100 years old". I went to see her. The Symphonion was a late one - about 1908, perhaps even later. I told her so and pointed out the wood-worm which had happily devoted generations to the transformation of the case into powder. The discs themselves were somewhat smoother beneath than they should have been. Funny how one can be wrong, isn't it! She had had it valued by 'an antique dealer' who said it was 'over 100 etc.' and worth over £50. Beats me why she didn't offer it to the 'antique dealer' and buy something else 'over etc.' with the proceeds like one of those early television sets with a mirror on top. Now they must be valuable today...

CORRESPONDENCE PAGE

Several members have written asking if it is the intention to run a correspondence page. Short answer is 'yes' so let's hear from you. First letters are included in this issue.

ADVERTISEMENTS - WHERE ARE THEY?

'I had hoped to read about machines wanted and for sale' writes Member Ron Bayford. So had lots of others... The facilities of the MUSIC BOX are yours so do make use of them.

PRESIDENT CLARK MOVES NORTH

Mr. J. E. T. Clark has now moved to his home county of Warwickshire and we all send him every good wish for a happy future in his new home. His new address appears on the back page.

CONTRIBUTIONS - A SLY DIG TO INFURIATE READERS...

The vast majority of material submitted for publication is about disc machines. Nothing on small pipe barrel organs, reed organs, singing birds, musical watches or snuff boxes. Can it be that these musical desiderata are losing their following? Not a bit of it, I can assure you. It's just that some people don't (or can't) write..... I know that a large number of people believe themselves to be incapable of coherent writing but at least they should try!

Arthur W. J. G. Ord-Hume

DEVIOUS DESIGNS
IN DAMPERS FOR
DISC MACHINES

By
Frank S. Greenacre
(Illustrations: P.5)

All Members should be familiar with the style of damper which the Polyphon Co. ultimately fitted to all their models but it seems that for some not inconsiderable time this firm experimented with various types of these very necessary fittings.

The Writer has amongst his collection of disc machines an early 11" Polyphon (40 zinc discs, inside wind, No.41923) which has an unusual form of damping to its single comb (see illustration). Each tooth has a tiny hole drilled near its tip and into these holes are soldered fine pieces of wire. The spring part of the dampers which are operated by the star-wheels, are stubby affairs with projections which damp on to the comb wires and not on the teeth direct. Consequently, tapering of the ends of the teeth is not required, the teeth having squared tips.

This system, although quite an improvement on the very early felt dampers, still has shortcomings. The comb must be removed in order to make any adjustments and the frail wires need these adjustments often.

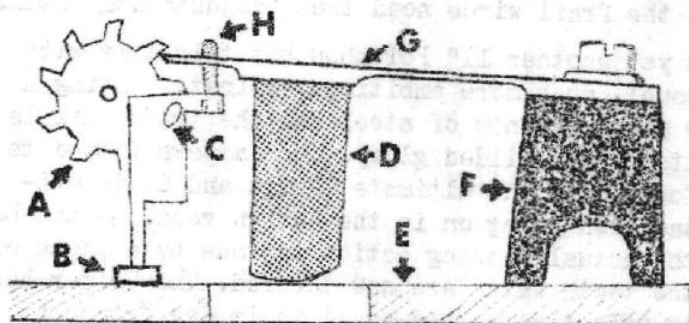
The Writer also has yet another 11" Polyphon but this time with twin combs and in an unusual, much more ambitious cabinet. Being a slightly later type, the discs are now of steel and the trade mark is but a black vestige of its former gilded glory. The dampers fitted to this model show a step forward to the ultimate design and it is evident that much thought had been going on in the design room. As can be seen from the diagram, the actual damping action is done by a piece of cat-gut on the side of the teeth which are now tapered. The Writer has found this to be quite an effective method as it is immune from that rather annoying buzzing which can sometimes emanate from metal dampers even when perfectly adjusted. Illustrations of these are overleaf.

Perhaps a few words about the unusual cabinet:- the disc, which is not covered, is played three times for a penny - a real bargain - and, as soon as the coin is dropped, a shutter worked by levers falls behind the slot. Further coin insertion is impossible until the music has ceased. The coins are received by a container on which the name "Polyphon" is inscribed. This section slides out sideways on runners when unlocked.

Later makes of disc machines brought with them a crop of various types of dampers, some of them being ridiculously over-complicated and containing channel pressings, wire springs &c. Without doubt, the dampers fitted to the Monopol machines were among the best devised to solve the problem of damping disc machine combs. This design, shown overleaf, has the following advantages:

1. The dampers are fixed beside and on the same rod as each star wheel thus eliminating the tedious soldering of rows of dampers on to a separate support;
2. The dampers also act as star-wheel steady springs and these are entirely eliminated (on some machines they are mounted separately);
3. They are very robust, readily adjusted and, once adjusted, stay adjusted!

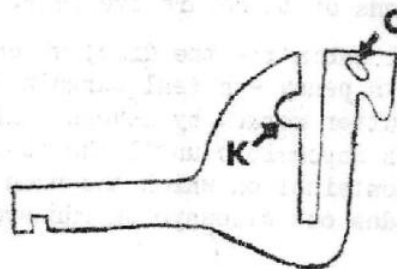
The illustration shows a large Monopol and a close-up of the typical comb arrangement with the usual 'vinery' decoration and excellent construction. By undoing the two locating screws, each gantry complete with star wheels and dampers can be lifted out for cleaning &c. The Ehrlichs certainly attempted to live up to the motto printed on the discs - *Semper Invictus*!



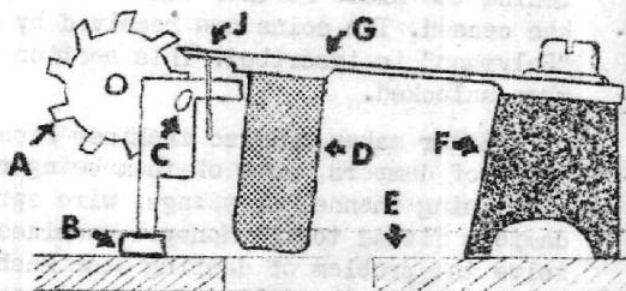
Left: 11" upright Polyphonic; Below: 11" table Polyphonic; Centre left: Monopol damper (enlarged drawing).

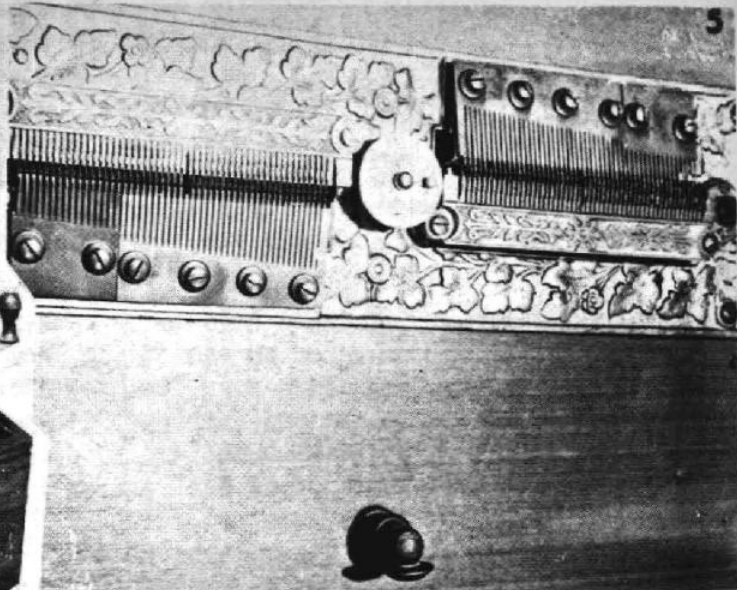
KEY

- A = Star wheel
- B = Damper Support
- C = Indentation
- D = Resonator
- E = Base-plate
- F = Comb base
- G = Tooth of Comb
- H = Cat Gut
- J = Thin Wire
- K = Star Wheel Support Rod Recess

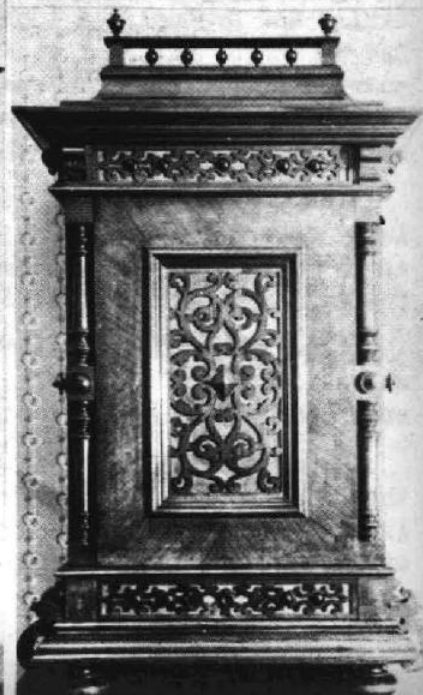
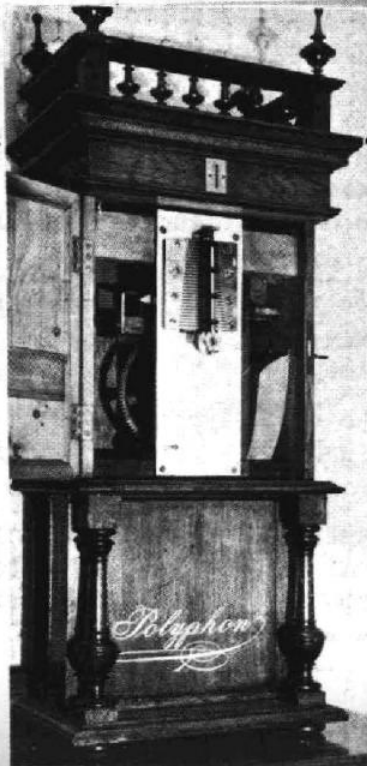


Note that the Star Wheel pushes the damper on →





11" inside wind Polyphon (top left) and twin-comb coin-operated vertical 11" machine (lower left). Above is the ornate baseplate and combs arrangement of the Monopol 13 $\frac{1}{2}$ " model, the attractive case being shown below. (Greenacre collection.)



DIRT - THE COLLECTOR'S PRESERVATIVE

By Arthur Ord-Hume



One day some while back, I was exploring some of the less patronised parts of the Isle of Wight and I discovered - a junk yard. All junk yards tend to look alike. Some specialise in elderly cars, gas stoves and bedsteads, others in less tangible bric-a-brac

whilst all seem to be endowed by Nature's fervent endeavours to transform Man's mess into floral grandeur via the nettle, the thistle and the creeper.

The junk yard I found had bedsteads, cookers and nettles and was on the banks of a damp backwater on one of the less pretty parts of the Island. My attention was drawn to a disintegrating blackened cabinet half buried in the muck of years and sharing, with no option on a sole tenancy, a pool of mud with a strident bramble. Somewhat forelornly hanging on one hinge, the once ornate front fell off as I touched it and the case, a few shreds of veneer still attached, displayed gaping splits between the warped boards. A dirty black mass concealed what I felt certain to be the corroded and unrecognisable remains of a once fine musical movement. With a stick, I scraped. A glint of bright steel appeared. With great care I uncovered a perfect pair of polished combs, the little brass dampers all present and correct, and a very smart gold-painted bedplate.

Subsequent careful cleaning and re-assembly has produced one of the finest 19th Polyphons I have ever seen. It would appear that every day of its service in some local ale-house, the mechanism had been oiled liberally and gradually a tough layer of caked dust and dirt bound in grease had sheathed the metal and this was entirely responsible for the mechanism surviving such rigorous conditions. Even the little springs on the clockwork motor air brake were unharmed and the big copper spring rivet still proudly proclaimed the date of manufacture - 11. 8. 96.

Now, fully restored and fitted in a new Polyphon cabinet which I was lucky enough to obtain, my Polyphon plays as serenely and as brilliantly as the day in 1896 when, newly assembled in the Leipzig factory, it performed for the very first time.

And where did I obtain a new Polyphon case? At a local auction where, described as a china cabinet - for it had carefully been gutted at some long past date - it was knocked down to me for a few shillings.

Somewhere here, then, there is a lesson to be learned. Provided that a music box has been well oiled - and fortunately the majority were liberally treated thus - dampness does not necessarily mean the passing of another of these splendid relics of a past age.

The following is an extract from the book
PATENT APPLIED FOR - A CENTURY OF FANTAS-
TIC INVENTIONS by Fred Coppersmith and J.
J. Lynx published in 1949 by Co-Ordination
(Press & Publicity) Limited to whom we are
indebted for this reproduction:

MUSIC

HATH

CHARMS



In a gloomy, wet December day in the year 1859, the people of Lew-
isham, Streatham and neighbouring parts of London, heard a soft,
singing noise which grew increasingly louder until it turned in-
to a mysterious music. Still louder it became until at last it was a
constant, deafening drone that resembled the death groans of a wounded
lion.

Windows and doors were thrown open. Frightened people ran into
the streets. Window panes began to vibrate, dogs howled, weeping chil-
dren ran to their mothers for reassurance. Police tried in vain to
keep the nervous and mystified crowds moving. According to newspaper
reports of the time, women fell on their knees and prayed in the street
believing that the Day of Judgment had come.

Again and again the roaring was heard until finally it died away
on a supernatural chord.

In the nearby Crystal Palace, quite oblivious of the public panic
he was causing, sat an American named Arthur Dennis, demonstrating be-
fore an auditorium filled with eminent music critics his great inven-
tion - the Steam Organ.

This monstrous instrument had thirty times the volume of any other
organ in existence. Instead of compressed air, which is used in the
conventional church organ, the pipes of the monster were set in motion
by steam supplied by a 30 h.p. engine. The organist was able to in-
crease the pressure to something like 125 lbs./sq.in. - a yet unheard
of achievement - by simply operating the stops. The tones could be
varied from a soft and lovely singing to the thunderous roar which had
terrorised the district, or even simulate the noise of a battle.

Mr. Dennis gave his instrument the poetic name of Kalliope, or the
beautiful-voiced, but his reasons for building the super-organ have ne-
ver been revealed. Certainly at the time there was a trend in European
musical circles towards increasing the power of musical instruments, but
Mr. Dennis carried that tendency to extremes.

He was of the opinion, no doubt fully justified, that his organ
could take the place of a full military band. It might well have caused
in South-East London a repetition of the Biblical incident of the Walls

of Jericho, but the music critics were happily unimpressed and the organ was never installed permanently in any part of England, on spite of Mr. Dennis' suggestion that it would be an effective way of calling people to church.

His own countrymen, on the other hand, were more sympathetic and steam organs were installed in several American cities, including St. Louis and New Orleans where the inhabitants were reminded of worship every Sunday by the powerful roaring of Dennis's invention.

But even when his steam organ failed to impress the British, Mr. Dennis refused to be discouraged and returned with a second monster instrument which was again played at the Crystal Palace and later at the Great Exhibition in Liverpool's St. George's Hall.

This also had been created to produce the maximum possible volume of sound and was, though considerably smaller than the organ, a combination of piano and a chorus of trumpets. Twelve basso trumpets and twenty ordinary trumpets were mounted on a grand piano. By means of air pressed through the trumpets, something like a fog-horn symphony could be produced by anyone who was brave enough to try and play the piano. The instrument was so loud as to be quite out of the question in the largest private drawing-room and did not prove a notable success.

To those who suffer from their neighbours' radio sets it should be some slight consolation to know that things were considerably worse a hundred years ago when the great aim in the construction of musical instruments was that they should make the maximum of noise.

Herr Karl Waelzel of Vienna spent no less than seven years perfecting his aptly named 'Panomonico' which incorporated well over 300 separate instruments, 150 flutes, 150 flageolets, 50 oboes, 18 trumpets, 5 fanfares, 2 timbals one triangle and last, but no means least, three big drums! And it could be played by one man.

Most amazing of all, the inventor succeeded in selling the monstrosity for 100,000 French francs. The purchaser was the Archduke Charles of Austria, protector of the muses and a man with a great sense of humour who bought it for the exclusive purpose of annoying his friends. He also allowed the inventor to exhibit it and for some time it could be seen - and heard - on the Champs de Mars in Paris.

But before we dismiss Herr Waelzel's invention too lightly, it is only fair to him to mention that he was a friend of Beethoven's and even persuaded the great composer to write a piece of music specially for the Panomonico. The 'Battle of Vittoria' Symphony, complete with trumpet calls, drum rolls and practically everything else, was the result.

Beethoven and Waelzel intended to perform the work on the Panomonic in London but, fortunately for the audience, the friends quarrelled and the visit never took place. Ninety members of the London Symphony Orchestra have more recently succeeded in producing the effect intended for one instrument while Waelzel will be remembered by generations of schoolgirls, strumming the 'Maiden's Prayer' not for his invention of the Panomonic, but for the simpler Metronome.

Anyhow, Waelzel started a craze for mechanical instruments combining the maximum of different sounds and there appeared the Orpheus, Daimonion, Baskanium, Harmoniphon and pneumatic piano and the electric ariston in quick succession. No wonder an embittered music-lover remarked "This noise is all so unnecessary - after all, we have Wagner already!"

Though they look strange to modern eyes, there were two musical instruments which attained very considerable popularity in their day. One was the Cello Piano which enabled a single musician to play with one hand on the piano keyboard and with the other to wield the bow of a cello. A smaller portable model combined a piano with a violin. This instrument was heard a good deal at Paris concerts.

Then there was the Lustre Chantant or Singing Lamp which became extremely fashionable in the salons of Paris at the end of the last century. Frederik Kastner, the inventor, owed his idea to the discovery of the English physicist, Higgins, that air pressed by force through an airless room produces tone. Kastner equipped a gas chandelier with glass pipes of varying lengths and connected the gas jets below the pipes to a key-board. When the keys were pressed, the gas jet turned down suddenly, hot air pressing through the glass pipes cooled rapidly and produced a high-pitched note, its tone varying according to the length of the pipe. Not only did the Lustre Chantant produce quite pleasing music, but the rapidly changing lighting effects produced proved an added attraction. Here was a concert you could listen to and watch at the same time.

CAPTIONS TO PICTURES ON PAGES 14 & 15 (1) Regina Orchestral Corona 27" self-changing; (2) Regina No.37 Corona self-changing; (3) Regina 15½" oak lid, short bedplate, 2 combs; (4) 15½" Polyphon with bells; (5) 100-note 15½" Polyphon; (6) 19½" Symphonion with bells; (7) 15½" 78-note 2-comb Polyphon; (8) 156-note 15½" Polyphon; (9) 17¼" Stella (this same cabinet was used for the 18½" Mira disc machine as well, both by Mermod Freres, Geneva); (10) 15½" Regina & disc cabinet; (11) 11½" Symphonion in veneered, moulded case. Items 7, 8 & 11 are in the Editor's collection. All others from Bornand Collection, New York.

THE DATE OF THE INVENTION OF THE MUSICAL
BOXA CRITICAL
REVIEWBy
Robert BurnettIntroduction:

The date of the invention of the musical box cannot yet be said to have been established beyond doubt and there are considerable variations between the dates as given by various writers on the subject. In these circumstances it appears worthwhile to try to discover which is the most probable date by reviewing the available evidence.

Before the information in the various sources is considered I think it is important to establish clearly the precise nature of the invention, the date of which is in question. I shall define the basic principle of the musical box as the production of musical notes from tongues of steel set in vibration by pins on the surface of a slowly rotating cylinder or disc. This definition excludes any mechanism which plays a tune on a number of bells and failure to recognise this distinction may have been responsible for some of the confusion in the past about the date of invention of the musical box proper. The confusion between the two mechanisms is easily understood since both have a cylinder with pins on the surface. In one the pins actuate levers connected to hammers which in turn strike the bells whilst in the other, that of the musical box, they act directly on the steel tongues producing the notes.

It was in this simplification of the mechanism that the inventor of the musical box showed his genius. Where previously for each note it was necessary to have a bell, a hammer and a lever operating the hammer, now all three were replaced by a single tongue of steel. As a result of the elimination of the bells and hammers, a scale of 10 to 15 notes could be accommodated in a very small space and advantage of this was taken in the early days to make the musical seals and other small items, often of gold, containing tiny musical movements. It also made possible the later development of the larger boxes with a scale of several octaves which were still of reasonable size and readily portable.

It is interesting to note that the invention was not simply the result of increasing technical skill. Watches of great complexity, calling for a very high standard of technical or mechanical skill, had been made for a hundred years or more before the invention of the musical box.

In the standard form of musical box, the tongues of steel are set in vibration by pins on the surface of a cylinder but some early movements were also made in which the pins were on the surface of a slowly rotating

disc. The positioning of the steel tongues which, in my experience, were always made and secured individually in this type of movement, is less simple than in the cylinder movement, but the use of a disc allows a very flat mechanism to be produced and this type of movement was used mainly in musical watches.

Possible because of its use in musical watches, some writers have suggested that the disc movement was invented before the cylinder movement. This seems to be extremely unlikely. In the cylinder movement, the cylinder is essentially the same as had been used for very many years in chiming clocks and the substitution of steel tongues for the levers, hammers and bells of the chiming clocks, while retaining the cylinder, represents a single inventive step. Introduction of a disc instead of the cylinder at the same time as the introduction of the steel tongues represents two inventive steps. I find it difficult to believe that these two advances were made at precisely the same time and I therefore contend that the first musical box movements were of the cylinder type.

The date which we wish to establish is thus the date of invention of the cylinder musical box mechanism and the information given by various writers will now be considered.

1. Helen Hoke and John Hoke "Music Boxes their Lore and Lure" (Hawthorne Books Incorporated, New York, 1957)

This is essentially a popular work which does not go into much detail when considering the date of invention of the musical box. It is suggested that the invention was made during the latter part of the eighteenth century, but no indication is given as to the source of the information or the authority for it.

2. L. G. Jaccard A long article on the history and development of the musical box by Jaccard originally published in 'Hobbies' magazine in U.S. in 1938 has been reproduced in the form of a booklet which is made available to members of the Musical Box Society (of America). It contains a brief account of the history of the musical box and of the development of the different types from the earliest times until the present day.

Jaccard states that early work on the beginning of the musical box took place more or less secretly, beginning about 1750, but unfortunately he gives no indication as to the evidence on which his statement is based. He refers to the manufacture of musical boxes in Geneva in 1815 and goes on "nevertheless it may be assumed that music boxes were already known in Geneva, as an inventory taken in 1780 indicated musical watches and small musical bottles were already made that could play two airs". I think that evidence based on musical watches should be treated with reserve as it is difficult to be sure that the watches in question were not striking

watches, repeaters or alarm watches, all of which were being made during the early part of the eighteenth century or, indeed, musical watches playing on a number of bells which had also been made by this time. Moreover it is not quite clear from Jaccard's statement whether the small musical bottles to which he refers were included in the inventory taken in 1780. My own interpretation of his statement is that they were not.

Jaccard describes a disc type movement as being the first to be made.

Later he states that the large size or 'cartel' musical box made its appearance in 1833, (again without quoting any source for the information). It seems unlikely that, if the original invention was made in about 1750, it would have taken until 1833 to develop the larger boxes. I think it must be concluded that Jaccard has put the date of the original invention much too early, for which further evidence is given below, and that he has put the date of the introduction of the large box too late.

3. J. E. T. Clark "Musical Boxes - a History and an Appreciation", Fountain Press, London, 1952

This is a full length book dealing mainly with musical boxes but giving also some account of barrel organs, musical clocks and singing birds. A section of the book is devoted exclusively to the firm of Mico Freres and describes the history of this famous firm of makers in Geneva and the different types of boxes made by them. Clark was at one time employed by Nicole Freres and one feels, as one reads his book, that the wealth of information which it contains is based on the practical knowledge of one who has handled and knows from first hand experience the boxes about which he writes.

Clark states that the invention of the musical box took place in about 1770, but does not give the source of his information. He holds that the earliest movements had pinned discs. He refers to Jaccard's article and quotes him as saying that by 1780 there were several watchmakers in Switzerland making musical watches. This differs somewhat from what is said in the reprint of Jaccard's article circulated by the Musical Box Society (the only text of this article available to me). Later Clark quotes a statement from 'Le Monde des Automates' by Chapuis and Gelis, Paris, 1928, that the earliest use of a comb is in a clock made by Antide Janvier, 1766. According to G.H. Baillie's reference work "Watchmakers and Clockmakers of the World" (N.A.G. Press Third Edition, 1951), Antide Janvier was born in 1751 and died in 1835. If this is correct, it seems rather unlikely that he would have made a clock incorporating so recent an invention in 1766 when he could only have been 15. This seems even less likely when one considers the term of apprenticeship served to watch and clockmakers at this period.

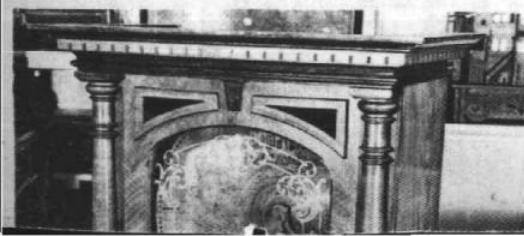
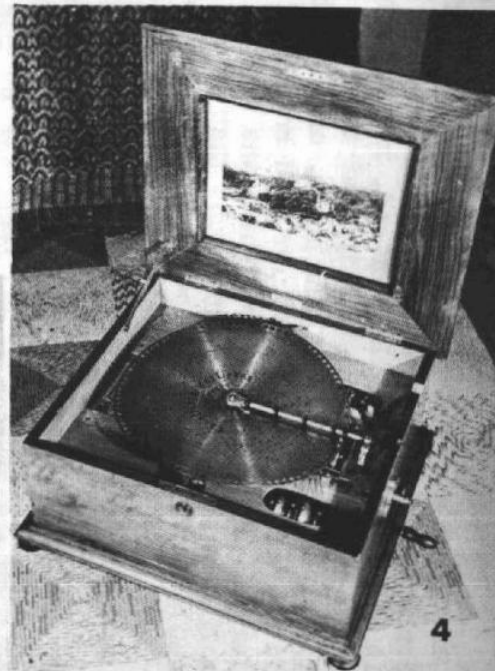
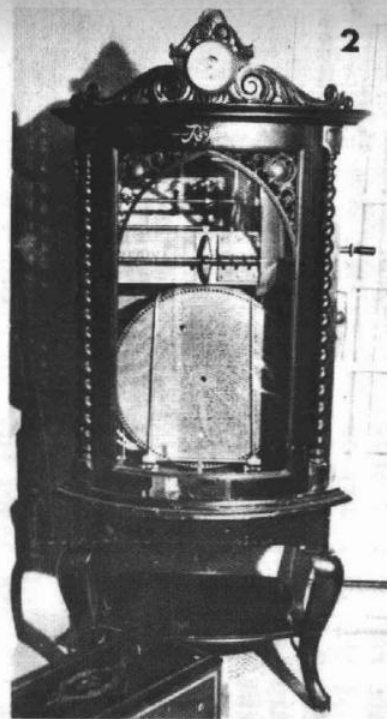
Clark also refers to early musical snuff boxes in silver or gold bearing hall-marks from 1780 onwards, but no specific box is referred to in any particular collection and, in the absence of a definite example, there remains the possibility that the boxes with the early hall-marks played on bells rather than combs, or that they contained comb movements fitted later. If a silver or gold snuff box were to come to light containing a musical movement which was clearly original and if the box bore a hall-mark showing beyond doubt that it was made before 1796, this indeed would be valuable evidence of an earlier date for the invention. As I shall show below, 1796 appears to be the most probable date of the invention on the evidence available to me.

4. Roy Mosoriak "The Curious History of Music Boxes" Lightner Publishing Company, Chicago, 1943.

In the section on the origin of the musical box, Mosoriak relies almost entirely on Jaccard from whom he quotes freely. He mentions the inventory taken in Geneva and referred to above in reviewing Jaccard's article but gives the date of the inventory as 1789 rather than 1780, the date given in the Musical Box Society's reprint of Jaccard's article. Mosoriak also reports Jaccard as saying that the inventory of 1780 (or 1789) contained musical scent bottles as well as musical watches. As I have said above, my own interpretation of Jaccard's wording is that he did not mean that the scent bottles were included in the inventory.

Mosoriak says that the inventor of music-work is unknown, although two sources attribute it to Favre. He quotes the Swiss Office for the Development of Trade as saying "The invention of the music box dates back to the beginning of the eighteenth century to one Louis Favre". I have not been able to check this last reference but I hardly think the term "music box" as used here can refer to the type of mechanism I have defined above, because the date mentioned is so much earlier than that given by other authorities.

Mosoriak states that Abraham Louis Breguet, the famous French watch-maker, invented the compact wire gong for repeater watches in 1789 and he makes the interesting observation that this is similar to the teeth of the comb in an early musical box. This statement appears in "Watches, Their History, Decoration and Mechanism" by Baillie (Methuen & Co., 1929) but Baillie would appear later to have changed his mind, because in Britten's "Old Clocks and Watches and Their Makers", seventh edition by Baillie, Clutton & Ilbert, The University Press, Glasgow, 1956, the invention of the wire gong for repeaters is said to be attributed to Julien le Roy. No date is given but as Julien le Roy died in 1759, the invention cannot have been later than 1759, (providing always that the attribution to le Roy is correct).



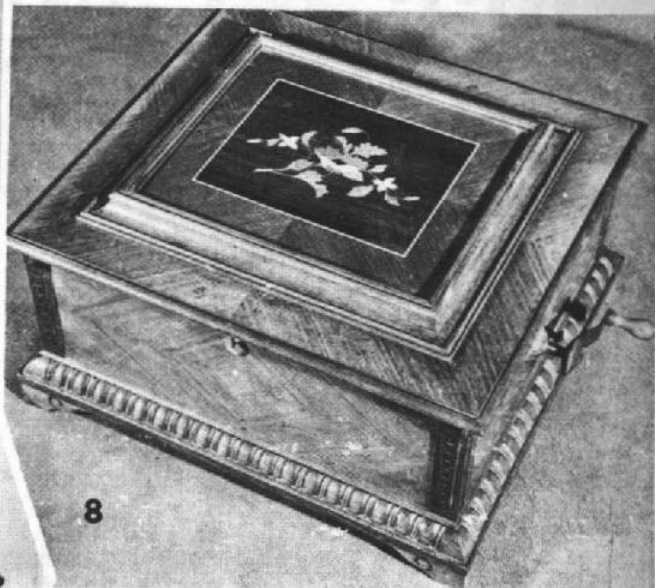


6



7

captions on page nine



8



9



10



11

15

(Continued from Page 13)

Mosoriak quotes Baillie (without specifying the work) as saying that the earliest use of a comb known is in a clock by Antide Janvier of 1776 described by Chapuis. This is presumably the same clock as referred to by Clark although the date given by Mosoriak is ten years later. The objection given above that Janvier would only have been 15 years old when he made the clock no longer applies if the later date given in Mosoriak is correct as Janvier would then have been 25.

5. Alexandre Buchner "Mechanical Musical Instruments" translated by Iris Unwin and published by Batchworth Press, London, in or about 1959.

This large and beautifully printed book contains a general account of all forms of mechanical musical instruments from the earliest days until today and is chiefly remarkable for the large number of excellent photographs which take up a great part of the book. The section on musical boxes is quite short. In it, Buchner states that C. Sachs considers that the beginning of the eighteenth century marks the invention of the musical box. Unfortunately, Sachs is not known to me and, although Buchner gives an extensive bibliography, it contains no reference to Sachs! Buchner also states that J. E. T. Clark claims the honour of being the first maker of musical boxes for Louis Favre of Geneva at the beginning of the eighteenth century, but this does not agree with my reading of Clark's book.

Buchner favours the disc type of musical movement as being the earlier.

6. Alfred Chapuis and Collaborators "History of the Musical Box and of Mechanical Music", Scriptor S.A., Lausanne, 1955.

This is also a large and beautifully printed work with a great number of excellent illustrations. The first part of the book is devoted to a history of all forms of mechanical music, excluding the musical box. The second and rather longer part is devoted almost entirely to the musical box. Of the works available to me, this book seems to contain the most definite evidence as to the date of the invention of the musical box. Chapuis gives a brief list of early writers from 1828 who have written on the subject and goes on to claim that, contrary to the opinion of other writers and, indeed, contrary to what he, himself, had earlier written, he now has evidence which enables him to date the invention precisely. His claim is based on an extract from the records of the Society of Arts in Geneva for the 15th of February, 1796 of which a photograph is given in his book and which I now quote (in translation) in full:

"Mr. Decombas reports that Mr. Favre has found the means of establishing carillons without bells or hammers. He presents a tin box con-

taining one on this principle: as this discovery could be useful in watch and clock-making the same commissioners named to examine Mr. Quosig's instrument are asked to examine it and report".

Chapuis adds that unfortunately the commissioners reported on Quosig's instrument, but not on Favre's. As Chapuis points out, this is easily understood because the Republic of Geneva was in a political turmoil at the time. She was encircled on all sides by the French Republic and was defending her independence desperately. Wide-spread unemployment was prevalent and in 1798, French troops entered Geneva thereby annexing the oldest republic in Europe. Only on May 15th, 1799, is there a further reference to Favre's invention. Again Chapuis reproduces a photograph of the extract of which a translation is as follows:

"The secretary reports that he was visited by Citizen Favre, who two years ago presented some carillons invented by himself and to whom the Society made an award by way of encouragement. His position has become even more unhappy, owing to the deterioration of his sight: he has some pieces of the same kind to send abroad, he has not the funds to do so: he requests the Society to lend him 36 louis for two months. The Society learns all these details with much distress, it would like to be able to assist Citizen Favre but the rules forbid it and the position of the Society makes infringement of the rules now more than ever impossible".

This is the essential evidence on which Chapuis attributes the invention of the musical box to Favre and indeed it is difficult to know what Favre's invention for producing "carillons without bells or hammers" can have been, if it was not the comb mechanism later so widely used in musical boxes.

7. G. H. Baillie "Watches, Their History, Decoration & Mechanism"

Methuen & Co., London, 1929

This book, which has already been referred to above, has a short section on musical watches. Baillie states that a few watches playing on sets of five to ten gongs were made before the end of the eighteenth century. From the illustration of one of these, it is clear that by gongs he means small bells arranged in the form of a nest one inside the other. Baillie mentions Chapuis' reference to the musical clock made by Antide Janvier of 1776 and says that this is the first known use of a comb musical movement. He states that the cylinder type was used in watches by the Swiss shortly before and shortly after 1800. He also states that the cylinder was replaced by the disc in musical movements for watches in about 1810. This confirms my contention above that the cylinder type of mechanism was invented first.

Conclusion

Reviewing the information in the various sources summarised here, there is some measure of agreement that the invention of the musical box took place in the latter part of the eighteenth century, but all too frequently the information is given without reference to the source. Helen and John Hoke place the invention in the latter part of the eighteenth century; Jaccard places it about 1750, Clark about 1770. Mosoriak relies mainly on Jaccard and Buchner quotes Sachs as placing it at the beginning of the eighteenth century and misquotes Clark as placing it at the beginning of the eighteenth century. Chapuis makes more effort than any of the others to consider early writings on the subject and writing in Switzerland he had the advantage of being near to the sight of the invention.

On the basis of the information in the various sources above, one must conclude, I think, that the extracts which Chapuis quotes from the records of the Society of Arts in Geneva constitute the most convincing evidence so far adduced as to the date of the invention. This gives both the date of the invention, 1796, and its author, Antoine Favre. The only definite piece of conflicting evidence is the reference to Antide Janvier's musical clock of 1776, mentioned by Clark and by Baillie. I am not aware how far the evidence as to the date of this clock is reliable. The musical movement in old clocks is often housed in the base which is separate from the clock proper and, if the clock in question is of this type, the base might not be contemporary with the rest of the clock. In the circumstances I am inclined to reject this single piece of evidence in favour of Chapuis' evidence that 1796 is the date of the invention of the musical box.

This then is the position until such time as fresh evidence should turn up. If any members of the Musical Box Society of Great Britain have any evidence bearing on the subject, I should be very glad to hear from them.



A few words about the author of this interesting article. Mr. Robert Burnett began collecting in 1958, now has 75 items comprising singing birds, musical seals, snuff-boxes, disc boxes and fine cylinder boxes. Largest machine he owns is a 19 $\frac{3}{8}$ " Polyphon - the smallest a minute gold musical seal. Those who attended the March social meeting will recall some of the interesting snuff-boxes in Mr. Burnett's collection. He does his own repairs both to mechanisms and the cases, and has given an illustrated talk on B.B.C. Favourite item? A 22" cylinder Nicole forte-piano box. Latest interests, possibly an obvious choice and certainly an allied one - collecting watches and carriage clocks. Address: Riverhill Hotel, Oxton, Birkenhead, Cheshire.

A number of our Members have found their individual ways into the Press and before the television cameras. Mr. Henry Lawrence has sent me a very interesting item from his local newspaper the LEAMINGTON SPA MORNING NEWS where his collection is described on the front page. Reference to his collection of over thirty

MEMBERS IN THE NEWS

items and 35-years-old, I had to read it twice to see whether it was Mr. Lawrence who was 35-years-old, or just his musical items were all 35-years old. Needless to say, I was wrong both times... Mention is made also of our Society.

Those who reside is what every schoolboy knows as 'the bulge' between The Wash and Thames will probably have seen Mr. Frank Greenacre with some of his machines. Anglian Television presented a programme in his home entitled 'The Tin Music Man'. Funny, I always thought that was money rattling in Frank's pocket when he walked. Anyway, name me a collector who is fool enough (or lucky enough) to walk round with money in his pocket for long! Frank tells me he's just discovered a rich deposit of musical boxes and is staking his claim, so perhaps it was money after all....

The B.B.C. have a programme called 'South at Six' presented in the Southern area to feature news and items of interest. Cameras and recording apparatus descended on Mrs. J. Gilchrist and her collection at Cowes a few weeks back. Mrs. Gilchrist and her charming daughter took viewers on a tour of her museum at Cowes seafront which is packed with bygones of all types including musical boxes. The programme ended with some imaginative camerawork and studio cutting-room dexterity featuring the big Lochmann Original disc machine in her collection.

If you are featured in press, steam radio or television, let me know.

~~~~~

|                                                   |                                                                                                                                                                                                                                                                             |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ADVERTISEMENTS</b><br><b>SALES &amp; WANTS</b> | <u>Sale:</u> 7.11/16" Symphonion, speed regulator, 12 discs;<br>8.3/16" Britannia, 1 disc; 9.7/16" Symphonion, 1 disc;<br><u>Wanted:</u> Organette to play 'Ariosa' 11 $\frac{1}{2}$ " annular 'discs'<br>and Ariston to play 11 $\frac{1}{2}$ " card discs. Few phonograph |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

cylinders for sale. Enquiries to Ord-Hume, Rose Mead, Lake, Sandown, I.W.

~~~~~

HAVING ALL MISSED THE SUMMER, we've had little to wash down the flavour of that surfeit of winter which froze our dampers and thickened our oil. All this makes it hard to realise that winter's almost with us again! Our next issue will be a 'bumper Christmas issue' with plenty of pictures and interesting features on many subjects. Among items to be included in this and subsequent issues are details of both the 2-disc and 3-disc Symphonions, details of a very early musical watch and notes on small organs.

"Osborne" Polyphon Automaton



Also with spring carrying wheel and flat cash drawer instead of bottom feet.

£18 12 6

Gramo-Polyphon.



No. 43, G. P.

Including 6 Polyphon tunes, 15 in. dia.

£15 0 0

Extra Tunes

2/6 each

Records, 7 in.

2/-

9 in. or 10 in.

4/-

There is no need to say anything with reference to the quality and perfection of the Polyphon Musical Boxes, same being now well introduced all the world over; and as to working of the Disc Talking Machine in connection with the Polyphon we can only say that the idea of combining two is carried out very well indeed, and the reproduction of sound **clear, loud, and distinct.**



Nos. 28 and 28s.

The "Infanta" Polyphons.

No. 28. The "Infanta" Polyphon to turn by hand, 30 notes, in rosewood case. Size 7 1/2 x 7 1/2 x 3 1/2 ins. Tune 6 1/2 ins diameter - 16/6

No. 28s. The "London" Polyphon, self-acting, 30 notes, in rosewood case. Size 7 1/2 x 7 1/2 x 4 1/2 ins. Tune 6 1/2 ins diameter - £1 12 0 Extra Tunes, 5d. each.

Gramo-Polyphon

No. 105 G.P.

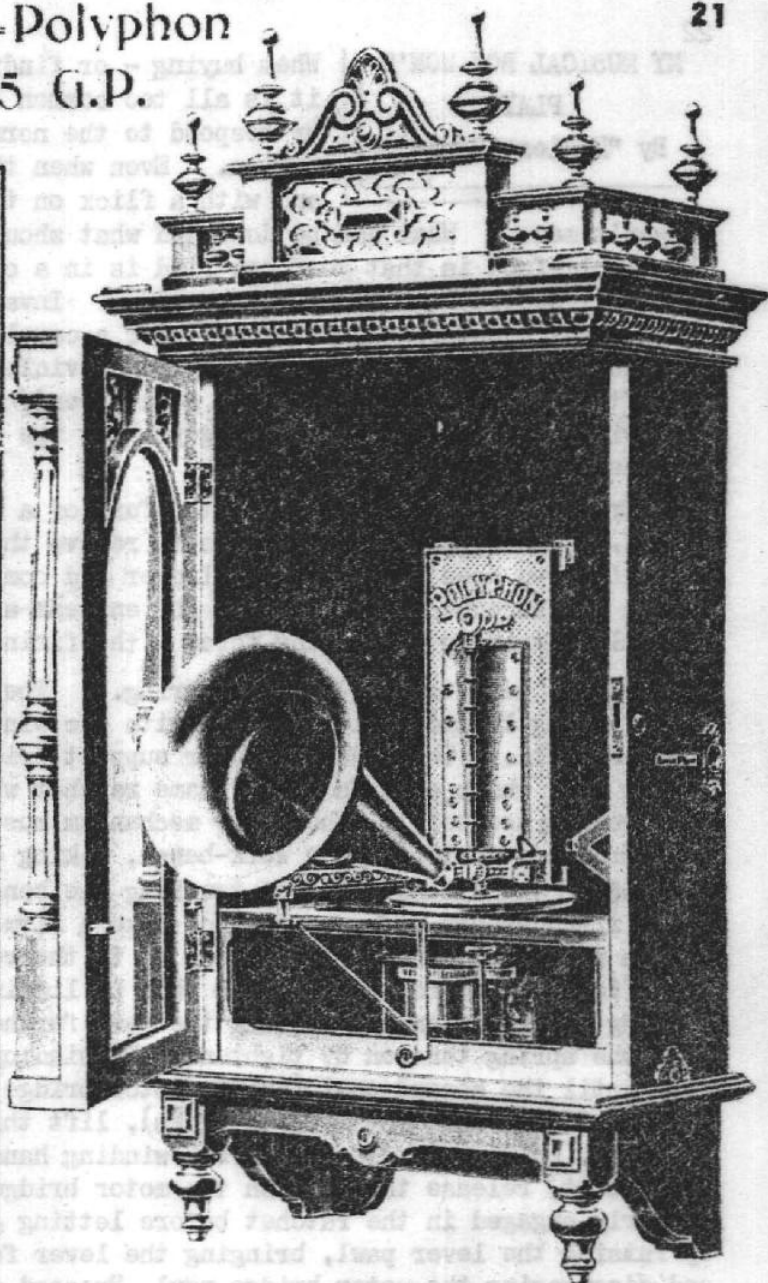
21

The "Geneva" Polyphon.



No. 41b.

No. 41b.—The "Geneva" Polyphon, self-acting 41 Notes, in walnut case. Size, 11 x 19 x 6½ ins. Tune 8½ ins diameter £3 0 0
Extra Tunes 8d. each.



Latest Novelty in Automata.

No. 105 G.P.—Size 27 x 32 x 16½ ins. 159 Notes in walnut.

Tunes 2½ ins diameter.

Price including 6 Tunes £31 10 0

Extra Tunes	6 - each
Records 7 in	2 - "
Records 9 in or 10 in	4 - "

This is the first of a series of reprints from the 1902-3 Polyphon and Regina musical box catalogue which has been loaned to the Editor by Mr. John E. T. Clark. Further extracts will appear in future issues of THE MUSIC BOX.

MY MUSICAL BOX WON'T PLAY

By "Endless Screw"

When buying - or finding - an old musical box, it is all too common to find that it won't play or respond to the normal action to set it into motion. Even when the spring is fully wound and with a flick on the butterfly or air brake it won't move. What can be done and what should be done to make it go? The simple fact is that your new find is in a critical state and it can literally destroy itself in your hands. Invariably the total force of a fully-wound motor is just waiting for a careless knock to discharge its enormous power into spinning the cylinder violently against the comb. Too often the results of this are seen already on our finds - a mutilated comb with broken teeth and missing points, the cylinder stripped of pins and scored by jammed teeth.

Provided care is exercised, the fury of a runaway motor can be prevented. The first thing to do is to remove the comb very carefully so that if a run does happen, the cylinder and comb may not be damaged. Do not on any account interfere with the endless and air brake for these are probably retaining the spring force - the firing pin of a cocked gun!

Now we have to let down the spring. The winding handle or lever has a spring loaded pawl to engage with the winding ratchet wheel on the motor spindle. The adjacent motor support bridge also carries a spring loaded pawl which engages in the same ratchet wheel. If these pawls are not readily accessible, then your mechanism must be removed from the case and screwed down to a clean work-bench, taking care to see that the under surface of the cylinder is not touching the bench - pack under the bed-plate if necessary with scrap wood. Take a firm hold of the winding lever - a really firm hold - and bring it to the vertical position. If the motor is fully wound, you must do this by lifting the pawl on the lever, raising the lever and re-setting the pawl further round the ratchet. Now take the spring tension by tightening the winding lever against the ratchet until the second pawl (on the motor bridge) is disengaged. With a small probe (I use dental tooth-picks), lift this pawl clear of the ratchet and, holding it clear, let the winding handle gently back as far as convenient, release the pawl on the motor bridge and make sure that it is properly engaged in the ratchet before letting go of the lever. Repeat by raising the lever pawl, bringing the lever forward, taking the strain and disengaging the motor bridge pawl. Proceed carefully in this manner until the spring is fully unwound (this is effectively when the male and female stopwork will permit no further reduction of spring tension). It will now be found possible to rotate the cylinder slightly within the usual slight play of the gearing. Breathe again - you've defused the mine!


At this point - and only now - can the gear train, endless and air-

brake be removed. The most likely causes of non-playing are excessive wear in the bearings of the gear train and, in bad cases, the cylinder pinions as well. Begin by carefully cleaning all the parts and then examine for wear on the gear train. It should be possible to set the air-brake spinning by pushing in the right direction on to the first gear in the train. If wear is present, this will not be possible however much force is applied. It will be seen that a large amount of backlash is present due to the pinions moving laterally in elongated holes under pressure, thus making the gears jam. The only solution is to bush the pinion holes or, as an alternative, carefully reduce the hole diameter by tapping a very small ball bearing into each one. This serves to close up the hole a little.

Re-assemble the train and adjust the lateral position of the lower bearing for the endless by means of the adjusting screw so that the air-brake turns freely when the first wheel is pushed. If the jewel or end-stone is missing from the top bearing of the endless (the bottom bearing in some Swiss disc music boxes such as the Britannia), the box will not play properly - it may not even play at all. A new one must be obtained from a clock-maker. The flat surface of the jewel is always innermost and the hemi-spherical side must be located properly in its cover plate. An enormous upload tending to drive the endless out of its cage is applied by the motor and this is resisted solely by the jewel as no other type of bearing would last under such conditions.

Careful lubrication with fine clock oil should be the final step in servicing this delicate part of the mechanism. Note that the speed of the box can be adjusted by opening or closing the 'wings' of the air-brake on their offset hinges. Re-fit the gear train to the box.

Wind the motor just a few turns and see that everything is working smoothly before re-fitting the comb. Only re-fit the comb when the cylinder has come to rest at the 'end of tune' position otherwise the delicate comb tooth points may be damaged as the comb is fixed.

Incidentally, if you remove the motor barrel from its bridges for cleaning, remember that the male and female stopworks are positioned so that the spring is neither tightly wound nor fully slack. The reason for the former is obvious. The latter is to prevent the ends of the spring from accidentally slipping free from the barrel hook or spindle dog. If you remove the stopwork, then the spring will unwind those few extra turns (quite suddenly, too!) and the spring will become free at one or the other of its fixings inside the barrel. These last turns are therefore to be let down under tension as before when the stopwork is removed. Access to the inside of the barrel is by prising off the lid by levering through the oil slot on the outside edge. **UNLESS YOU ARE A CLOCKMAKER, NEVER TRY TO REMOVE THE SPRING FROM THE BARREL - THIS IS EXTREMELY DANGEROUS TO DO WITHOUT PROPER EQUIPMENT.** 



This splendid example of a street organ is one of fifteen which are still in regular use in Amsterdam, Holland.

This machine was photographed recently by Mr. Gordon Wheeler of Bonchurch, Ventnor, Isle of Wight, by whose courtesy it is reproduced here.

Lower right is an American Cabinet Roller organ playing interchangeable wooden rollers.

Below is a 9" table Polyphon.

Both of these machines are in the collection of the Editor



LETTERS
TO
THE
EDITOR

I was rummaging through some old records in a junkshop the other day and to my astonishment I came across one record which boldly says 'POLYPHON RECORD' and plays two pieces performed by the 'Polyphon Band'. The label is dark green and the lettering in gold - no country of origin or other distinguishing marks except meaningless numbers. Do you

think that this was produced by, or more probably produced for the famous Polyphon Company? We know that they were producing machines which played records as well as discs during the declining years so it is reasonable to assume that they had some records made with the Polyphon name on if only to be used as selling media in the shops. What do members think? I have seen scores of different makes of records among the pre-electric stuff but this is the first time I have seen a Polyphon record.

F. S. Greenacre, 164, Lowestoft Road, Gorleston-on-Sea, Norfolk

This seems a likely solution. Two models of the Polyphon were made to play both discs and records. One, the Model No. 43 G.P. Gramo-Polyphon, played $15\frac{1}{2}$ " diameter discs and 7", 9" or 10" records horizontally. The second model was the No. 105 G.P. which played a $24\frac{1}{2}$ " disc vertically or 7", 9" or 10" records horizontally. Discs for the Model 43 cost 2/6d each and for the 105 G.P. 6/- each. Records for both machines cost 2/- for the 7" and 4/- for the 9" or 10". Both these machines are illustrated on pages 20 and 21 of this issue. Has any Member come across actual examples of either of these Polyphonographic mutations? (Editor)

Mr. Neumann Miller, 410 W. Lomita, Glendale 4, California, U.S.A. writes:

I collect phonographs and also table model or upright music boxes. I have a large Regina Automatic that holds 12 records and will play 6 or 7 to a winding. We have 36 records for this. We also have a Symphonion music box - $13\frac{1}{2}$ " disc - which plays perfectly and the case is in birds eye maple with some inlay on top and is really a beauty. Also there is an Orphenian which plays a $13\frac{1}{2}$ " disc made of pewter. The wood in the case is beautifully grained and the machine plays fine. We also have a Symphonion musical bank that plays small records about 6 inches in diameter when a penny is dropped into the bank. We have a Regina table model music box with a nickel slot - it plays around twice for one coin and the disc is 16" across. Plays perfectly and the case is cherry wood. All these boxes have a dozen or more records with each. We just sold a 16" Stella music box that played perfectly with about 18 records. It had a mahogany case with some carving on it and was in fine order.

Our hand roller organs are all in perfect condition and the cases are all good. We have two 'mandolinas' that play a 6" wide paper roll. Each roll has five or six different songs on it. We have fifteen rolls


between the two roller organs. The next one is a 'Clariona' made by the Mechanical Organette Co. It plays a paper roll about 12 inches wide. These rolls have about four to six different songs on each one. We have about 20 rolls for this. Then we have a musical casket that plays a 10" wide paper roll. It is a rathersquare looking box with a lot of gold flowers and leaves painted on the outside. We have a concert roller organ that plays wooden rolls with little wire pins sticking out of them. The rolls are interchangeable and we have about 50 rolls for this one. We have had Gem roller organs and Chatagua roller organs that play these same wooden rolls with wire pins, but we have sold them and now only have the Concert left of this type. We have a German made Fretti which plays a large wooden roll with wires on it but it is not interchangeable. We also have an old wooden roller organ made in Germany - no name on it- the works being entirely of wood, even the cog wheels. The roll is not interchangeable but you can push it or pull it to different positions by a side lever thus getting six different tunes by changing the position of the roll (as in the barrel organ - Editor).

We have about 180 phonographs of different makes and about 5,000 cylinder records - 2 minute, 4 minute, amberole and Pathe. Also large 5" cylinders, even some Lambert and Edison Bell 5" cylinders. We do have a few disc records but mostly choice artists or famous speakers. Most of the phonographs are the table model type with outside horns. Some have large horns, others small ones and I only want them in perfect condition and I try to keep mine that way.

I would be glad for any you might find over there to sell me and I would like to get in touch with a Mr. Greene who is a bus driver in London who sold a large collection to a friend of mine recently. I got a few phonographs from the collection. We belong to the Society of Early Recorded Music and through the Society have got to know quite a few collectors, but none in England so far.

Neumann Miller, California

There are many early phonograph collectors here in England and I know our Treasurer, Mr. Frank Greenacre, has some fine examples. Perhaps, Mr. Miller, you would care to contribute a descriptive article and/or photographic negatives of some of your organs for publication in THE MUSIC BOX as I am ceryain that this is a subject which will interest many. Editor.

A number of Members have written asking for information on making dampers for Polyphons. By courtesy of MODEL ENGINEER and Mr. Ernest Lee of Orpington, we shall be publishing an article on this subject in due course. Furthermore, at least one Member is shortly to go into production with dampers which should be available to Members ultimately. 

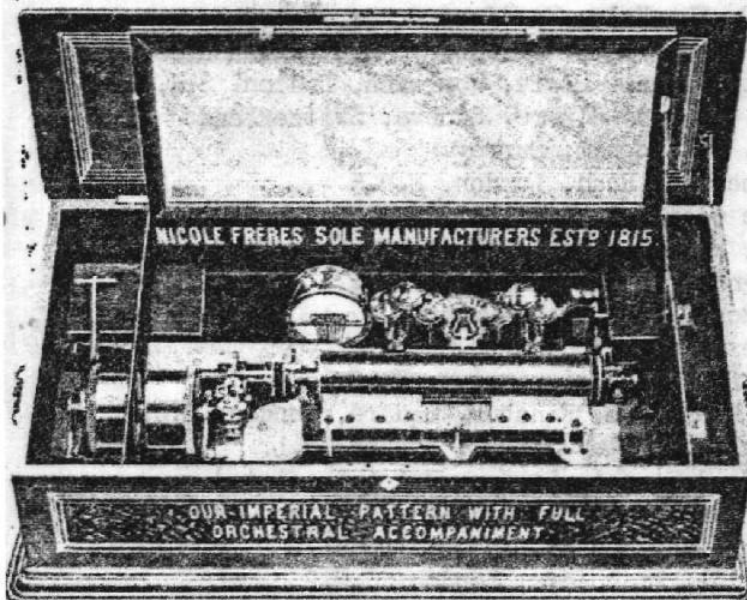
Flutina Voix Celeste (Organ)

27

Musical Boxes With

Interchangeable Cylinders

Reprinted from the 1902-03 Polyphon catalogue (see pages 20/21)



The only instruments with Flutina Voix Celeste Accompaniment which sweet and beautiful effect cannot be produced on by any other Tune Sheets.

The following are the Patterns and Sizes in which the above Musical Boxes are made, with their Prices, which include one Cylinder.

JUBILEE—8 Airs, with Flutina Voix Celeste

IMPERIAL—8 Airs, with Flutina Voix Celeste and Full Orchestral Accompaniment.

TRADE MARKS

The trade mark this issue is that of the Stella disc music box. Manufactured late in the music box era by Mermod Freres in Geneva, the Stella differed from other Swiss machines in that the disc rotated in a clockwise direction as on the Polyphon and Symphonion. Oft averred the most advanced disc machine produced, this make dispensed with projections on the discs. The star wheel points actually engaged in plain slots in the disc and were turned in this manner. Not only were the discs thus far more durable, but it allowed a neater mechanism. The Stella trade mark, shown here, was probably a rubber stamp as it invariably appears a little blurred. The impression is in black above the title and the word "SWISS" was sometimes omitted. The drawing is full size.



SWISS

Size of Box	Approximate	Number of	Price
12 x 8	Size of Box	Notes	Price
12 x 8	12 x 8	56 0 0	10 0 0

LIST OF MEMBERS

41. Victor Dyer, 11, Sprimont Place, Chelsea, London, S.W.3
42. W. Nevard, 21, Welshwood Park Road, Colchester, Essex
43. Miss C. A. Thompson, 10, The Vale, Woodford Green, Essex
44. Jackson Fritz, 1427a, Foxtrot Lane, Alconbury, Huntingdonshire
45. R. C. H. Skinner, 9, Nightingale Place, Woolwich, London, S.E.18
46. M. Hornbacher, 11, Bvd. de Pont d'Avre, Geneva, Switzerland
47. John Halford, Melville, Woldingham, Surrey
48. Brian T. Evans, 12, Boscastle Road, London, N.W.5
49. Robert P. Atkinson, The Gean House, Alloa, Clackmannan, Scotland
50. Mrs. Dora Dunnage, 303, Nelson House, Dolphin Square, London, S.W.1
51. C. Parmalee, 24b, Holland Park Road, London, W.14
52. G. Cresdee, 30, Stoke Road, Gosport, Hampshire
53. D. A. Young, 2, Edwardes Place, London, W.8
54. Ernest L. Lee, 125, Crofton Road, Orpington, Kent
55. Eric M. Bruton, N.A.G. Press, 26, Finsbury Square, London, E.C.2
56. Dr. A. Hepburn Miller, 102, Harley Street, London, W.1.
57. Peter Gordon, 44, Crawford Street, London, W.1 (Associate)
58. John J. Hoetzel, 1013, Gordon Street, Midland, Michigan, U.S.A.
(President of Music Box Society International)
59. Rex Montgomery, Flat 8, 31, Long Acre, London, W.C.2
60. Neumann Miller, 410, W. Lomita, Glendale 4, California, U.S.A.
61. Danielo Konvalinka, 1626, Wisconsin Avenue N.W., Washington D.C.,
United States of America
62. Mrs. A. Brown, 54, Hall Street, Soham, Cambridgeshire
63. F. G. Buck, Balla Vista, Endon, Stoke-on-Trent
64. Mrs. B. M. Simes, 14, Spenlow House, Jamaica Road, London, S.E.16
65. Miss J. Martin, 157, Hartswood Road, London, W.12 (Associate)

CHANGES OF ADDRESS

1. John E. T. Clark, King's Lane, Broom, Bidford-on-Avon, Warwickshire
3. G. Planus, 6, Vanbrugh Fields, Blackheath, London, S.E.3

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