

JOURNAL OF
THE
MUSICAL BOX
SOCIETY OF
GREAT BRITAIN

THE MUSIC BOX



Vol.3 No.7 Autumn 1968



LOOKING FOR SOMETHING SPECIAL IN

MECHANICAL MUSIC ?

GRAHAM WEBB

HAS THE LARGEST SELECTION

IN ENGLAND AT

93, Portobello Road, London, W.11.

Telephone: 01-727-1485

Buses 12, 15, 27a, 28, 31, 52 and 88 pass close by

Nearest Underground Notting Hill Gate

There must be *something* meant for you in

***Over 400 examples
sold each year***

Catalogue and List of Prices

OF

MUSICAL BOXES,

BY
MESSRS. NICOLE FRERES,
OF GENEVA.

WALES and M'Culloch are direct importers of Nicole Frères' celebrated Musical Boxes, which perform, with unrivalled brilliancy of tone, the most popular airs of the day; as well as varied selections from the works of the great composers. Thus, these beautiful instruments, by their self-acting mechanism, are subservient to produce the sublimest emanations of Handel and Mendelssohn, Mozart and Weber, Rossini, Verdi, and Meyerbeer; while the lighter compositions of Labitzky, Strauss, and Jullien, are rendered with equal and most pleasing accuracy.

The annexed list represents a collection of the choicest instruments that can be produced, each of which having passed the personal supervision of one of the manufacturing firm above named, the customer has the same guarantee for high quality as if he were purchasing one of Erard's Harps, or Broadwood's Pianofortes.

In reference to frequent inquiries it may be remarked that Musical Boxes are capable of a durability as great as that of clockwork; and are not liable to derangement, except through inattention to the very simple instructions for their management which are given, in a printed form, with each instrument.

And when, by any means, an accident does occur, the mechanism can be easily repaired by foreign workmen employed on the premises, 32, Ludgate Street, London.

TERMS.

Cash on delivery. Orders from the Country must be accompanied by a remittance.

Post-Office Orders to be made payable at the General Post-Office, London.

WALES AND M'CULLOCH,
IMPORTERS OF MUSICAL BOXES,
No. 32, LUDGATE STREET,
(OPPOSITE EVERINGTON'S)
AND No. 56, CHEAPSIDE,
(NEXT DOOR TO BOW CHURCH)
LONDON.

SMALL MUSICAL BOXES.

Two Tunes, 14s. 6d.

Composition Cases.

Dearest Mac
La Fée aux Roses Valse
Allila Cavatine
J'ai van o mechetto
Sing, sing Darkies
Marguerita Waltz
Spanish Waltz
Luna Waltz—*Labitzky*

First quality, manufactured by Henri Margot. Composition Cases.

Two Tunes, 18s.

Let us be happy together
Nelly Bly
Brave old oak
British Grenadiers' March
Libiamo—*Traviata*
Ah! che la morte—*Trovatore*
I'm off to Charlestown
Willie, we have missed you
Isle Polka
Crown of Roses Waltz
Jenny Jones
Cheer, boys, cheer
Those evening bells
Bilhat Lake
Il Penseroso Waltz
The mill, mill O!
Il segreto—*Lucrezia Borgia*
Quadrille finale—*Daughter of the Regiment*
Bloomer Waltz
'Twas once upon a time
St. Patrick's Day
March from *Somnambula*
Terjetto, finale 1st Act—*Trovatore*
Waltz d'Oberon
Home, sweet home
Annie Laurie
Scots wha hae wi' Wallace
Auld lang syne
God save the Queen
Rule Britannia
Those evening bells
Oft in the stillly night
Punis mon andace—*Les Vêpres Siciliennes—Verdi*
Traviata Waltz

Mary Blane
The Ocean Waltz
Shadow Dance—*Dinorah*
Fair shines the moon to-night—*Rigoletto*
Partant pour la Syrie
Jeannette and Jeanôt
Oh! summer night, Serenade—*Don Pasquale*
Ah! non giunge—*Marche-Somnambula*
Am I not fondly thine own
Marguerita Valse
Venus Reigen Valse
Rule Britannia
Bridal Waltz—*Jullien*
Bridal Polka „
La belle Schottische
The Cavendish Waltz
Old Hundredth Psalm
Evening Hymn
In native worth—*Creation*
Tyrolienne, from *William Tell*
The sea, the sea
The Ocean Waltz
White Cockade
Robin Adair
Sempre libera—*Traviata*
Il balen—*Trovatore*
L'adieu du Général
La Tyrolienne Cadence
Within a mile o' Edinbro'
Summer Flowers Waltz
Ah! bello a me—*Norma*
Robert, toi que j'aime—*Robert le Diable*
I dreamt I dwelt in marble halls
Sublime was the warning
The Royal Bride's Mazurka
The Cavendish Waltz

Three Tunes, 30s.

Manufactured by Henri Margot. Composition Cases, first quality.

Shadow Dance—*Dinorah*
Fair shines the moon to-night—*Rigoletto*
Nothing more—*W. Winn*
Libiamo—*Traviata—Verdi*
Ah! che la morte—*Trovatore—Verdi*
Punis mon—*Vêpres Siciliennes—Verdi*
Redowa Waltz
Waterloo March
Rose Polka

THE MUSIC BOX

THE JOURNAL OF THE MUSICAL BOX SOCIETY OF GREAT BRITAIN

Vol 3 Number 7 AUTUMN 1968

CONTENTS

	Page
Extended Play Boxes	470
by Arthur W.J.G. Ord-Hume	
Musical Patch Box	475
Brugger & Straub Trade Card	477
Panharmonicon Handbill	478
Repairing Inlays	479
by Arthur W.J.G. Ord-Hume	
Melograph and Melotrop	481
From Music Boxes to	
Street Organs	483
by Cyril de Vere Green	
Maskelyne's Orchestrephone	484
Piddinghoe Church Barrel Organ	485
Under the Hammer	486
Ord-Hume in America	489
Forthcoming Books	494
Nicole Freres Catalogue c. 1853	495-506
(from Jackson Fritz)	
The Player or Residence Organ	
- Continued	507
by F. Webb,	
The Perforated Music Company	521
Regina 22" Self-changer	526
Crasselt & Rahse Piano-	
Orchestrion	528
Letters to the Editor	530
Classified Advertisements	530
Street Music in 1870 London	531
List of Members	532

Published by

The Musical Box Society of Great Britain.
11, Devonshire Place, Wimpole Street,
LONDON, W. 1.

Hon. Editor: Arthur W.J.G. Ord-Hume.

The Editor writes:

The production of a small journal such as ours is one of those tasks which is both rewarding and, occasionally, onerous. When one produces a good issue, a readership which practices passive acceptance proves the adage that 'no news is good news'.

However, one small slip, one error of judgment, one mistake missed by a tired eye, and the passive readers stir into action, fly to their pens and unleash in your direction a salvo of polite but tacit reminders that, if they had succeeded in spotting it, why the thundering heck didn't you!

But the worst error is that of omission, particularly that of credit. In this connection I must apologise for not stating that the fine Nicole Freres catalogue reproduced on pages 417-436 comes from Member Jackson Fritz. In this issue we reproduce another item from his choice collection of ephemera - a catalogue dating from about 1853.

Whilst on my rounds looking and listening recently, I heard the Vaughan Williams arrangement of the tune "Greensleeves" on a 15½" Polyphon. This is Number Two in what appears likely to be a series of newly-punched discs - further evidence of a recrudescence of the art.

ARTHUR W.J.G. ORD-HUME

EXTENDED-PLAY BOXES

By

Arthur W.J.G. Ord-Hume

CYLINDER musical boxes have always posed certain inherent problems in the interpretation of music. This is readily understood when one realises that the whole tune must be played on one revolution of the cylinder. Depending on the size of the cylinder and also, to a marked extent with certain Viennese and Czech movements, the length of the cylinder pins, so the cylinder will make one complete revolution in a specific time. This speed may be controlled within narrow limits by the setting of the wings of the governor fan but, since there is an optimum speed at which the governor must run for each spring movement, any attempt at excessive slowing down will cause uneven running and snatching over multi-note chords.

As far back as Engramelle and Dom Bedos, it was recognised that the parts of a musical mechanism must be given a rotational impetus which must in turn be sustained fairly regularly. The same chroniclers showed how the pinning of music to a rotating cylinder was a direct function of the number of musical bars in the arrangement and the optimum rotational cycle. Their words concerned mechanical organs but are equally applicable to all other forms of musical machine - even the player piano has an optimum speed, either side of which drastic deviations affect the production of the music.

Solutions to this shortcoming were not beyond the ability of the early artisans, and as far back as 1787, Alexander Cumming manufactured barrels for the Earl of Bute's machine organs which played long tunes by turning the barrel spirally as it rotated. This was not the first use of this method and during the long years of popularity of the barrel organ and orchestron, the system was widely used, only being superseded by the perfection of pneumatic player action.

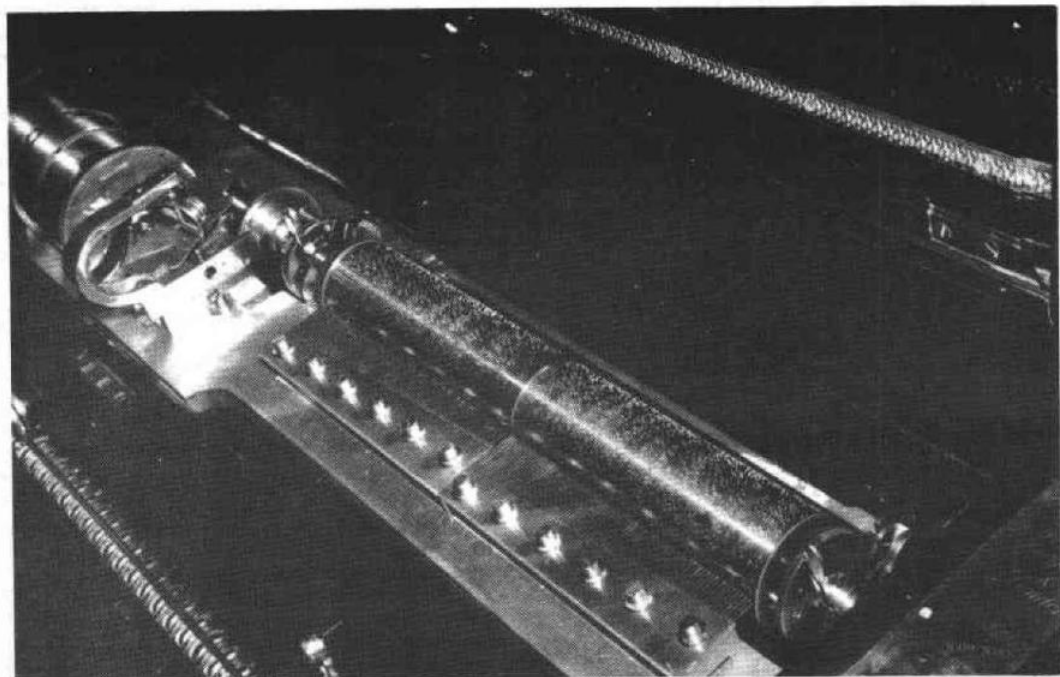
With the cylinder-playing musical box, three distinct types emerge from the attempts

at producing lengthy musical programmes. First of these were the movements wherein the pinning was continued in a kink to effect continual playing whilst the normal tune change snail advanced the cylinder one step laterally. This we will term the **Semi-Helicoidal**. Then there came the variety where the normal tune change snail was replaced by a worm drive which progressed the cylinder laterally at a continual rate during playing, the pins on the cylinder being arranged in a spiral or gentle helix. This type is termed the **Helicoidal**. The third type of movement is a most ambitious development along the practised lines of the normal cylinder box wherein two cylinders operate together, end to end on the same arbor, each being shifted in steps by separate change snails but the changes on each cylinder occurring at different times so that one cylinder always remains playing. This is the so-called **Telescopic** or **Plerodienique** movement.

In all three types, the length of tune to be played is governed by the time taken for the cylinder to make six, or in some cases, eight revolutions. This, then, is the maximum length of tune which may be pinned to the cylinder and quite often a box would be made which played three or more cylinders (these boxes invariably had interchangeable cylinders), one of which might be pinned to play just one tune such as a whole overture. The second and third cylinders might be pinned to play one, two or three tunes of varying length and these tunes were not governed as to length by the accepted cylinder box specifications. One tune might play $2\frac{1}{4}$ revolutions and a second tune $3\frac{1}{4}$ so as to make up the total of six turns. Again, a cylinder might start with a fanfare of $\frac{1}{4}$ revolution, a tune played 2 turns and finishing with a piece played in $3\frac{1}{4}$.

To understand the workings of these ingenious varieties of the common or garden cylinder musical box, we will examine first of all the **Semi-Helicoidal** variety.

The mechanism of this remains identifiable with that of the normal interchangeable cylinder box excepting that the stop lever trail, placed at the left end of the cylinder



The cylinders of the PVF Plerodienique movement (above) and the tune sheet (below)



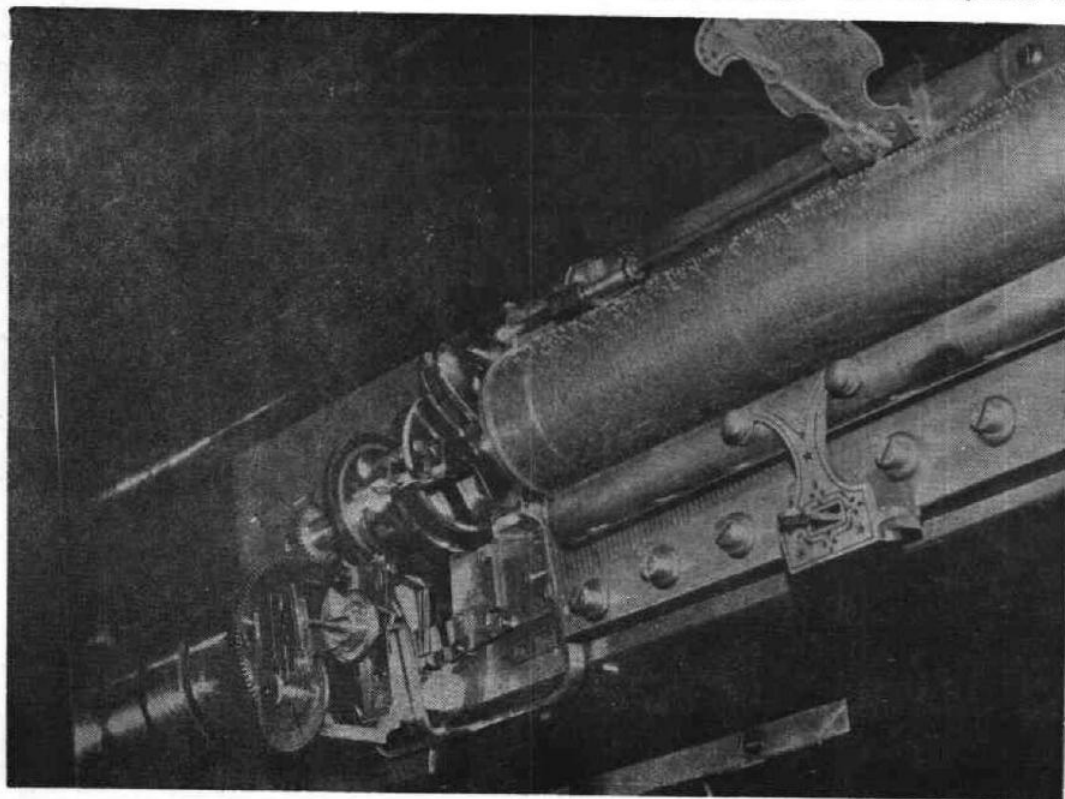
nearest the governor, rides on the outside circumference of the cylinder itself where the various stop positions for each tune (remembering that they may all be of different lengths) are indicated by slots cut into the surface at the correct positions so that the trail may drop in and engage the stop sprag on the governor.

There is one other major difference and that is that, at the end of the programme on the cylinder and when the cylinder is required to be changed, the whole cylinder automatically swings back and away from the comb. This is achieved by a linkage triggered off by a spring-loaded plunger which rides against the left end of the cylinder and is often coupled up to a tune indicator. The system of swinging is carried out whilst the cylinder is still in rotational motion, and is thus under power from the spring. In swinging back, the cylinder arbor is moved backwards, transferring the axis from the arbor to the normal offset driving projection on the cylinder arbor extension. The arbor bearings, instead of being rigidly dowelled and screwed to the bedplate, are fixed so as to slide back and

forth, towards and away from the comb. Patentee of this mechanism was F. Conchon of Geneva who named the mechanism, understandably, "*A l'Etoile*".

The pinning of the "*Etoile*" resembles that of the normal box excepting that there is no obviously clear 'end of tunes' position on the cylinder. However, at the comb position corresponding to the moment the snail change wheel advances the cylinder to play a fresh pin position, the pinning will be seen to display a definite 'joggle' or kink so that the pins are maintained in correct alignment with the comb tooth points throughout the process of the cylinder laterally shifting. Similar boxes were also produced by D. Allard & Cie. of Geneva.

In the case of the Helicoidal box, once again the cylinder may be pinned to play one long tune or several shorter tunes. Again the stop trail usually rides on the left end of the cylinder face and once more the invention was the patent of F. Conchon. However, the normal change snail wheel is dispensed with, the cylinder progressing laterally at a constant rate during playing. Here the cylinder is



F. Conchon semi-helicoidal movement showing the drive and movable cylinder arbor.

steadily pushed by a plunger driven by a worm gear, and once again at the end of the cylinder programme, or when the cylinder is to be changed, it is swung back well clear of the pins. The pinning of the Helicoidal is, as already pointed out, in a continuous spiral.

The telescopic or Plerodienique movement represents an early and ingenious, if complex, alternative means of producing performances of great length from the cylinder musical box. Whilst the Ste. Croix firm of Paillard first exhibited this style of movement at the Great Industrial Exhibition held at South Kensington in 1862, only a very few were built and, even with the discovery of a fresh specimen in England recently (now in America), the number known is little more than half a dozen.

It must be remembered that, at this point in the development of the musical box, the invention of interchangeable cylinders had still to reach the state of perfection which we take for granted on many later boxes. The first movement to be made with provision for the owner to change his own cylinders was probably made by Ducommun Girod of Geneva - Clark gives the date as 1854 - and I have examined a box of this type. Reference to various patents at the Patent Office Library off Holborn in London reveal that it was not until as late as the 1880's that the simple and fool-proof changing methods were brought into use.

All this is to show in part that movements such as the Plerodienique, coming as it most certainly did some years earlier than either of the two types hitherto described, represented quite astonishing advances in an art still in the throes of being explored and exploited.

The name 'telescopic' as applied to the Plerodienique, is really a misnomer since it implies that one part of the cylinder slides inside another part. A better English name might be "expanding" since it is just this that the cylinder does, gradually increasing in length as it rotates. Usually the gap between the two cylinders is covered by a narrow metal collar and in truth this may be the cause of the name 'telescopic' being applied to this type of movement.

The mechanism makes use of two cylinders mounted end to end on a single arbor and each having its own comb. The cylinders each employ the self-same functions of an ordinary cylinder in that each carries a tune change snail cam; each one has a visible gap along its face corresponding to the change position where there are no pins, and each is pinned in the normal manner, i.e. bass at the left, treble on the right. The tune change snails are, however, mounted differently: on the left end of the left cylinder and on the right end (normal

end) of the right one. Whilst the cylinders appear thus similar, they are not mounted on the arbor in the same radial alignment. One cylinder is arranged between 15° and 20° in advance of the other. The operation will now become immediately apparent for, when one cylinder comes to the end of its pinning and goes through the stages of being advanced by the normal tune changing mechanism in silence, the second cylinder is still playing, having some distance to travel before its turn comes to stop playing and be shifted. However, by the time this second cylinder has stopped playing, the first cylinder is beginning a fresh revolution. To allow for this radial variation, at the start of the piece of music, one cylinder will be found to be starting in the usual position but the other will have advanced in silence through an unpinned portion of its circumference beyond the normal unpinned change position.

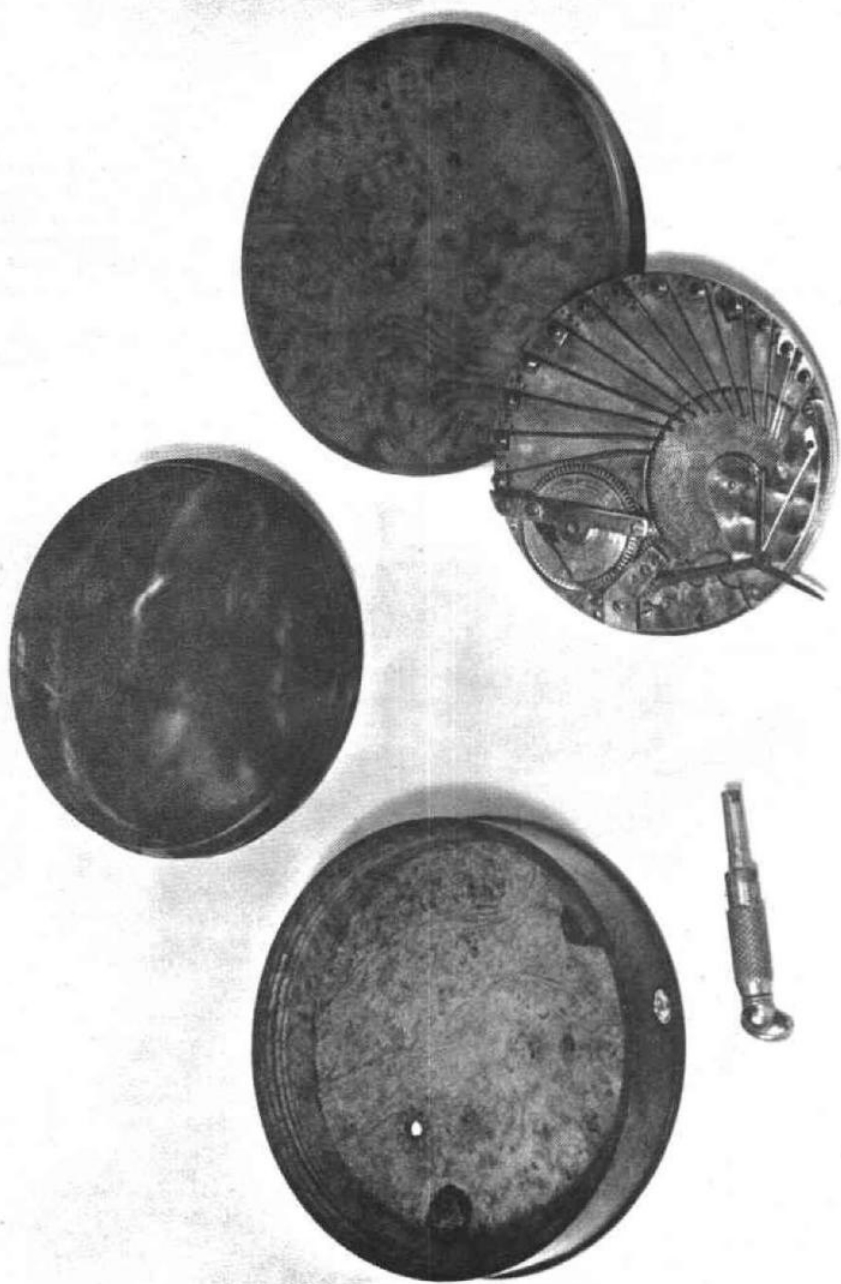
At the start of the tune, both cylinders are at their furthest apart position. At each rotation they move closer together, first one, then the other, until at the end of the tune first one cylinder and then the other drop back to the lowest point on their cams and the movement stops. In this position, the two cylinders together span about 20 inches.

As with the Helicoidal type of movement, tunes of different lengths could be pinned to the Plerodienique, although its obvious forte was its ability to perform whole overtures.

The speed regulation of the large PVF musical movements of this time consists of a circular collar mounted longitudinally and transfixed by the endless screw. This collar has two slots cut in it on opposite sides and into these fit the turned up lugs of a single-piece air-brake wing which passes through the collar prior to its attachment to the endless screw. Speed regulation is effected by turning the whole wing around in its location, so as to increase or decrease its impingement on the air. The aerodynamicist will detect that, in this way, one half has a negative angle of attack to the airflow and the other a positive angle!

On the Plerodienique, each half of the air brake is a separate wing fixed into the transverse collar by a clever planetary gearing so that as one wing is rotated to adjust the speed the other wing moves in an equal and opposite fashion, giving both wings a positive angle of attack.

Of all the many different styles of musical box ever made, including those with imitative tonalities and orchestral accessories, these long-playing marvels of Swiss ingenuity are among the most sought after collectors pieces.

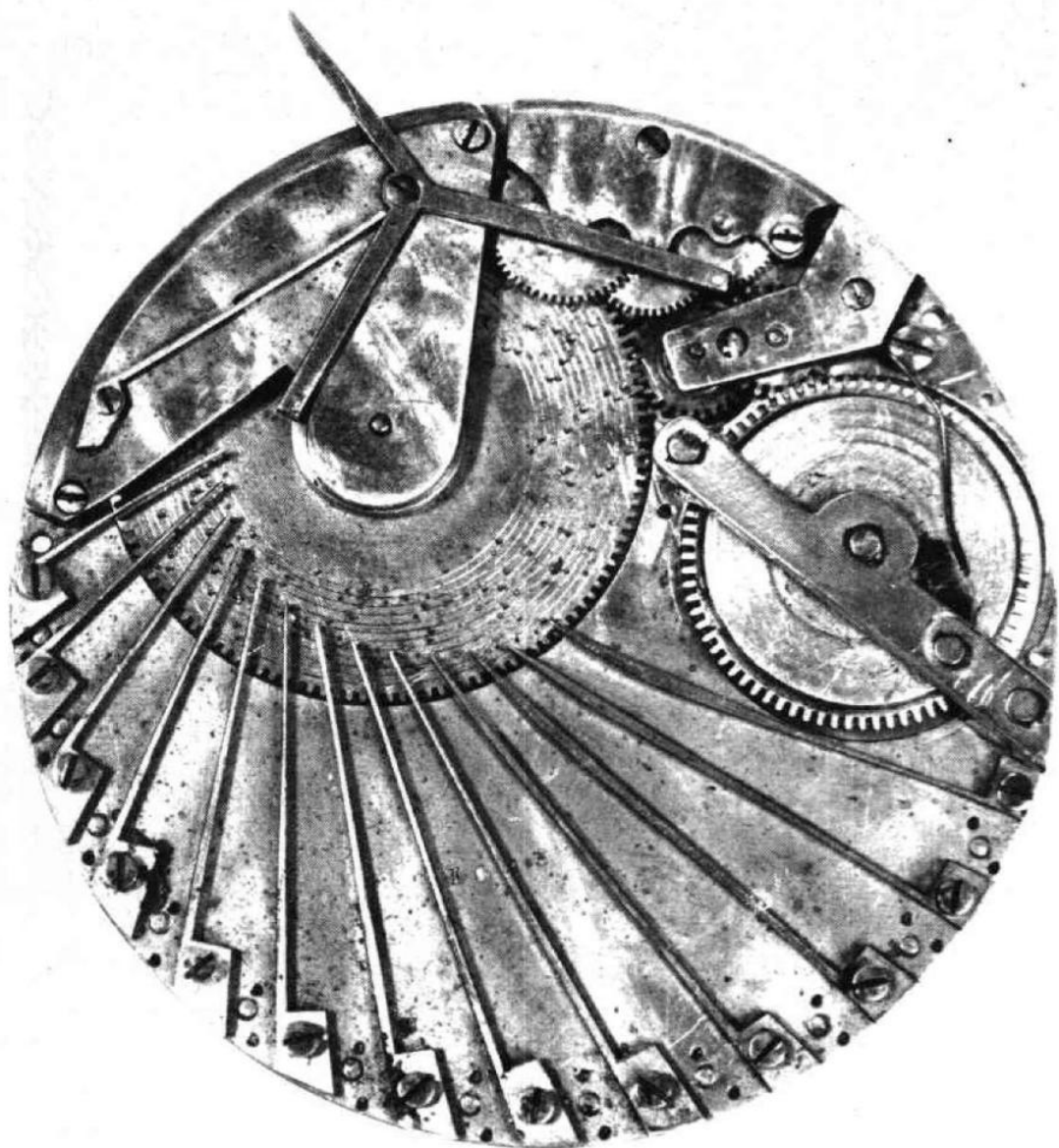


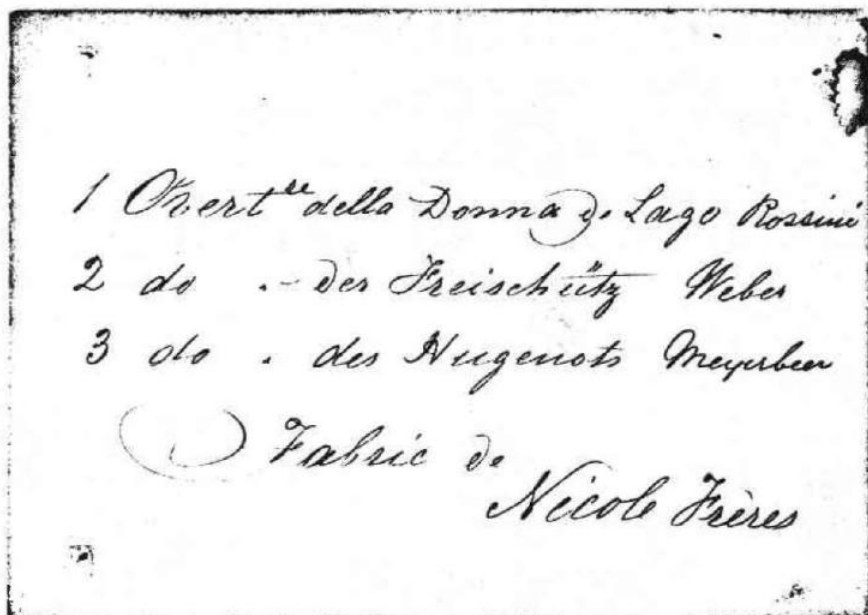
Musical Patch Box

AN UNUSUAL and early musical piece is illustrated on this and the facing page. Dating from about 1805-1810, this is a seamstress's patch box having a tortoiseshell liner. Removal of the screwed-in liner reveals this large-size disc movement measuring 54mm. across. The motor barrel and its drive teeth were found to be badly worn and so have been replaced by a new assembly somewhat thicker than the original. In its original form, the thickness of the complete movement was approximately $\frac{1}{4}$ ". The power is let down through a bare pinion, and the tune, though well set for so early a piece, is unrecognisable. The former property of Member Graham Webb, it is now in the de Vere Green collection.

Pictures by Jack Maclean







A Nicole Freres 3-overture box in the collection of Roger Vreeland carries this plain but obviously original tune sheet (reproduced full size). In the course of examination of this fine box, your Editor suspected that the script was on the back of something else. Removal from the lid revealed the fine trade-card seen below. Members will recall that, on Page 355 (Volume 2), was reproduced a tune sheet bearing the word "Dulcet" and the initials B & S with the trademark of a triangle and striker which, as reported on page 426 of the same volume was later identified as that of Brugger & Straub.

Reproduced by courtesy of Member Roger Vreeland,
Cranford, New Jersey.



ROYAL GREAT ROOMS,

Spring Gardens, Charing Cross.

PANHARMONICON Exhibition of Music,

BY MECHANICAL POWER,

EQUALLY GRAND AS A FULL ORCHESTRA BAND,

Performing the most select Pieces of Military Music,
COMPOSED

By MOZART, HAYDN, KROMMER, ROMBERG, &c. &c.

INVENTED BY
from

TH
Panharmonicon

CONSISTS OF

210

INSTRUMENTS,

VIZ.

French Horns,

Kettle Drums,

CLARINETS,

Cymbals,



J. J. GURK,
Vienna.

GREAT DRUM

Trumpets,

BELLS,

OBOES,

BASSOONS,

Triangles,

Common Drum

AND

German Flutes.

Commences playing precisely at 1 o'Clock until 4, and from 7 to 10 in the Evening,
ADMITTANCE ONE SHILLING AND SIXPENCE.

N. B. The whole of the Music is performed in each Hour, concluding with God Save the King, or Rule Britannia.
Private Parties may command Admission from 4 to 6, paying 3s. each Person.

A coloured Engraving of the Panharmonicon may be had at the Rooms, price 6d.

TOPPING, PRINTER, Blackfriars, London.

A number of instruments seem to have carried the name "Panharmonicon". This one, allegedly made by a man called Gurk, was brought to London as this early 19th Century bill from the Editor's collection proclaims. One wonders whatever happened to the lost automaton which Ludovico Gavioli the First made which carried this name. Might this have been it?

From the collection of The Editor

REPAIRING INLAYS

by

Arthur W.J.G. Ord-Hume

MANY of the quality musical boxes produced around the middle of the last century featured elaborate lid inlays. Whilst decorative woods were universally popular over a long period of time, metals and minerals as well as non-wood natural materials became a feature of the more expensive boxes.

Brass inlay, either in the form of strips and bands or as fretted designs, was widely used, often in conjunction with cold-curing enamels. Highly polished, the effects of these were always striking and often very beautiful.

Over the years, these embellishments usually suffered to a varying degree from attrition and the subject of this article is the repair and preservation of these inlays.

To begin with, then, let us detail the processes by which these decorations deteriorate. When subjected to heat, specifically the effects of strong sunshine, the fixatives securing brass inlay fail, usually by a combination of natural ageing and the expansion of the metal pieces. A similar effect is also achieved by exposure to moisture, only in this case, the wood inlay usually suffers to an equal amount. Once the metal has become partially separated from the wood, then total separation is only a matter of time. The metal lifts in places, is easily snagged with the maid's duster or presents a challenge to the enquiring fingers of the young.

Mineral or enamel inlays fail initially by a process of surface cracking wherein the entire piece crazes or becomes criss-crossed with many fine cracks. Each piece of enamel thus isolated curls up, thereby breaking its fixative. Ultimately, one piece falls out and then the entire section is liable to crumble away rapidly.

Other types of inlay material such as mother-of-pearl and ivory tend to separate in the same manner as brass, pewter and silver inlay in that they retain their basic shapes but shear their glue bonds with age.

Restoration depends on the degree of attrition present. Begin by washing the dirt off

the lid with surgical spirit. Where brass strip or decoration is loose, it is quite easy to remove it completely by the careful use of a scalpel or other sharp-pointed modelling tool. Take great care not to break down the clear-cut edges of the wood each side of the inlay. The reverse side of the metal will be found to have been roughened to provide a key for the original fixative. The pieces of metal should be cleaned carefully to remove all traces of the old glue; methylated spirit usually does this adequately.

With the modelling knife, carefully rake out the old glue and dirt which has accumulated in the wood. Uniformly coat the recess in the wood with hot brown glue and replace the brass. Apply setting pressure by clamps, if practicable, first covering the piece with polythene sheet and then a flat piece of hard wood to act as a caul. If it is not possible to use clamps, then use heavy weights. For small pieces of decoration, it is quite adequate to hold the pieces firmly in place with clear sellotape until the glue has set.

The restorer is not always lucky enough to have the original metal pieces and he must, therefore, make new pieces. Small pieces of decoration are easily remade by taking a paper rubbing of the recess in the wood, or tracing from a matching piece if the design is symmetrical. The new piece can then be cut from thin brass sheet using fine snips and an assortment of very smooth jewellers' files. For replacing strips, thin sections can be cut from thin flat strip but for very narrow strips, it is better to replace using ordinary round-section brass wire which can be dressed flat as part of the polishing operation.

A similar technique can be applied to the replacement and remaking of missing pieces of mother-of-pearl inlay. This material, from the shell of certain sea creatures is quite plentiful, and pieces can be obtained from most junk shops. At one time there was a popular oriental game which employed small pieces of this material as counters, and these counters can be found in profusion in such places as the Portobello Road. In working, it is prone to chipping and flaking, so it is better to do as much work as possible using nothing else but fine files.

The coloured mineral inlays present the greatest problems and yet, in many ways, are the easiest to renew. Where the area is complete but the surface is crazed and thus very loose, stick sellotape right over the inlay and rub fairly hard all over the area with a smooth object such as the cap of a ball-point pen. This serves two purposes: firstly it ensures that the adhesive tape is evenly adhering to each small fragment and, secondly, the action of rubbing makes complete the process of loosening the fragments from their bond.

Gently and carefully peel off the tape, tearing it off at a slight angle so as to provide the maximum lift to the pieces. Ease the first fragments out with a scalpel and then, as stripping proceeds, check that each fragment is properly detached from the recess in the wood. Ultimately, you are left with all the fragments adhering in their correct positions to the sticky side of the sellotape.

Now clean out the recess in the wood and apply a liberal coating of white resin adhesive such as Evostick Resin W, a specially formulated for woodwork. The reasons for selecting this type of glue are important to understand. To begin with, it is non-staining if it comes into contact with the surrounding wood. It is also quite clear and colourless whilst at the same time having certain gap-filling characteristics.

Press the clear adhesive tape complete with coloured inlay fragments back into place in the prepared and glued recess. The transparent tape will allow you to see that each piece of colour becomes properly bedded in the white glue. Now leave the piece well alone for at least a day - this is much longer than the declared setting time for the adhesive because the presence of the tape isolates the air from the surface and thus inhibits the curing process. Then gently peel off the tape, this time doubling the tape tightly back on itself so as to avoid tearing out the pieces. Leave the piece to finish curing for another eight hours.

Surplus glue can now be removed from the replaced enamel and the surrounding wood by using fine wire wool which will also polish up the inlay and partially smooth off the sharp edges between the individual fragments.

Where coloured inlay is missing entirely, or so much of the original is missing that any attempt at patching would clearly show a discrepancy in colouring or texture, a completely new infill must be made for the

inlay recesses in the wood. For this, you should use sealing wax. Several quite successful repairs have been made to small areas by using large numbers of coats of gloss oil paint but the result is often spoiled by the paint soaking into the wood thus destroying the necessary sharply defined edges.

Sealing wax is available in a variety of colours and, where it is not possible to mix colours to achieve the correct colour to match an existing piece of colour inlay, it is usually best to remove all the inlay of that colour and replace the lot.

For small repairs, melt the wax straight into the recess, smoothing it down with a hot, flexible artists pallet knife. If it spreads over the wood, do not bother because it can be removed cleanly later.

To aid spreading and to avoid the wax sticking to the knife, dab it on a piece of cotton-wool soaked in linseed oil between each stroke.

For larger areas, it is better to melt the wax into a shallow earthenware pot or, better still, an artists earthenware pallet held over a small burner. This is because sealing wax contains when melted, a quantity of air bubbles which will spoil the inlay. Avoid actually burning the wax, otherwise its true colour will be marred by black streaks. Once the wax is melted in the pallet, do not let it bubble, but work it with the pallet knife to exclude bubbles. Then quickly place a lump on the wood and smooth it rapidly into position, pressing it well down into the interstices of the wood.

Removal of the excess of wax is effected by using the scalpel to scrape (not cut) the top wax away, finally finishing off with wire wool.

With a little practice, this technique will be found to produce first-class results.

Whilst visiting Member Roger Vreeland at his Cranford, New Jersey home recently, he showed me a box which he had restored using plastic metal as a decorative infill. His technique is to mix up sufficient of this two-part resin/catalyst substance as used for motor car and many other 'do-it-yourself' repairs, and to press it into the recess in the wood. He claims that, with a stiff mixture, there is no unsightly absorption by the surrounding wood, nor is there any staining. He advises that the material is, of course, considerably harder than wood and must therefore be flushed to the surface as near as possible on application, leaving but little sanding to be done. The

effect is not unlike a pewter inlay, being a dull grey in colour and taking polish well.

Roger Vreeland has also used very thin cross-sections of brass and copper tube to create his own inlay decoration, the centre being filled as above. The results which he has produced seem to be excellent in every way.

The finishing of the inlays prior to polishing will usually involve judicious use of varying amounts of very fine sandpaper and wire wool to produce a good base for polishing. Incidentally, a good cleaner for inlay is *Brasso* metal polish rubbed with fine wire wool. The ammonia in it brings out the natural wood colours. Also, do not be put off by the generally dull appearance of newly-surfaced inlay and wood - polish always brightens it up.

A few words of caution. NEVER sand across the grain. Wire wool makes an excellent finishing-off treatment and some fine results can be achieved by using brass wool in a circular motion. Do not wet bare wood or inlay as this will raise the grain and undo all the good work of preparation. Whether sanding or using wire wool, remember that the veneer is only a few thousandths of an inch thick and it is easy to rub right through it, particularly on the corners of the box. If a light spot develops whilst sanding, stop at once because you have rubbed through to the plain wood underneath.

The techniques of French polishing have been well covered before in the pages of *THE MUSIC BOX* and also in *COLLECTING MUSICAL BOXES & HOW TO REPAIR THEM* and so will not be repeated here.

MELOGRAPH & MELOTROP

Translated from the German by
Lyndesay G. Langwill

from "Zeitschrift für Instrumentenbau" (Officielles
Organ der Berufsgenossenschaft der Musikinstru-
menten-Industrie) edited by Paul de Wit in Leipzig,
April 21st, 1890.

AMONG the numerous exhibits which were included under the section devoted to musical instruments at the Paris World Exhibition of 1899 were two items of unpretentious appearance which, as *Le Monde Musical* reports, belong nevertheless to the most interesting of the group of musical instruments. These are the *Melograph* and the *Melotrop*, the invention of the Paris electrical engineer, N.J. Carpentier, who has acquired a reputation in that science by his numerous discoveries in the field of applied electricity and as a successor to the noted Ruhmkorff.

As an accomplished amateur musician, Carpentier had long toyed with the idea of constructing an apparatus which would instantly transcribe any improvisation performed on the piano. His inventive genius accordingly succeeded in solving the problem so completely that, if we are to rely on the reports of the French press, all the many attempts which have so far been made in this field have now been completely overshadowed.

The *Melograph* is a small, neat machine

which stands beside a piano and is connected with the keyboard by a series of electrical circuits. A motor, contained in the *Melograph*, draws a strip of white paper through the machine at a remarkably constant rate. If a small roller on the machine be charged with ink using a fine brush, and a finger be placed on one of the piano keys, it will be observed how the roller at once depresses, a black line appearing on the paper strip. So long as the key is held down, so the line lengthens. If on the same key a staccato movement is made, there appears instead of the continuous line a dotted line. A held chord gives a row of lines, a chromatic scale a kind of echelon with neat regular rises. If a piece of music is played on the piano, the different kinds of indication are reproduced that the piece is set on paper in an entirely new manner of writing in which effect is given to the many minute variations in time.

We do not feel competent to describe the individual parts of the machine; this would more appropriately be a matter for an electrician or mechanic. We confine ourselves to what eye and ear detect when the apparatus is in action. The immediate mechanical transcription of a musical performance has indeed already been made by other means and through different inventions, but the reading of the transcribed music presents considerable difficulties. The marvel of Carpentier's discovery is that now the music transcribed on

to the paper strip can be played back on to the piano note for note with the help of a second apparatus, the *Melotrop*.

After the indications made on the paper strip by the *Melograph* have been perforated by means of a special contrivance, the strips are brought to the *Melotrop* which is a long narrow box of palisander wood which is set on the piano keyboard. After the perforated strip is placed in the apparatus and a small fly-wheel has been fixed to the latter, a crank is turned and the music is heard exactly as it was previously played on the piano.

We have in the *Melotrop* a piano-player which affords the highest degree of capability and even delights the wiles of sensitive musicians.

The *Melotrop*, which can easily and simply be fitted to any piano, possesses no electrical mechanism: its construction appears to rest on an extraordinarily ingenious mechanical principle - on a remarkable application of the laws of friction.

The repertoire of the *Melotrop* already comprises more than five hundred numbers, all improvisations, which have been performed by outstanding pianists and transcribed by the *Melograph*. As the reproduction resembles the original performance precisely those who are in possession of a *Melotrop* can follow and study on his own instrument the manner of performance of the master pianist.

We have repeated above the report of the Paris journal, "Le Monde Musical", but we cannot refrain from expressing our amazement that Mr. Carpentier claims for himself the invention of the *Melograph* and the *Melotrop*. We remind readers of our journal that we have described both these appliances nine months ago but not as a French but as an American discovery. At a convocation of the American Institute of Electrical Engineers at the end of last year in New York, two new instruments - *Melograph* and *Melotrop*, were presented to the audience as a discovery of the mechanic Mr. B. Abdank. The "Scientific American" gives a description of the apparatus in terms not so rapturous or enthusiastic as those in the French papers, but in its technical details gives a much better presentation. We now reproduce the American report as follows:

The *Melograph* is an apparatus for writing music which is played on a piano. And the *Melotrop* is an instrument for the reproduction of the music transcribed by the *Melograph*. The *Melograph* consists of a system of contact points or switches which are applied under the

key-board of a piano and so arranged that when a key is struck, an electrical contact is closed as these keys are in circuit with an instrument which resembles a Morse telegraph appliance writing with colour or ink. In consequence, in playing on a piano key using the instrument, a sign in the form of a line is printed on a ruled paper strip so that it occupies a position which corresponds exactly with the note on the piano. In this manner, one obtains, as it were, a complete copy of the music played. But this copy contains not merely the notes played, but the length of the particular line notation indicates also the length of the notes played.

This musical notation is then made to run directly through a special appliance which is called a perforator, the job of which is to punch the lines of the music through and into a strip of special stiff paper underneath. This device is electrically worked and the operation very quick. Here, naturally, an electric motor is used. The perforated stiff paper strip is then ready for use on the *Melotrop* for the reproduction of manuscript music.

The *Melotrop* works purely mechanically and follows easily the movement of the finger on the keyboard. This instrument is provided with a long barrel which stretches the whole length of the keyboard of the piano upon which it is playing. This barrel is provided with a row of "forks" in which are located the cords securing the spring-loaded piano-key fingers, and these latter, when they are drawn tight, press down on the piano keys. The chief part of the apparatus consists of a cylinder on which lies the above-mentioned perforated paper strip. In its grooves rest the levers controlling by means of cords the small mechanical fingers which work the piano keys. By turning the grooved cylinder covered by the perforated music, the piece of music is reproduced in a manner resembling that already achieved on other new mechanical musical instruments".

We are surprised that M. Carpentier has not acknowledged this announcement and an explanation on his part would be very appropriate.

This article, translated by Lyndesay Langwill demonstrates that the Dumb Organist of the 1850's had a counterpart for the piano. Your Editor owns a somewhat incomplete Melotrop

An illustration of a surviving complete Melotrop is featured in the new book to be published early next year called PLAYER PIANO.

FROM MUSIC BOXES TO STREET ORGANS

By

Cyril de Vere Green

DURING a recent dental congress held in Amsterdam, my wife and I decided to take a trip to Utrecht to visit the Musical Box Museum there which is open on Wednesdays, Saturday and Sunday afternoons and Thursday evenings. We chose the Sunday and found Utrecht, with a population of 250,000, a quiet and delightful city. A gentle stroll, for the temperature was 98°, brought us to the Cathedral Square which separates the remaining part of the cathedral from the famous tower and carillon, much of the cathedral having been destroyed by a hurricane in 1674. After a most enjoyable lunch in the restaurant of the Hotel Pays Bas we walked through the Cathedral Square again and down the Lange Nieuwstraat to the once famous Convent of St. Katherine where a signpost directed us to a beautiful and tranquil square - a garden surrounded by old buildings which once formed part of the convent. Being a little early for the opening of the museum, we sat on a bench and enjoyed the sun and serenity. Shortly after two o'clock we went to the entrance to be joined by one of the curators - Mr. J. Jongenelen - who very kindly took us on a conducted tour of the museum.

As far as I was able to ascertain, the museum comprises a collection of instruments by Mr. de Waard and Mr. Jongenelen - housed by the State and open to the public. Perchance, though I doubt it, this article might be read by some government minister in this country, with similar results.

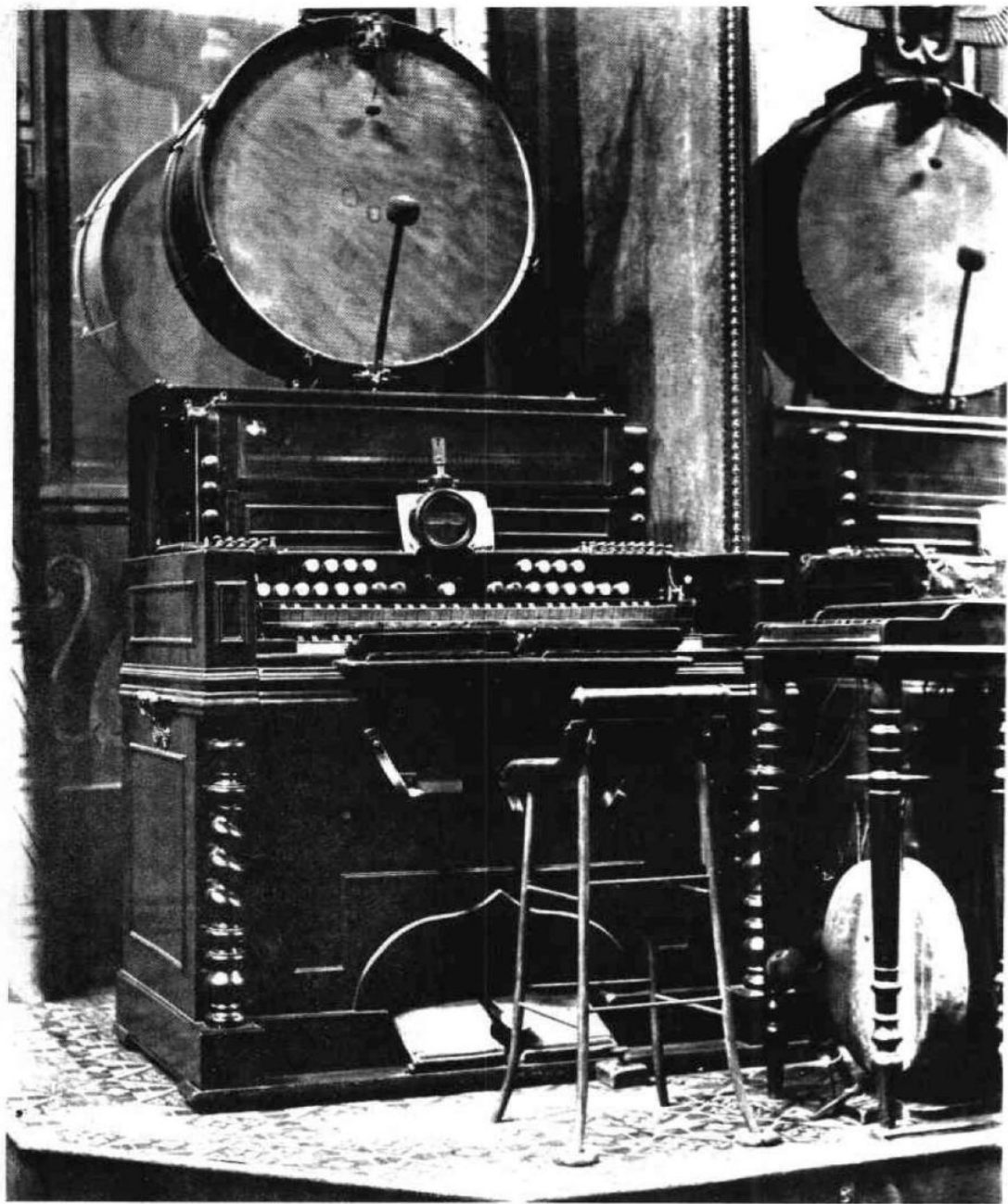
The museum itself is in a lofty wing of the convent and displays, as its title implies, a great variety of mechanical musical instruments. They were fairly accurately arranged in age of manufacture and popularity. As an example, the first exhibit to be played was an early English carillon clock, the second was a very early cylinder movement from a clock base with single teeth on a sectional comb and fusee drive. There was a Le Coultre, a Bremond, a Paillard - a bell box, an organ box and an interchangeable cylinder box, and so on to the disc machines which were well represented. A flute-playing clock mechanism soon brought me to the most beautiful example of a barrel orchestration I have ever heard. It was built by

Heismann. Then came the street piano - the player piano and what is known in Belgium as the "Tingeltangel" an illustration both closed and open is shown - this instrument like all the others played perfectly. Then we came to the organs - starting with a Serinette - birds in cages - then on to street organs. Then started the larger organs, both cylinder and book music, the Gaviolis and ending with very large concert and dance organ "De Schuyt" by Gavioli which, on account of its volume, is only played on Thursday evenings!!

We can most certainly recommend a visit to this museum to all our members who may be visiting Holland. For those of you who cannot pay a visit to this collection then I suggest you purchase the L.P. Record (reference C.N.R. KLP 4206)* on which most of the instruments in the Museum can be heard. The record sleeve contains illustrations and descriptions of the instruments* - a very worthwhile addition and I imagine Keith Harding stocks it.

Three days later I played "hookey" from the Congress for three hours and we drove to Monnickendam. For many years I had been told about this musical box restaurant and cafe and now at last was a chance to visit it. We found it situated at the waters edge in most picturesque surroundings. The cafe part contained the louder types of mechanical music, whilst the restaurant housed the cylinder and bell boxes, singing birds and disc machines. It was fascinating to see the proprietor walk through his establishment and turn on box after box - but never two together - all through lunch. In all, we were told there are 170 pieces, and all in playing order. Is this an idea for a collector who ought to be a restaurateur or a restaurateur who ought to be a collector? One other addition caught my eye - in the centre of the cafe section was a raised platform fitted out as a work bench with all musical box repairers' impedimenta - the patrons being able to watch from time to time all types of repairs being carried out whilst they sipped their Schnapps. What about it Graham - Keith or even our President?

* Reviewed on page 228



John Neville Maskelyne installed his "Electrical and Automatic Orchestrephone" at the Egyptian Hall, Piccadilly, London, prior to 1894. A highlight of the famous Maskelyne & Cooke's magic shows, contemporary programmes refer to it as being "....controlled by Mr. Chas. Mellon" who played a "Grand descriptive selection, introducing a storm at sea". The instrument, recalled within living memory, is now lost. Maskelyne also financed a typewriter company which bore his name.

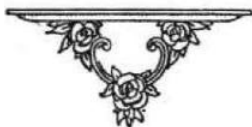


Piddinghoe Church in Sussex contains these remains of a large barrel organ. Three barrels can be seen mounted in a rotating, indexing frame and the soundboard, now without pipes, forms the top of the instrument which no longer has a case. Langwill & Boston state that the organ has three stops and 28 notes. There were ten tunes to each barrel. It is said to have been restored in 1790 which date seems extremely early for an organ of this type. The maker is unknown.

Picture by courtesy of the Radio Times Hulton Picture Library.

● UNDER THE HAMMER

Being Some Interesting Items sold recently at Sotheby's in London.



A rare singing bird watch by Jacob Frisard in the form of an urn with blue enamelled conchoid cover, the base decorated with applied oval panels of fruit and flowers within gold frames. The base opens as a snuff box, the cover opens to reveal a singing bird standing between two rocks which flank the dial of the watch. (sold for £3,000)



A George II musical automaton bracket clock by Edward Pistor, London. The shaped dial with rococo spandrels, calendar aperture and with an amusingly painted automaton in the arch, with a group of nine musicians including a lady in an ivory and blue dress seated at a harpsichord, a violinist, a man playing a flute and a tambourine in his other hand, another man with a double bass and a small girl in a bright blue dress holding the music for a woman with a lute, the scene set in a drawing room, pictures on the walls, a mirror and a table with an ivory damask cloth, at the bottom a selector for six tunes. The fine three-train movement with eleven bells, an engraved back-plate and contained in an inverted bell-top ebonised case richly mounted with pierced gilt-metal rococo motifs, carrying handles at the sides and the canted corners with female terms, swags of flowers and fruit and with gilt metal pierced and shaped aprons and fine scroll feet, 2 ft. 1 in. high. Edward Pistor was working in Prescott Street, 1755-77.







A gold and enamel musical snuff box and watch, the case in the form of a butterfly with spread wings, the body cast and engraved, the wings veined in gold and marked with varicoloured enamel, the base with a blue border containing gold leaves surrounding a blue basse taille panel centred with a butterfly, the band of the case divided into panels decorated with blue basse taille panels and gold, black and white floral decoration, the left wing opening to reveal the snuff box, the right the dial of the watch, musical movement contained in the base, 73mm. in original red morocco fitted case

A slightly similar piece is illustrated on Page 82 of Mosoriak's book "The Curious History of Music Boxes".

A gold and enamel watch and snuff box in the form of a butterfly, with a musical box in the base, the sides decorated with urns and flowers on a dark blue ground, the back attractively enamelled in dark blue transparent enamel over engraved rosettes within a gold and enamel border, the front naturalistically engraved and decorated with multi-coloured enamel to simulate the wings and body of a butterfly, the musical movement stamped P & M, circa 1820, 72 mm.

(From the Marfels Collection)



Obituary

It is with deep regret that we have to record the death after a short illness of Member Henry Cormacey of Wanstead, London. Henry Cormacey began collecting mechanical musical instruments in 1964 and his house at one time housed a marvellous assortment of instruments ranging from a large manual chamber organ in his hall through a Duo-Art reproducing piano, a 65/88-note Rachals player piano, to his musical boxes which

included an almost mint specimen of the 22inch self-changing Regina. In recent months, failing health suggested that he should dispose of most of his collection. Founder and former managing director of the large paper and board company bearing his name in East London's Curtain Road, Henry passed away on July 18th, just one week short of his 77th birthday. We extend our deepest sympathy to Mrs. Cormacey and his two sons.



Ord-Hume in America

Part One

IN describing my visit to the United States and some of the things which I saw, I am aware that of our Membership, something like 15% to 20% are American. This must naturally modify my approach in some measure, as well as possibly making me think twice before committing general impressions of a land the size of the States to print.

I was last in the States six years ago and in the intervening years it does seem to have altered a great deal. There exists a tension and insecurity concomitant with the overt wealth and comfort. It is ever an ant-hill of constant motion and activity, yet the ordinary man appeared to me to have relapsed into a state of apathy leaving one in doubt as to just what there was in life which they enjoyed doing. I can, I know, be taken to task for judging a nation on so short and restricted an examination, yet my experiences bear a direct relationship to the extended attributes we read about in our newspapers. Perhaps the bus companies and the police forces breed a special strain of naturally disagreeable people, I don't know.

On the other hand, I was delighted to find that certain aspects of the American way of life remain unchanged. I refer, of course, to the newspapers and their wonderful ability to rub down all the news to a common level. Where else, for example, might one read this other than in the New York Times:-

ly MOZART'S NEW HIT HEARD IN FESTIVAL

As everyone must know by now, Wolfgang Amadeus Mozart, dead these 176 years, has a smash hit on his hands. It is his Piano Concerto No. 21 in C (K. 467), which has become a best seller.

Again, for something as hilarious as one could wish, what about this item from the Daily News:-

Walkout Hits Girdle Plant

About 75 workers walked out at the Figure Flattery Brassiere and Girdle Co. yesterday in support of a temporary worker fired for what the company called a one-man sitdown strike.

The
terna
Worl
gan
Tent
Ber
presid
as a
compl
the pi
the

But enough of the preamble - let's get down to business. My wife and I arrived with a crate of photographic equipment and enough recording equipment to make the big boys sit up, as they say. After a period of adjustment during which one changed good old British

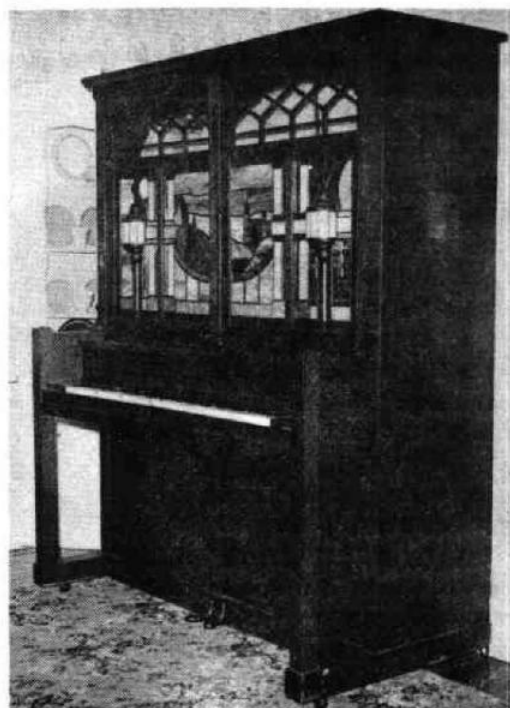


Band organ by C. Eifler of Darby, Pa.
in the Bill Pilgremayer collection.

3-pin fused plugs for those 2-pin shaver-type plugs the Americans use, got accustomed to high humidity and temperatures in the 'high nineties, realised that one either learned to sleep with a noisy air-conditioner which sounded as though its big-end had gone or just didn't sleep at all, and learned to change shirts before every meal, we just got down to the serious side of things.

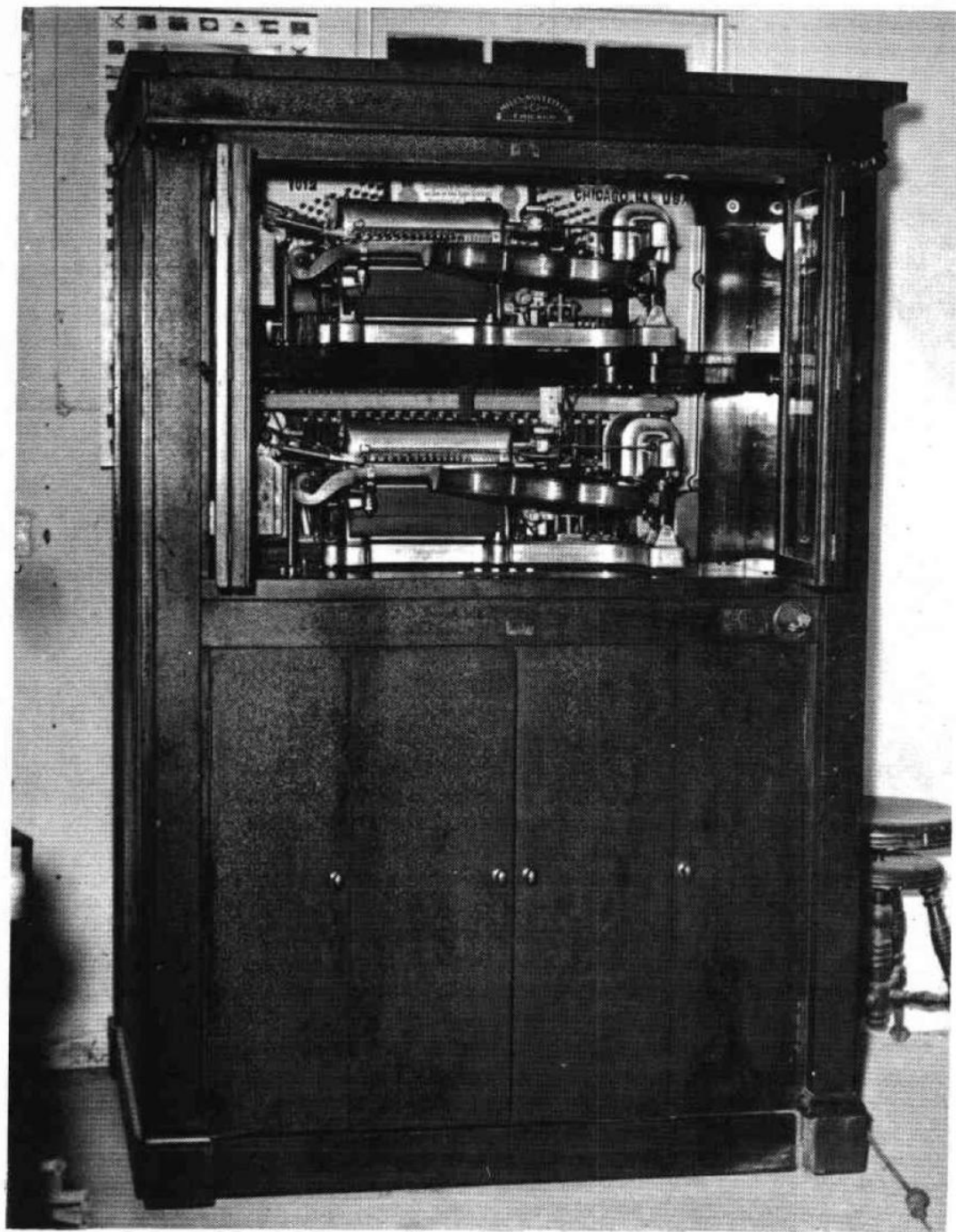
A visit to Paul Wilkinson in Philadelphia was first on the list. He has one of the very early Forneaux barrel and finger hamoniums which may be played either by hand or by turning a handle whilst treadling. A Mason & Hamlin American organ although not mechanical is interesting because it has a large musical box-type comb inside it which, when a stop is drawn, is struck by dulcimer-like hammers. The effect is interesting. Paul Wilkinson has a good collection of musical boxes, a lovely Nelson-Wiggen keyless coin-operated piano and xylophone and an Orchestrelle of the same style as my own.

William Pilgermayer of Glenside, Pennsylvania, runs a player piano workshop and, hearing that Ord-Hume was in town, he sought me out to advise on the restoration of a large Welte No. 2 Cottage Orchestron he has recently bought. His large garage was absolutely packed with coin-operated pianos, a fair



organ, the enormous console of an Aeolian player pipe organ and sundry other bits and pieces including a steam calliope in marvellous condition. Because Bill's neighbours are not calliope fans, I had to forego hearing this one! However, we did hear the Link piano back in the house - this plays an endless band of paper music which is not on a spool but left free to fold and re-fold itself in an area set aside for it. It seemed to function on the perpetual threshold of disastrous and irrevocable entanglement but, miraculously, this *ad lib* music storage system never quite behaves in the way it looks.

A visit to the vast, non-mechanical six-decker organ in the John Wanamaker store in Philadelphia proved most entertaining. I was ushered into a seat just behind the organist - a holiday relief chap - and suddenly found myself called upon to help change the stops. Although it has been in regular use every business day since its installation in 1911, the organ has never really been finished and so the couplers are not connected. With 451 stops, 964 controls and 30,067 pipes, this is some organ to behold. The organist played a popular selection including Black and White Rag. "I daren't open it up", he explained, indicating the three "Forte" stops firmly off. "If it gets too loud, they can't hear the cash-registers downstairs (in the Great Hall) and someone 'phones up". I could see what he meant, looking down into the centre of this vast department store,



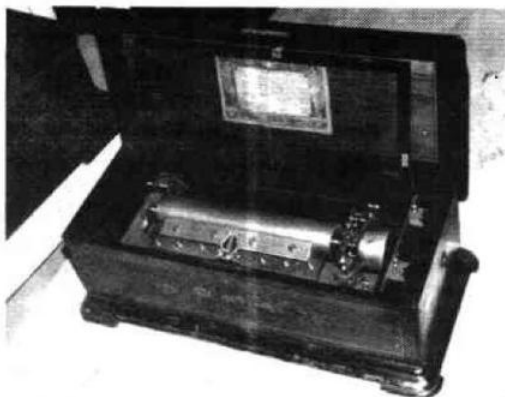
Mills twin Violano-Virtuoso
[Bill Pilgemayer]

especially after I read the following extract from the little blurb leaflet I picked up off the table:-

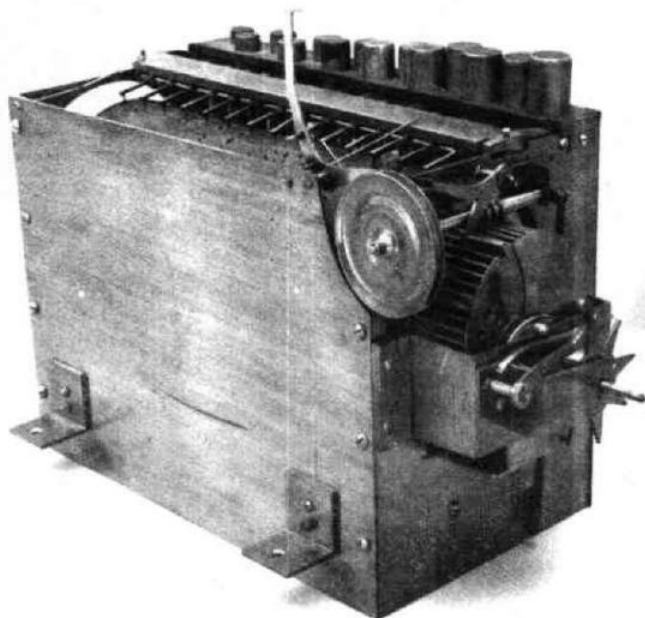
The Major Chimes are usually referred to as "tower chimes" because they were made especially for outside tower chime playing. The largest chime of this set, Note C, is twelve feet long, five inches in diameter, and weighs 600 pounds. It is struck by a leather-topped hammer four inches in diameter, the stroke of which is nine inches. It weighs eighteen pounds and has an impact of seventy-two pounds pneumatic pressure.

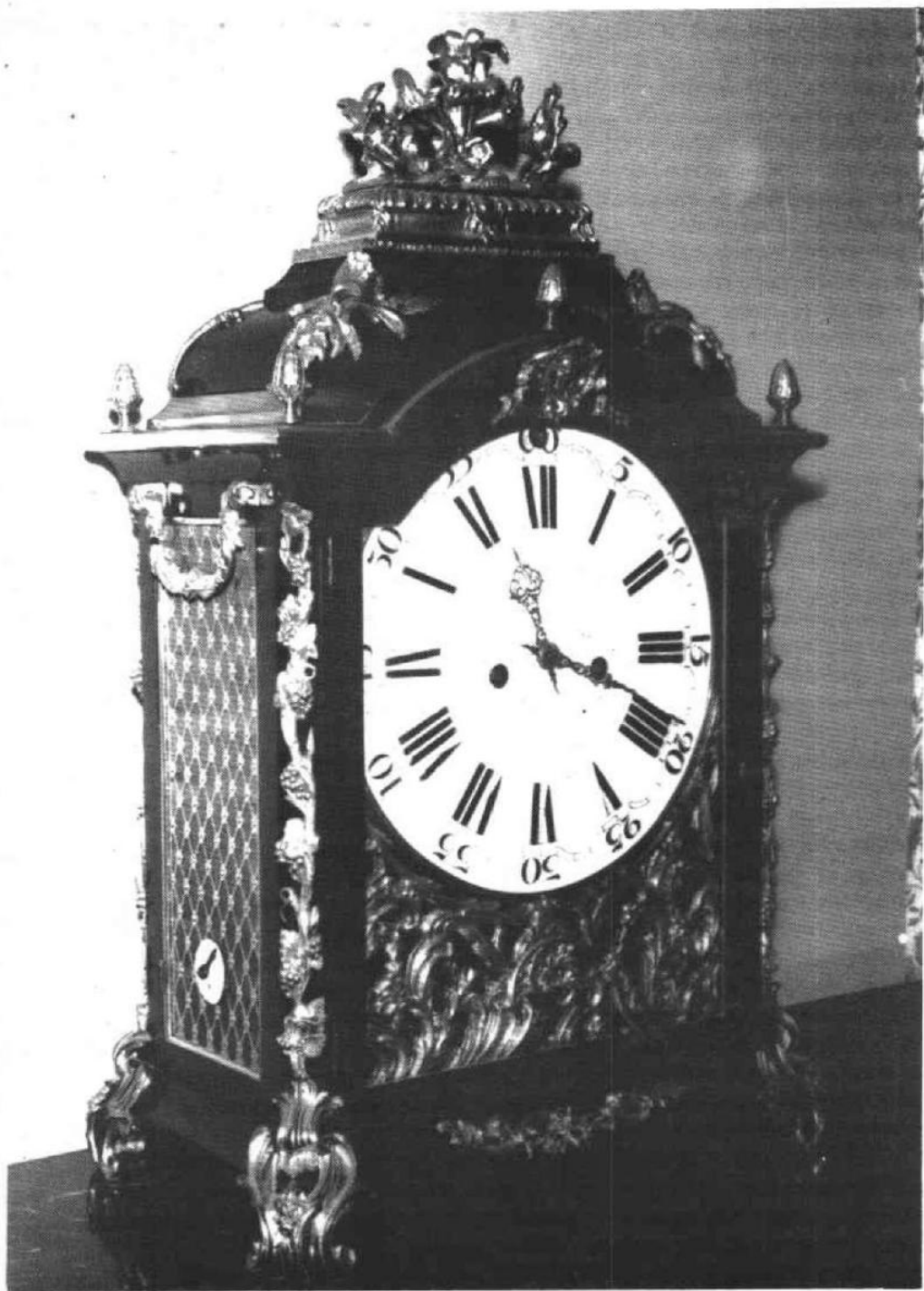
From Philadelphia we went by road to New York, stopping en route to see if the Howard Johnson roadhouse actually stocked all the 28 varieties of ice cream which it advertised. It didn't. Hughes and Frances Ryder had very kindly offered us accommodation at their Cranford, New Jersey home and so it was that we finally arrived there to be greeted by Stephen and Gerry Ryder and Buddy the dog (who slept most of the time in a basket under the 1921 Weber Style WR Duo-Art). I was introduced to Hughes' basement where, in the days which followed, I spent a great deal of time looking into the fine boxes he has.

In addition to many key-wind and lever-wind boxes, he owns what may well be a unique box - a PVF *Polytype Zither*. At first appearance, this two-comb box appears fairly ordinary. However, the six tunes on the cylinder are bracketted into three pairs, each pair being arranged for a different tonality. The first two are *Sublime Harmonie*, the next two *Piccolo Zither* and the third pair *Tremolo Zither*. This 13½ inch cylinder movement has the motor mounted to the right of the bedplate.

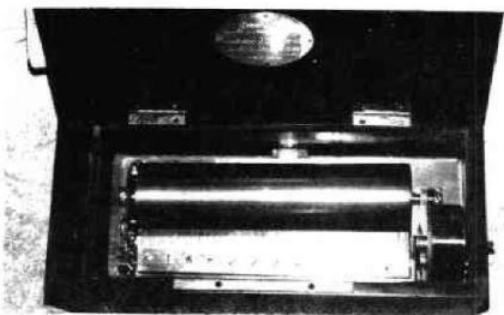


I was intrigued to note the extreme similarity in tone between the Capitol "Cuff" boxes and disc machines with similar-sized combs. They all played very well with none of the occasional clanks which so often mar a disc performance. But the gem is with little doubt a 3-overture box marked on the comb FRANC^S NICOLE and having an oval silver tune sheet. The serial number is No. 3 and the comb is in three pieces although they are all soldered in manufacture to one comb base. In most other details it resembles the later box by this maker described on 389 *et seq.* Although described as a 3-overture box, it actually plays only two - *La Gazza Ladra* in two parts and the *Barber of Seville* in one. The characteristic lateral and vertical ruling to the cylinder, described by Jocelyn Walker in the article mentioned above is also present.





Howard Fitch is the proud owner of this flute-playing clock by Jaquet-Droz. The organ mechanism is illustrated on the facing page (left).



Hughes and Frances had a heavy week-end programme of catering, so Howard and Helen Fitch collected us on Saturday morning and took us first to one of those vast and sterile American shopping complexes where, in the concourse, was, of all things, a veteran car club rally. Here, amongst cars with names such as the Pierce Arrow and other more familiar ones - all looking as good as the day they were made - we enjoyed ourselves amidst the same type of car enthusiasts that we know in England. We lunched at Rod's 1890's Ranch House - a most interesting and authentic re-creation of a period eating place part of which consisted of two wonderfully restored and furnished 19th century railway carriages still mounted on bogies and standing on authentic lengths of track. "The Lillie Langtry Suite for Wild and Woolly Parties or Conventional Occasions" read the blurb on the giveaway match pack. Here we met Lee Munsick and we spent lunch making tentative plans for an American visit to England perhaps next year. The idea is to get about one hundred Members together to charter a flight across

The Puddle.

Next we visited George and Madeleine Brown at their delightful hilltop home in the woods - Harmony Hill. George has a fine collection of musical boxes and automata. I was particularly interested to see a large full orchestral box made by Bremond which he has. This one, custom-built and with an original inscribed tune sheet, is a start to the dating of Bremond boxes by serial numbers *a la* Nicole Freres. At the bottom of the tune sheet is written in matching script: "Geneva, December 1886. Made Expressly for Mr. E.J. Donnell, Esquire, by B.A. Bremond". This four cylinder changeable bears the serial number 20534, being 16 airs to each cylinder.

A visit to Lee Munsick's home led us through an area marked "The Great Swamp". At Lee's we found more fine instruments; by this time being quite accustomed to descending into basements to view choice items.

The evening was spent viewing the Fitch's collection including musical watches, a seal and other superb miniature pieces. Howard's pride is justifiably directed towards his Jaquet-Droz flute-playing clock which, overlooked by others at a sale he bought "for a song", although which of the eight ones that it plays he would not reveal..... There is also a Francois Nicole 3-overture box which he bought from Hughes for a princely 25 cents, but that is another story.

In the next issue I will describe the collections of George Boser, Rita Ford, Ruth Bornand and, last but not least, Murtoigh Guinness.

FORTHCOMING NEW BOOKS

"PLAYER PIANO - The History of the Mechanical Piano and How to Repair It" by Arthur W.J.G. Ord-Hume (George Allen & Unwin). A follow-up to his classic book on Collecting Musical Boxes, published last year, Arthur Ord-Hume's second book on mechanical music is to appear early in the new year. Designed as a matching volume, **PLAYER PIANO** tells of the early endeavours to produce a self-acting piano, relates the development of the barrel piano from the small portable street pianos to the larger 'automatics' of the public house, and describes the attempts to reproduce music which led to the production of the player piano. The perfection and complexity of the reproducing piano is also described. With step by step repair and overhaul details

for all types of mechanical piano, this new book will have 110 photographic illustrations and 111 line drawings. A third book in the series, devoted to the mechanical organ, is in the course of preparation.

"THE CYLINDER MUSICAL BOX HANDBOOK" is the title of a new book to be published in the Autumn by Faber & Faber. Written by Graham Webb and costing 50/- this book will give instructions on cleaning, maintaining and repairing the movement and case of cylinder musical boxes. With 200 pages of text and illustrated by more than 40 photographs and drawings, this work will show that with a few inexpensive tools and the use of a kitchen table, the scope of collecting can be enlarged to the benefit of the musical box and its collector. A chapter will be devoted to the question of cylinder re-pinning.

By the sad sea waves
In happy moments
Buffalo gals
Annie Laurie
Cheer, boys, cheer
Home, sweet home
Original Polka—*Jullien*
Olga Waltz
Lass o' Gowrie—*Scotch*
Auld lang syne
Blue bells of Scotland
Lass o' Gowrie
God save the Queen
Home, sweet home
Rule Britannia
There is nae luck about the house
Bonnie Dundee
St. Patrick's Day
Adelaide Waltz
Val d'Andore dans cette ferme
Le sermens romance
In the days when we went gipsying
Thou angry storm
The dream of home

Four Tunes, 40s.

*Composition Cases, first quality.
Manufactured by Henri Margot.*

Jenny Jones
The days when we went gipsying
Les Immortels Valse
O charming May
Libiamo—*Traviata*
Ah! che la morte—*Trovatore*
Il balen
Punis mon—*Sicilian Vespers*
Ever of thee—*Foley Hall*
Rose de Mai Valse
Nothing more—*W. Winn*
A father's love—*Lurline—Wallace*
Over the water to Charlie
Blue bells of Scotland
My love is like a red, red rose
Royal Charlie
The British Grenadiers' March
There is nae luck about the house
'Twas within a mile o' Edinbro
St. Patrick's Day
Les Immortels Valse
Zitti, zitti—*Barber of Seville*
Ah! non giunge—*Somnambula*
Non piu mesta—*Cenerentola*
Old Hundredth Psalm
Evening Hymn
In native worth—*Creation*
Thy will be done—*A. Mullen*

Oh! summer night—*Don Pasquale*
Robert, toi que j'aime
Il segreto—*Lucrezia Borgia*
Quadrille—*Daughter of the Regiment*
Auld lang syne
Scots wha hae wi' Wallace
Bonnie Dundee
My heart's in the Highlands
Two merry hearts are we—*Glover*
The gay Cavalier
The Angel's Whisper—*Lover*
Ring out, wild bells—*Blockley*
I'm off to Charlestown—*Graham*
Polly won't you try me O!
My Mary Ann
Wait for the Wagon
Crown of Roses Waltz.
Jeanette and Jeanot
The Isle Polka
Cheer, boys, cheer
Ye banks and braes
Bonnie Dundee
Annie Laurie
Mira d'Acerbe—*Trovatore*
Tyrolhienne, from *William Tell*
Partant pour la Syrie
Robin Adair
The lass o' Gowrie
Tyrolhienne, from *William Tell*
Waltz—*Der Frieschutz*
Bonnie Dundee
Annie Laurie
Shadow Dance—*Dinorah*
Willie, we have missed you
Fair shines the moon—*Rigoletto*
Beautiful star—*S. M. Sayles*
Sans toucher terre Waltz
The maid of Beulah
Am I not fondly thine own?
Prince Ernest Galop
Then you'll remember me—*Balfe*
The Prima Donna Waltz
We may be happy yet
St. Patrick's day
Maria Padilla Valse
Nelly Bly
The sea, the sea
March from *Somnambula*
Tyrolhienne, from *William Tell*
The Evening Hymn
In native worth—*Creation*
Old Hundredth Psalm
He is mine
My love is like the red, red rose
Vogel gesang Valse
A lowly youth, the mountain child

The Queen of merry England
Lily of St. Leonard's
Fleurs de Fantasia Waltz
Hamburg Polka

Home, sweet home
Bay of Biscay
Sailor's Hornpipe
Aurora Waltz

Come, live with me
The Ocean Waltz, No. 1.
When Sappho stood trembling
Scots wha hae wi' Wallace bled

Lucy Neal
Redowa Waltz, No. 5
The Queen of merry England
The mill, mill O

Thou angry storm
In the days when we went gipsying
La Fanfan Valse
Celebrated Original Polka

*Polished Walnut Wood Cases, 14 by 6
by 5 inches.*

Manufactured by Nicole Frères.

Four Airs, £4.

1127.

Home, sweet Home—*Bishop*
I'm afloat, I'm afloat—*Russell*
You are going far away—*Jeanette and
Jeanôt*

Huntsman's Chorus—*Der Frieschütz*

1065.

Robert, toi que j'aime—*Meyerbeer*
Hear me, Norma—*Bellini*
Olga Waltz, No. 1—*Jullien*
Bohemian Polka—*Kœnig*

1568.

Dell invento—*Traviata—Verdi*
La Traviata Valse—*D'Albert*
Di tale amor—*Trovatore—Verdi*
Achetez voici—*Etoile du Nord—
Meyerbeer*

1424.

Cheer, boys, cheer!—*H. Russell*
Waltz, Favourite, No. 3—*Beethoven*
Marche du Sacre—*Prophète—Meyerbeer*
Di si felici—*Barber of Seville*

1550.

Il Balen—*Trovatore—Verdi*
Coro di Zingari
Duetto vivia, No. 12
Waltz, No. 4—*Traviata*

1016.

Home, sweet home—*Bishop*
Bid me discourse
God save the Queen
Rule Britannia—*Arne*

1314.

The bonny breast knots—*Scotch*
Weel may the keel row
The lass o' Gowrie
There's nae luck about the house

1634.

Auld Robin Gray
Here's a health to them that's awa'
Scots wha hae wi' Wallace bled
John Anderson my Jo

1089.

Huntsman's Chorus—*Der Frieschütz*
Copenhagen Waltz
Oh fortune—*Robert le Diab'e*
Green hills of Tyrol—*Rossini*

1119.

Son vergin vezzosa—*Puritani*
Si fino all'aura—*Norma*
Ah! non giunge—*Sonnambula*
Mazurka de Spa

1007.

I know a bank where—*C. Horn*
The sea-maid's song—*Macfadden*
Duke of York's new March—*Kohl*
Brand Hofen Waltz—*Libitzky*

705.

All idea di qual Metallo—*Barbieri de*
Non piu mesta—*Cenerentola* [*Seville*]
Suoni la tromba—*I Puritani*
Credea si misera—duetto

1243.

Tho' the last glimpse of Erin—*Irish*
Fly not yet
Those evening bells
Oft in the stilly night

1343.

Donnybrook Fair
She wore a wreath of roses
The fine old English gentleman
Farewell to the mountain

SACRED.

Rosewood Cases, 14 by 6 by 5 inches.

Four Airs, £4 4s.

452.

Old Hundredth—*Psalm*
All Saints—*Hymn*
Lyons
Mount Ephraim—*Hymn*

1388.

The heavens are telling—*Haydn*
Sound the loud timbrel—*Airson*
Before Jehovah's awful throne
With verdure clad—*Haydn*

*Polished Walnut Wood Case, 18 by 6
by 5 inches.*

Manufactured by Nicole Frères.

Six Airs, £6.

1563.

Ti seosta o Malnato—*Masnadieri—Verdi*

La mia Letizia—*I Lombardi—Verdi*

Di tale amor—*Trovatore* "

Sempre libera—*Traviata* "

Dell invento " "

Stride la Vampa—*Trovatore* "

646.

Home, sweet home—*Sir H. Bishop*

Rule Britannia—*Dr. Arne*

St. Patrick's Day

Bid me discourse—*Sir H. Bishop*

God save the Queen

Victoria, our bonnie English rose

679.

Ah! bello a me—*Cavatina—Norma*

Le linge, la chioma " "

Me protegge—*Marche* " "

Nella citta di Cesari " "

Tutto e gioga e festa—*Sonnambula*

Perche non posso odiarti " "

1070.

No. 1. Pantalon

2. Eté

3. Poule

4. Trenise

5. Finale

*Royal Irish Qu-
drille—Jullien.*

Olga Waltz—*Jullien*

1370.

Di tanti palpiti, op *Tancredi—Rossini*

Tyrolleane de *Guillaume Tell* "

The National Schottische—*D'Albert*

The British Grenadiers' March

Prima Donna Waltz—*Jullien*

The Camelia Polka " "

1551.

Per me ore fatale—*Trovatore—Verdi*

Duetto Contende Vivra " "

Marche des Vêpres *Siciliennes* " "

Mazurka " "

La Méchante Polka—*Labitzky*

Les bords du Rhin Valse—*Hampton*

1487.

The Sultan's Polka—*D'Albert*

Waltz d'Amour—*König*

Coquette Polka—*D'Albert*

Mandoline Waltz—*Büller*

Finale Galop des Diamans—*Auber*

Summer Flowers Waltz—*Tinney*

1311.

Me protegge Marche—*Norma*

Suoni la tromba Marche—*Puritani*

Marche de la *Fille du Régiment*

Marche de Figaro (Mon Enfant)—*Mozart*

The American Polka—*Jullien*

Olga Waltz

1444.

Home, sweet home—*Sir H. Bishop*

In the days when we went gipsying

Jenny Jones

Annie Laurie—*Douglas*

Olga Waltz—*Jullien*

The Bloomer Polka—*Blockley*

572.

Torna torna—*Lucia di Lammermoor*

Della crudele—*Elisir d'Amore*

Suoni la tromba—*I Puritani*

Bel conforto—*Elisir d'Amore*

Still so gently—*Sonnambula*

Largo al factotum—*Barber of Seville*

654.

Auld lang syne—*Burns*

Blue bells of Scotland—*Stirling*

Scots wha hae—*Burns*

The lass o' Gowrie—*Hogg*

Of in the stilly night—*Moore*

John Anderson my Jo—*Burns*

1230.

Aussi nombreux que les étoiles—*Prophète—Meyerbeer*

Un Bouquet de Dahlias Waltz—*Strauss*

Julietta Polka—*Litta*

Il segreto per esser—*Lucrezia Borgia*

Le linge, la chioma—*Norma*

Largo al factotum—*Barbieri de Seville*

1298.

Le Desir Waltz—*Beethoven*

The first violet—*Mendelssohn*

Balmoral Waltz, No. 2.—*Labitzky*

Exhibition Polka—*Jullien*

Wild Flowers Waltz, No. 2—*Jullien*

The Jetty Treffz Polka—*Buller*

Rosewood Cases, 18 by 6 by 5 inches.

Manufactured by Nicole Frères.

Six Airs, £6 6s.

1698.

Beautiful star—*S. M. Sayles*

Willie we have missed you—*S. C. Foster*

I'm off to Charlestown—*W. Grantham*

Limerick Races

Hoop de dooden doo—*Montgomery*

Wait for the Wagon

1536.

Il balen—*Trovatore*—*Verdi*
 Libiamo me—*Traviata*
 Si j'étais roi—*Romance*—*Adam*
 Wilde Rosen Polka—*Labitzky*
 La Rose monseuse Waltz "
 Grüss an Wien Polka "

158.

Marche de Figaro—*Mozart*
 Vedraicarino—*Don Giovanni*—*Mozart*
 O dolce concerto—*Flute Enchantee* "
 Waltz, No. 3—*Strauss*
 Mon cœur soupire—*Mozart*
 Die Wiener Waltz—*Lanner*

The above in Walnut Case, £6.

1452.

Bid me discourse—*Bishop*
 God save the Queen
 Home, sweet home—*Bishop*
 The keel row—*Nelson*
 Cheer, boys, cheer!—*H. Russell*
 Partant pour la Syrie—*La Reine Hortense*

1551.

Per me ore fatale—*Trovatore*—*Verdi*
 Duetto contende Vivra "
 Marche de Vêpres Siciliennes "
 Mazurka " "
 La Méchante Polka—*Labitzky*
 Les bords du Rhin Valse—*Hampton*

1542.

Bobbing around—*Ethiopian*
 My Mary Ann "
 Polly, won't you try me, oh!—*Ethiopian*
 The Ratcatcher's Daughter
 Postman's Knock
 Nelly Bly—*Ethiopian*

631.

Auld lang syne—*Burns*
 Blue bells of Scotland—*Stirling*
 Scots wha hae—*Burns*
 The lass o' Gowrie—*Hogg*
 Oft in the stilly night—*Moore*
 Woodman, spare that tree—*Russell*

1311.

Me protegge Marche—*Norma*
 Suoni la tromba Marche—*Puritani*
 Marche de la Fille du Régiment
 Marche de Figaro (Mon Enfant)—*Mozart*
 The America Polka—*Julien*
 Olga Waltz "

1072.

Oh! summer night—*Don Pasquale*
 Still so gently—*Somnambula*
 Robert, toi que j'aime—*Robert le Diable*
 Scenes that are brightest—*Maritana*
 Bird of Paradise Waltz—*König*
 We may be happy yet—*Balfe*

1358.

Ernani! Ernani! involami!—*Donizetti*
 Tutto Sprezzo—*Cavatine*
 Festal—*Polonaise* [*Donizetti*]
 Pour tant d'amour, No. 10—*Favorite*—
 Si fino all' aura—*Norma*—*Bellini*
 Valse d'amour—*König*

995.

Who'll buy caller herrin?—*Gilfillan*
 Robin Adair—*Burns*
 Auld lang syne—*Burns*
 The bonny breast knots
 Blue bells of Scotland—*Stirling*
 Brand Hofen Waltz—*Labitzky*

761.

Non piu mesta—*Cenerentola*
 Il crociato in legetto
 Ah! non giunge Marche—*Somnambula*
 Ah! per sempre—*I Puritani*
 Deh conte conte—*Norma*
 Oh! could I but

The above in Walnut Wood Case, £6.

1428.

Cheer, boys, cheer—*Russell*
 Home, sweet home—*Bishop*
 The old folks at home
 Ben Bolt
 Quadrille finale—*Daughter of the Regi-*
 Auld lang syne—*Burns* [ment.]

SACRED.

Rosewood Case, 18 by 6 by 5 inches.
Manufactured by Nicole Frères.

Six Airs, £6 6s.

944.

Old Hundredth—*Hymn*
 Morning "
 The Evening "
 Hallelujah "
 Before Jehovah's awful throne—*Hymn*
 Helmsley "

1284.

Rousseau's dream—*Hymn*
 O rest in the Lord—*Mendelssohn*
 If with all your hearts "
 Before Jehovah's awful throne—*Madan*
 Grand Chorus—*Creation*—*Haydn*
 With verdure clad "

Rosewood Cases, 20 by 6½ by 5 inches.
Manufactured by Nicole Frères.

Six Airs, with Piano and Forte Accompaniment, £7 17s. 6d.

945.

Home, sweet home—*Bishop*
 Rise, gentle moon
 We may be happy yet—*Balfe*
 I dreamt I dwelt "
 The Bohemian Polka "
 Waltz de Copenhagen

1122.

Deh! conte li prendi—*Norma*
 Com'è gentil—*Serenade—Don Pasquale*
 Suoni la tromba, Marche—*I Puritani*
 Still so gently—*Somnambula*
 Motif de l'ouverture—*Guillaume Tell*
 Waltz d'Oberon

239.

Qui la voce—*I Puritani—Bellini*
 Me protegge—*Norma* "
 Norma vieni! " "
 Si fino all' ore " "
 Vi ravisce—*Somnambula* "
 Quando di sangue—*Belisario—Doni-*
zetti

*Polished Walnut Wood Cases, 20 by 6½
 by 5 inches.*

Manufactured by Nicole Frères.

Eight Airs, £8.

1631.

The light of other days—*Balfe*
 God save the Queen
 Rule, Britannia—*Dr. Arne*
 Alice Grey—*Milliard*
 Then you'll remember me—*Balfe*
 Waltz from *Der Freischütz—Weber*
 Yankee Doodle—*American*
 The girl I left behind me—*Nelson*

1676.

The cradle song—*Dinorah—Meyerbeer*
 The shadow song " "
 Air de danse " "
 Quand l'heure—*Duo* " "
 Le traître morbleu " "
 Chanson de l'oiseau " "
 Chant du chasseur " "
 Ah! mon remords—*Romance* "

1530.

God save the Queen
 Rule, Britannia—*Dr. Arne*
 Partant pour la Syrie—*La Reine Hor-*
tenae
 Rose of Allandale
 British Grenadiers' March
 Annie Laurie—*Douglas*
 Yankee Doodle—*American*
 We may be happy yet—*Balfe*

1467.

As I view those scenes—*Somnambula*
 Perché non posso odiarti—*Somnambula*
 March from the *Crown Diamonds*
 The meeting of the waters—*Moore*
 Tho' the last glimpse of Erin " "
 Kate Kearney—*Alex. Lee*
 The maid of Llangollen—*Clarke*
 Oh! Nanny, wilt thou gang wi' me?

1661.

Auld lang syne—*Burns*
 Partant pour la Syrie—*Reine Hortense*
 Those evening bells
 The brave old oak—*Loder*
 Long, long ago
 Ariel's song—*Nelson*
 Death of Nelson
 Waltz d'Oberon—*Weber*

1320.

Perché non posso odiarti—*Somnambula*
 Son Vergin Vezzosa, Polacco—*Puritani*
 Oh! per sempre li si peraci " "
 Si fino all' ore—*Norma*
 Ah! bello a me " "
 Dell'eradina Cavatine—*Parisina*
 Viendellto. No. 6—*I Puritani*
 Deh! conte li prendi—*Norma*

619.

Home, sweet home—*Bishop*
 The rose will cease to blow
 O dear, what can the matter be?—*Bayley*
 The brave old oak
 Victoria, our bonny English rose
 My heart and lute—*Bishop*
 The Pope he leads a happy life
 Tyrolienne de *Guillaume Tell—Rossini*

1413.

Rule, Britannia—*Arne*
 The last rose of summer
 Here's a health to all good lasses
 Isabel—*Spanish Air*
 Scots wha hae wi' Wallace bled
 The Elfin Waltz, No. 1—*Labitzky*
 ditto No. 4 " "
 Copenhagen Waltz

1554.

Silver lake Varsovia—*Montgomery*
 My Daughter's Schottische " "
 Close of the Ball Galop " "
 Traviata Waltz, No. 2—*D. Albert*
 Maletier Polka—*Williams*
 Maid of the Valley Waltz—*Farmer*
 The Cantinière Polka—*Williams*
 The Virginia Varsovia—*Marriott*

*1660.

Oh dear, what can the matter be?
 The girl I left behind me—*Nelson*
 Yankee Doodle—*American*
 Bonnie Dundee
 Tyrolienne from *William Tell*
 British Grenadiers' March
 Jenny Jones
 Huntsman's Chorus—*Der Freischütz*

1163.

Marche—*Fille du Régiment—Donizetti*
 Die Elfin Walzer, No. 4—*Labitzky*
 Annen Polka—*Strauss*
 Il segreto per esser—*Lucrezia Borgia*
 Finale Galop—*Crown Diamonds*

Hermeline Waltz—*Jullien*
The Bridal Polka—*D'Albert*
Wanderers Leberwoltz Waltz—*Strauss*

1612.

Eugénie Schottische—*D'Albert*
Varsoviana, nouvelle danse—*Laurent*
The Ripple Polka, No. 2—*Jones*
Piccolomini Waltz, Nos. 1 & 2—*Wagner*
Moldavian Schottische—*Jullien*
Rose de Péronne Fantasié—*Rosellen*
Tu Vedrai che amor, *Trovatore*—*Verdi*
Ah si j'etais coquette *Huguenots*—*Meyerbeer*

Rosewood Cases, 20 by 6½ inches

Manufactured by *Nicols Frères*.

Eight Airs, £8 8s.

1028.

A life on the Ocean Wave—*Russell*
Oh! Molly Bawn—*Lover*
Quadrille Finale—*Daughter of the Regiment*
The Elfin Waltz, No. 5—*Labitzky*
Oh! summer night—*Serenade*—*Don Pasquale*
I'm afloat! I'm afloat—*Russell*
Bridesmaids' song and chorus—*Der Freischütz*
Les Plaisirs Waltz—*Strauss*

1559.

Achetez, voici, voici—*Etoile du Nord*—*Meyerbeer*
Inkermann Polka—*Cricea*
Blondine Mazurka—*Labitzky*
Bouquet Quadrille, No. 1—*Strauss*
Stride la Vampa—*Trovatore*—*Verdi*
Leiblich liegt—*Rübezahl*—*Flatow*
Veneise Waltz, No. 2—*Bruschi*
Allegro—*Vêpres Siciliennes*—*Verdi*

1237.

Plus blanche—*Les Huguenots*
Beauté divine enchantresse—*„*
Mon cœur s'élance—*Le Prophète*
Marche du sacré—*„*
Un jour dans les flots—*„*
Celeste Phalange—*„*
Elfin Waltz, No. 4—*Labitzky*
La belle Schottische—*Farmer*

1446.

Cheer, boys, cheer!—*H. Russell*
God save the Queen
Rule, Britannia—*Dr. Arne*
Partant pour la Syrie—*Reine Hortense*
Bid me discourse—*Sir H. Bishop*
La belle Suisse Waltz—*D'Albert*
Julietta Polka—*Litta*
Les Fleurs d'Antoine Waltz—*D'Albert*

1562.

Per me ore fatale—*Trovatore*—*Verdi*
Libiamo—*Traviata*—*„*
Il Balen—*Trovatore*—*„*
Coro di Zingara—*„*
Le Rube Coro—*Masnadiere*—*„*
Da te questa—*Attila*—*„*
La sua lampada—*Masnadiere*—*„*
Cara patria—*Attila*—*„*

1162.

No. 1. Pantalon }
2. Eté } *Royal English Quadrille*—*Jullien*
3. Poule }
4. Trenise }
5. Finale }
The Military Schottische
Quadrille—*Poule*—*Daughter of the Regiment*
The Bridal Polka—*D'Albert*

Thus rank and fame—*Rose of Castile*—*Balfe*
Muleteer's Song
Des ma plus tendre—*Martha*—*Flatow*
Lorsque mes yeux
Power of love—*Satanella*—*Balfe*—*„*
When, the friends—*„*
The shadow dance—*Dinorah*—*Meyerbeer*
Song of the huntsmen—*„*—*„*

1501

Les Bords du Rhin Waltz—*Hampton*
March des Vêpres Siciliennes—*Verdi*
La Marchant Polka—*Labitzky*
Mazurka des Vêpres Siciliennes—*Verdi*
La Cantiniere Quadrille
Fleurs de Andalousie Varsoviana
Myrtle Polka—*Labitzky*
Il *Trovatore* duetto vivia—*Verdi*

1631.

The light of other days—*Balfe*
God save the Queen
Rule, Britannia—*Dr. Arne*
Alice Grey—*Millard*
Then you'll remember me—*Balfe*
Waltz from *Der Freischütz*—*Weber*
Yankee Doodle—*American*
The girl I left behind me—*Nelson*

1573.

No. 1. Pantalon }
2. Eté } *The Holiday Quadrille*—*Dos Santos*
3. Poule }
4. Trenise }
5. Finale }
Mazurka des Vêpres Siciliennes—*Verdi*
The Myrtle Polka—*Labitzky*
Vivia, duetto—*Trovatore*—*Verdi*

1384.

Row Polka—*Jullien*
 Prima Donna Waltz—*Jullien*
 Sturm March Galop—*Bills*
 Ravenswood Waltz—*Jullien*
 Great Exhibition Polka "
 Elfin Waltz, No. 4—*Labitaky*
 La belle Schottische—*Farmer*
 Redowa Waltz, No. 5—*Jullien*

1546.

No. 1. Pantalón
 2. Eté
 3. Poule
 4. Trenise
 5. Finale

Royal Irish Qua-
drille—Jullien

Il segreto per esser—*Lucrezia Borgia*
 Bonnie Dundee Polka
 La Rose de Mai—*Kanig*

1617.

Jennes beautés—op *Huguenots—Meyer-*
beer

Entends tu ces—*Lucia di Lammermoor*
 Per me ore fatale—*Trovatore—Verdi*
 Tu vedrai che amor "
 La donna e mobile—*Rigoletto*
 La ci darem—*Don Giovanni—Mozart*
 Largo al factotum—*Barber of Seville*
 Squilli Ecehgi—*Trovatore—Verdi*

1318.

The blue bells of Scotland
 The Campbells are coming
 The keel row
 Ye banks and braes
 Auld lang syne
 The Laird o' Cockpen
 Draw the sword, Scotland
 My love she's but a lassie yet

1572.

No. 1. Pantalón
 2. Eté
 3. Poule
 4. Trenise
 5. Finale

The Railway
Quadrille—Weippert

Marche des Vêpres Siciliennes—*Verdi*
 La Merchante Polka—*Labitaky*
 La Cantiniere Quadrille—*Filo do*

SACRED.

Rosewood Cases, 20 by 6½ inches.
Manufactured by Nicole Frères.

Eight Airs, £8 8s.

1011.

Helmsley—*Hymn*
 Lord of all power—*Hymn*
 The Evening "
 Easter "
 The Morning "
 German "
 Abingdon "
 Portuguese "

1093.

In native worth—*Creation—Haydn*
 Thanks be to God—*Elijah—Mendels-*
sohn
 Glory to God—*Messiah—Handel*
 He shall feed his flock "
 O rest in the Lord—*Elijah—Mendels-*
sohn
 If with all your hearts
 Rejoice greatly—*Messiah—Handel*
 Pastoral Symphony "

Rosewood Case, 25 by 7½ by 5½ inches.
Piano and Forte Accompaniment.

Eight Airs, £11.

1464.

In native worth—*Creation—Haydn*
 With verdure clad " "
 The Morning—*Hymn*
 See the Conquering Hero comes—*Chorus*
 The Evening—*Hymn*
 Lord of all power
 The Old Hundredth—*Hymn*
 Before Jehovah's awful throne—*Hymn*

Manufactured by Nicole Frères.

Eight Airs, with Piano and Forte
Accompaniment, £11, Rosewood.

Rosewood Cases 25 by 7½ by 5½ inches.

1372.

The light of other days—*Balfe*
 Auld lang syne—*Burns*
 Annie Laurie—*Douglas*
 Blue Bells of Scotland—*Stirling*
 Alice Grey—*Milliard*
 Last Walts—*Weber*
 John Anderson, my Jo—*Burns*
 Roy's Wife—*Mrs. Grant*

1705.

Per me ore fatale—*Trovatore—Verdi*
 Libiamo—*Traviata* "
 Il balen—*Trovatore* "
 Coro di Zingari "
 Le Rube Coro—*Masnadiere—Verdi*
 Da te questa—*Attila* "
 La sua lampada—*Masnadiere* "
 Cara patria—*Attila* "

1348.

God save the Queen
 We may be happy yet—*Balfe*
 Auld lang syne—*Burns*
 Home, sweet home—*Bishop*
 The meeting of the waters—*Moore*
 Nella città di Cesari—*Norma*
 Com'è gentil—*Don Pasquale*
 Robert, toi que j'aime—*Robert le Diable*

1055.

The light of other days—*Balfe*
 God save the Queen
 Rule Britannia—*Dr. Arne*
 Alice Gray—*Mrs. Millard*
 Then you'll remember me—*Balfe*
 Waltz Favourite—*Der Freischütz*
 Yankee Doodle—*American*
 The girl I left behind me—*Nelson*

Rosewood Cases, 20½ by 8½ by 6 inches.

Manufactured by Nicole Frères.

Twelve Airs, £12 12s.

1212.

Me Protège Marche—*Norma*
 Hear me, Norma
 Oh! Summer night—*Don Pasquale*
 Marche de la Fille du Régiment
 Perché non posso odiarti—*Somnambula*
 Ah non giunge, Marche
 Finale des *Diamans de la Couronne*
 Quand je quittais ma Normandie, de
Robert le Diable
 Suoni la tromba, Marche—*I Puritani*
 Son Vergen Vezzosa, Polacco
 Largo al factotum—*du Barbier*
 Zitta zitta, piano piano

1287.

Blue bells of Scotland—*Stirling*
 The Campbells are coming—*Scott*
 Weel may the keel row
 Ye hanks and braes—*Burns*
 Auld lang syne
 The Laird o' Cockpen
 Draw the sword, Scotland
 My love, she's but a lassie yet
 There's nae luck about the house—
Adams
 Auld Robin Gray—*Burns*
 The bonny breast knots
 Within a mile of Edinbro'

1211.

The Drum Polka—*Jullien*
 Il segreto per esser—*Lucrezia Borgia*
 Prima donna Waltz—*Jullien*
 Galop de fascination—*Alma—Costa*
 Valse a deux temps—*Weippert*
 Marche de *Figlia del Reggimento*
 The serenade—*Don Pasquale*
 Original Schottische—*Jullien*
 The Hyacinth Waltz [Jeanot]
 You are going far away—*Jeannette and*
 The Huntsman's Chorus—*Weber*
 Non piu mesta—*Cenerentola*

1493.

Still so gently—*Somnambula—Bellini*
 Carnival de Venice
 Cheer, boys, cheer—*Russell*
 Auld lang syne—*Burns*
 Annie Laurie—*Douglas*
 The harp that once—*Moore*

Then you'll remember me—*Balfe*
 Mary Blanc—*Ethiopian*
 The ivy green—*H. Russell*
 Partant pour la Syrie—*La Reine Hor-*
tense
 Californian Galop—*Labitzky*
 Jetty Treffz Polka—*Goodban*

1333.

Finale des *Diamans de la Couronne*
 Ah! non giunge—*Somnambula*
 Fisherman's chorus—*Masaniello*
 Suoni la tromba—*Marche—Puritanti*
 Ma Normandie—*Robert le Diable*
 Le linge la chioma—*Norma*
 Il segreto per esser—*Lucrezia Borgia*
 Largo al factotum—*Barbiere de Seville*
 Da quel di che—*Ernani*
 Non piu mesta—*Cenerentola*
 Ma vedrette—*Linda di Chamouni*
 Finale—*Belisario*

Give but the word—*Norma—Bellini*
 Le linge la Chioma
 Hear me, Norma, 1st part
 Si fino, 2nd part
 Ah! bello a me—*Cavatine*
 Fier la morte du No.9—*Puritani*
 Credea si mesern, Duetto
 Maid, those bright eyes—*Somnambula*
 Tutto e gioia, tutto e festa
 Serenade—*Barber of Seville—Rossini*
 All' idea de quel metallo
 Di si felici Nesto—Finale

1210.

No. 1. Pantalon
 2. Eté
 3. Poule
 4. Trenise
 5. Finale

Royal Irish Quadrille,
Jullien

Valse a deux temps—*Weippert*
 The Agnes Polka—*Brown*
 Elfin Waltz—*Labitzky*
 Scenes that are brightest—*Balfe*
 Original Schottische—*Jullien*
 Robert, toi que j'aime—*Robert le Diable*
 Si fino all' ore—*Norma—Bellini*

815.

Tutto e gioia, tutto e festa—*Somnambula*
 Tu non sai
 Perché non posso obiarli
 A! non giunge
 Nella città di Cesari—*Norma*
 Me protegge
 Ah! bello a me
 Le ciuge la chioma
 Serenade—*Barbiere de Saville*
 Valse Favourite
 All' idea di quel metallo
 Di si felici nesto

1706.

The Shadow Dance—Dinorah—*Meyerbeer*A father's love—*Lurline*—*Wallace*La Donna e Mobile—*Rigoletto*—*Verdi*When the Swallows—[*Agathe*]—*Abt.*The Power of Love—*Satanella*—*Balfe*Last rose of summer—*Stevenson*Nothing more—*W. Winn*Beautiful star—*S. M. Sayles*

Kitty Tyrell

Princess Royal Varsoviana—*Marriott*

The Swiss girl

Excelsior Waltz—*Julien***Rosewood £12 12s.****SACRED.**O rest in the Lord—*Elijah*—*Mendelssohn*

Thanks be to God „ „

If with all your heart „ „

Rejoice greatly—*Messiah*—*Handel*

He shall feed his flock „ „

But thou didst not leave „ „

For unto us a child is born „ „

With verdure clad—*Creation*—*Haydn*

The heavens are telling „ „

In native worth „ „

See the conquering hero—*Handel*

Rousseau's dream

*Rosewood Case, 22 by 8½ by 6½ inches.**Manufactured by Nicole Frères.***Twelve Aires***With Piano and Forte Accompaniment.***£15 15s.**

1545.

De Mie—*Traviata*—*Verdi*Squilli echeggi la tromp—*Trovatore*—*Verdi*March from *Daughter of the Regiment*Zitti, zitti, piano piano—*Barber of Seville*Finale Galop—*Crown Diamonds*Ah! non giunge—*Somnambula*Fisherman's Chorus—*Masaniello*Suoni la tromba—*I Puritani*Le linge la chionna—*Norma*Marche du sacre—*Prophète*Beaute, divine enchantresse—*Huguenots*

1522.

God save the Queen

Rule Britannia—*Arns*Home sweet home—*Bishop*Auld lang syne—*Burns*

Annie Laurie

Over the water to Charlie

See the Conquering Hero comes

Oh thou whose lustrous beauty—*Auber*Finale on Galop des Diamans—*Auber*Mandoline Valtz No 1.—*Buller*Perche non posso odiarti—*Bellini*The Drum polka No. 1.—*Julien*

1674.

Per me ora fatale—*Trovatore*—*Verdi*Lebiamo me, No. 1.—*Traviata*—*Verdi*Il balen, Aria No. 6.—*Trovatore*—*Verdi*

Di zingari Covo No. 6 „ „

Gruss an Wien Polka No. 2.—*Labitzky*La belle Suisse Valse No. 2.—*d Albert*La Cantinière Polka—*Williams*

The Swiss Girl

Ah! si j'étais coquette—*Huguenots*—*Meyerbeer*Tu Vedrai—*Trovatore*—*Verdi*Britannia the Pride of the Ocean—*Paimbank*Di madride noi Siain—*Traviata*—*Verdi*

1317.

Me protegge—*Marche*—*Norma*Ah! bello a me—*Cavatina* „Perchè non posso odiarti—*Somnambula*Ah non giunge—*Marche*We may be happy yet—*Balfe*Scenes that are brightest—*Maritana*Tho' the last glimpse of Erine—*Moore*Home, sweet home—*Bishop*The lass o' Gowrie—*Hogg*When the rosebud of summer—*Stevenson*The light of other days—*Balfe*

God save the Queen

*Rosewood Inlaid Case 29 by 9 by 7 inches.**Manufactured by Nicole Frères.***Eighteen Aires, £20.**

1571.

Cheer, boys, cheer—*Russell*

A life on the ocean wave

Annie Laurie—*Douglas*

Mary's Dream

The old arm chair—*E. Cooke*The light of other days—*Balfe*Still so gently *Somnambula*—*Bellini*The ivy green—*Russell*I dreamt I dwelt in marble halls—*Balfe*Home, sweet home—*Bishop*Rule, Britannia—*Dr. Arne*Shells of ocean—*Cherry*Lucy Neal—*Ethiopian*

The gay cavalier

Steer my bark to Erin's Isle

The old house at home

The soldier's tear

God save the Queen

FLUTE ACCOMPANIMENT.*Fabrique de Nicole Frères.***Six Airs.**

Rosewood Cases, beautifully inlaid, 24 inches long. **£21.**

5.

The power of love—*Satanella*—*Balfe*
 La mia Latizia—*Traviata*—*Verdi*
 Introduction—*Barbier*—*Rossini*
 Carlotta Valse, No. 2—*Labitzky*
 Punis mon audace—*Vépres Siciliennes*
Verdi

Ah! che la morte—*Trovatore*—*Verdi*

6.

L'Immortelle Valse—*Gungl*
 Choral de Luther—*Huguenots*—*Meyerbeer*
 Per poco frala tenebre—*Lucie*—*Donizetti*
 Per me ora fatale—*Trovatore*—*Verdi*
 Saint Amour—*Vépres Siciliennes* "
 Romance—*Domino Noir*—*Auber*

Rosewood Cases, 20½ by 8½ by 8½ inches.
 Manufactured by *Nicole Frères*.

Six Airs, £15 15s.

With the novel and effective addition of

DRUM AND BELLS.

1531.

March -- *Daughter of the Regiment*
 Drum Polka—*Jullien*

GRAND MUSICAL BOX.**FOUR OVERTURES.***Fabrique de Nicole Frères.***Rosewood Inlaid Case, £21.**

Overture de la Caravanne	Grétry
" de la Flute Enchantée	Mozart
" der Freischütz	Weber
" della Gazza Ladra	Rossini

EXTRA GRAND MUSICAL BOXES.**Rosewood Superbly Inlaid.**

FOUR OVERTURES. 26½ inches long. *Fabrique de Nicole Frères.*
£28 10s.

1707.

Norma	Bellini
Les Huguenots	Meyerbeer
I Puritani	Bellini
Tancredi	Rossini

1285.

Guillaume Tell	Rossini
Du Barbier	"
Semiramis	"
Flute Enchantée	Mozart

BEST FRENCH CLOCKS, DUTY FREE.

A portion of the premises at No. 56, Cheapside, is appropriated to the exhibition and sale of one of the choicest collections of French Clocks in London, the whole of which having been imported since the remission of the duty, the customer has now, at this establishment, the combined advantages of extremely moderate prices, and the opportunity of selecting from the most novel specimens that the skill and exquisite taste of the Parisian workman has yet devised for the use and adornment of drawing-room, dining-room, or library.

Locomotive Waltz
 British Grenadiers' March
 Derby Polka—*Jullien*
 Partant pour la Syrie—*Reins Hortense*
 1421.

Donna Sabina Waltz—*Henrion*
 Leontine Polka—*Amazon*—*Strauss*
 Musidora Polka—*Mazurka*—*Tabery*
 Odeon Quadrille—*Poule*—*Strauss*
 Chorus—*Robert le Diable*—*Meyerbeer*
 La retraite du Napoléon—*Puget*

Rosewood Cases, 20½ by 8½ by 6 inches.

*Manufactured by Nicole Frères.***Four Overtures, £15 15s.**

1112.

Guglielmo Tell—*Rossini*
 Semiramide "
 La Gazza Ladra "
 Fra Diavolo—*Auber*

1576.

Barber of Seville—*Rossini*
 Dame Blanche—*Boieldieu*
 La Violette, Fantaisie brillante, 1st Part
 La Violette " " 2nd "

754.

Norma—*Bellini*
 La Gazza Ladra—*Rossini*
 Pre aux Clercs—*Isold*
 La Muette—*Auber*

The Player or Residence Organ

By F. WEBB

Continued from our last issue

IV. DESCRIPTION (continued).

THE "residence" (player) organs built by the Skinner Organ Co., of New York City, U.S.A., are also included in Class B. Several models of these instruments are made. All models are duplexed, i.e., the stops are common to both manuals and are useable on either. The small model, which is schemed somewhat like the Æolian small model, has the following stops: 1, diapason 8ft.; 2, vox céleste (2 ranks) 8ft.; 3, flûte céleste (2ranks) 8ft.; 4, chimney flute 8ft.; 5, orchestral flute 4ft.; 6, English horn 8ft.; 7, corno d'amour 8ft.; and 8, vox humana 8ft.; with a bourdon 16ft., extended to a gedect 8ft., on the pedal. These stops are arranged in two groups, Nos. 1, 2 and 3 being enclosed in the first swell box, and Nos. 4 to 8 in a second swell box. The specification of the average (medium size) model is as follows:—

1. Bourdon	16
2. Diapason	8
3. Salicional (echo gamba)	8
4. Flauto dolce { Gemshorn céleste giving muted string effect. }	8
5. Flûte céleste	8
6. Concert flute	8
7. Flute	4
8. Nazard	2½
9. Piccolo	2
10. English horn	8
11. Corno d'amour	8
12. Trumpet	8
13. French horn	8
14. Vox humana	8
15. Clarinet	8
16. Harp	
17. Chimes	
18. Drums	

COUPLERS

1. Manual II to I (unison)
 2. Manual II octave
 3. Manual II sub octave
 4. Manual I octave
 5. Manual I to pedal
 6. Manual II to pedal
- Combination pistons to each manual with indicators.
- Sforzando piston (reversible)
- Sforzando piston (touch only)

PLAYER

Ventil, semi-automatic, full automatic, tempo lever and re-roll.

PEDAL

2. 16ft. stops with extensions to 8ft.

All stops are duplexed and arranged in two groups in independent swell boxes.

The larger models contain an additional broad-toned string céleste, a second diapason, bassoon 16ft., tuba 8ft. and pedal trombone 16ft. In still larger models, the true organ ensemble is developed up to mixtures, &c.

When three manuals are employed, there are two independent sections and the stops of both are duplexed to the third keyboard. A few of the stops perhaps need a little explanation, as our cousins on the other side of the "fish-pond" love to call things by different names from those to which we are accustomed. The chimney flute is our old friend the rohr flöte, the English horn is apparently a description of medium scale smooth horn, the French horn is the organ equivalent of the orchestral instrument of that name, and the corno d'amour is similar to our ordinary oboe. It is somewhat curious to see the salicional treated as a string stop: in English organs it is usually a slightly stringy dulciana more closely allied to the diapason family than to the strings. It is still more curious to note that the flauto dolce—which with us is an inverted conical pipe giving a distinctly fluty tone—is treated as a gemshorn (taper pipe) and used for muted string effects. The primary player action is compressed air at a pressure of 10in., which is then converted to electro-pneumatic, ventil soundboards being used. Only one hundred and twenty holes are used on the tracker-bar to control everything, special pilots being employed singly or in combination as selectors to determine the function of a perforation: great flexibility is claimed by this means.

We have now to consider the final class (d) player organs that have long tracker bars operating the full compass of three manuals and pedals. These instruments may be considered the *ultima thule* of player mechanism. Only one builder seems to have made a specialty of this type,—namely, the Austin Organ Co., Hartford, Conn, U.S.A. They are capable of effects that are almost impossible for the human player to execute. To give an example: a melody may be played (say) on the clarinet to an accompaniment on the strings (violetes), with an independent or obbligato bass on the pedals and a figuration of any degree of elaboration on the harp stop or flute 4ft. To accomplish this, the tracker bar has to be long and the music rolls proportionately wide (21½in.). This increased width of roll and number of perforations usually brings trouble with it in the shape of expansion and contraction through damp or dryness, causing the notes to go out of register; but the Austin Co. claim to have overcome this difficulty. Recognising that with this width of roll a certain amount of expansion and contraction is inevitable, they have adopted what may be described as a compensating tracker-bar. The bar has a total of two hundred and forty holes, arranged in two rows in a similar manner to the Æolian double tracker-bar. These holes are divided into five sections of forty-eight holes each, with a space between each section. The middle section is fixed, but the two others on each side have a slight movement to the right or left as required. The general tracking is corrected by a continuous perforation in the middle of the roll, which operates the automatic tracking device. There is in addition another continuous perforation on the left hand side that governs the compensating mechanism correcting the expansion or contraction of the

roll by automatically moving the outside sections of the tracker-bar on each side closer to, or further away, from the middle (fixed) section as required to keep the holes in the bar in correct alignment with the perforations of the music roll. This appears somewhat complicated, but is relatively simple in operation. Only one (a standard) model is made, the specification of which is as follows:—

GREAT ORGAN

1	Open diapason	...	...	8
2	Gross flute	...	...	8
3	Violoncello	...	...	8
4	Concert flute	...	...	8
5	Dulciana	...	...	8
6	Harmonic flute	...	...	4
7	Harmonic trumpet	...	...	8
8	{ Chimes <i>piano</i> Chimes <i>forte</i> }	25	tubes	

SWELL ORGAN

9	Bourdon ...	...16
10	Viola ...	... 8
11	Stopped flute ...	... 8
12	Viole d'orchestre ...	... 8
13	Viole celeste ...	... 8
14	Echo salicional ...	... 8
15	Flute ...	... 4
16	Harmonic piccolo ...	... 2
17	Cor anglais ...	... 8
18	Vox humana ...	... 8

CHOIR ORGAN.

19	Gross flute*	...	...	8
20	Violoncello*	...	...	8
21	Concert flute*	...	...	8
22	Dulciana*	...	...	8
23	Unda maris	...	...	8
24	Harmonic flute*	...	...	4
25	Harmonic trumpet*	...	...	8
26	Clarinet	...	...	8
27	Chimes <i>forte</i> *			

(*) from great

PEDAL ORGAN

29	First bourdon	...	...16
30	Second bourdon	...	...16
31	Violone	...	...16
32	Violoncello	...	... 8
33	Flute	...	... 8

COUPLERS

- 1 Great unison
- 2 Great suboctave
- 3 Great octave
- 4 Swell to great unison
- 5 Swell to great suboctave
- 6 Swell to great octave
- 7 Choir to great unison
- 8 Choir to great suboctave
- 9 Choir to great octave
- 10 Swell unison
- 11 Swell suboctave
- 12 Swell octave
- 13 Swell to choir unison
- 14 Swell to choir suboctave
- 15 Swell to choir octave
- 16 Choir unison
- 17 Choir suboctave
- 18 Choir octave
- 19 Pedal octave
- 20 Swell to pedal
- 21 Swell to pedal octave
- 22 Great to pedal
- 23 Great to pedal octave
- 24 Choir to pedal
- 25 Choir to pedal octave

Cancellor bars (patented)

Over each group of stop keys

Balanced swell pedals

Great, swell and choir

Balanced crescendo and diminuendo pedal

Great to pedal reversible

Sforzando pedal

The noteworthy features of this specification are the very complete list of couplers, and the absence of a 16ft. reed on the pedals to balance the manual reeds. The specification is very complete, and with the exception of the pedal reed mentioned above, embraces all qualities of tone that are necessary or desirable for organ or orchestral music. The player action is the Austin "Quadruplex," the initial stage of which is on vacuum, and all other action electro-pneumatic. Needless to say, the organ is built on the Austin "Universal Air Chest" system: it takes up a space of about 21ft. wide, 14ft. high, and 9ft. deep, exclusive of blower and exhauster. Detached consoles, and if necessary a separate console for the player action only, are provided. The action is fully automatic, all speaking stops, couplers, accessories, and other movements being operated from the music roll. An illustration of the upper part of the console showing the arrangement of the stop keys is given in plate IV.

A number of organs fitted with player mechanism have been built during

recent years by Messrs. Jardine, Noterman, Spurden Rutt, A. W. Hayter & Sons, and others: but most, if not all, of these are only provided with single tracker-bars taking 58 or 65-note rolls. With the exception of the Æolian Co., no organ builder in England seems to have made a special study of this form of the "King of Instruments," or evolved anything like a standard model, which is much to be regretted. In this connection, it is interesting to note that the largest organ in the world (independent speaking stops),—viz., that in the Wanamaker Stores at Philadelphia, U.S.A., is provided with a second detached console, fitted with player action and controls only, which shows that no organ is too large to be adequately controlled by a player mechanism.

V. CONSTRUCTION

(a) *Action.* Having in mind the purpose for which the instrument is built, and the people who are likely to use it, it is desirable to make its action and operation as reliable, and shall we say, as fool-proof as possible. There are two types of action used in player organs of the present day,—viz., those using compressed air (ordinary wind supply), and the others using suction or attenuated air. It is not possible to use exhaust action as it is usually understood for the primary, as there is an absence of pressure or suction to keep the roll bedded on the tracker-bar. Electric action may be possible in years to come, but quite a different type of roll would have to be used than is at present the case, with some means of making the necessary contacts.

(b) *Pressure Action.* With this type of action, using the ordinary organ wind as supplied to the pipes, the music roll, tracker-bar and take-up spool are enclosed in an air-tight chamber having a sliding glass front, this chamber being supplied with wind of the requisite pressure through a valve or ventill controlled by a tablet or stop-knob. It is quite feasible to operate a player mechanism on the ordinary wind pressure of $3\frac{1}{2}$ in., but a higher pressure, up to 6 in., is better to ensure a closer adhesion of the roll to the tracker-bar, and also to feed the small holes supplying wind to the primary pneumatic action. It is not desirable to go beyond 6 in. with this type of action, as the valves and motors, unless carefully felted or otherwise quietened, are apt to be noisy and thump. A secondary as well as primary must be used when dealing with this type of action to ensure a sufficient supply of wind to operate the motors (or puffers) quickly enough to obtain a good attack, without which—as well as release—player action is useless. In addition, if the console is detached from the organ, a relay is necessary, especially if the couplers are to be made available through the player in order to get the best effect, and failing which the action fails in achievement. The tubing from the player should be coupled to that from the keyboard touch boxes with a slide or ventill to cut off the manual action when the player is in use, this saves waste of wind and possible leakage back, and also prevents untoward sounds from the keyboard if accidentally touched whilst the roll is running. Particular care must be exercised to see that roll spindles, tracker-bar, and take-up spool, are in correct alignment,

and truly parallel: unless this is done, correct tracking, and even bedding of the roll without creasing or cockling, cannot be assured. This applies to all player actions, but is of especial importance in pressure actions. When the tracker-bar contains a fewer number of holes than the total compass of the manuals and pedals, &c., a special arrangement has to be made whereby, for a short time, certain holes (usually the lowest octave or so) normally connected to one of the windchests are disconnected, and these holes made available for other purposes. This is accomplished by pilot or auxiliary holes which bring into operation a mechanism cutting off the original connections, and diverting these holes into other channels for operating pedal notes, stops or swell movements, &c. This sounds somewhat complicated, but is relatively simple in operation, and is used by several builders in their player mechanism.

(c) *Suction Action.* Vacuum or attenuated air seems to be the favourite action for the primary pneumatic of the player, as this ensures a more perfect bedding of the roll, and allows the roll-chamber to be left open so that the operation and travel of the roll can be better observed and corrected if necessary; it is also easier to take the music rolls in and out. This primary can be changed if necessary to either pressure, exhaust, or electro-pneumatic action in the secondary stage. Pressure action can be similarly changed over at this stage.

Whilst dealing with this type of action it is interesting to bring under notice the very ingenious type of player organ invented and produced by the late Mr. Vincent Willis. This might be considered in some respects as an inversion of the Austin wind chest system, but in this case the whole of the pipework was enclosed in an air-tight chamber forming a swell box, the space where the louvres were being covered on the inside with an air-tight membrane. The wind chest on the underside was open and exposed, the air was exhausted from the pipe chamber above so that when the note valves were opened air was drawn from the room through the valves and fed the pipes standing on the soundboard. The advantages of this system were that the pipes were fed by air from the room in which the organ was situated, thereby overcoming the objection of the change of temperature of the wind supply altering the tuning (pitch) of the pipe work. No reservoirs or feeders were required, so that considerable space was saved; also, all the valves being exposed, they were readily accessible for adjustment. The elimination of the reservoir and feeders enabled the soundboard to be placed low and rendered it possible to continue all the stops down to the full 65-note player compass (AA) without unduly increasing the height of the instrument. There was, of course, a slight tonal loss owing to the enclosure, but this for chamber organs was if anything rather an advantage, as it gave a suggestion of distance to the tone. The system was only intended to apply to instruments where the tonal output was relatively small. It had the further advantage that suction (attenuated air) was at the same time available for the player action without the installation of a separate suction plant, which is necessary when both compressed and attenuated air have to be used, as in some types of player organs.

The writer had the pleasure of hearing some years ago at Mr. Vincent Willis's works, at Brentford, a small player organ of this description and much admired its beautiful tone quality and exceedingly ingenious mechanism. It is much to be regretted that the system has been allowed to die out, as there were certainly possibilities in it.

(d) *Compass.* The compass of the most generally used organ music roll is 58 notes, CC to A³; but as it is an advantage to be able to use 65-note piano rolls as well, it is usual therefore to fit instruments having a single tracker-bar with a combined 65-note and 58-note bar. The compass of the 65-note roll is from AA below CC to C⁴. If this is fitted to an organ, with a keyboard compass of 61 notes, CC to C (which is desirable), it is usual to connect up the three lowest notes below CC to the pedal organ and extend the soundboard compass to C⁴, and also (to complete the octave coupler) an additional octave, making a total soundboard compass of 74 notes. With practically all other types of player-organs, the modern full compass of 61 notes, CC to C⁴, is arranged for as well as the pedal of 32 notes (CCC to G).

(e) *Detached Consoles.* These are advisable whenever possible so that the operator can hear better what effect is being produced, especially with the semi-automatic type, and gain some pleasure therefrom. They are, however, not so necessary with the fully automatic type, as this can be left to look after itself, which in the case of the Welte-Philharmonic organ it certainly does, even to the extent of stopping the roll at the end of the piece and re-rolling it ready for use again. It is almost uncanny to watch the most human-like operations of this instrument, as it does everything necessary to get the best effect, so cleverly constructed is it.

(f) *Stop Keys.* These, instead of the usual knobs, are almost a necessity for instruments of the semi-automatic type. Being arranged, as they usually are, just below the roll chamber, they are easily visualised at the same time as the travel of the roll; and, being readily accessible, enable the operator to make the necessary changes of stop registration quickly and easily without having to look to the right or left for the necessary knobs. With the fully-automatic organ, stop keys are not so necessary; but in the writer's opinion stop keys in any size organ have this distinct advantage over the ordinary stop knobs,—that they can be grouped much closer together, and are therefore more compact and accessible, especially in large instruments. It is only a matter of time when the stop knob so beloved of our forefathers will become a thing of the past.

(g) *Automatic Tracking.* This device is almost a necessity in double or long tracker-bar actions, these having a large number of holes close together it can readily be seen on referring to the table on p. 518 that it only requires a very slight deviation to the right or left in the running of the roll to produce wrong notes or effects. The device is somewhat similar to that used in player-pianos: one variation consists of one or more holes on each side of the tracker-bar which, when the roll is tracking correctly, coincide with blank spaces on the music roll. But should the roll move to

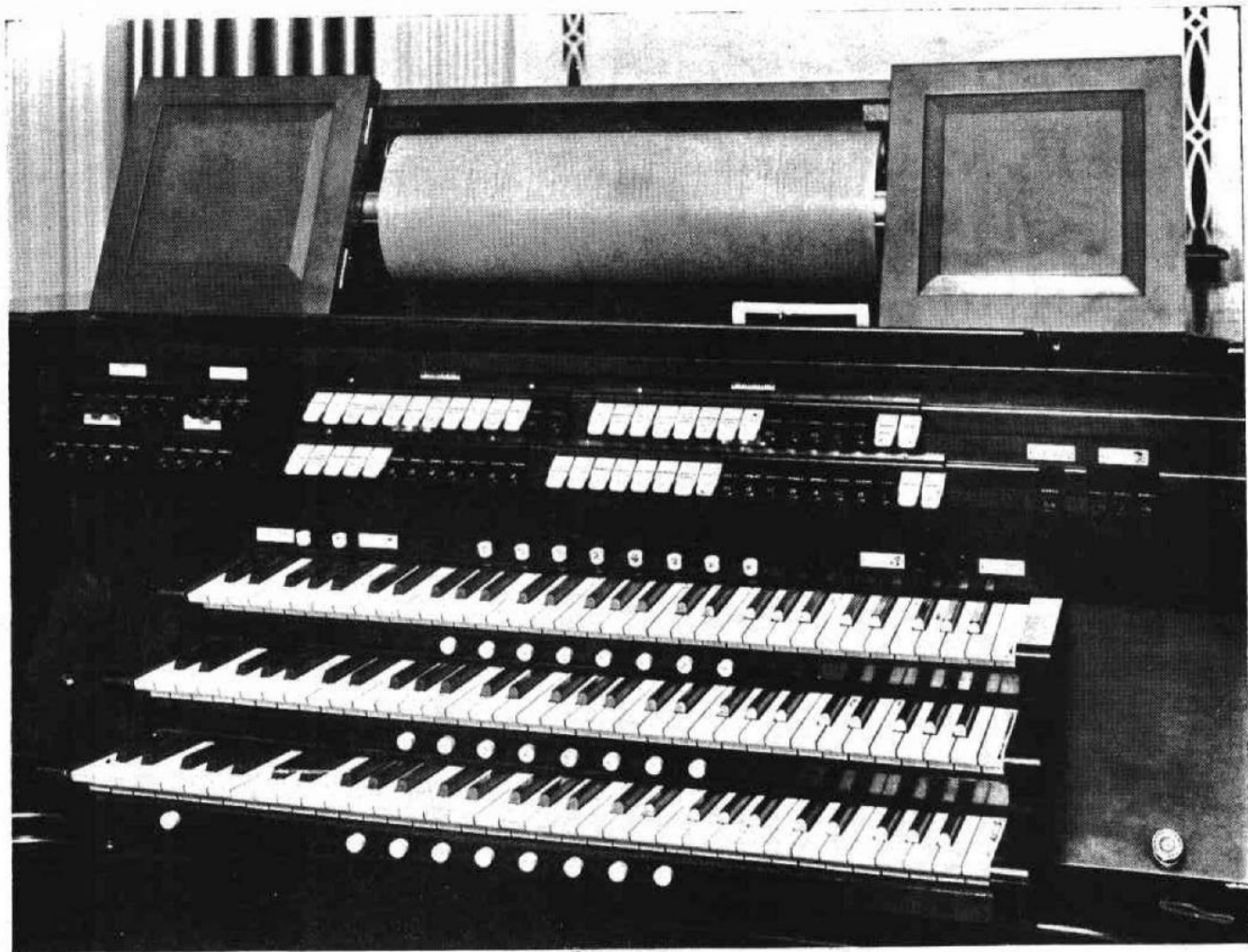


Plate IV. Console of Player Organ by the Austin Organ Co., Hartford, Conn.
Shown with doors open and music roll in operation. *(By permission of the Austin Organ Co.)*

the right or left, these holes are uncovered and set in motion a train of action that moves the roll spindle and takes up the spool either to the one side or the other, as may be required, and so corrects the tracking.

(*h*) *Wind Supply.* It is very necessary in constructing organs of this character to ensure an adequate wind supply: it is desirable to provide from twenty-five to fifty per cent. above that usually deemed sufficient, especially if music rolls of four handed arrangement are to be used. It must not be forgotten that with a music roll it is possible to score music much more heavily, and many more notes may be sounding than it is possible to put down with the human pair of hands, also to enable couplers to be more fully used when required it is necessary to have an ample margin beyond the normal to provide against this and any possible unsteadiness of wind owing to large and varying demands.

(*i*) *Position.* It is becoming a usual feature for chamber organs (called in America "residence" organs), especially those fitted with electro-pneumatic action and detached consoles, to be placed in special brick or concrete chambers either at the back or below the floor of the music room in which the console is situated, the sound being admitted through sound ducts or tone chambers faced with gratings or ornamental wood or ironwork screens, behind which are the general swell louvres, no pipes being visible. Whilst this certainly gives the charm of distance, moderates any possible roughness of the tone, adds an air of mystery, and possibly secures a more perfect blend of tone, it is somewhat to be regretted, as a well designed case of figured hardwood, polished or dull finished, with plain gilt or spotted metal pipes artistically grouped is as great a joy to the discerning eye as the agreeable sounds proceeding therefrom are a pleasure to the ear.

VI. TONAL DESIGN

(*a*) *Stops.* Bearing in mind the extensive and very varied kind of music cut for player work and likely to be used for player organs—ranging from legitimate organ music, orchestral transcriptions and symphonies down to popular dance music—it is desirable to keep the tonal scheme rather on the orchestral or bright side; an undue prominence of dull flute, brassy reed or tootling piccolo tone, which is apt to produce the barrel organ effect, should be avoided as far as possible. A diapason foundation is not so necessary or required to the same extent as in a church organ, but genuine organ tone should be represented by at least one open diapason, in small instruments, of a cantabile quality, and a lighter 4ft. of this family, preferably a spitzflöte or gemshorn; in larger instruments, a second diapason of a fuller and broader quality, with a lighter toned principal or octave; in still larger instruments a fifteenth might find a place, but a piccolo (harmonic) or zauber piccolo would probably be found more useful for orchestral work. The timbre creating stops, twelfth and tierce, could advantageously be included in larger models, but the twelfth would be better on the flutey side and the tierce of a dulcet quality, as these will com-

bine better with the 8ft. flute and gamba families to produce the novel tones so much in evidence to-day. Strings should be well represented according to the size of the instrument. In small ones a viol d'orchestre of medium scale with its accompanying céleste would be sufficient, a viole sourdine (taper shape) would also be an advantage; in larger instruments a string gamba or 'cello of larger scale and broader quality would find a place, together with possibly its 4ft. octave viola or gambette. The salicional and dulciana family are very useful for accompanimental purposes, and a light double of this character would make also a welcome addition to the pedal organ when borrowed. That most charming of all flute qualities, the lieblich gedackt, with a metal upper part and perforated stoppers, should certainly find a place, together with a 4ft. flauto traverso or harmonic flute. In larger instruments a small scaled hohlflöte or clarabella forms a useful addition, as does also the flauto dolce or corno flute, both being valuable stops for accompaniment; but all the flutes should err rather on the bright side. Mixtures, if of delicate dulciana tone, could be included in large instruments to complete the ensemble.

It is as well, even in small instruments (especially if orchestral transcriptions are to be included in the répertoire), to include the two most divergent reed qualities,—viz., oboe and clarinet, both extending to the full compass of the manuals. Inclusion of the vox humana is largely a matter of taste, although both Mr. Skinner and the Æolian Co. include this stop even in their small models,—a concession due probably to popular, if faulty, musical taste. A clarinet is of much greater use than the vox humana and should at least have second place to the oboe. The other reed tones—trumpet, horn, bassoon, &c., would make their appearance only in larger models; and the tuba only in the largest instruments. It is in the pedal department that several of the tonal schemes so far under review fail: the ages-old fault of the early English organ builder is repeated, a single 16ft. stop being deemed sufficient in many cases to balance the manuals. It is true that in orchestral music pedal stops may not be required, but it is to be taken for granted that legitimate organ music would be largely used; therefore, the pedal organ should be fully developed, as it is this added depth of tone that gives the organ its true quality, and one that makes the most appeal to the musician. Again, if 65 note rolls are used, the lowest three notes have to be provided by the pedal department, and for that reason also, this part of the organ should be adequately developed. The best first 16ft. stop for the pedal for small instruments is the contra-bass of small scale, as its crisp incisive tone is more orchestral and suitable for player-work and rapid passages than a muddy-toned bourdon. From the contra-bass, an 8ft. 'cello should be derived: this forms the smallest possible scheme for this department. If a soft manual double is provided, preferably a double dulciana or contra salicional, this may, with considerable advantage, be borrowed for the pedal. A soft 16ft. reed, either bassoon or contra fagotto, should also be included: this may be an extension of the manual oboe, and should be enclosed in one of the swell boxes. It is somewhat surprising to notice that in the specification of the large and otherwise

complete Austin player organ, there are only five pedal stops to balance some twenty manual stops; and, although there are no less than four 16ft. reeds on the manuals, there is no 16ft. reed on the pedal to balance them. In the larger models of Welte instruments, a 16ft. reed is included in the pedal organ.

(b) *Percussions* are very largely a matter of taste, but true musical percussions properly in tune, such as resonating gongs, harp, and celesta, are capable of beautiful effects in combination with the flue stops, or used alone for embellishment or arpeggio effects. Tubular bells are useful for special effects at times, but one looks rather askance at drums, cymbals, triangle, &c., which are best left for the orchestrion proper or the cinema organist to play with.

(c) *Arrangement.* With regard to two manual single tracker-bar instruments, it is desirable to arrange the tonal scheme so that the purely accompanimental stops are assigned to the lower manual (to which the player action is generally connected), and the solo stops of more pronounced character to the upper. This is the most useful arrangement when melodic action is used. With double tracker-bar instruments, this arrangement of stops, although useful, is not so necessary, and the stops may be allocated in the usual way.

(d) *Swell Boxes.* Enclosure is most essential to secure as much expression (if one may use the word in its "organic" sense) as possible, especially seeing that this type of organ is mostly built for home use. With two-manual instruments, two swell boxes should be used for the manuals, and as many of the pedal stops as can (without unduly increasing the size of the box) be included, always excepting, of course, the open diapason and possibly its 4ft. companion. Sometimes, as in the case of the Welte organs, the whole organ is enclosed in a sound-proof chamber with swell louvres fitted to the front or top; but it is better to provide separate swell boxes to each manual or group of stops so as to have more control, and be able—if necessary—to secure what one may describe as a dissolving tone effect.

(e) *Extension and Unit System.* This with the player organ is somewhat of a problem. It has its uses in larger and more fully developed instruments; but it is somewhat costly, takes up a certain amount of room (either for coupling chambers or windchest space), and—what is of more importance—produces no new tone qualities. In small organs, it tends to upset the tonal balance, leaving the middle octaves weak and, if unduly developed, the upper and lower octaves too predominant. Extending some half-a-dozen or so stops of pronounced qualities (as is done in the ultra-modern cinema organ) upwards, downwards, sideways, skew-ways and any old ways until it makes an array of twenty or more so-called speaking stops does not produce an organ and only results in all semblance of tonal balance and cohesion being lost. Such an affair is nothing but a gorgeous tonal fake, produced (one supposes) to satisfy the cinema proprietor with no musical taste, who imagines he is getting a "grand organ" with a large number of speaking stops. The average cinema contraption (miscalled

organ) of the "Wurly" type is simply a jazz machine composed of a few sets of pipes of large scale and exaggerated tone quality blown for all they are worth, a mass of electrical contacts and wiring, and (last but by no means least) multitudinous "effects." Such an affair only shows the utter want of musical taste and appreciation of what an organ proper should be. To derive either a twelfth or a tierce from a unison stop is absurd, as the tuning intervals are not pure and the tonal effect and blend is lost, only discords being created between the tempered intervals of the unison and the true pitch of the upper partials. To this is also largely due the ineffectiveness of the so-called 32ft. acoustic bass when the same set of bourdon pipes is used for both the 16ft. and the quint. Enough, however, has been said on this *et revenons nous à nos moutons*.

(f) *Duplex System*. This system of building which is used by both the Skinner and Æolian Co., differs from the unit or extension systems: all the stops are common to, and made available on, both manuals,—in other words, duplicated. It has distinct disadvantages despite its complication, as any one or more stops can be used for solo work accompanied by any other stop or combination of stops, but it is a question whether the cost of the duplicating action (both keys and stops) would not be better used to increase the tonal resources of the instrument by providing additional stops of varied character.

VII. MUSIC ROLLS

(a) Fortunately both the standard 58-note and 65-note music rolls are cut to the same gauge (six to the inch), and any description of these standard rolls can be used on a single tracker bar instrument if fitted with an adjustable take-up spool and cut-off. These rolls have also this advantage that the perforations being larger and spaced further apart than the double and long tracker-bar rolls, a slight deviation to the right or left in tracking does not matter so much, and wrong notes are seldom heard, there being more latitude in this direction. There are some disadvantages, however, with these large perforations. In the older type of roll long slots are cut for prolonged (or holding) notes, and unless sufficient bridging pieces are left, these slots are apt to close up and the note goes off. Also held-chords of several notes, progressing either up or down by tones or semitones, sometimes cause a slight cockling of the roll at the junction of the chords, which result in discords on wrong notes. This is avoided in the later type of rolls which, for prolonged notes and chords, have a continuous series of perforations. On the other hand, this sometimes produces a slight fluctuation of the tone, and if the action is set very fine for repetition with the roll travelling slowly, repeated notes may occasionally be heard instead of one continuous sound. In double and long tracker-bar rolls the perforations are much smaller, and although this would seem to leave a larger margin of safety between them this is rendered nugatory by there being an increased number of perforations to the inch. Therefore in these rolls correct tracking has to be assured by the use of an automatic tracking

device, and expansion and contraction of the roll has to be guarded against. The following table setting out the widths and number of perforations in the music rolls of various makes may be of interest in this connection :—

<i>Make of Roll</i>	<i>Number of Holes in Tracher-bar</i>	<i>Width of Music Roll in inches</i>	<i>Approx. number of Holes per inch width of Roll</i>	<i>Approximate Diameter of Holes</i>	<i>Type of Roll</i>
<i>Æolian Single</i>	58	10½	6	⅜ in.	... Semi-automatic
<i>Universal</i>	65	11½	6	⅜ in.	... Semi-automatic
<i>Æolian Double</i>	116	10½	12	⅞ in.	... Semi-automatic
<i>Æolian Duo-Art</i>	176	15½	12	⅞ in.	... Fully-automatic
<i>Welte</i>	150	15½	10	⅞ in.	... Fully-automatic
<i>Skinner</i>	120	14	9	⅞ in.	... Fully-automatic
<i>Austin Quadruplex</i> ...	240	21½	12	⅞ in.	... Fully-automatic

It will be readily seen from this table how small, in the case of rolls having numerous perforations, the margin is between the holes and how a slight movement to the right or left in tracking or expansion and contraction will produce wrong results.

(b) *Autographic Rolls.* These rolls, which are produced by several builders for use with their particular instruments, are made from a master roll which is cut while the organist plays. Every note put down or movement made by him—be it stops, pistons, pedals, swell pedals, or alteration of tempo, &c.—is faithfully recorded; and the music rolls cut from this master record reproduce the music exactly as it has been played. A large amount of experiment has been made with this type of roll and it has been brought to considerable perfection. The Austin Organ Co. state that if the owner of one of the quadruplex player instruments desires one or a whole programme of pieces by a certain organist, if the artist visits their studio and plays these pieces on the standard studio organ they can deliver the next day rolls cut from the music played which will faithfully reproduce the music as it was played. The Skinner Co., Welte and the Æolian Co. record in the same way and are able to cut rolls for their organs giving a faithful rendering of the music played. It may be mentioned that rolls when not in use should be kept rolled up fairly tightly and secured with rubber bands or thread and stored in a dry place at a moderate temperature. With these precautions and care exercised in use, music rolls will last for a considerable number of years.

(c) *Standardisation of Rolls.* It is much to be regretted that by an agreement between the various makers of player organs a standard music

roll cannot be evolved. A number of makers seem to have adopted a more or less standard gauge of twelve holes per inch width, as will be seen from the above table; and it is a pity that they cannot agree to a standard length of tracker-bar and width of roll also. At present, each builder cuts rolls for his particular type of instrument, and the possessor is practically tied by this arrangement and cannot use rolls of any other make. It would be a great step forward and add much to the popularity and usefulness of this type of organ if both its tracker-bar and music rolls could be standardised, so that rolls recorded by any organist and cut by any firm could be used on any player organ. Possibly, this may come in time; it would be very welcome.

(d) *Paper* for music rolls is another vexatious problem: so many conditions have to be satisfied. The principal conditions may be stated thus:—

- (1) *Non-absorbence* in order to prevent, as far as possible, expansion from dampness, and contraction from undue dryness.
- (2) *Smoothness* of surface to ensure easy running and freedom from undue friction over the tracker-bar.
- (3) *Toughness* to prevent tearing between the numerous perforations.
- (4) *Flexibility* to secure good bedding on the tracker-bar, and at the same time sufficient stiffness to prevent creasing and cockling when tracking.

It will be seen that the makers have had by no means an easy task to satisfy all these requirements, but although trouble is occasionally experienced, they seem to have solved this problem fairly well.

VIII. CONCLUSION

The thanks of the writer are due to the following: Mr. John T. Austin (Austin Organ Co.), Mr. Ernest M. Skinner (Skinner Organ Co.), and Mr. Edgar Smith (Æolian Co.), for information received, and the loan of blocks or photos for illustration purposes; also to Mr. E. D. Horwood (Messrs. Steinway & Sons), Messrs. E. H. Aird and H. H. Brown (Harrods, Ltd.), and Mr. E. Smith (Æolian Co.), for their kindness in allowing the author to inspect and try the instruments under their care; also to Mr. Henry Willis for permission to reprint his opinion on player organs. Finally, if this article has in any way awakened the interest of readers of *The Organ* in this type of instrument, and added, if only in small measure, to the general knowledge of the organ and its makers, the writer will feel sufficiently rewarded for his labours, and the space occupied in our valued journal justified.

ERRATUM.—On page 446, eight lines from the bottom, the sentence, "This instrument is illustrated in the first plate," should read "The console of this instrument (without case) is illustrated in the first plate."



THE PERFORATED MUSIC CO

THE business of the Perforated Music Co., as the name indicates, consists entirely of the manufacture of music-rolls, and the whole industry is self-contained within the walls of their premises in City Road, E.C. That is to say, not only do the Company make rolls, but they also make all the highly specialised machinery for the purpose, do their own printing, and make their own boxes.

The Company's trade is not confined to this country. It extends to the Continent, and as far afield as Australia, New Zealand and India. The annual output is approximately 300,000 rolls. A ton of paper (75 feet to 1 lb.) is used every week, and the total length of rolls made in the year is over 10,000,000 feet. If that is worked out on a Holt Schooling analogy, one may arrive at some such striking figure as that the rolls made in a year would, if unwound and placed end to end, stretch round the British Isles.

Nevertheless, the firm regard their business, which has been established ten years, as in its infancy. They see in the piano-player the universal domestic instrument of the future, just as the ordinary pianoforte has been regarded up till now. Moreover, they recognise the vast difference now that the recognition of the player by musicians is an accepted fact, and they appreciate the early and constant efforts of this journal in that direction!

The making of music-rolls was fully described in our August number, and it will only be necessary here to touch briefly on the different stages of the Perforated Music Company's processes, in the form of an enumeration of the different departments of the factory.

First, there is the musician's room, where the master copy of the roll is made. This master record is either made by an actual performance on a recording piano, or the

musician transcribes the notes of the score on to specially charted paper, which is afterwards punched out. The stencil, after being tested for faulty perforations and corrected, goes to the cutting-room, where there are eight machines constantly at work, and where sometimes as many as thirty copies are punched at one time by each machine. The next stage is the putting in of the expression marks. The musician takes a length of roll-paper and marks a line indicating the varying degrees of tone, tempo, etc., and a stencil is cut therefrom. This is placed over a roll, and ink serves to make the continuous dotted line with which the player-pianist is so familiar. Other necessary expression marks are put on the roll in a similar way. In the case of the "Songola" rolls, where the words of the song are printed opposite the corresponding chords of the accompaniment, a stencil is cut in specially prepared stencil paper by a machine specially adapted for the purpose.

The completely marked and perforated sheet is then glued on to a spool, and the "linenized" front (to which further reference will be made) is affixed by a very clever and special machine which ensures that it shall be attached mathematically true. The roll is then finally examined for blemishes and for possible faults in tracking. Every roll which leaves the premises is guaranteed correct, and the firm point out that where their rolls do not track correctly the fault lies with the spool-frame of the piano-player and not with the roll. The fixing of a spool-frame is, they contend, a work of fine engineering, and it should be adjusted to a hair's breadth. In some players manufactured by firms new to the necessity of absolute accuracy, however, the spool-frames appear to have been put in by a carpenter with a foot-rule, rather than by a skilled mechanician. "We get many complaints," they say, "for faulty paper," etc., when it is really the player which is to blame.

The roll having been boxed and labelled, is ready for the market, having gone through nine distinct processes. It is placed in the stock-room, where over 300,000 rolls are kept ready for despatch.

Realizing that before long all 88-note rolls will be made with the contiguous cut, which prevents faulty playing where the perforation is a long one, the Company are now making rolls in this manner. They anticipated the contiguous cut some time ago by putting in a bridge for every eight punches (about $\frac{3}{4}$ inch) in order to get a satisfactory result with sustained notes. The advantage of the 88-note roll is obvious. Many works when transcribed for the piano-player have to be liberally "faked" to satisfy the limitations of the 65-note compass. The result in such cases is inartistic and sometimes ludicrous, as when, after a brilliant finale, the roll ends up with a thin, unconvincing chord in the middle register of the pianoforte. This tame ending is due to the fact that the vital bass notes of the chord are beyond the compass of the roll. As an example of inartistic "faking," the expedient adopted in one point in Moszkowski's popular "Air with Variations" may be cited. There is a grandiose descending passage in semi-tones, but this, properly rendered, goes beyond the 65-note compass, and consequently the bottom octave has to become a mere repetition of the one above it.

The specialities of the Perforated Company's rolls are the Linenized Front, the Steel Spool, the patent Tab, the one-piece Box, and, last but not least, the inalterable quality of their paper. It is guaranteed neither to shrink or swell whatever may be the vagaries of climate to which it be subjected. This feature permits the use of a spool with rigid ends, as they have no varying widths of paper to contend with, which has been the cause of so much dissatisfaction

with the product of other factories. In each case a clear advantage is gained.

In the case of the spool, it is made of drawn and pressed sheet steel, and though light in weight is very rigid and practically unbreakable. It is not affected by rough use, and the end flanges, being in one piece with the axis, cannot work off as is the case with many of the old-fashioned wooden ends.

The linenized front is untearable and gives an access of strength where it is most needed. It is of a shiny, washable material, and does not get dirty from fingering. The patent tab is a metal attachment with linen reinforcement, and this not only obviates the use of the always-lost rubber band but is proof against the wrenching which the rolls get in the hands of inexperienced player-pianists, and contributes also to the correct tracking of the roll. It is much less bulky than the old "D" hook, and fits exactly into the recess of the take-up spool. Consequently it never does what the other attachment sometimes does, namely, press out the paper into a bump somewhere about the centre, causing a pulling of the roll from each side, which increases as the unwinding goes on.

The advantage of the one-piece box, of course, is that you never lose part of the box, or get the labels mixed.

The "Songola" roll, as mentioned above, is a song accompaniment with the words printed in position on the roll. The introduction is marked off in bars, and the words begin where the voice commences. The convenience of the arrangement is obvious, but it is not claimed as a substitute for sheet-music. The roll is a useful guide to the accompanist, especially where he be of a type to which a music-roll is simply a piece of paper with a lot of holes in it. The publishers do not fear the competition of the "Songola." Experience has shown that a person who uses one of these rolls which is new to him, usually buys the sheet-music afterwards. The rolls

are a means of spreading the popularity of a song and thereby undoubtedly increasing the sale of the publisher's sheet-music.

It is satisfactory to learn from the Perforated Music Co. that the demand for good music on the part of player-pianists is increasing. They find the player-piano a very potent factor in the development of higher musical taste. They put it in this way : "A man buys a player, and the first month he plays rag-time. Then he goes rapidly through the comic opera stage, till he reaches Chaminade and MacDowell. Often he gets no further than that, but an increasing percentage go on to the classics." "MacDowell's reputation in this country has largely been made by the piano-player."

For the convenience of the Trade the Perforated Music Co. are now prepared to deliver rolls in which the compositions bear the numbers and prices of any existing catalogue that they may be selling—a point that will be appreciated by many dealers, tending to avoid confusion.



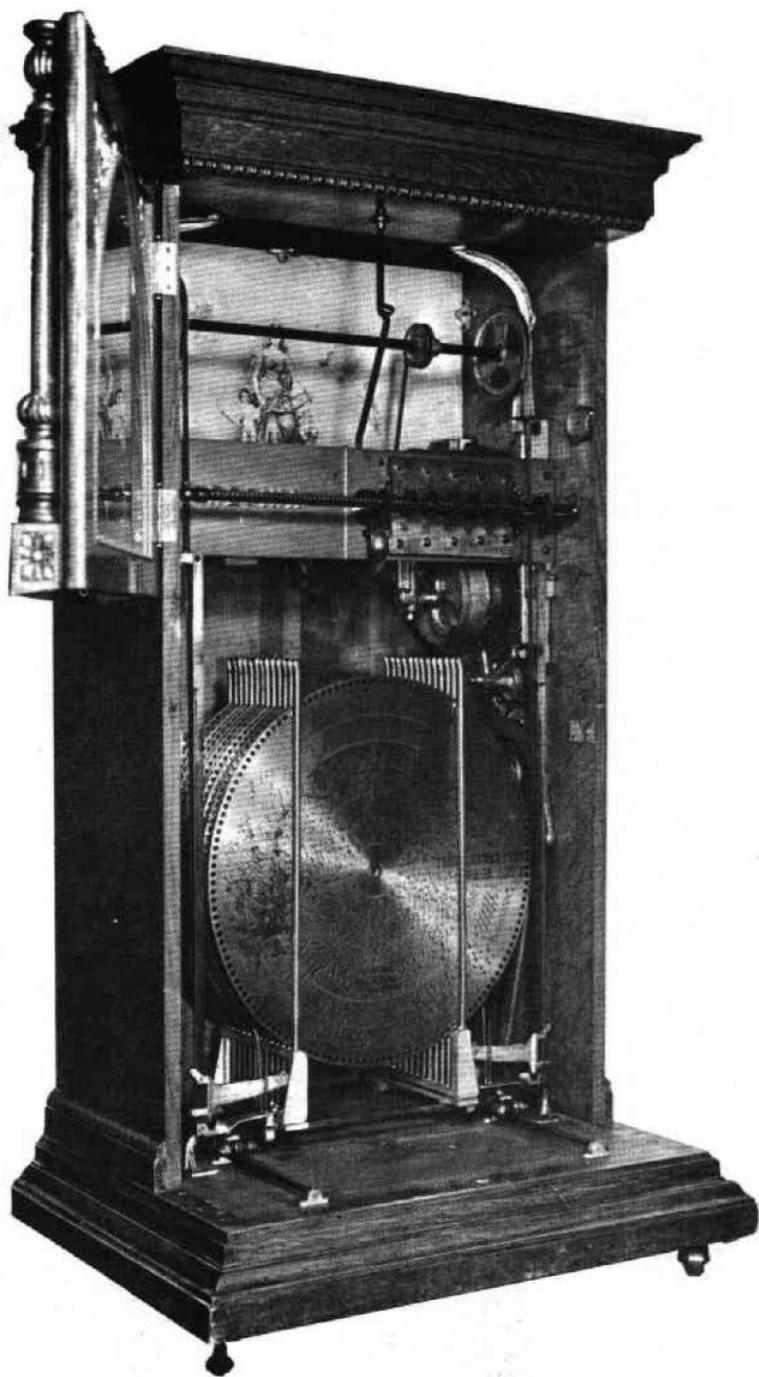
The trade and business of the Perforated Music Company expanded until, by 1918, they occupied numbers 197, 199, 201 and 203 City Road. At 1.14 a.m. on March 16th 1918, fire broke out. In spite of the use of three hydrants, 15 water pumps and 42 firemen, the six-floor building was engulfed in a fierce fire, the roof collapsing and adjacent premises, including Lipton's Tea Factory across the road, became involved. The damage was put at £48,750 — very high by the then valuations — and the Perforated Music Co., although continued in other premises on a much smaller scale, never recovered. A picture showing the aftermath of the fire exists in Member Ron Benton's unique collection of early insurance records.

The illustration on page 520 shows a pianist recording a music roll in the factory on July 26th, 1909. It shows clearly the pneumatically-operated master-roll punching apparatus in the room adjacent to the special recording piano.

Picture by courtesy of Radio Times Picture Library



A machine coveted by the disc musical box collector is the Regina made in Rahway, New Jersey. The 22 inch size self-changer seems less common than the 27 inch self-changer, itself scarce in



England. This fine specimen, in almost mint condition, was formerly in the collection of our late Member, Henry Cornacey. Some months ago, Henry sold the machine and it was acquired by Member Graham Webb.

Crasselt & Rähse,

Pianoforte-Fabrik in Löbau i. S.

Brüssel 1888: Grosse goldene Medaille. Bologna 1888: Silberne Medaille.

Pianos und Flügel

in vollendetster Eisenkonstruktion mit aufrechtstehender Stimmschraube (System Rähse). [322]

Ausgezeichnete Haltbarkeit!

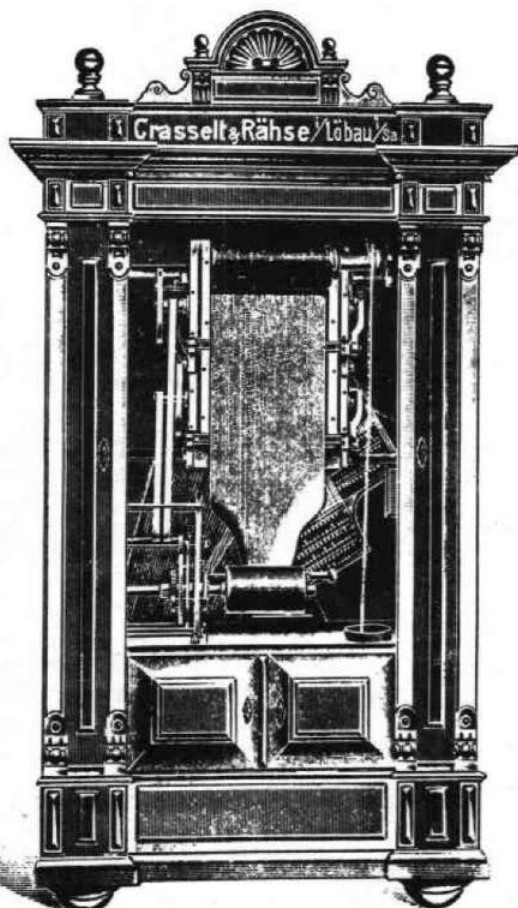
Vorzügliche Klangsönheit!

Klavierspielwerk.

D. R.-Patent
No. 134484.

Dieses Klavierspielwerk, das neueste auf dem Gebiete der Instrumentenbaukunst, mit Gewichtsauflage, auswechselbaren Notenblättern und Geldeinwurf, ist für Restaurants, Tanzsäle vorzüglich geeignet. Spielt vollendete Concert- sowie vorzüglich Tanzmusik.

D. R.-Patent
No. 134484.



D. R.-Patent
No. 134484.

Da sämtliche Instrumente von uns mit unserer neuen Stimmvorrichtung versehen, so sind dieselben auch sehr gut für den Export nach den tropischen Klimaten geeignet. Durch diese Stimmvorrichtung sind die Instrumente unverwundlich. Wollte sich jeder Interessent selbst davon überzeugen.

D. R.-Patent
No. 134484.

Preis mit 12 Noten Mk. 950.—.

— Dieses Klavier-Spielwerk ist das Allerneueste! —

ROBERT BURNETT

XVII - XIX Century Clocks, Watches and Musical Boxes

My Stock normally includes:

Musical Boxes of the normal cylinder or disc type. **Musical Snuff-Boxes** and **Singing Bird-Boxes**.

A Good Selection of **Carriage Clocks**, including several of the rarer types, e.g. **Miniatures, Quarter-Repeaters** and **Grandes Sonneries**.

A variety of **Ornamental** or **Unusual Clocks**, including one or two **Marine Chronometers**. (No Long Case Clocks).

A Selection of **XVIII Century Watches** and some later **Complicated Watches**, such as **Pocket Chronometers** and **Minute Repeaters**.

Visitors are welcome, Guilsborough is about 10 miles north of Northampton and about 8 miles east of the M1, which one should leave at Exit 18 by the A428. This is the best way whether travelling north or south.

An appointment is desirable, but not essential.

15, CHURCH MOUNT, GUILSBOROUGH, NORTHAMPTON,

Phone - Guilsborough 333

THE CYLINDER MUSICAL BOX HANDBOOK

Published by Faber & Faber

written and illustrated by **GRAHAM WEBB**

Price 50/-

For your copy to be posted on the day of publication (November)
send no money but

order now

from

GRAHAM WEBB

**93, Portobello Road,
London, W.11.**

LETTERS TO THE EDITOR

Member Graham Webb writes:-

From the experiences of several members we have already noted that the manufacture of musical boxes by Nicole Freres did not in fact start with the 19,000 series, but that considerably earlier numbers were used. Up to the present I think that the earliest numbers known are in the 17,000's.

I feel that it might be of interest to fill in some of the between dates in Mr. Clark's admirable list by means of actual dates appearing on the boxes themselves.

At the moment I have two Nicole Freres boxes which do, in fact, bear dates which are almost sure to be right. They both agree with the loose dates which Mr. Clark has set, but go further in supplying an actual month and year to a particular serial number. I realise that there may well have been a time lag between the making and the selling of a box, but even so it narrows the period considerably.

The two boxes I have are as follows -

1. An interchangeable cylinder medium box playing 8 tunes per cylinder and having the serial number 52201.

A plate is attached to the front of the case which bears the legend "Presented to Miss Tangye from the Employees of Tangye Ltd. on the Occasion of her Marriage.

28th June, 1892"

Mr. Clark, after putting the manufacture of the 50,000 series as up to 1888, puts the 52,000 series as up to 1903, so that this date of 1892 fits in very nicely.

2. A fixed cylinder large size box playing 18 airs, 2 per revolution of the cylinder, there being 9 changes, the serial number is 44901.

Deeply incised into the brass plate holding the controls is the following:-

Tom and Blanche from Rushton.
18th Oct. 1876.

Mr. Clark puts the 44,000 series as up to 1880.

I'd very much like to see more dates found on boxes.

Member John Goodacre writes:-

Those cinema goers who are also lovers of automata should remember to see the famous 1928 Russian film about the Revolution called

'October' and directed by Eisenstein and Alexandrov.

In a sequence symbolising the magnificence and vanity of the Czar's regime, there are several shots of the great Peacock in Lenin-grad. This was made in England by James Cox and is described and illustrated in the book on automata by Chapuis and Droz (pp. 225-7). It has an elaborate sequence of movements. In the film it is seen from close up shaking its head, slowly revolving in a circle and, a marvel of engineering, fanning cut its tail, each metal feather sliding from behind the next.

Classified Advertisements

Rates: 3d. per word (Bold type 6d. per word).

Box numbers are not permitted. 'Display and semi-display rates are available on request.

Electric Reproducing Pianos for sale.

Small Steck pedal-electric upright Duo-Art.

Weber electric Duo-Art upright.

Steinway Duo-Art upright.

Rogers Ampico 5 ft. electric grand.

Rare Steinway Welte Keyless model (same as the one on display at the Birmingham Science Museum).

Also one Violano Virtuoso automatic violin with piano accompaniment now in process of being completely rebuilt.

Enquiries invited, Norman Evans (Reproducing Electric Piano Specialist), 76, Tottenham Lane, Hornsey, London, N. 8. Tel: 01-340-4356.

Try ME When selling that quality box. Excellent prices given for fine specimens and those needing repair.

M. Gilbert, 8, Bramley Close, Earley, Reading.

FOR SALE:- 17 Symphonion discs (5.5/8") £8.
12 Paper rolls. 20 note for Celestina or Seraphone. £5. Wanted - Ammunition for Autophone or Gem roller organ. J. Tempest, 27, Cringle Hall Road, Manchester 19.

Wanted. Musical picture, musical scene, any automata, chordephon, small pipe organ, singing bird box, overture box, organ box. R. Williams, 62, Kingswood Road, Kingswinford, Staffs.

Musical boxes wanted, also coin-operated game and vending machines and circus items. Please describe and state price.

Charles Currie, 602, Lincoln Avenue, Palmyra, New Jersey, U.S.A.

GEORGE ALLEN & UNWIN LTD

Collecting Musical Boxes

ARTHUR W. J. G. ORD-HUME

Written by a leading authority on mechanical musical instruments, this book traces the history and development of the cylinder and disc musical box and describes some of the many other forms of mechanical instrument produced from the earliest times to the present day. This book is intended not only for the collector and restorer, but also the antique dealer and trader.

'Here is a book which will find a place of value with every collector and enthusiast, not to mention the budding musical box dealer.' *The Music Box*.

'Admirably told with a wealth of expert advice and informative pictures.' *Antique Dealer and Collector's Guide*.

A valuable guide including the history of the musical box industry, what to look for when buying, and how to repair boxes and restore cases, with a special section on trademarks. *Illustrated*.

9 $\frac{3}{4}$ " $\times$ 7 $\frac{3}{8}$ ". 136 pages. 44 plates.

FREE POSTAGE & PACKAGING.

42s.

ARTHUR W. J. G. ORD-HUME

3a, Downshire Hill, Hampstead, London, N.W.3.



Not all street musicians carried their instruments around with them. This one, depicted in a London street in 1870, chose a more sophisticated means of transporting his organ and playing it. He does appear to have been better dressed than his image today may altogether suggest. Judging by the angle of the donkey's ears, he was not a music lover

Picture by courtesy of the Radio Times Hulton Picture Library

LIST OF MEMBERS

- 342 H. Turner, 230 Sudbury Heights Avenue, Greenford, Middlesex.
- § 343 A.J. Robb, P.O. Box 226, Timaru, New Zealand.
- 344 M.H. Bailey, 29, Sweet Briar Walk, Edmonton, London, N. 18.
- 345 P.R. Pennington, Westfield House, Blyth Road, Ranskill, Retford, Notts.
- § 346 Ichiro Kagoshima, c/o Japanese Embassy, 59, Basilissis Sofias, Athens 140, Greece
- 347 A. Sefton, 26, Poulton Avenue, Accrington, Lancaster.
- § 348 Jean Pierre Rocheford, 5 rue de Mission Marchand, Paris 16, France.
- 349 J.A. Gamett, 44, Chorley New Road, Bolton, Lancashire.
- 350 B.S. Campsie, 29, Woodland Avenue, Windsor, Berkshire.
- 351 B.R. Verrall, 186, Kent House Road, Beckenham, Kent.
- § 352 J. Cohen, 11756, Canton Place, Studio City, California, U.S.A.
- 353 E.A. Spencer, Wood Hall, Woodhouse Lane, Copley, Halifax, Yorkshire.
- 371 Dr. C.J. Brooks, 28, Sherry Lane, Arrowe Park, Wirral, Cheshire.
- § 372 Dr. P.L. Schwartz, Flat 6, 369 Neerim Road, Carnegie, Victoria 3163, Australia.
- § 373 Sven Erik Svensson, Kastanjegatan 70, 21362 Malmoe SOE, Sweden.
- 374 R. Cooke, 25, Templars Avenue, London, N.W. 11.

omitted from last issue

CHANGE OF ADDRESS

- 135 J.K. Bratley, "Wey View", 56, London Road, Liphook, Hampshire.
- 290 Q.D. Bowers, 12646, Carinthia Drive, Whittier, California, U.S.A.

CORRECTIONS TO DIRECTORY ENTRIES

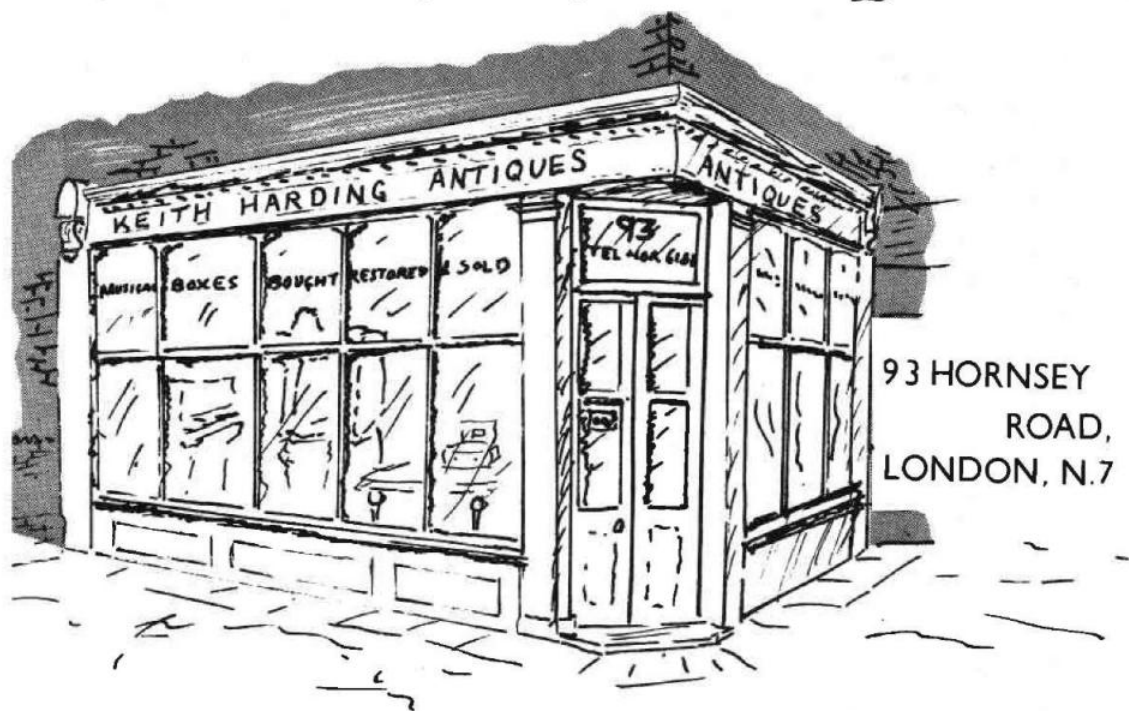
Please alter your Directory of Members accordingly.

- 13 F.S. Greenacre, 164, Lowestoft Road, Gorleston-on-Sea, Gt. Yarmouth, Norfolk.
- 200 R.H. Hill, 88, Deerswood Road, Westgreen, Crawley, Sussex.
- 353 E.A. Spencer, Wood Hall, Woodhouse Lane, Copley, Halifax, Yorkshire.



THE MUSIC BOX is designed by Arthur W. J. G. Ord-Hume and printed by Litho Arts, 6, Chesterfield Gardens, Mayfair, London, W.1 and published four times each year by The Musical Box Society of Great Britain at 11, Devonshire Place, Wimpole Street, London, W.1. Text Varityped by Montagu Watson, 40, Buckingham Mansions, West End Lane, London, N.W.6

Keith Harding



MORE THAN A SHOP

Books · Materials · Spares · Repairs ·

*A CENTRE FOR MUSICAL BOX
ENTHUSIASTS*

Tel: 01-607-6181 or 3761 Open: 10a.m.to 6p.m.

Are YOU interested in Musical Boxes?



Small Barrel Organs or

Reed Organettes?

Fairground Organs?

Musical Snuff-Boxes?

Singing Birds (automatic ones!)?

Musical Automata of every other kind?

If you are, then you will quite probably derive immense enjoyment leading to a greater fulfilment of your interest by becoming a Member of

THE MUSICAL BOX SOCIETY OF GREAT BRITAIN

The aims and objects of the Society are extremely simple. The Society exists to bring together all those who share a common interest in the collecting, preservation and appreciation of all types of mechanical musical instruments.

What for? What good does the Society do? The Society brings together fellow collectors from all over the British Isles and many foreign countries including Switzerland — the accredited birthplace of the

musical box as we know it.

The Society publishes a quarterly Journal called THE MUSIC BOX which is devoted to articles on all aspects of musical automata, repair and overhaul tips, descriptions of fine and unusual musical movements and, of course, it circulates Members addresses. The MUSIC BOX is fully illustrated and is a unique publication, there being no other journal devoted exclusively to musical automata anywhere in the World.

Membership to the MUSICAL BOX SOCIETY OF GREAT BRITAIN opens up a whole new world of musical box appreciation. Wherever you live, up-to-the-minute news of members and collections reaches you through THE MUSIC BOX. Twice a year, a full day meeting is held at which all members and their guests are invited to attend. Ultimately, regional meetings, film shows, lectures and demonstrations will be encouraged.

How much does all this cost? Just **THREE POUNDS** (U.S.A. \$9) per year! If you are not convinced that Society membership can benefit you, why not send 5/- for a specimen copy of THE MUSIC BOX? Judge, critically, for yourself.

Binders

Keep your copies of THE MUSIC BOX neat, clean and immediately available for reference. Strong, durable binders in red rexine with gilt title on spine made to hold two years' issues of magazines, directory and index. Your copies can be inserted or removed in a moment. There is no need to mutilate your magazines by punching as each one is simply retained on a wire.

Post and packing free 14/- each.
(\$2 U.S.A.)

Available from: The Secretary, Musical Box Society of Great Britain,
11, Devonshire Place, Wimpole Street, London, W. 1.

