## Vol. 2 No. 7 Autumn, 1966

Bery once in a while, there is an uproar when a so-called treasure is sold outside our country. Invariably, it seems, that work of art or whatever it may be goes to America, and there is the usual clucking in various circles which hinges on one or the other of two aspects - first, the dehudation of our heritage by weal thy persons outside our shores, and second, what a pity the Nation (or some benefactor who lives in this country) doesn' $t$ save it from leaving the United Kingdom.

Just such a state of affairs now exists in musical box circles. With the recent discovery that certain people (not, we must all, our accredited musical box dealer advertisers!) are buying up boxes in any condition for the sole purpose of exporting them to the States, the distant clucking suddenly becomes a loud cry in our own ranks, Not that our Society has or wishes to have national borders and our American and many other overseas Members are to be deprived the right to buy where they like. The nub of the matter concerns the indiscriminate export of boxes to overseas speculative dealers. This can neither be fair to us nor the recipients of such boxes. The bulk export of musical boxes is to be discouraged if the interests of Members are to be preserved, regardless of their nationality. We have already seen the effects of thoughtless denudation in past years in that the Swiss and German collectors have to come to Bngland for most of their boxes. It is this drain on our home market potential which one must blame for the price spiral, not an unimaginative approach from home dealers who are finding boxes harder and harder to come by.

## *THIS MAGAZINE

It ajems quite a while since last I made my periodio noises about ecntributiona for the MUSIC BOX - your Journal.

What constitutes a contribution? An articie, dravings, pictures or just a description of a musical box, a muaical box manufacturer, or an allied industry. The scope of mechnnical music, which is embraced by our Society, is enormous and opportunities for magazine material are almont limitlesa. Everybody may well have something that Is worthwisile publishing, be it the fruits of your om research, details of an unusual machine you know about, or the loan for reproduction of original printed material such as cataingues, old sdvertisements and soon. Our re thod of reproduction enables us to reproduce almost anything that it printed, dram or painted regardless of colour or size. Original adivertisements and catalogues, as we have all soen, often come out better that the original which may be too tattered to hendle.

If you send pictures please ond glossy prints $10^{\prime \prime} \times 8^{\prime \prime}$ if poosible aithough half-plate size can be used. If you are mriting, plesse do sol If you can't type, then scribble and if I can't decypher it or pisy it on my Orchestrielle then I'Il send it back to you for transiation! If you want to drav, please do. If yoo are afraid you camnot drav, then send rough aketches - there is a tame artist who frequently wears ty hat who can usually make aomething out of an idea.

## * BACKGROLIND MUSIQUE

About two years or so ago, I had a particular ly enjoyable holiday in the Devon village of Dartington. It was all the more memorable because it was the first holiday. I had had for some years and alao because it didn't rain as much an it usunlly does whenever I take the day off and heed for the wide open apaces. Aryway, back to Dartington. There is a famous music college there - Darting ton Hall - and one fine day I was valloing through the college grounds, wherein grow some extremely fine and quite remarkable trees. Feeling just a little like actor Peter Ustinov in his humourous sketch on the singing tutor he once had, I was intent on maintaining myself the right side of the 'keep off the grass' signs in the quadrangle and musing on the possibilitiea of teaching dogs to read and at the same time listening to the quite ethereal aura of music in the air. Bery windou of every room was open, and from within came the sounds of practice. The oboe hera, the flute there, a vell-voiced oello over thare, an aupegio on the pieno back there AII the time, ohubbyfaced country birds ohirped cheektly in the trees. The whole scene vas unbelierable sarene and yet at the aame time videly alive and vivacioun.

I tried to re-oreate this, 1ater, by ruming round the house, turning on all the aubecal boxes,
prodding a real live blackbird into action - an kicking the grandrathor clock. It wes not a muc cess and I was forced to take a suiden run up the road until things had subrided.

All this is experience gained and froa that learned a fev things. But nevertheless, there ar those in our midst who will not benefit fice othe and have to experience for themelves. Sose tis after all this, I was invited to take part in broadcast, and the B.B.C. valluh arid "Svitch o some of the mastcal boxes and lets get acone back ground". Reflecting that it wasn't worth pointin out that they vere not electric and couldn't gnitched on, I suesested the resultant cacophon migit be ruinous. He gave ae the sort of loo I gathered inferred "Look, zstel If you're try irg to teach me my job ..." I 'suritched on' hal a dozan boxes. Kike Yallah did the convocitiona with his vicrophone. When things hal quietened dow he plaved the thing back - and vinced. Yell, yo can't say "I told you so", nok can you! There an those who wust cose up the hard way in everythin

## * RED SHOES IN THE SUINRISE

Ever hud an experience which you wish fervent 2y that you could forcet? Sonething really en barrassing and arful? And when you do remenber it, you get a shudder down your spine, you clenc your fist and eay "Oh, why did I ever do that" I had just that experience a few minutas back a I chanced to pull out a little musical box whic Playn four 114tile dances of the 1830's. You ase it was like this.

I had but recently taken an soctive interest is musiont hoxes and lums in the first flush of look ing, fiddiang end buying. Hiow, I had an aunt nate ed Cladys who was known to ne when young as tuint 1o Happy Botton - this is a joke orily to be appre ciated by a pupil of the Lover Tourth. Vell, Aunti H. B. hand a muarical box which I had know of fo years and years and now I sought the opportunit to examine it in the light of ay neu-found blow ledso. It was a four-nir Lecoultre and only plaje taree tumes due to a deposit of old ofl and dus on the arbor. This I cleaned off, the bor plave four tunes again - and funtie E. B. was overfoye to the extreae. Hy aim vas now to get herto par with her box but she would just laugh and say on day it would be تine in any case.

It came to pass that acone tive later she tele phoned ae. Could ehe cooe and stay for a feu dayn and I said "yea" and added jabingly, "Don't for get the maical box!". Iou could have knoched a dom vith a danper vhen she arrived in time foil tea with the box and actually gave it to ne!

Her day of departure duly arrived. She want ed to catch an early train and this neant drivin her to the atation by 6.35 a.a. Rogrettably, did not sot ay alarn olock and the first I kne
was when Auntie H. B. shook me from my slumbers sajing "It's a quarter past six" in a tone which was a mixiture of ave and despair. In a flash, I was but of bed and summed up the situation. The 15-minute drive to the station left no time for convention. I put on a bright red dressing gown, stuffed my feet into large fluffy red slippers and set about loading the cases into the car, Auntie completed a very hasty dressing. Within three minutes we were on the road - the local fire-brigade couldn't have mustered a quicker turn-out! Auntie H. B. caught her train with 40 seconds to spare. Relieved, I yriggled my toes in my slippers - and started back home.

As a flyer, one of the first things I learned was never to take off without doing ny cockpit check. Part of that check concerned fuel. Heving never run out of petrol in the air or on the road before, I was initially flummoxed when the car spluttered to a standstill in a dewey lane betwixt a thicket and a cabbage field.

Not until I got out of the car did I realise the extent of my unfortunate position. I began to walk. Funny thing about slippers. They're 0.K. in the house but terribly impractical for hiking. I set off towards the village in the hope of finding, in sustained anonywity, a two-gallon can of gasolene thoughtfully left by the roadside.

Oddly enough, I did not hear the car at all, only the scrunching of its tyres on the gravel as it slowly pulled alongside me from behind. The policeman eyed me up and down - slowly - from tousled hair down to fluffy slippers. "Good morning, officer", I siad. "I'm looking for some petrol". His face broke into a wry smile. "For my car", I added, pointing feebly back in the direction from whence I had come.

They took me to the police station where I eventually convinced them of my sanity. They even drove me back to my car with some petrol. However, it was now well into the morning and everybody stopped and stared at the sight of a touslehaired fellow dressed like an emperor. That's why I never play that box in an endeavour to forget.



## *FRENCH WEST AFRICAN BRITAIN

One-time an ardent philatelist (and still a passive one since I now save stamps but only, keep them in a shoe-box), I used to add my voice to those who claimed that Great Britain had the dullest stamps in the world. I remember how avidly the first conmemoratives were greeted after the wax.

Today, though, when someone says "Have you seen the new stamps?", one usually has to say "which ones?". I've just been doing some letters and, on searching around for stamps, I found an odd assortment indeed - all valid and all different. The uneasy feeling is growing on me that I am living in an obscure South American state or deep in the heart of equatorial Africa long before independence reared its colourful head. I have stamps with flowers on, blue skies, more flowers, fighter aircraft, Westminster Abbey and a fine corner block of four showing a footballer in a blue jersey kicking in the teeth of a fellow in a red jersey, And here's some with birds on - wing-ed ones.

I'm not too happy about these stamps not that we've got variety. The Queen is relegated to a small silhouette in the corner like the af termath of a grubby finger application. The point never seems to come across either. Remember that National Productivity Year we had? Everybody was urged to do twice as much work in half the time. So we had stamps to emphasise the point which were twice the size and took twice as long to lick.

Why, in the half-light of the High Street the other evening, bathed in the deceptive glow of those sodium lamps whicn miraculously abstract colour from everything and force in grey, I even tried to stick a cigarette gift coupon on a letter. No wonder the Postal authorities never detected the letter sent to me by a colleague with a Green Shield stamp on it.

I now modify my earlier opinions in the light of the welter of new issues. I reckon that that supremely uncluttered, unembroidered-albeit very short-lived-issue of Edward Vill was the best we have produced, I now await the inevitable new issues this month of six big stamps to comemmorate the Royal visit by the Duke to a cardboard box end-flap folders' factory at Blackheath, the four new stamps for the opening of the new Watneys pub in Whitechapel, the ten new stamps for the re-laying of the main sewer in Dulwich High Street, and the lot to celebrate the fourth birthdey of the female chimpanzee in Torquay Zoo.
arthur w. J. G
G. ORD-HUME

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## A Macabre Automaton TIPPOO'S <br> 

WGWDON's VICTORTA \& ZLBERT MUSELYM contains one objact of both peculiar fascinaticn und great interest to the student of mechanical music. The item is the somalled iippon's 'Tiger.

Tippoo is the bastardjsed spelling of the $3 i p u$ Sultan who was ruler of Mysore in Southern India. Tipu Suitans life centred around the worship of the tiger and even his throne, constructed in 1786, was in the shape of a ti.ger. Bffigies of the tiger adorned the Sultan's paiace at Seringapatam. Now Tipu was a great hater of Europesns and stories of his extreme cruelty to British prisoners were legion. The politics of the situation are of but passing concern here. However, it came to pass that on 4th May, 1799, the British overthrew 'lipu and his empire of Seringapatam. bising bsttered for three weeks at the stone wall surrounding the city, a tieach wis made, the British piundered the buildings and did battle in the palace. Tipu suitan died of a bullet wound above his right ear, a ball in the cheek and, to waie quite certain of the demise of the wretched ruler, three bayonet wounds.

Much of the Sultan's property was shipped back to Eingland. Among these treasures which duly arrived at East India House, Leadenhall Street, London, was a device which was described in a memorandum in the following terms: "This piece of Mechanism represents a Hoyal Nyger in the act of devouring a prostrate European. There are some barrels in imitation of an Organ, within the body of the Tyger, and a row of heys of natural Notes. The sounds produced by the Organ are intended to resemble the Cries of a person in distress intermixed with the roar of a Tyger. The machinery is so contrived that while the Organ is playing, the hand of the Buropean is of ten lifted up, to express his helpless and deplorable condition. The whole of this design was executed by Order of Tippoo Sultaun".

Prom this description, we see that not only is this object a wooden effigy, it is also a mechanical organ or barrel organ and an automaton figure. The origin of concept is doubtful. One feels that it must have been inspired by an actual incident althoueh, bearing in mind the Sultan's attitude towards the Buropean, and also his love of the tiger, the whole thing could have been dreamed up. However, it is significant than an incident did occur wherein an Englishman was dragged from his canp into undergrowth by a tiger who took the wretched victim's head in its mouth. This hoppened on an islend named Saugor in the Hooghly river approaching Calcutta, and the date was 2nd December, 1792.

The organ is hand-turned in the usual barrel-organ style. Built directly into the air reservoir is a most peculiar 'double' pipe of large scale, one half of which is partially gopen and the cther closed. The former producesa lower and dull-


er tone then the other and the resultant two dissimilar notee are ytrikingly like the growling cough of a Bengal tiger at its kill.

There is another important organ pipe which is controlled separately fromits own cuckoo feeder worked by a connecting rod from the crank bandle which passes down into the victim's chest. Air is ducted to this pipe, made of brass, the top of which ends at tha victim's open mouth. This produces a shrill, human-like scream. The subtlety of the moving hand is now revealed, for this hand is made to move up and down from the victim's mouth (the top of the pipe) to near the tiger's ear. When it is covering the mouth, it increases the tonal length of this 'voice' pipe in the same manner as an open flue pipe may be lowered in pitch with the provision of a shade. Thus the voice is contrived to rise and fall in pitch as well as in intensity.

The main organ comprises two high-pitched stops of open brass pipes. Since both ranks produce the same notes, it is thought that the use of the stops could purely serve to increase volume. Henry Willis relates that the tuning scale is not Western and, indeed, believes that the method of playing the organ was to run the knuckles up and down the scale to add more effect to the automaton actions. The stop knobs are visible in the picture on page 317 below the tiger's tail.

The origin of the 'man-tiger-organ' (which description oddly fits and may be found in Keats's poem "The Cap and Bells") remains unknown. Whilst the style of painting the Englishman's face and the stripes of the tiger are certainly after the Indian, the mechanism is Western and, from the construction of the organ, and the materials used, Henry Willis believes it to be European, probably French.

That we have the relic at all today is fortunate for, after its arrival in London in 1800, it was variously stored, exhibited, looted and misused. During the 1939-45 war it was extensively damaged when part of the museum was bombed and masonry collapsed upon it.

The three-quarter life-size exhibit is now housed in a giass case, together with Tipu's gold watch and other relics, in a display room for all to see some 167 years after its capture. Somewhere, one feels, there must be a record of the manufacturer of this unique device for the Sultan of Mysore, be it French, or German, or English. The thing might well have been a gift from another country. At all events, it was commissioned, carefully thought out, planned and built by no mean crafteman.


MUSICAL BOX REPAIRS. A. Ridsdill, 46, Kingsway West, Acomb, Yorkshire.
FOR SALE. Empty wooden glass-fronted case for $24 \frac{1}{2}$ " Polyphon - good order - inside measurements $33^{\prime \prime} \times 25^{\prime \prime} \times 10^{\prime \prime}$. Delivered free 30 miles - £9. 10. Od. C. W. Cramp, 4, West Street, Horsham, Sussex.
HAVE YOU RETURNED YOUR DIRECTORY QUESTIONWAIRE YETT? If not, only your name and address will appear with nothing to show whether you collect or are interested in anything! If you have not made your return, do it NOW.

ollowing an attendance of Flotow＇s opera＂Martha＂，Berlioz made the following comment on be－ half of＂The Last Rose of Summer＂：＇The delicious Irish air was so simply and poetically sung by Patti that its fragrance alone was sufficient to disinfect the rest of the work＇．（1） Berlioz＇s words should most eloquently illustrate why，out of the 18 operas written by Flowtow，it is only＂Martha＂which has held the stage continuously until present times．

This romantic opera in four acts was first presented at the Imperial Opera House in Vienna in November of 1847．It was followed by performances in New York in 1852 and in London in 1858．While the melodious＂M＇Appari＂（＂Like a Dream＂）deservedly evolved as one of its most popular tenor arias， it was the lovely＂Qui Sola Vergin Rosa＂that soon revealed itself as the aria on wich the opera most depended for its fame．Flotow assuredly appreciated the appeal of this simple Irish air which at the time of his discovery，was relatively unknown，for he featured it as the leading motif in the latter part of＂Martha＂．He also added a new and effective touch to the song by having the tenor join the soprano at the close．Concerning the popularity of＂Narths＂，Kobb had this to say：＂More－ over，the music and words（of＂The Last Rose of Summer＂）fit so perfectly the situation on the stage that for Flotow to have lifted and interpolated them into his opera was a master stroke＂．（2）To that ＂Martine＂owes much of its popularity．

Eaving now established that Flotow had＇borroved＇the song for his opera，let us go back and examine its beginnings．Evidence supports that it may have first evolved from a very old Irish air called＂A Young Man＇s Dream＂．Leter，around 1788，when Blarney，near Cork，became popular，a Cork attorney， $\mathcal{A}_{0}$ A．Millikin，used the melody in writing his＂Groves of Blarney＂，a poem designed to fi－ dicule a laudatory set of doggeral verses praiaing the beauty of Castle Hyde．＂Groves of Blarney＂ epparently firat appeared in print circa 1806.

The adaptation of the air to the words of＂The Last Rose of Summer＂is attributed，to Thomas Moore of Dublin，an able musician who was largely self－taught．Working was John Stephenson，Moore included the song as the fifth song in the first publication of their Irish Melodies，released in 1813．Moore wrote the texts for＂Irish Melodies＂and Stephenson did the arranging and editing．By 1843，they had completed ten sets and a supplement，the last two collections being harmonised by Hency Bishop of＂Home Sweet Home＂fame．（3）Very likely it was the florid changes which Moore and Ste－ phenson made in the melody of＂Groves of Blarney＂to adapt it for＂The Last Rose of Sumar＂which most influenced the extended popularity of the soag．However，it is Flotow to whom we must exterd the most credit for his successful＇plugging＇of the song to its crowning glory．

It is unlikely that the song appeared on the programmes of many ausical boxes before Flotow cut it loose in 1847，even though Beethoven had employed the melody previously in his Tventy Irish Lieder（No．6）and Mendelaschn had written a fantasia on it，consaderably altering the notation．of great interest is the song＇s appearance only twice in a Niccle Freres catalogue issued sometire shortly before 1850．Here it is listed $6 s$ written by Stephenson．Thereafter，however，recofising the rising popularity of＂Martha＂，mekers in Geneva and St．Croix lost little time in pricicirs the cylinders to include＂The Last Rose of Sumner＂and，shortly，it was even vieing with＂झine Swee： Home＂for top billing on the tune sheets．Collectively，these two songs probably gave more i－yetis to the sale of musical boxes over a longer period than did any other popular or classical air．＂Tae Last Rose of Summer＂could even be appropriately labelled as＂King of the lever box era＂：cr uitir ately it was presented on boxes of every quality and design，sometimes poorly，but aore ofter it vas arranged eloquently with runs，pauses and flourishes．It was particularly suitable for arangeests for mandoline combs．

In a 20－page catalogue issued by Wales \＆McCulloch around 1870，＂The Last Rose of S：ニニンシ＂an：ー
ears on the progranmes of 25 instruments. In one, it is described as "Irish". A six-air "sublime harmony" box lists it as composed by Stephenson, while another, a 'forty-eight airs mandoline expression' ( 6 cylinders), lists it as by Flotow from "Kartha". Several 'Extra Grand' instruments with interchangeable cylinders present it in 'two parts with variations by Thalberg'. In a much later 16page catalogue, issued around 1890 by Nicole Freres, the air was present on the programme of 19 instruments, the opera "liartha" being credited as the source in all cases.

During the latter years of musical box production, when competition took many forms, the delicate "Last Rose of Summer" was worked over to fit the renditions of many types of instrument, a feat which must have been executed on many occasions with tongue in cheek. To present a few examples of boxes for which it was adapted: "Mandoline Expressive", "Drum, Bell and Castanets", "Flute and Voix Celeste", "Sublime Harmonie Piccolo and Bell". The song was also edited for all types of organettes and was almost always to be found on one of the cylinders of an interchangeable box.

A most unique example in the Author's collection is its rendition on a later "Sublime Harmonie" box with drum and bell accompaniment. Here, a skillfully arranged cylinder and carefully tuned combs combine with six delicately voiced bells and a tastefully used drum to render a distinctly ornate, but nevertheless wholly pleasurable performance of "The Last Rose of Summer". The other five tunes on this box are equally successful, an achievement not usually identified with drum and bell boxes.

Readers can no doubt furnish many examples of "The Last Rose of Summer" from boxes in their own collections and happily we owe much credit to musical boxes for the strong role which they played in the perpetuation of this lovely song. Indeed, "The Last Rose of Summer" has survived for many a summer and promises to go on and on - and on!

## BIBLIOGRAPHY 1. Groves Dictionary of Kusic \& Musicians, New York, 1910

2. Kobb's Complete Opera Book, Putnam, London \& New York, 1963
3. International Cyclopaedia of Music and Museums, edited by Arthur Thompson

This article is the second in an occasional series in which Lieut. Col. Jackson Fritz sets out to examine the of ten fascinating stories behind a few of the more popular titles which appear on "The Tune Sheet". "The Last Rose of Sumner" appears, together with "Home Sweet Home", on a Nicole Freres 18-air two-tunes-per-turn box No. 41931, in the de Vere Green Collection (see below):

$\overline{S T O P S}_{\frac{A}{W}}^{\text {THE }}$THE WONDERFUL ORCHESTRAL ORGANETTE (BY ROYAL LETTERS PATENT.) Hundreds of Testimonials. A FOUR GUINEA ORGANETTE FOR ONLY 35s. W E are the sole Yroprietors in the United Kingdom for this New and Wonderful Instru. ment. Having for many years manufactured and sold enormous quantities of Automatic ment. Having formany years manor it has ever been our aim to produce at a low Price an Organette capable of a VARIETYOF Keed urgans, organettes, \&c.. it has ever been our aim to produce at a hatich having but a limited compass, and but one range of tone. While TONES, the Organetres sareffaction, we still have had as our motto, "Excelsior," and now can exclaim, "Eureka!" because, without incressing the price of the Orchestral Organette lourlatest production) over other instruments in the market, we have succepded in producing the very ACME OF MUSICAL IN VENTION, an in* strument with as much variety of tone as an organ costing, e25. The illustration gives you but a faint idea of general make and finish, but every Orchestral Organette is supplied with 28 FULY SIZED AMERICAN ORGAN REEDS, the same size and quality as those used in a cabinet organ. The reeds are placed in a novel manner (patented) over a double suction tellows, and are controlled by THREE STOPS, as follows, viz., Fiute, Expression, and Vox Humans. The muric is produced by per orated shepts, which pass around the Organette in endless pands, enabling a tune to be playec over and over again without stopning, furniching the GRANDEST ORCHESTRAL EFFECTS, either in sacred, secular, dance, or voca! music, afforoing a rich, sonorous, and powerful accompaniment to the voice, requiring ahsolutely no skill in the performer, and THE RANGE OF MUSIC AND TONE 18 PRACTICALLYUNLIMITED. Bythemanipu. lation of the stops, a tone as soft and sweet as a zephyr, or a loud, long and swelling melony may be produced; trills and high falsetto, as well as reverberating bass, and all manner of pleasing combinations at the will of the performer.
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> A MERE CEILD CAN PLAY IT. Any reader of this paper who forwards this Coupon before the date named herewith can receive ONE Orchestral Organ. ette at reduced price of 21158 . instruments being sold under various names. We are the SOLE PROPRIE. TORS OF THE ORCHESTRAL ORGANETTES (ne plus witra) and you must order direct from us or through our authorised agents. Remember, the orchestral Organette is NOT A TOY, but a LARGE and POWERFUL IN. TRUMENT, builtexactly on the principle of CHURCH ORGANS; they are made In the most substantial manner, lighty polished, and decorated in gold. The reeds are the productof machinery costing thousands of pounds, and are so powerful they procuce sufficient volume of music for the drawing-room, chapel, lodge, or ball-room. There is nothing about them to get out of orde-. They positively improve with age, producing richer and sweeter tones alter having been used a few years. For HOME ENTDRTAINMENTS THEY ARE UNSURPASSED. Bear in mind that eachinstrument has FOURTEEN MORE REEDS than any other Organette in the world, and they are ORGAN RESDS, and the special feature is THRE S STOPS, acharacteristic of no instrument except a costly organ. Our regular price for the Orchestral Organette is 24 4s. Having just put it before the public, we wil: sell a limited number to the readers of this Paper at \&1 15 a., provided the nbove Coupon is cut out and sent with order not later than the date given in it, and we furthermore agree to REFUND THE MONEY and PAY CARRIAGE to anyone not entirely satisfed after receiving it. By the aid of the Stops-viz, Expression, Flute, and Vox Humana, there is not a piece of mnsic which cannot be played with all thevarying effects of an orchestra; a false note Is an impossibility, and the most difficult operatic air ls played with as much ease as the most simple hymn. In many homps wili be found a Grand Piano or Organ, with not an inmate of the housphold, even the most expert player, who can interest company on either sowell as a child of three years old can on the ORCHESTRAL ORGANETTE. Rememb-r any tune can be played with artistic effect by anyone, young or old. Y much effect as that produced by a FIRST-CLASS FOUR-PIECE ORCHESTRA. Remember our regular price is i4 $46 .$, but as wo have found a well pleased customer our best advertising medium, have decided to sell a limited number, as an introduction to the readers of this paper at $£ 115 s$, provided the order is received pot Inter than the date printed in the Coupon immediately beneath the illustration of the Organette. We will give a selection of MUSIC FRES with each instrument. Send Money and Coupon by Registered Letter, Crossed Cheque, or Money Order to J. DRAPER, Manager, Britieh Organette Co, Blackburn. For 2s. extra the Organette will be sent to any part of the United Kingdom, Carriage paid, List of tunes and Testimouials sent anywhere free. Visitors can inspect the Factory daily from $9 \mathrm{a} . \mathrm{m}$. to 7 pm . Saturdays close at noon.
N.B.-Above time ia extended for Foreign Customers.
$£ 500$ CHALLENCE. We will give $\mathscr{C}_{500}$ to anyone who can prove that we ever solicited a testimonial, or that any in our Catalogue are not genuine. During Oct., Nov., and Dec . 1890, we received 500 testimnials for our Orchestrals. Surely this speaks for itself.

Nammlung Mangold owns a fine follection of mechanical musical instruments, ranging from mechanical organs with pipes, barrelo and crenk '́serinettes, barrel organs, flute-playing clocks) to the musical i causiu 3 of the 19th century in which the sound is produced by means of perrorated metal or card board discs and paper rolls. Two large fair-organs are included. of the twentytwo mechanical musical instruments in the Mangold collection, eighteen specimens are set out in a room of the local museum.

Here we must mention a few noteworthy examples. Besides the two

## MANGOLD COLLECTION

TRANSLATED BY L.G. LANGWILL organs already mentioned, they are chiefly 19th century barrel organs with wooden pipes, bellows, barrels and crank in different sizes. Among the smallest of this nature, the Serinettes (bird-organs), is one with a single register (rank of pipes or stop), another with three registers, termed in France "Serinette Pionne". This latter must date from the 18th century. Another organ, called the "Serinette Parisienne", is, however, the size of a normal barrel organ and has reeds instead of pipes. One of the finest pipe organs in the collection is probably the English barrel-organ which bears inside the case the manuscript name: "John Kleyser \& Co., 66, Heyte Street, London, 18...."* In addition to the British National Anthew, it plays fashionable dances and pieces from the early 19th century.

In the second half of the 19th century barrel organs were replaced by organs working on a different principle. Instead of pallets being actuated by a barrel, they were operated via a perforated metal or perforated cardboard disc (from 185?) and perforated cardboard or paper strip (from 1362). The pipes were replaced by free reeds like those of the Physharmonika (modern hamonium), of the barrel-organd of this type on show, one example must be mentioned, namely that termed "The Gem Roller Organ" of English or American manufacture.** It is a reed barrel organ and remarkable because outside the case is a small barrel which puts the keys in motion as may be seen on old hand accordions.

Another kind of mechanical musical instrument is the Musical Box (French $=$ Boites de Musique; German = Spieldose) viz., the Spielhur. It is particularly well represented in the exhibition. In this instrument, neither pipes nor free reeds are the sound-producer as in the barrel organ, but a comb with metal tongues tuned to a scale, which are plucked by pins on the barrel. The motion of the barrel is achieved by a crank (Spieldose $=$ German; Manivelle $=$ French), or by a spring (Ger$\operatorname{man}=$ Spieluhr; French $=$ Boite a Musique). These instruments are made in France, Markneukirchen and Switzerland. They are made in sizes from the small childss musical box to the large automatic music-cabinet in the guise of a piece of expensive furniture. The Swiss musical box is specially famous because of its precision mechaniam. Frequently, these boxes are decorated with moving figures - dancing and

* John Kleyser \& Co. were makers of English lever watches c. 1820 and had premises in High Holborn, London. It is probable that they merely sold the organ and were not manufacturers, notes Mr. Lyndesay Iangwill.
** These ware mede by the Autophone Co., Ithaca, N.Y., U.S.A. See page 184. (Editor)
musical dolls - which are set in motion by the mechanism.
At this point, we may mention that the Spielhur (spring-driven) musical box is not to be confused with the Flotenuhr (flute-playing clock). The sound producer in the Spieluhr is, as we have said, the plucked metal tongues; on the Flotenuhr it consists of pipes. The name Spieluhr arose because these musical instruments are provided with clockwork. In the exhibition there is inter alia a Spieluhr with the name "Fortissimo Piccolo" with five dolls dancing in time to the piece of music being played. Crank-driven and spring-driven musical boxes were a special favourite of people in the nineteenth century - they are still being made today.

The Flotenuhr, related to the barrel organ, is represented in the Mangold collection by two examples. Their most important components are again pipes, bellows and barrels. The driving force results from clockwork. In their heyday (c.17701860) which began with the workmanship of the Wehrle family* in Schwarzwald, they were produced as separate articles in all sizes but specially built into clocks and these all sounded the hours by striking mechanism. A charming type of Flotenuhr is the tiny musical box created with exceptional skill which reveals a singing and twittering bird in lifelike reproduction with moving head, beak and wings. Dancing and musical figures also occur in both Flotenuhr and Spieluhr. The former in the Mangold collection are, unfortunately, no longer intact. Whereas in one the organ still works although the clockface is missing, with the other one there is a very lovely clockface with two moving flute-players, but the organ is no longer in order.

In general, the musical items exhibited are in good condition, and, for the greater part, still playable. It is gratifying to hear from Herr Mangold that the exhibition, contrary to expectation, is very well attended.
J. Hiestand-Schnellman

The foregoing article appeared in GLAREANA, Nachrichten der Gesellschaft der Freunde alter Musikinstrumente, published in Zurich on 3lst December 1964 and we are indebted to Member L. G. Langwill for this translation.

* Baillie's "Watchmakers and Clockmakers of the World" lists 'Wehrle, John, Simonswald, 1768. Made musical clocks with glass bells'. Chapuis lists Johann Wehrle at Neukirch, Black Forest, as a maker of carillon clocks with glass bells and also as maker of the glass bell carillon in the Schwarzwald Tower. Member J. Barham has a Julien Wehrle flute clock bearing the address Furtwangen and c.1780. This is to be pictured in the next issue of THE MUSIC BOX. See also p. 291 and note for 'Johann Werle of Neukirch' please read 'Johann Wehrle of Neukirch'.
$* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *$
THE FACING PAGE depicts an original account tor the sale of a Fortuna musical box. This is one of those tantalising documents which turn up once in a while and this one was found recently by Member Graham Webb.

Obituary

## MRS. D. DUNHIAGE

It is with regret that we have to record the death of Mrs. D. Dunnage, Member No. 50. She passed away at her London home early in the Summer.


Reproduced on the facing page are illustrations of the Monopol disc-playing musical box. In both cases, the disc size is $7 \frac{1}{2}$ " diameter and the method of drive is via scoop-shaped indentations

## Monopol

 in the periphery of the disc. The upper picture is of a box in the collection of IIrs. Gilchrist of Cowes, Isle of Wight. This simple little box is wound from the inside and the interesting octagonal disc storage box, next to the instrument, indicates that the Ehrlichs - manufacturers of the Monopol - were thoughful enough to provide a box, complete with a lock, to match at least this size of instrument.The two pictures below show an extremely simple :lonopol which has no spring motor but which is played like a manivelle by turning the handle. This model recently passed through the hands of Member Graham Webb.


## NEXT SOCIETY MEETING

$\therefore \quad \therefore$ The Winter meeting of the Musical Box Society of Great Britain is to be held on Saturday, 12th November, 1966, at the Great Western Royal Hotel, Paddington, London, W.2. The hotel is conveniently situated right by Paddington main line railway station and is easily reached from anywhere in the London area by Underground or by omnibus. Ample car parking facilities are near at hand.

This meeting will be a one-day affair and a most interesting progranme of events has been planned. President Dr. Robert Burnett will be talking during the morning session on the points to look for and consider when assessing the quality of a musical box. This lecture will be illustrated by examples from his extensive collection.

During the afternoon session, there will be a tune identification panel and a question time when questions will be answered by a panel of experts - and questions fired at the Members! This will be organised by Member Bruce Angrave and Editor Arthur Ord-Hume. For the tune identification, Members are invited to bring nusical boxes along. Tape recordings will not be used this time.

A demonstration room will be available as well as ample facilities for the display of boxes. It is planned to organise a dinner in the evening if support is sufficient. Concession accommodation rates are offered by the Hotel to Hembers wishing to stay the night. Full details have already been circulated by the Secretary. All Members and Guests welcome.



34908 is a six-air Hicole Freres key-wind mandoline musical box having a corb $18 \frac{1}{2}{ }^{n}$ long with 198 teeth. The approximate date of the box $=1859$.

The story starts on 23rd May 1959, when I was returning from Cornvali. I stopped at an antique gallery in Ilchester where I had proFionsly heard of the oumer through veteran car circles. At the time he ouned seven vehicies and it was my intention to have a look at them. I knew that he had a coiliection of musical boxes of all types shapes and sizes and sc ses not surprised to see bits and pieces on various shelves in his garage. One long narrow box caught my eye and this was balanced diagonally on a pile of odis and ends on a top shelf. Oiviously it was one of his rejects and, knowing wy interest, he proceeded to get it dow. It was ny early days of collecting, and I had never seen a comb so long and fine and ay eye just continued to travel along its length. Its state was apalling. Apart from broken hinges, the veneer and lining on the lid was lifting and the beading around three sides was missing. The box was not much better. Its back panel was perforated with won and a whole section had crumbled away. The cylinder was pretty bald and countless

## The Sad Tale of 34908 <br> by Tony Sherriff

 tips were missing. However, it was Hy first Nicole box. For a small sum, I bought this and two otkers, both, strangely enough, Nicoles, and also in a terrible state of disrepair. One is now a handsome drum and bell crank wind box No. 40872, circa 1866. The drum skin is a thin sheet of brass, and the fact that the bells and drums are hidden is perhaps a little unusual as at this period I would suggest that these were nornally on show. The other example is one of $\mathbf{H i c o l e s}$ mass production. It has a coarse comb and a double spring barrel. Even now, I cannot decide if it is worth repairing.Returning to the story, I loaded my boot rith these three boxes and returned home. It was not long before I had sent the comb and cylinder of the mandoline box to Beud Freres, Switzerland. When doing this it is alvays best to forget the bor concenned as it is usually a year or more before it is returned, $I$ fisited Brud Freres recently when I was shown a hude pile of broken bores, all, I understood, owned by one American. I can now readily realise why they take so long! Eventually I received the comb and cylinder repaired to perfection. They replaced a large section

This fine organ box sppeared at the last Society meeting. Made by F. Conchon, Geneva, the tume sheet describes it as "Flute, Celestial
Voice", "Change of hir at Will, Indicator Dial, Regulator".
of the bass teeth completely and now it plays beautifully. Its programe (No. 1172) consists of six airs, all previously unknown to me. They are 1) Olga Waltzer No. 1 (Jullien); 2) Ah! Bel Destin No.1, Linda di Charnounig (Donizetti); 3) Theresia Waltzer No. $1 \& 2$, (Lenner); 4) Ah! Di Tue No. 25, Linda di Charnounig (Donizetti); 5) Il Picolo Schwitloro Marsch; 6) The Trumpet Polka No. 2 (Jullien).

I don't know how other collectors feel about this but, whilst most boxes are interesting and attractive, there is the odd one that crops up now and again that carries a greater depth of character. I cannot put into words the tone and quality of this particular box except to say that the music is very sad and so obviously from a far gone age which can never be re-captured other than through these early mechanical reproducers. Perhaps I am sensitive, but I find no difficulty in conjuring up the past when I listen to this musical box playing.

A small label inside the cabinet says that this box was supplied by a music shop in Surrey which dealt in 'Pianos, Phonos \& Music'. I think it oest not to reveal the name for reasons which will become apparent as you read on. From the start I thought of writing but it was not until 8th February 1963 that I wrote an enquiring letter to the address, not really expecting a reply. I put my return address on the envelope in case of non-delivery should the district have been rebuilt over the years, A week and more elapsed and then I received the unexpected reply! It was I presumed, from an elderly lady, probably the daughter of the original owner of the shop who naturally had the same name. She acknowledged my letter but knew nothing of this box. However, she did mention that musical boxes were stocked at one time. Her father opened the shop 80 years previously and died during the last war. Because this box is over 100 years old, I can only think that it passed through this shop as a second hand item unless her information on the age of the business is wrong. Anyway, I replied to this letter asking if she had any boxes or parts as I had no wish to miss anything that there might have been there. I had no reply and assumed the obvious. It was not until 20th May the same year that I received a small parcel which contained just two $5 \frac{3}{4} "$ Symphonion discs with centre drive and serrated edge. I believe that they are unusua] but the main contents of the letter was very touching. With no immediate mention of these discs she started: "It is a long time since I received your last letter, but so many unpleasant things have happened to me since then that I've had no heart for anything. I have a brother who is a widower and lives by himself. During this dreadful winter he fell ill. Between us we looked after him but my younger brother and my sister are married, didn't care for the job and nagged me to sell up and go and look after him permanently. I stood out against it for a long time but likeafool eventually gave in and have regretted it ever since. This is a very old
house, we do not know the actual date but it was standing in 1500. It is large and roomy but in a bad state of repair owing to the cost of labour but I was born here, and have been in the business all my life, and the thought of leaving it has just about broken my heart. The building is mine and I have sold it for quite a good price, but turning everything out and selling is terrible. I have also had a help in the house for over 20 years and, just as all this bother started, she had to go into hospital for an operation. I have no idea how I am going to clear this house. It is full of things that have accumulated in the course of many years. Some of the furniture was antique and I have sold but $I$ hate to see it go. I have got to live in a tiny house where I can take but very few things and in a district where nothing passes the door. I dare not think about it.... I seem to have written you a very boring letter all about my'troubles, please forgive me, but I am so utterly miserable and unhappy I can't see a bright light anywhere....."

She finished by saying she had a musical alarm clock if I was interested. Needless to say, it is not in the collection although not yet restored. I answered her letter and tried to console her as best I could. A later letter finished: "... I am in a dreadful mess here and no happier about my future. Having been in business all my life and now having to go into exile and nothing to look forward to for the rest of my life is a terrible thought. I shall be pleased to hear from you..."

Out of the blue, sent by this good lady, a carrier delivered a typical musical box with a 'sacred' programme, but in poor condition. There is no makers name but the comb is reasonably fine and plays 8 hymns. Because of the connections, I think I shall repair it. With this came a last letter, dated September 13th, 1963, which finishes.. "This is evidently my bad year - nothing will go right..."

This concludes the story concerming 34908 and it is strange to think that, after all these years, had I left my first letter any longer, I may never have had a reply.


OIN THE FOLLOWING EAGE is reproduced a Bremond tune sheet. Originally in blue on white card, the example shown depicts the central lyre which is a festure of Bremond tune sheets and appears in various forms. The tune sheet has been loaned by Mernber Gerry Planus. - .
Beginning on Page 333 is the listing of tunes for the Fortuns disc musi-cal boxes produced by zimmermann. The catalogue is the property of the Editor.

$\therefore$ LIST OF T TUNES

MUSICAL BOXES AND AUTOMATONS.


## Note.

For Instruments $N^{\text {os }} 211.220$.

- 215. 225. 
- 230. 
- 235. 
- 255. 
- 265. 270. 310. 
- 280. 330. 
- 340. 345. 350. 355. 
- 360. 365. 400. 430. 
- 370. 375. 435. 

Size B tunes are required.

- D
- F
- H
- K
- M
- 0
- $\mathbf{R}$
- T
- Z


## List of Music Tunes for Fortuna.



| 8 | D | F | H |  | M |  | $\mathbf{R}$ | T | $\boldsymbol{Z}$ | TIte. | Composer. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | No. | No. | No. | No. | No. | No. | No. | No. | No. |  |  |
| - | 2061 | 12081 | 3081 | - |  |  | - | - | - | Carlotia Weltz | Millocker |
| 1062 | 2068 | 12062 | 3082 | 7062 | 4062 | 11062 | 5062 | 6062 | 6062 | God amve the King, National Hymn |  |
| 1088 | 2068 | 12068 | 3068 | 7068 | 4068 | 11068 | 5068 | 8068 | 6068 | Swedish-Soug |  |
| 1070 | 2069 2070 | 12069 | 3069 3070 |  | 4070 | 11070 | 5070 | 8070 | 6070 | Deseaner March | G. Bizet |
|  | 2070 | 12070 | 3070 3073 | ${ }_{7073}^{7070}$ | 4070 4073 | 11070 11073 | 5070 5073 | 88078 | 6070 | Prayer from „, Freischütz" | Weber |
| 1074 | 2074 | 12074 | 3074 | 7074 | 4074 | 11074 | 5074 | 8074 | 6074 | Der Vogelhandler, Wie mein Abal | Zeller |
| 1075 | 2075 | 12075 | 3075 | 7075 | 4075 | 11076 | 5075 | 8075 | 6075 | Torgau March | Friedrich der Grosse |
| 1077 | 2077 | 12077 | 3077 | 7077 | 4077 | 11077 | 6077 | 8077 | 6077 | Firemans Gulop | Hertel |
| 1078 | 2078 | 12078 | 3078 |  |  |  |  |  |  | Edelweiss ${ }^{\text {Mill }}$ in the Black Foreat Idyll | Peuschel <br> Elenberg |
| 1080 | 2079 2080 | 12079 | 3079 2080 | 7080 | 4080 | $1 \overline{1080}$ | 5080 | 8080 | - | Mill in the Black Foreat Idyll 3 wiss Song | Eilenberg <br> Koschat |
| 1082 | 2082 | 12082 | 3089 |  |  |  |  |  |  | Dream Weltz | Alillocker |
|  | 2084 | 12084 | 3084 | 7084 | 4084 | 11084 | 5084 | 8084 | 6084 | Champagne Galop | Lumbyo |
| 1085 | 2085 | 12085 | 8085 | 7080 | 4085 | 11085 | 5085 | 6085 | - | Ooesacks ride, Gellop | Milliocker |
|  | 2088 | 12048 | 3088 |  |  |  |  |  |  | Schottische | Peglow |
| 1089 | 2089 | 12089 | 3089 | 7089 | 4089 | 11089 | 5089 | 8089 | 8068 | Carnival of Venise | N. Paganini |
| - | 2090 | 12090 | 2090 | 7090 | 4090 | 11090 | 5090 | 8090 |  | Song from, Der Trompeter von Sackingen" | Negsler <br> Waldteufel |
| 1094 | 2093 | 12094 | 3093 3094 | - | 4093 | - | 5093 |  | - | Skating Walz Bridal wreath gong from „Freigchaitz" | Welber |
| 1096 | 2096 | 12098 | 3096 |  |  | - | - | - | - | Mndem Angot Polka | L, ecocq |
| 1097 | 2097 | 12097 | - | - | - | - |  | - | $\square$ | Tyrolere eong from William Tell | Roseini |
| 1099 | 2099 | 12099 | 3099 | 7089 | 4089 | 11099 | 5099 | 8099 | 15199 | Mikado Waltz | Suljivan |
| 1101 | 2101 | 12101 | 3101 |  |  |  | - |  |  | Parisienne-Life Schottische | Offenlach |
| 1108 | 2106 | 12106 | 3106 | 7106 | 4106 | 11106 | 5106 | 8106 | 6106 | Blae Danube, Waltz | Joh. Strauss |
| 1107 | 2107 | 12107 | $3: 07$ | 7107 | 4107 | 11107 | 5107 | 8107 | 6107 | Christmas-Song |  |
| 1110 | 2108 2110 | 12108 | 310 g 3110 | 7110 | 4110 | 1110 | 5110 | 8110 | 6110 | I am not lonely, Aric from Preciosn Invitation to the Walta | Weber |
|  |  | 12111 | 3111 |  |  |  |  |  |  | Austrian Waltz | Millocker |
| 1112 | 2118 | 12112 | 3112 | 7112 | 4112 | 11112 | 5112 | 81.2 | - | Morgenblutter, Waltz | Joh, Stranes |
| 1118 | 2113 | 12113 | 3113 | 7113 | 4113 | 11118 | 5113 | 8159 | 6118 | Duett from Trovators | Verdi |
| 1114 | 2114 | 12114 | 8114 | - | - | - | - | - | - | Song from „, Czar u. Zimmermann" | Lortzing |
|  | 2122 | 12122 | 3128 |  |  | $\checkmark$ |  |  |  | Besutifol times, Song |  |
| - |  | 12124 |  | 7124 | 4124 | 11124 | 5124 | 8124 |  | Cloches de Corneville, Waltz. | Friedrich II. |
| 1130 | 2127 2130 | 12127 12130 | 3127 3130 | 7127 | 4127 | 11127 | 5127 | 8127 | 6127 | Hohenfriedberger March Don Cesar March | Friedrich II. <br> Dellinger |
| 1191 | 2131 | 12131 | 3131 | 7131 | 4131 | 11131 | 6131 | 8131 | 6131 | La Paloma, Mexican Song | Yradier |
|  | 2133 | 12133 | 3133 | 7133 | 4133 | 11133 |  | 8133 |  | Chorus from William Teil | Rossidi |
| 1134 |  | 12134 | 3134 |  | 4134 |  | 5134 | 8134 | 6134 | Die Puppenfee, Waltz | Bayer <br> Kosehat |
| -- | 2135 | 12135 | 3135 | 7135 | 4135 | 11135 | 5135 | 8135 | -5136 | At the Worthis Sea Waltz | Kosehst <br> Koseini |
| 1137 | 2137 | 12137 | 3137 | 7186 | 4136 | 11136 | 5136 | 8136 | 6136 | Tell Melodie for riate and Oboe Country-fuir Waltz | $\underset{*}{\text { Kozini }}$ |
| 1138 | 4138 | 12138 | 3138 | 7138 | 4138 | 11138 | 5138 | 8138 |  | Pariser Einzugs-March | ** |
|  | 214: | 12142 | 3142 |  |  |  |  |  |  | March frum „Der lustige Krieg" | Strauss |
| 1143 | 2143 | 121.43 | 3143 | 7143 | 4133 | 11143 | 5143 | 8143 | 6143 | The Rec- Ilouse Mareh | Sihacider |
|  |  | 12147 | 3147 | 7147 | 4147 |  | 5147 | 8147 | 6147 | Interaezzo fion Cas incris liosticans | Nascagn: Milibuer |
| 1151 | 2151 | 12151 | 3151 | - | -7 |  | 517 | 8157 |  | Gasparone, Marcil | Eilicabserg |
| 1157 1160 | 2157 2160 | 12157 $12161)$ | 3157 3160 | 7157 7160 |  | 11157 11160 | 5157 5160 | 8107 8160 | 6157 6160 | Kussian Gubrùs March <br> Wenn die Jlatter leise rauschen, Waltz Song | Enlenberg Lincke |
| 1161 | 2161 | 12161 121 | 3160 3161 | 7160 7161 | 4161 | 11160 | ${ }_{5} 5161$ | 8160 8161 | ${ }_{6} 6161$ | My Girl Song | Baker |
| 1183 | 2163 | 12163 | 3163 | 7163 | 4163 | 11163 | 5163 | 8163 | 6163 | Rhoda and her l'agoda | Joras |
| 1164 | 2164 | 12164 | 3164 | 7164 | 4164 | 11164 | 5164 | 8164 | 6164 | The Queen of the Philippine Islands | Rubene |



| B | D | 9 | 7 | 5 | TI | 0 | B | T | 7 | TItIe. | I | Compeetr. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | No. | No. | No. | $\begin{gathered} \text { No. } \\ 7265 \end{gathered}$ | No. <br> 4203 | No. 11:65 | No. <br> 5265 | No. <br> 8965 | No. | The belle of New-York. Selection | [ | G. Kerker |
| 1266 | 2266 | 12266 | 3266 | 7266 | 4269 | 11000 | 5266 | 8986 | 6248 | A eimple little otring, The circus Girl |  | Caryll |
| 1267 | 2267 | 12267 | 2267 | 7257 | 4:237 | 11249 | 5267 | 8267 | 62017 | Queen of the Earth |  | Pinguti |
| 1288 | 2968 | 12268 | 3268 | 7268 | 4268 | 1190t | 6263 | $8: 68$ | 6-118 | Let 'em all come |  | Honnor |
| 1270 | (27) | 12.270 | 3270 | 7270 | 4270 | 11 127 | 5270 | 8270 | 4. 21. | Rageian National Hyma | , | 1.woft |
| 1273 | 2273 | 12273 | 3873 | 7273 | 4278 | 118 \% | 5273 | 8273 | 0.788 | Has de quatre | $1 \times$ | Lutz |
| 1276 | ¢1276 | 12276 | 3276 | 7276 | 4278 | 11473 | 5276 | 8276 | - | Life for the Czar, Mazurks | . | Clinka |
| 1280 | $\underline{4280}$ | 12: 20 | 3280 | 7280 | $42^{46}$ | 112. ${ }^{1}$ | 5280 | 8:80 | - | Waltz from "Eugen Onegina | 1 | Techaikowsky |
| 1284 | 22] 64 | 12:894 | 3284 | 7284 | $4{ }^{4} 8$ | 11:34 | 5384 | 8.284 | - | Mry Waltz "Ogen Oagi | 1. | Aletter |
| -- | 2:268 | - | - | 7288 | 4860 | $11 \pm 188$ | 5988 | 8288 | - | Jesus lover of my soul |  | Streatfield |
|  | $\rightarrow$ | - | - | - | 4289 |  | 5289 | 8289 | - | The March of the Men of Herlech | 1. | ${ }^{*}$ |
| $\cdots$ | $2: 90$ | - | - | 38 y | $44^{49}$ | 11930 | 5290 | 8290 | - | Ever of Thee, Song |  | Hail |
| $\llcorner$ | - | - | - | - | 4991 | - | 5991 | 6:91 | - | From Greenland's Jcy Muuntains |  | Mason |
| , | - | 12 |  |  | 4392 | ■ | 5292 | 829 | - | The village Blackemith |  | Weiss |
| 1298 | - | 12298 | -- | - | 4498 | - | 5293 | 8293 | - | Rule Britannia |  | Dr. Arne |
| - | - | - | - | 二 | 4294 | - | 5494 | 8.294 | $\cdots$ | Aogels over bright and fair, Sacred Song |  | Hendel |
|  |  |  | 3309 | 7309 | 4309 | 11309 | 5302 | 8302 | - | Little Dolly Daydream |  | Leslie Stuart |
| 1308 | 2309 | 12309 | 33309 | 7309 7314 | 4309 | 11309 | 5309 | 8309 | 631 | Lost Happiness, Sung |  | Sprowncker |
| 1340 | 2340 | 12840 | 3340 | 7340 | 4340 | 11340 | 5340 | 8310 | $63+10$ | Grace et Coquetterie (Pas de qualre) |  | Cross |
| 1341 | 2341 | 12341 | 3341 | 7341 | 4341 | 11341 | 5341 | 8341 | 6311 | "Mignon" Graceful Dance |  | Murley |
| 1309 | ¢30.9 | 12359 | 33559 | 78;9 | 4859 | 11359 | 53.39 | 83.9 | 68:9 | "Coquetterie" Pas de quatre |  | I.aladie |
| 1360 | 2860 | 123601 | 3396) | 7360 | 4300 | 11380 | 5360 | $8: 300$ | 6,160 | Absent-Minded Heggar |  | Arthur Sullivan |
| 1361 | 2351 | 12361 | 3361 | 7301 | 4301 | 11361 | 53361 | 8.351 | fincl | Ora pro Nobis |  | M. Piccolomini |
| 1362 | $\geq 36$ | 12315 | 3:39-2 | 730, | 4:392 | 11302 | 5)342 | $8: 302$ | 6.502 | The better Land |  | Frederic H. Cowen |
| 1363 | -363 | 12:313 | 3363 | 7:3138 | 4363 | 11363 | ¢) 563 | 436:3 | 10363 | When the Heart is young |  | Dudley Suck |
| 1364 | -394 | 123i4 | 13:544 | 713134 | 43364 | 11:364 | 5364 | 8364 | 6334 | Off to Philedelphia |  | Battison Haynes |
| 1365 | 2345 | I3343\% | 3365 |  | 1364) | 11303 | Fi3\%) | 8865 | (136) | Rillurney |  | II. W. Balfe |
| 1366 | -3419 | 123613 | :3865 | 73134 | 43366 | 11345 | 533645 | 83514 | Casbis | Kathleen Mavourneen | \\| | F. Nicholls Crouch |
| 1367 | 2367 | 12347 | 33367 | 73.3157 | 4897 | 11363 | 5367 | $83(7)$ | 63367 | Over the Hills (Shop Girl) |  | Jvan Caryll |
| 1368 | 23318 | 12348 | 33868 | 73368 | 4:308 | 11310is | ¢,368 | 8368 | 93368 | Come back to Erin |  | Claribell |
| 1369 | 23169 | 12369 | 3369 | 7369 | 43369 | 11369 | 5369 | 836y | 053159 | Private Tommy Atkins |  | S. Potter |
| 1350 | 9371 | 12370 | 33370 | 7370 | . 8370 | 11370 | 5837 | 8370 | 18370 | Jack's the Boy (Geisha) |  | Sidney Juncs |
| 1371 | 2371 | 12:371 | 3371 | 7371 | 4371 | 11:771 | 0371 | 8371 | 933? | Old Brigade |  | Odonrdo Barri |
| 137. | 937: | 1937: | 33372 | 737.9 | 4372 | 1197: | 6379 | 837 | 1337-2 | Children's Home |  | Frederic H. Cowen |
| 1373 | 4373 | 12373 | 33378 | 7373 | 4373 | 11373 | 5378 | $8 \% 73$ | 6373 | Love's old sweet Song |  | J. L. Molloy |
| 1374 | 2:374 | $12: 374$ | 33374 | 7874 | 4374 | 11874 | -374 | 8374 | 9374 | Darby end Joan |  | J. L. Molloy |
| 1375 | 9375 | 1-37.5 | 3375 | 7375 | 4375 | 11375 | 61035 | $83 \%$ | 19375 | Say "An revoir." |  | Harry Kennedy |
| 1376 | 23: ${ }^{2}$ | 19375 | ${ }^{337} 9$ | 7376 7377 | 4376 | 11:76 | $\bigcirc 378$ | 8376 | 6:375 | Tom Bowling | , | Dibsdin. |
| 1377 1378 | 2377 6374 | 12:77 | 1337 3878 | 7377 7378 | 4377 4338 | 11:877 | -877 | 8377 | (:\%77 | Promise of Life |  | Frederic H, Cowen |
| 1378 1379 | $237 \%$ 9379 | $12: 75$ $12: 789$ | 3378 3379 | 7378 7379 | 4338 43 48 | 11378 | .378 <br> $\cdots 3$ <br> 3 | $8: 78$ | 0378 | By the Fountsin | 1 | Stephen Adams |
| 1379 | 2379 | J2:179 | 33379 | 7379 | 4379 | J1379 | 23.9 | $8: 79$ | 19379 | Queen of my heart from "Dorothey" | ; | ( 6 ¢lit |
| 1380 | 23811 | 12:381 | 3380 | 7389 | 4:380 | $11: 380$ | MS | 80861 | 6-s, | Esmeralda | 1 | W. C. Levey |
| 1381 | 2ak1 | 12:31 | $3: 381$ | 7381 | $4: 381$ | 11388. | 2081 | 8:31 | 0351 | Toreador song from Carmen |  | lizet |
| 138: | 2383 | 1238\% | 338: | 738: | 4388 | $1138 \pm$ | 235\% | $83 \%$ | 0382 | Soldiers in the Parl | 1 | Monckton |
| 1383 | $2: 383$ | 12:38: | 31383 3324 | 7383 | 4383 | 11883 | -38\% | 838:5 | 12833 | God bless the Prince of Wales | 1 | Brinley Richards |
| 1384 | 2384 | 12384 12385 | 33384 | 7384 | 43884 | 11384 | -384 | O354 | \%384 | O weel may the Keel Row |  | JIemery |
| 1385 | 23505 | 12385 | 3:335 | 738.7 | $438:$ | 11.38 | 2038 | $8: 385$ | ( 238.5 | 'The auld House |  | Noirne |
| 1386 | 2488 | 12396 | :36815 | 7384 | $4: 386$ | 11388 | -2386 | SR1; | 1338ic | Bonnie Dundee |  | Hemery |
| 1387 | 23887 | $1 \geq 187$ | 13367 | 7387 | 4\#387 | 113887 | 51.387 | 8:387 | 1:397 | Auld Robin Giray |  | Licder |
| 1388 | 2383 | 12388 | 33388 | 71388 | 4:88 | 11388 | 2388 | $8: 888$ | 13348 | Robin Adair |  | do. |
| 1889 | 9889 | $1 \underline{389}$ | 33389 | 7384 | 4359 | 12389 | -4889 | 5388 | ti389 | Annie Laurie |  | do. |






| $B$ | D | F | F | K | M | 0 | R | 1 | 7 | Tilio． |  | Codpeotr． |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No． | No． | No． | No． | No． | No． | No． | No． | No． | No． |  |  |  |
| 1378 | $\stackrel{278}{ }$ | 12378 | 3378 | 7378 | 4378 | 11378 | 5378 | 8378 | 6378 | By the Fountain |  | St，Adams |
| 1379 | $\stackrel{3}{3} 9$ | 1：379 | 33374 | 7379 | 4379 | 11379 | ¢ 079 | 8579 | 6379 | Queen of my heart from Dorothey |  | Gellier |
| 1381？ | －3＜1） | 19380 | 33980 | 7380 | 4380 | 11380 | 5380 | 88861 | 6380 | Esmeralda |  | W．C．Levey |
| 1382 | 235 | 1238： | 33882 | 7362 | 4380 | $11 \% 82$ | 5882 | 8085 | 6383 | Soldiers in the Park |  | Mouckton |
| 1384 | 235 | 1－381 | 3884 | 7384 | 4384 | 11384 | 538． | 8384 | 6384 | $O$ weel may the Keel Row |  | JIemery |
| 1285 | －3 | 1 $236{ }^{\circ}$ | 3385 | 7385 | 438. | $1138{ }^{\circ}$ | 538 | 6385 | 6385 | The auld Houts |  | Neirne |
| 13366 | ${ }^{4} 356$ | 1：386 | 3386 | 7386 | 4386 | 11386 | ．3386 | Eate | 6386 | Sonvie Dundee |  | IIemery |
| 13837 | 2387 | 12：387 | 3887 | 7：387 | 1387 | 11387 | 5387 | 9387 | 6388 | Auld Robin Gray |  | Loder |
| 188\％ | 9338 | 123888 | 6388 | 7388 | 1388 | 11：388 | ¢388 | GSEB | 63388 | Robin Adair |  | do． |
| 1389 | 3889 | 12389 | 3389 | 7389 | 4389 | 11389 | 5839 | 6889 | 6389 | Annie Laurie |  | du． |
| 1391 | 9390 | 1：390 | 3360 | 7390 | 4396 | 11390 | 6390 | 8390 | （i390 | Mary，Kind and gentle is she |  | Hicbardsua |
| 1391 | 249？ | 1：39］ | 3301 | 7391 | 4391 | 11349 | 6391 | 6841 | 6891 | Auld Laog Syne | 1 | Hernery |
| 1392 |  | 12092 | 3302 | 7392 | 434．9 | 11392 | 539： | 849\％ | 6392 | Caller Herrin |  | loder |
| 1：35 | 23423 | ］－：93 | 3393 | 739： | 4393 | 11893 | 51393 | 83895 | 6393 | The Campbells are comning |  | do． |
| 1344 | 3：494 | 12894 | 3394 | 7397 | 4394 | 11391 | ． 391 | 8814 | 6394 | Charlie is my darling |  | do． |
| 1848 1346 | ㄹ．35； | 12393 | 539： | 789. | 439 | 11697 | 5，34， | \＆：10， | 6395 | Cook of the North | 1 |  |
| 1346 1397 | －364 | $1-346$ 1.347 | 3396 | 7396 | 4396 4347 | 11396 | 5396 | E396 | 6：396 | Within a mile of Edinboro Town |  | Sterling |
| 1397 139 | －397 | 12347 | 3397 | 7897 | 4397 | 11397 | ［1：37 |  | 6397 | Ye Janks \＆Braes |  | Loder． |
| 1395 | －398 | 1：498 | 3398 | 7398 | ＋398 | 11：398 | 2395 | Bbis | 6395 | Scots wha hae |  | ＊ |
| 1：999 | 2399 | 12：399 | 3398 | 7399 | 43991 | 11399 | 2399 | 839 | 6309 | The Gay Tom Tit |  | Joncs |
| I f 111 | $\cdots{ }^{-2}$ | 1 2100 |  | 7400 | $4!(1)$ | 17 H 1： | i． 110 | Eater | 6400 | Jobn Anderson my Jo |  | Loder |
| 1401 | － 2010 | 1.201 | 3401 | 710］ | $4+i{ }^{4}$ | 11111 | \jot | $\mathrm{Br}^{\text {［1］}}$ | 6471 | Lily of Laguna |  | Lealie Stuart |
| $1+62$ | 216 | 1．2102 | 340.9 | 7 ct | 4402 | 1140.1 | 54in2 | 84 | 6492 | Linger，Longer Loo |  | Siduey Joues |
| 1.500 | 2163 | 12108 | 3403 | 74173 | $4+93$ | 1：1913 | 54183 | $8+6.3$ | 6419 | The Chinee Dolly | I | Carr |
| 1.101 | 2104 | $1 \pm 101$ | 3 3 （1） 1 | 7 701 | 4104 | $11+61$ | 5410 | E．f．+ | 64191 | Old Folke at home |  | ＊ |
| 1005 14000 | 2105 -2108 | 12409 12406 | i 3401 $3+01$ | 74n5 | 4105 | 1140.1 11406 | 5 | 84.6 | 6105 | Bay of Biscay |  | J．Davy |
| 1460 1407 | $\underline{2408}$ | 12106 | $3+69$ | 7406 | 1） 106 | $11+06$ | 5406 | 8166 | 6106 | Song that reached my heart |  | Julian Jordan |
| 1407 $1+10$ | 2407 $\underline{2411)}$ | 12417 $19+10$ | $3+407$ $8+10$ | 7.107 7410 | $4+17$ $4+10$ | 11.107 11410 | 5107 | 8407 8.110 | 6407 6410 | I dreamt that 1 dwelt in Marble Hall | ＇ | M．W．Balfe |
| 141i | $2+15$ |  | － $3+13$ | 7413 | 4413 4413 | 11413 | － 5413 | $8+10$ $8+13$ | 6413 6413 | Take Hear | 1 | Kraiduer |
| 1414 | $-2414$ | $13+14$ | 3114 | 7414 | 4414 | $11+14$ | 2．414 | 8414 | 6411 | Sir Roger de Coverley |  | Newton |
| $1{ }^{124}$ | $\cdots 120$ | 12.120 | 3420 | 7420 | 4420 | 11120 | 5420 | 8439 | 6－1：0 | The Minstrel Boy |  | Stevenson |
| 1121 | 24.1 | 12121 | 84． 1 | 74.21 | 4421 | 11481 | 54， 1 | 84 \％1 | 6121 | Oft in the stilly night |  | do． |
| 1.423 | 2123 | 13423 | 3423 | 7423 | 4423 | $11+23$ | 5423 | 8423 | 6423 | ＇The Girl 1 left behind me |  |  |
| $14 \geq 4$ | $\cdots 4.4$ | 124.4 | $34 \geqslant 4$ | 7124 | 1124 | 11484 | idy 24 | 8424 | 64.24 | The heart bowed down |  | M．W，Malfe |
| J434 | 243． | 1.2 $1 \cdot+34$ 1.9 | $3+34$ 314 | $7+31$ | 4434 | 134！44 | i43 1 | 8434 | 64：14 | Funiculi Funicula |  | Denza |
| 14.4 | $\cdots 49$ | $1 \cdot 2449$ | 3449 | 7449 | 4449 | 11.49 | 5449 | 3449 | 8449 | 1 can＇t think ob nuthin elee but you |  | H．Dacre |
| 14.1 | －24．1 | 12451 $1.9+61$ | 34.51 3.461 | 7461 | 4451 | $11+61$ | 0491 |  | 8451 | Whisper and I ehall hear |  | M．Piceolomini |
| $1+61$ $1+62$ | 2461 | $12+61$ | 3.161 | 7461 | 4461 | 11461 | 5461 | 8461 | 6461 | I want yer，ma Honey |  | Templeton |
| 176. 116.7 | －3482 | J $19462{ }^{6}$ | 3462 3465 | 7462 | 4469 4465 | 11462 | 5462 | 846 | 6462 | Lousiana，Lou |  | Lealie Sturt |
| 116.3 1167 | －16 | 19469 | －3465 | 7465 | 4465 | 11463 | 5465 | 8465 | 6465 | The Anchors weigbed |  | Brabam |
| 1159 | －-469 | 1－169 | 8469 | 746 | 4469 | $11+69$ 11188 | 54169 | 8467 8.959 | 6．454 | ＂Alice where art thou＊ | ， | J．Ascher |
| 1178 | $\underline{2178}$ | $1 \because 174$ | 33178 | 7478 | 448 | 11178 | 5178 | 8178 | 6478 | Song of the $\lambda$［otherland San Toy |  | Mouckton |
| 1479 | $\bigcirc 179$ | 12179 | 3179 | 7479 | 4479 | 11179 | 5479 | $8+79$ | 6479 | Chine Soge Man San Toy |  | do． |
| 14301 | －181 | 12180 | 3480 | $7+80$ | 44811 | 11180 | 5480 | $848 i$ | 6480 | Land of my home |  | Florodore Stuart |
| $14 \times 1$ | $\pm 131$ | 12181 | 3． F ¢ 1 | 7481 | 4481 | 11181 | 6481 | 8181 | 6481 | When J leave town | ${ }^{1}$ | do． |
| 1490 | 21911 | $1 \because 1!41$ |  | $74 \pm 91$ | 4.1901 | 11490 | 5490 | 8.5917 | 6490 | Dandy Dau（The Life guardeman） |  | Slaughter |
| 1011 1515 151 | 号11 | 12\％11 | 33.11 | 7511 | dis 11 | 15.11 | － | 8511 | fibl 1 | An Meer，Song | 1 | Schubert |
| 1615 | 2013 | 12513 | 35．13 | 7513 | 1513 | 11 lar | － | 8513 | 651：5 | Itargo | 1 | Handel |
| 1.15 | 2．214 | J Sial | 35.15 | 7514 | 1514 | 11：1 $\downarrow$ | － | 8514 | 6514 | Gate Nacht du mein herziges Kind，Lied | 1 | Alt |
| 1515 | 2515 | 1201\％ | 3 B | 7515 | 4可号 | Jibla | － | 851： | 6\％${ }^{\text {ab }}$ | Ich wollt＇meirns lhieh＇ergơsse sich，Lied |  | Mondelesohn |

-12 -

| B | D | $F$ | E | K | M | 0 | R | T | 2 | TItIe. | Ceapeser. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | Gomic. |  |
| - | - | - | - | - | - | - | 5198 | - | - | Oh! Sir, you'll have to marry me now |  |
| - | - | - | - | - | - | - | 5197 | - | - | There are momenta when one wants to be alone |  |
| 1201 | 8201 | 12201 | 3801 | 7201 | 4901 | 11201 | 5199 | 8201 | 6201 | Now we shan't be long The Briton's Jubilee |  |
| 1201 | 8201 | 12201 | - | - | 4801 | 120 | 5204 | 8201 | 6201 | For one night only | * |
| - | - | - | - | - | - | - | 6203 | - | - | When I'm knighted as Sir Tom | - |
| 1204 | 2404 | 12204 | 3904 | 7204 | 4204 | 11204 | b204 | 8204 | 6804 | I sin't a going to tell | ${ }^{*}$ |
| 1217 | 2217 | 12217 | 3217 | 7817 | 4204 | 11217 | 5217 | 8217 | 0 | Ting-a-ling-a-ling. | Dacre |
|  |  |  | - | - | - | 11 | 6221 | - | 6.55 | She was one of the esrly birds |  |
| 1255 | 2955 | 12255 | 3255 | 7255 | 4855 | 11255 | 5255 | 8255 | 6255 | Our lodger's euch a nice young Man | Marray Barcelly |
| 1256 | 2256 | 12256 | 3256 | 7256 | 4856 | 11256 | 5256 | 8256 | 6856 | Staring me in the face | Marray \& Leish |
| 1257 | 2257 | 12257 | 3257 | 7257 | 4207 | 11257 | b857 | 8257 | 6257 | The Penny-Whistler | Fox |
| 1258 | 2258 | 12258 | 8258 | 7258 | 4258 | 11258 | 5258 | 8258 | 6258 | I'm off to Klondyke | Freeman |
| 1259 | 2259 | 12259 | 8259 | 7209 | 4859 | 11259 | 5259 | 8259 | 6259 | Why did I leave my little Back-Room | Stuert |
| 1260 | 2260 | 12260 | 8260 | 7260 | 4260 | 11260 | 5260 | 8260 | 6260 | The little Mad'moiselle | Stuart <br> Connor |
| 1268 | 9268 | 12268 | 8268 | 7268 | 4268 | 11888 | $\delta 268$ | 8268 | 6268 | Let 'em sll come | Connor |
|  |  |  |  |  |  |  |  |  |  | Pieces from Operas and Operettas. |  |
| 1015 | 2015 | 13015 | 9015 | 7015 | 4015 | 11015 | 5015 | 8015 | - | Boccaccio March | v. Suppé |
| 1015 | 2028 | 18092 | 8022 | 7022 | 4042 | 11022 | 5022 | 8022 | 6022 | Prsyer frora "William Tell ${ }^{\text {a }}$ | Rossini |
| 1027 | 2087 | 12097 | 8027 | - | 4027 | - | 5027 | 8027 | 6027 | Wedding Song from „Lohengrin" | R. Wagner |
| 1029 | 2029 | 12029 | 3029 | 7029 | 4029 | 11029 | 5029 | $80 £ 9$ | 6029 | Faust Waltz | Gounod |
| - | 8033 | 12033 | 3033 | 7083 | 4033 | 11033 | 5033 | 8033 | 6033 | Quintett from Marths | Flotow Wagner |
| - | 2050 | 12059 | 3050 | 7050 | 4050 | 11050 | 5050 | 80 0 | 6050 | March from Tannhanser | Flotow |
| - | - | 12060 | 3060 8073 | $7 \overline{7073}$ | $4 \overline{073}$ | 11073 | $5 \overline{073}$ | 8073 | - |  | Weber |
| - | 2090 | 12090 | 8090 | 7090 | 4090 | 11090 | 5090 | 8093 | - | Song from "Der Trompeter von Sackingen ${ }^{*}$ | Nessler |
| 1094 | 8094 | 12094 | 3094 | - | - | - | - | - | - | Bridsl wreath Song from „Freiscbuitz" | Weber |
| 1097 | 2097 | 12097 | -- | - | - | - | - | - | - | Tyrolese Song from "William Tell" | Rossini |
| - | 2108 | 12108 | 3108 | - | - | - | - | - | - | I am not lonely, Arie from "Precinsa" | Veber |
| 1118 | 2113 | 12113 | 8113 | 7113 | 4113 | 11113 | 5118 | 8113 | 6113 | Duett from , Trovatore" | Verdi |
| 1114 | 2114 | 12114 | 3114 | 7114 | - 1138 | 11133 | - | 8123 | - | Song from "Czar and 'Yimmermann | Lortzing <br> Roscini |
| - | 2183 | 12133 | 3133 | 7133 | 4133 | 11133 | 5136 | 8133 8136 | 6136 | Uhorus from "William 'leil" | Rossini |
| - | $\stackrel{\rightharpoonup}{148}$ | - | - | 7136 | 4136 | 11136 | 5136 | 8136 | 6136 | Tell Melodie for Flute \& Oboe | Rossini <br> Strauss |
| - | 2142 | 18142 | 3142 3147 | $7 \overline{714}$ | $4 \overrightarrow{147}$ | - | $5 \stackrel{-}{5147}$ | 8147 | $6 \overline{147}$ | March from "Der lustige Krieg" | Strauss Mascagni |
| $1 \overline{170}$ | 2170 | 18147 12170 | 3147 3170 | 7147 7170 | 4147 4170 | 11170 | 5147 5170 | 8147 8170 | 6147 6170 | Intermezzo from "Cavalleria Rasticans" Overtare Zampa | Mascagni |
| 1170 | 2170 | 12170 | - | - 170 | - | - | 5185 | 8185 | 6185 | Tunnhảuser | Wagner |
| 1218 | 2918 | 12218 | 3218 | 7218 | 4218 | 11218 | 5218 | 8218 | 6218 | Geisha selection | Joner |
| 1258 | 2253 | 12233 | 3253 | 7853 | 4253 | 11258 | 5253 | 8253 | 6253 | Chin Chin Chinsman, from nGeishs* | do. |






The articie on STHEET MUSIC on p. 284 prompted Member M.J. Foster to send the following extract rom NEw scientist 4 November 1955. Note the 'cart-before-the-horse' historical note in paragraph 4.

## LAST WORD ON BABBAGE AND BARREL-ORGANS

Anlong the encomiurns to the Genele Consputer on other pages, appropriate homaze hes already beea paid to the memory of the mavil whe started it all-Charles Raibhage, mathematical visionary, inventor extraordinary, genius cantankerous, qud the organ-grinder's Fublic Enemy Nc. L. Luke Carlyte, his concentration was extremely sensitive to distracting sounds, and he costtended that a qearter of his life 's workingpower was anstrined by the audible cuisance of orpan-pribders and street musicians perforenmg ontside his house at No. I Dortpl Street, London W.1.

He tonk up peritions against them, complained to his MP. vaigered the police to arrest them, and once pursued a fleetfooted hurdy-gurdy man for a mile across London hetore finding a constable willing to run him in. "He spoke," a friend reported shortiy before Babhage's death, "as if he hated mankind in general, Englishmen in particular, and the English government and organ-grinders the most."

The majnrity of mankind, of course, find Englishmen olmonious, and it is only nacural for any red-blooded tax-payer to detest his government. But the simgluy auk of organ-grinders for ultimate athorrene is a cerethet of surfassing whimaicality. And, in Charles Bahkage. it represented a most uypratessional misdie ection of spleen. His destiny was widoubtediy wielding the lard-Wloddet when it centrived the ironic spectacle of the grear prophet of theuretical autonation chasing from his own doorssep tive operators cf one of the few cxisting, practical applications of autoration.

The bartel-orgar, foming down from the music-box and first used in churches in the early eighteenth century, was one of the earliest examples of a programmed maviune. From pores applied to a single shaft, it enotrolled reciprocating bellows, selected the pipe to be played, and blew air through it at the appropriate point in tume. The programme was stored, as in today's computers, en a drum, not yet magnetic but made of wood and set with pins of varying lengths which, as the
drum turted, actuated the pipe walyes. hagenionsly packaged in portable farmi. and geseratly opprated hy an Itatian, the harrel-organ developed inso the burdygurdy of Babbage-bater.
izs programme-storing drum weuld nem to be a forerunner of the pin whed mechanism of tordar, the device by nthich comact pinitare raised as required on the vater circumfereace of a time-controlled wheel. and which serves as the basic mesnery-unit in many types of conveying, sortine and seiectime machines. Fartly bectute he sliemated his politieal patrons, partly becuuse he upset his engeneer, and perhaps becsust ${ }^{\prime} \mathrm{e}$ spent so much time chasing brgan-grinders nut of Dorset Street, Charles Babbage never finished either his diflereace engine or his analytical machine. He seemed ta have relied in his nechanisms mainly on the continuous meshing of cogs. Who krows, had he softened his heart to a hurdy-gurdy man. ariked him in for a drink and token a look inside his batpd ine-ligged box, he migh have spotted the principle of the embryo pin-wheel and finished both his projects?

## P "PÜT ANOMER WICKEL IN - An Illustrated History of Coin-Operated

 Book Review Pianos and Orchestrions" by Q. David Bowers, Vestal Press, Vestal, used to sing a dirge during, I think, the late forties called "Put Another lickel In". For the record, the next lines went: "In the Nickelodeon. All I want is loving you and music, music, music". Without delving into the moral turpitude of this requirement, I wonder how many of the teenagers who tunelessly whistled the melody or tried to couth the words were in any way aware as to what a nickelodeon happened to be. Or, come to that, appreciated that the word is a genus for a variety of fascinating coin-operated irstruments which range from large Regina musical boxes to the orchestrion, some of which were as large as a small house.Q. David Bowers is no long-naired fuddy-duddy. This youthful enthusiast has tackled his book with incredible gusto and his genuine love of these instruments has resulted in a book of exceptional quality and great interest. He deals capably with the invention and development of the Orchestrion from its origins in the Black Forest to its improvement and extreme perfection in America in the hands of Welte (a subsidiary of the inventor) and Wurlitzer.

There is a large section devoted to the Anerican electric piano and orchestrion industry which is copiously illustrated with original advertising copy and many, many pictures of excellent quality showing complete instruments, technical details, workshops and so forth. A good proportion of this book is devoted to Wurlitzer, but this is not detrimental since so little remains known today - let alone recorded - of the massive range of mechanical ausical instruments turned out by this huge organisation. among them were such oddities as the mechanical banjo and the coirl-operated harp. Not that America is favoured exclusively, for there is representative material on Imhof, Gavioli, Frati, Popper and others. I was amused to see that electric light advertising was fitted benesth the wings of an aeroplane in the late twenties and the ad. mesaage was spelled out by holes in a player-piano-type roll!

This is an outstanding contribution to the bibliography of mechanical music marred only by one seemingly characteristic failing of Auerican books - a total lack of an index.
olland is a comparatively small country, and ye1 it has numerous attractions characteristic to it and in which it abounds. For the enthusiast of mechanical music, the Dutch are famed for their

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1
$$ street organs, colourful, gaily-decorated Rococo facades concealing a multitude of mechanism-and all mounted or a 3 -wheeled handcart of almost ridiculous diminutiveness. A very recent L.P. released on the Vocalion label is "Dutch Band Organ". mono only VAl60172. Apart from a most distressingly "with it" text on the sleeve, which I found largely unintellibible, this is one of the brightest discs you could wish for. I managed to adduce from the sleeve notes that the rolls for this organ are perforated by a prominent Amsterdam solicitor who does this as a spare-time hobby. The recording is made in a studio which lends a pleasing resonance to music which tends to sound a little woak in the open air. There are six tunes to each side including the ever-popular "Wonderful Copenhagen", "Did You Ever See A Dream Walking?", and "Whatever will Be Vill Be". This rollicking organ despatches each one with subtie panache and, for the disc musical box follower, ends its programme with the march "Under The Double Eagle", so popular with the Leipzig lady disc-punchers in the 1880 's. The sleeve relates that the organ recorded is "The Pride of Amsterdam" - the best of them all. I am inclined to go along with that.

The cafe piano of the first decade of this century remained largely unknown in this country. Perhaps the English took their refreshments in a more refined environment than other nations, for the Americans had the nickleodeons and the Germans their orchestrions and Hupfeld Dea-Violinas. The French and Belgians had mechanical pianos which played music from a pinned barrel. The pianos usually had percussion effects added for good measure. Decca has released a disc of one such instrument. "Old Belgian Cafe Fiano Tunes" (mono only DFEE 8629) is a $45 \mathrm{r} . \mathrm{p} . \mathrm{m}$. recording of an instrument made in Italy by the Rossi firm who aiso made street pianos over here (vide Rossi \& Spinelli). This piano was rebuilt by Oscar and Leonard Grymonprez of Ghent before being sold to Ceorge Cushing at Thursford, Norfolk. This is a good record of catchy tunes on a well-restored instrument but one wonders if perhaps the full programme of eight tures is notalittle cloying. And, oddly, the tunes remain un-nawed.

Dating from the same period is the Carl Frei Concert Organ, recorded on Decca 1K/SKL 4741 (mono/stereo). Restored in Waldkirch, Black Forest, by Carl Frei Jnr. as a 112-note keyless organ, it now belongs to George Cushing. The 13 tunes, all expertly arranged by Carl Frei, show off to perfection this instrument which has over 500 pipes. The standard of the recording is particularly good - no mean feat with a fair organ.

# British Patents for Automatic Musical Instruments 

## INTRODUCTION

WHIS LISTING has been compiled by The Editor from the Library Records of the Patent 0ffice, London, and relates to Letters Patent Granted, Applied For or Proviaionally Protected. The list gives the date, patent number and patentee (with asgignee where relevent) and brief details of every entry recorded in the Patent Office archives relating to Automatic Musical Instruments.

The system of patent numbering presents some confusion as, from 1617 to September 1852, a continuously numbered sequence up to No. 14,359 was used. From October 1852 to 1915 , the sequence was numbered from " 1 " annually and thua it is necessary to know the year of patent as well as the mumber. From 1916 to date, patents have been numbered aonsecutively and continuously starting with the number 100,000 .

PART ONE

| Year | Date | Pat. No, | Patentee | Brief Description |
| :---: | :---: | :---: | :---: | :---: |
| 1694 | 20 Oct. | 337 | George Joyce \& Peter East | " A certaine instrument which applied to clocke, organs at any other key instrument .... will cause the same .. to play any .. tune.. and is alterable to any air or tune in half an hour by any person, (tho noe master of musick) without changing the instrument" |
| 1731 | 13 Apr. | 527 | Justinien Morse | "A new organ... which any person, tho' unskilled in musick, may be taught to play.... entirely without rowla or barrels... the musick being pricked on both sidee of half-inch wainacot, 8 or 10 psalm tunes being contained on a board about the size of a sheet of paper, and vorked by clockwork..." |
| 1789 | 8 Dec | 1712 | George Godfrey | "Hew invented tamborine, tabor or drua, and pipa ...... the same in or to a barrel organ". |
| 1801 | 27 Jan | 2.46b | John Longasn | "Improvemente in the construntion of barrel organs". A circular plate is used to connect the barrel and key-frame to prevent reverberation. |
| 1811 | 9 Sep | 3487 | John Chancellor | "A mechanical musical instrument ... applied to clocks and other kinds of machinery". 12 vibratory bars hit by hanmers from a pinned berrel or cylinder. |
| 1814 | 1 Nov | 384'3 | James Longhurst | "Aeolian organ or barrel organ with a selfacting swell" |
| 1829 | 17 Jun | 5802 | Francia Day * Auguat Munch | " A nen stop or set of subatitutes for pipes to the organ or other instrument, such as ... the barrel organ". |
| 4 | 11 Aug | 5831 | Thomas Hall Rolfe | "Improvementa on the self-acting pianoforte". A method of pinting barrels to play soft and loud. |
| 1846 | 29 Aug | 11359 | Alexander Debain | Device fitted to keyboard of an instrument which playa wooden planchettes having projections when a handle is turned. Callad the Antiphonel. |

There is a peculiar fascination in the production of something which is a miniature replica of a fuil-sized thing. One only has to recall the dolights of a doll's house and the pleasure at recognising its diminutive details and furnishings. Models of human fonm are likewise to be met with and here we are converned the automata-figures which move. Chapuis traces moving replicas of human form down to the ancient Egyptians and the references to such in the classics are legion. In recent years - those enbraced by the musical box era - one perticularly popular form of autamaton has been the blackamoor or negroid.

On the facing page is a nicture of such an instrument. Approximate1y $28^{\prime \prime}$ from head to toe, the figure incorporates four separate movements, the plucking motion of the right hand, the movement of the head from side to side, the movement of the head up and down, and the movement of the lower jaw. It is fitted with a small two-air musical movement. Dressed in a scarlet coat, it is altogether a delightful piece. (Courtesy Mem.G.Webb)
ANTIQUITY

The word 'antique' has come in for much misuse, particularly in connection with musical boxes. The following sets out the true definition of the term

FRANCIS BACON once said that antiques were "some remnants of history which have casually escaped the shipwreck of time," and the dictionary would agree. But for a piece of furniture to be old is not sufficient to earn it the title of antique.

Like the automobile, there is a time in history after which classification, like that of veteran, may not be made.

The regulations laid down by the promoters for the conduot of the Antique Dealers' Fair provide "that all articles are to be authentic antiques of the period they are represented to be, and
made prior to the year 1830."
The only legal definition of the word antique is to be found in the Customs regulations of various sountries:-
America ............... pre-1830
Canada .................. pre-1847
The Continent ....... pre-1866
The British Customs tariff states that antiques over 100 years old will be admitted to this country free pt duty.

These criteria are not inviolate, Indeed there are many so-called antiques to-day the makers of which are still warm in their graves if not alive and smiling at our credibility. They are sold as antiques, and are revered as such, bv- people who believe that the article is genuine. However. their mistakes arise from the common belief that to be of the last century is sufficient, and also from fraudulent transactions of a few decades ago, the materials of which are still, and often vehemently. considered to be of antiquity, Many a dealer has had to tarnish the glow on a family's treasures when they have been proudly displayed before him.

THE PICTURE ON PAGE 354 is of a long Thibouville-Lamy cylinder box playing eight airs on a fairly coarse comb. The characteristic winding crank may be seen in this view. Next to the serial number is stamped the unidentified initials 'S.W.' in an oval. By courtesy of Member Graham Webb.




THE ABUVE TUHE SHEFT appears on a small cylinder musical box belonging to Member Graham Webb. The tune sheet shows a striking resemblance to one produced by Dawkins and shown on p. 262, and also to one style of Bremond. Can any Member identify this maker with the initials B.S. and the triangle-and-striker motif?
 Gerry Planus (Antiques Mechanical) of 567, Old Kent Road, London, S.E.l, Writes It is with regret that due to lack of demand I rust ask you to notify Members that I shall no longer make or supply Endesses, Gears, Genevas \&c, and that I have disposed of all stocks of musical box spares. The only item I shall still supply is Polyphon Dampers. $\square$
D. E. Lubbock, "Coniston", Hawks Hill__Leatherhead, Surrey $1_{2}$ says:
On page 24 of the Christmas, 1964 (Volume 1) issue you showed pictures of a box with a tune sheet having a keyboard design at the top. The maker of this box and the user of this deaign was D. Langdorf \&Fils and I have a specimen in my collection with original tune sheet and name stamped into the brass bedplate.
Editors Comment: Mr. Lubbock produces a complete set of reproduction musical box tune sheets. These are high-quality prints on card which as nearly as possible match the originals in colour and texture. Those who attended the last Society Meeting will recall the display he had of these cards including such rarities as the diamond Bremond tune sheet, the Langdorf referred to above, and a wide range of Nicole Freres. Another tune sheet poser (at the top of this page) is given and the writer of the first correct answer to be received by the Editor will receive a free plastic jam sandwich...?


## As They Really Played

UITE a sensation is being caused in the gramophone world by some new records of great pianists of the past taken from piano rolls in the BBC Sound Archives.
Unlike normal piano rollis of the time, these reproduce faithfully the piatist's own timing, exprestion and volume.
The Grotrian-Steinweg reproducing piano, which was completely
renovated for the operation. is
The above is from LONDON DAY BY DAY by Peterborough and below is part of Peter Stadlen's review as well as relevent letters. The Editor makes erateful acknowledgement to THE DAILIY TBLBGRAPH \& FORNING POST,

## RECENT <br> RECORDS

A
S between voice and keyboard fanciers. the latter have a distinct advantage when it comes to exploring the Golden Age. While some of my esteemed specialist colieagues have to crane their Guelph necks in a desperate attempt to distil the peerless bel canto from the croakings of the wax cylinders, we Ghibellines have alternative documentation to fall back on.
It is provided by an invention that bridged the gap between unrecerded history and the time wheo the gramophone had dereloped sufficiently to preserve the true likeness of a pianist's performance.
Those were the days when a fuss was made of the piano and its prophets. deservedly so, 1 wilt add without concealing my bias, for here we have the true queen of instruments. the equal of the string quartet in attracting the purest. most profound thought while outdoing voice and fiddle as a breeding ground for bravura and titillation.
In the leaflet that goes with Arso's issue (mono) of a recital by Joseph Lhévinne (who died in 1944 aged 70) Denys Gueroult gives a fascinating account of the development of the piano roll from crude beginnings to an astonishing degree of mechanical complexity in the 'twenties.
Several people worked for five weeks carrying out more than 100.000 separate actions in order to transfer on to a single master roll the imprints recorded on several graphs. These represented the various parameters of Lhévinne's performance as he realised the 7.915 notes of Schulz. Evler's "Blue Danube" transcription.
Mr . Gueroult convincingly
argues the trustworthiness of
claimed to be the most subtle and delicate mechanical musical instrunent ever devised.
The Russian pianist Josef Levinne (1874-1944) is on the first disc issued by Argo. On the second are Rachmaninov and Moritz Rosenthal a pupil of Liszt who could play alf
Chopin from memory. So at last we can catch something of the full Lisztian romantic style.

## PETERBOROUGH

## 

 Mr. F. W. Holland, of the British Piano Museum (July 18) has commented on Peterborough's remarks regarding mechanical musical reproductionIt is a pity that the celebrated man in the street is so blissfully unaware today of the achlevements in the mechanical reproduction of music of earlier years, One has only to listen to the performance of a Welte, Imhof or Wurlitzer orchestrion organ of 50 and more years ago to marvel at the genius bordering on wizardry of a past era. Even the ordinary musical box achieved a degree of performance perfection in the second half of the 19th century which was quite remarkable.

The reproducing plano alsoand, I might add, the reproducing pipe organ-was an incredible achievement when one considers that the modus operandi was simply air shifted by an electric motor through a complexity of tubes, critically-ddjusted diaphragms and levers.

Be it a Grotrian-Steinwez. Erard or Ampico is but of academic interest. Given such an instrument in excellent condition and with perfect rolls, not only are we shown an effortless concert performance, but we also have a valuable insight into the styles of performance of artists who are no more. The early phonograph records, such as they were, gave no indication of the style and phrasing of these virtuosi, for their perlormances had to be tailored to fit the playing time of a cylinder made on primitive apperatus.

Unfettered by time limits, unruffled by the knowledge that pianissimo playing would not be picked up by the early microphone, those performers who did make for us lasting records of their art on paper rolls ofteh display a more lyrical approach to the music that might be senerally acceptable today. This. then, is the value of these pianos which can play by the turn of a switch.

Speaking purely on style, we might well have been surprised at
the performances of Chopin an Lizst had they had the facility $c$ making fox posterity reproducin piane rolls of their own music. Yours truly,
ARTHUR W. I. G. ORD-HUME Editor, Musical Box Soc., London, W.I.

Journal.

## The Daily Telegraph, <br> Tueaday, July 28, 1968

## Piano runs amok

## at the BBC

©IR-By coincidence Mr, F. W Holland's letter and Mr. Pete Stadlen's article on player-piano both appeared on the same da; (July 18). If memory serves it was in 1923 that we importei into the " $2 \mathrm{LO}^{\prime}$ studio a Grotrian Steiaweg instrument fitted wit. "Duo-Art" mechanism-and goodly supply of perforated rolls Many of these claimed to repre sent the actual performance o well-known pianists.

The auto-piano was invaluabla for filling gaps in the eariy broad cast programmes-and we had nice selection of works to choos from. No manual control wal required beyond inserting the rol and starting up.

But any machinery can gc wrong at times-as happened to one of our announcers, who shal be nameless. As the opening bars of the "Moonlight Sonata were being broadcast over Britain he thought all would be well fo the next 10 minutes or so, went down in the lift at Marconi House, out into the Strand anc turned left-for a quick half-pint. On his return he found that "2LO" was no longer on the air: the machine had gone beserk -and festoons of perforated paper littered the studio floor in alf directions. An agitated engineer was in process of starting the (more reliable) phonograph. This was one of the earliest occasions when our technical brethren rescued us from a fate worse than death.
The wheel seems to have turned full circle, now that these "Duo-Art" rolls are being transferred to disc records. I have not heard Lhevinne's performance, mentioned by Mr. Stadlen-but the enterprising Argo people are sending the their next issue of performances by Rosenthal and Rachmaninoff, both of whom 1 recorded on disc for HMV in the old days. Yours faithfully London, S.W.5. REX PALMER,

# Musical Mechanism 

# THE RECONSTRUCTION OF AN OLD POLYPHON 

By "Aeolus"

FTEELING convinced that repairs to large, high-class music boxes are within the scope of a model engineer, and knowing that there are hundreds of these fine mechanisms lying derelict in various parts of the country, I resolved to try my hand at salving one or two. With more ambition than due regard to the time involved in such repairs, instead of one or two, four "dud" boxes were acquired. One, the subject of this article, is a disc playing instrument, while the others play by means of pins protruding from brass cylinders or drums, 2 in. to 4 in . in diameter, and 12 in . to 14 in. long.

As it is the largest and my workshop is small, the disc machine was tackled first. Music boxes of this type have a volume (but not the tone) of a small upright piano. Their music is superb and extremely charming. The range of tunes played is only limited by the number of discs available.

Before detailing a few renovations, for readers unfamiliar with this particular kind of musical mechanism, it will be necessary to say something about the playing part of the instrument. The clockwork movernent is very powerful, but, being fairly simple, it needs no description beyond a mention that it is controlled by a penny-in-the-slot mechanism, and it operates for about three minutes when a coin is inserted; it stops automatically at the end of the tune. In passing, it may be said that the whole music box had been very badly treated before it came into my hands-in fact, it was little more than scrap and beyond economic repair. I found the redemption of so delapidated a musical relic of the past, (it was manufactured about the turn of the century) parliculariy gratifying.

An idea of the size of the machine will be gathered from the two-foot rule, discernible under the cabinet in Photographs Nos. 1 and 2.
This "Polyphon," for that is the name of the make of this music box, plays a $15!$ in. dise, with a $\frac{5}{16} \mathrm{in}$. hole in its centre. The disc is made from 38 S.W.G. sheet steel, has
the name of its tune printed on one side of it, and a large number of lugs, integral with the disc, and corresponding to the notes to be played, are pressed up and formed at varying radii on the other side. These lugs are about $3 / 64 \mathrm{in}$. wide and stand out from the surface about $\frac{1}{16} \mathrm{in}$. They are doubled back on to the disc itself, in the form of a stapleshaped loop. This gives strength and rigidity, see Fig. 1A. Discs were lacquered to prevent rust (be it said, without complete success), and are rotated and driven by a " gear" wheel, fitted with 16 hemispherical or dome-headed screws instead of normal teeth. These engage in the round perforations seen near the edge of the disc in Photograph No. 1.
Two cast-steel playing combs, with teeth facing each other, are mounted on a heavy c.i. baseplate, which, in turn, is attached to the back of the wooden casing (forming a sounding board) by means of four large wood screws. (See Photograph No. 3). The individual teeth of these combs are tuned after the manner of tuning forks. Each gives its distinctive musical note when struck or plucked and forms one note in a scale. Some of them, the larger ones, with deep notes, have various-sized resonators attached to their backs by solder. These do not show in the photographs, as they are behind the teeth, but Fig. 18 is a diagrammatic sketch of one of the largest. The resonators are rectangular lead weights, and are specially men-
tioned because they are often damaged or missing in ill-used machines. In this instance, a few were detached, but fortunately were found lodged behind the bedplate. Resonators were used by the makers as one means of tuning the teeth. The heavier they are, the deeper the note produced; they are difficult to replace, if lost. It is essential that they be firmly fixed and correct as to weight, size and position-or the teeth will be out of tune. When new ones have to be fitted, the teeth affected must be retuned by adding to or reducing the weight.
The combs each have 38 playing teeth (in case anyone counts those in the photographs, there are some that do not play !) and both look much alike but are different musically; their physical differences can be detected by close examination.


Photograph No. I. View of music box, with door closed

As the dise revolves, the projecting lugs are arranged to pluck, at varying intervals, one or more of the 76 tuned teeth. Obviously, this number gives the machine a good musical range, although there are music boxes with up to 200 teeth, and a few with more. The contact between the lugs on the disc and the teeth is indirect, and takes place through the media of small ratchet-like star wheels (see Fig. 1C), about $\frac{3}{}$ in in diameter, and 0.033 in. thick; each has 9 teeth and is made of steel. They are mounted and evenly spaced on a vertical shaft of about $\frac{3}{16}$ in. diameter, situated midway between the two opposed combs. The star wheels are actuated by the lugs on
the revolving disc, which, on contacting a star wheel tooth, moves it one station forward. Each movement of a star wheel causes one of its teeth (i.e, not the one contacted by the lug), as it travels from one station to the next, to pluck the tip of the tuned tooth corresponding to it, thus a musical note is produced. The shaft carrying the star wheels runs from top to bottom of the combs and there is one star wheel for each tuned tooth. This shaft also carries two rotatable steel washer-like members, about $49 / 64 \mathrm{in}$. in diameter and 0.033 in . thick, which act as jockey pulleys by resting against the inner surface of the disc as it revolves, thus preventing the lugs from meshing too deeply with the star wheels. The dise lugs are so arranged that none is in the track of the jockeys.

The disc is held in playing position by a light steel bar (later called a clamp arm), the lower end of which is hinged and it swings outwards from a slotted yoke forming part of a cast-brass bracket screwed to the baseplate ; it may be observed in
the photographs. At its upper extremity, viewed when closed, there is a small banjo. in which is housed a lever-operated spring catch, serving to clip it to a slot in the central spigot, which, in turn, supports the weight of the disc by passing through its central hole. The clamp arm carries six narrow rollers, made of ebonite or similar material, suitably held apart by tubular spacers. These rollers hold the disc up to its work by gently pressing on its outer, or smooth surface, Photograph No. 1. Two pear-shaped wooden rollers at the bottom of the baseplate (see Photograph No. 3, at bottom corners of the combs) are mounted on short pillars. Two more, much larger pearshaped rollers (also of wood) are attached, by means of ornamental cast-brass brackets, to each side of the wooden cabinet, in a horizontal line with the central spigot-see Photograph No. 3. The object of these four rollers, each of which is so situated as to run against the inner side of the outer edge of the dise, is to spring it into a slight curve;


Photograph No. 2. View of music box with door open, showing triangular pediment and cash drawer
this they do by reason of the fact that all of them are on a level a little nearer to the front of the cabinet than the inner faces of the six rollers on the clamp arm. This is very important, and is remarked on because some of these parts were missing, and some wrongly assembled, when the machine came into my hands. It might therefore, have been rather


Fig. 1. A-Staple-shaped lugs on back of playing disc. B-Resonator on tuned (bass) tooth.
C-Star wheel. D-Damper and brake

MODEL EMOTMEER


Photograph No. 3. Close-up, showing arrangement of works. The mainspring of these clockwork movements is tremendously powerful, and can canse serious injury if released suddenly
difficult to envisage their positions and exact function without previously having seen a similar machine in action. This springing of the disc is an ingenious method of temporarily stiffening and guiding an otherwise flexible, not to say " floppy" and difficult component to handle mechanically.
There is another series of essential mechanisms, one item of which is mounted between each of the s!ar wheels and its related tuned tooth These are the dampers. Properly adjusted dampers are absolutely necessary, because, if a tooth of a star wheel contacts a comb tooth while the latter is in vibration after being plucked, a jarring, buzzing noise is made, completely spoiling the harmony. This unpleasant sound is caused by the tuned tooth vibrating against the tip of the star whecl tooth as they approach close to each other, and touch.
The two combs are set at different angles and levels, that on the right being higher in relation to the centre
of the star wheel shaft than the other. The star wheels pluck the lecth of the right hand conib "upwards" and those of the left, "dowawards" when looking at these parts mounted on the music playing sub-assembly lying in a horizontal position on the work bench. For this reason, the dampers differ slightly as between the two combs, but as their action is practically the same in both cases, it will only be necessary to describe those on the right hand side.
The dampers (with one set of which are combined "brakes" for the star wheels-all these are on the right hand side) on this particular machine work on the following system, but it should be noted that although dampers on cylinder type machines serve exactly the same purpose, they are quite different in form.

Fig. ID is a sketch of a damper of the kind used on the right hand comb. The dampers are made of spring steel and brass plated, but in some machines of this make they are of spring brass, or, it is believed.
of German silver. Each damper has a curve formed in it which, normally, is sprung against the side of one tooth of its related star wheel when the latter is in its rest position, and is thus kept out of contact with the tuned tooth. As the star wheel is moved round towards its next station by the dise Jug, the curve of the damper springs over, out of its vertical position, into the space between the tooth which has just left it and the next one coming up. In this intermediate or mid-position, its tip is sprung over hard against the side of the tip of the tuned tooth, thereby stopping it from vibrating, or, in other words, damping it. The movement towards and on to the tuned tooth is due entirely to natural and inherent springiness. The next oncoming star wheel tooth, in its turn, then moves the damper by coming in contact with the curve, thus pressing the damper arm away from the tuned tooth, which is immediately freed from damping effect. At this stage, the tuned tooth is plucked by the same oncoming star wheel tooth and emits its note. The lug then loses contact with the star wheel tooth, and the star wheel comes to rest.

So far, the damper arm has been dealt with; the other arm, with no curve in it, is termed a brake in Fig. 1D. This tongue of metal is sprung against the side of the star wheel (sufficiently near to its centre as to be clear of its teeth) and serves to prevent the star from over-running or getting away from its normal rest position without the aid of the disc lug.

The sheet metal channels down which the pennies run can be seen passing behind the music playing mechanism (coins may be inserted at either side of the machine) and the rectangular "cup" into which the money falls is at the end of the lower channel on the right of Photograph No. 3. The weight of the coin depresses the "cup," which is balanced on a weighted arm, and thus starts the movenient by releasing a wire "arm" attiwhed to the "fly." As movement continues. the " cup" is further depressed and also tilted by at cam until it ejects its contents into a drawer below. The "cup" then comes slowly back, nearly to its first position. The cycle is ended when a pin on the balanced arm drops into a hole in a revolving plate, and so stops the clockwork by making contact with the "arm" on the "fly." This "arm" is merely an extension of the end of a coiled spring wrapped round the spindle of the "fly."
(To be continued)

# THE DEVELOPMENT OF THE . MECHANICAL PIANO <br> PART ONE 

By Arthur W. J. G. Ord-Hume

 board musical instrument of the spinet, virginal, harpsichord or forte-piano type and concluded its progressive development with the modern reproducing piano*.

We shall trace the mechanisation of this instrument from the earliest know barrel-operated spinets, tirough the Jacquard loom, planchette, and the numerous electro-magnetic principles, to the pnewnatic-mechanical piano-player, the selfcontained player piano and finally the reproducing piano.

We will see how the instrument depended so much for its early stages of mechaniscition on the mechanical organ, yet later developed a style of reproductive transcription entirely of its own which in turn was destined to become the modus operandi of other stringed instrument played sutomatically, viz. the harp, violin, banjo and, indeed, it even applied itself to revolutionising the siffeacting organ.

In the beginuing, then, there existed the organ - the oldest known form of instmment and one which was quite familiar to the Rocaans and the ancient Egyptians. The organ, originally played somewhat erratically using the fist on plungers, soon took on a form of rudimentary key-sticker-pallet action, the basis of which survives to this day (in spite of electro-magnetic actions) in many small instruments. The key-sticker-pallet principle lent itself readily to the mechanism of the barrel pinned with music and turned by a crank handle. That such mechanism was known in the sixteenth century we know. That it existed even earlier is a fair surmise on the knowledge that auite advanced clockwork mechanisms were being built during the fourteenth and fifteenth century and the technical skill to construct such a mechanism as the Nells Cathedral clock (now performing impressively in the South Kensington Science Yuseum, London) during the second half of the fifteenth century was ruite sufficient to build a mechanical organ. Generally speaking, it seems that Suropean clockmakers were more advanced than those in England at this time, so it is more than likely that the mechanical organ constructed in London oy Thomas Dallan for the Sultan of Turkey in 1592 was in no way a demonstration of a new technique.

It is thue not difficult to see that the first attempts to pluck or strike the wires of a stringed instrment should assume the same basic mode. Howevei, $=$ difference between the dynamics of the organ and those of the stringed instrument presented problems. Whilst the playing of a mechanical organ demanded but the depressing of a small pallet in a wind-chest, to pluck or to strike a string required much more force. This one fact was the principle drawback to the mechanisation of the stringed instrument and is why no completely satisfactory system was evolved until the comparatively recent development of the pneumatic system. Whilst the barrel organ developed into the highly sopnisticated orchestrion which could * It will be appreciated that the development of all musical instruments of the form that we know has reached the ultimate. 'The 'rext generation' of instrunents appear as those which make their sounds electronically and thus the conventional musical instrument has already achieved obsolescence although, happily, we shall see them in use for the performance of traditional classical music for, we hope, posterity. The point made here concerns the fact that development is complete.
produce almost perfect music from a large number of pipes comprising numerous stops and voices, this was achieved after nearly three hundred years or continuous improvement and perfection, admittedly gaining in impetus during the latter half of the 19th century. Before such a state could be reached with the piano, however, barrel had given way to perforated card gtrip (first used in 1864), developed into the perforated paper roll (first patented in 1887 by Emil Welte) but more generally settled for the perforated cardboard 'book' of music patented between 1892 and 1896 by Gavioli. Development then proceeded to the early player paper rolls of various numbers of notes until the standardisation of 65 and 88 note player paper rolls and, finally the Duo-Art and Ampico full reproduction autographed type of roll.

The paper rolls, as mentioned above, were developed initially for the orchestrion by Welte in America and in the hands of such as Wurlitzer, the roll eclipsed the barrel and book as the music score for orchestrion pipe organs and similar eclectic instruments.

The first known mechanical stringed instruments were the spinets manufactured in the workshops of Samuel Bidermann in Augsburg. Bidermann lived between the years of 1540 and 1622 (these dates are only approximate). He produced instruments which fitted into writing tables and cabinets, and is also credited with the introduction of water to drive his mechanical spinets. Three of Bidermann's instruments have survived. These are keyboard spinets which may also be played by a handleturned barrel set with pins. . One such instrument has 45 notes, only 26 of which may be played by the barrel. Bidermann's two sons continued the business upon his death and they produced many similar instruments prior to 1625.

A similar craftsman was $J$. Wegener of Leipzig who built a mecharical virginal which played three pieces of music. Also probably of the same period is a remarkable mechanical haffenetta d'amour in the National Museum, Prague. Clockworkdriven by a large weight, this features two automaton figures which are worked by horizontal bridges on the music barrel.

In all these instruments, the hamers were lifted by pins in the barrel. As the hammers freed from the barrel pins, they fell against wire strings, assisted in so doing by small springs.

There is scant evidence of development during the eighteenth century but it is safe to assume that instruments were made in Europe, and one barrel piano with persussion accompaniment in the de Vere Green collection seems to indicate French origin of the mid-eighteenth century period.

The next developaent of consequence was the introduction of the small street portable piano by Hicks in about 1800. The Hicks family were piano makers and, later, organ builders and they had adaresses in Bristol and London. Hicks vastly simplified the barrel piano, making it acceptable as an interpreter of the tunes of the time. He introduced what we can term the 'Hicks Styie' of piano (see p.55) seen later in the handiworis of Henry Distin (another piano and organ maker) of London; Moller of Copenhagen; Getto of Ivrea, Italy, and others. These machines were made to be carried on the shoulder and played in the street or public places. Frequently, they were supported on one central pole or leg. Hicks at least was responsible for refurbishing the concept into the barrel piano suitable for parlour use in about 1846 which, although having 41 keys instead of the 23 of the street variant as well as large barrels playing ten tunes, was essentially the same design and construction but in a vastly superior and more acceptable case.

## F.A.Richter's <br> <br> LIBELLION

 <br> <br> LIBELLION}By The Editor

ON PAGR 288 we published an advertisement describing the Libellion book-music comb-operating musical box manufactured by F. A. Richter. By coincidence and good fortune, an example of this undoubtably rare instrument has come to light in the hands of Member Vince Bond of Romford, Bssex.

The Libellion is a completely unorthodox instrument by any standards and it is totally different from anything else so far discovered in this field. Representing the first complete breakaway from the traditions of cylinder and disc musical box, the Libellion appears to have been the answer to the questions posed in the article entitled "Endless Music" published in "HE MUSIC BOX, Volume 1, No. 5, page 35.

Produced in 1900-1901 by F. Ad. Richter of Rudolstadt, Germany, the instrument plays music in the form of a zig-zag folded 'book' of the type used with fair organs. This music is fed under a pressure plate which is hinged to facilitate loading. It is transported by a toothed drive wheel engaging in a perforated track along the middle of the music. This drive wheel is situated some way in front of the combs, and the music is kept straight by a second toothed wheel this one being an idler - placed at a corresponding distance behind the combs. To each side of the centre drive is a comb of 42 broad teeth.

Approximately five octaves are represented and most notes are in pairs, one in each comb. Several treble notes are triple with two in one comb.

The whole concept of plucking the comb teeth is original and superbly engineered as, indeed, is the whole mechanism of the Libellion. The comb teeth are square cut and each has a plectrum of hardened steel. This plectrum is allowed to slide back and forth on its pivot, an oval slot being

At this point, the damper is in contact with the end of the tooth. The continued passage of the music sheet now causes the plectrum, depicted alongside, to be pushed downards, the damper lesving the tooth end and the anvil contacting the end of the tooth. Further downwards movement plucks the tooth and immediately the nose of the plectrum passes out of the slot in
 the tune sheet. The strip steel spring beneath the plectrum now causes it to be pushed smartly back to the normal position ready for next time.

Not only is the means of producing the sound unusual, but so is the style of construction both of the bedplate assembly and the motor. The combs are screwed on from underneath, so leaving a tidy upper surface - why ever did nobody else think of that! The motor is of the usual spring-type with endless escapement and fly but the stop/start lever also incorporates a speed regulator of great simplicity and effectiveness. Over the shank of the endless is fixed a short strip steel spring with a hardwood bearing pad. Movement of the stop/start lever firstly takes the sprag out of the fly on the endless and then gradually applies less and less pressure on the spring as the lever is moved further towards 'play' position. The pad creates friction on a rim on the endless shenk. provided to this end. The plectrum is sustained in an upright position by a strip spring which is cut in the form of a comb from one piece of thin springy metal and is screwed under the musical comb. Tooth damping is catered for by a small curl of brass wire rivetted to the plectrum at its upper extremity.

The music sheet presses down all the plectrums level with the 'sound table' at the start. When presented with a slot in the sheet, the plectrum rises and is carried forward along with the music for one sixteenth of an inch, thereby bringing the anvil over the end of the tooth on the comb.


SECTION THROUGH MECHANISM



## Improverisente in or connected with the Striking and Damping Devises of Hechanieal Musical instruments.

I, Fribnhicin Anolf Ricuter of Rudolstaila in the Bimpire of Germany, Manufacturer, to berehy teciare the nafare of this invention and in what manner the eame is to be performed to be partieniandy described and acectained in and hy the following etatement:-
In the striking and dasaping deviecs as usailly herctofore constructed for tho stecl reeds of meghanical musical instruments mith perforated misic oheets, the dunjping action is failty, nither becanse it is exerted or applied to an insuflicient extent and is noify or becuate it is applied too momo.

Thane refy acriouia draslacks are obviated aceonling to the present invention


 formands ly thr mosie simet, and thereby presses the damping sperigge acgainst the formard edge of the reed.

By means of thit areapperuent-there is propinend a thoronghly certain and rapid
 impirtasect in tion asse of inv iong vibrating bass receds
Reforrive to Fugnce 1 of the accanpanfec dranings, the striker is formed with


 tapable of moverase! are n lixed sizit /. The uprand movement zait the rearwaril Dorceuvin of the striker is effected by means cit a spring $g$ which presses from below against the arme of the ntiker. The movement of the striker is limited by menns of a fixer? angle picse $h$
The music shect $\Lambda$ mbich moves ever the striking apparatus is formed with perforated notes or musical characters, and when one of these perforations comes exactly orer the striker, the latter is raised by the saring $g_{\text {a }}$ and is at the Eame timo also pushed back on the shaft, until its striking point $b$ is euabled to silp freely past the reed $i$, and the arm $d$ bears against the augle picec $h$ as is clearly shown io Figure 2. By the further formand movement of the music shect, the striker (rhich is situated wich its catch a io the perforation in the music shect) is at first drawn forward antil the rear of the elongated bole formed comes agruinst the shaft and the striker then mored downmards with a rotary motion, whercloy the reed is atruck and enused to emitits note. Whilst the striker is being drawn forward by the music shec.t, the damping springs e which are allixed laterally to the striker, phace themselves against the iorwaril edge of the real i aud act to damp the latter fut befure the striker peint comee in contact with the resel. The damping action is thus apylied immediatoly befure the real is sletuck, so that the said reed is allowed to vibrate up to ane very lest noment which is of great valuo fur tho minsic.
Figure 3 illwstrates the striker at the moment of atriking the read, and Figure 4 shons the striker in ite position after atriking the read.
The danping springa may in some eases be final to the lower part of the arm at at $d^{1}$ as shown in figure $\delta$, instand of being fixel at tho upper part of the striker at $e^{1}$ as shown in Figure 1. Aso in the case of meak reeds, the damping derico may consist merely of only one spring mounted laterally on the striker.

Having now particularly deseribed and asecrtained the nature of my said invention and in what manner the same is to be performed I deciars that what I clsim is :-

A device for striking and danaping the sted or other metal reeds of mechanicai masical instruments, consistiog of a ztriker monntex by means of an chongated hole on the stationary slars, esidd atriter being provided, in adilition to a entch $a$, striking point b, amil an anm d serring as a stop, witl a damping device, conaisting of one or two metal sprivge arranged laternlly en the striker, tricich said springs come in contact with hle formand adge of tha rect avd slame the reed when the striker is drawn forward and sobstantially as get forth.

Dated this 17th disy of September 1895.

The music sheet is ${ }^{3}{ }^{3}$ " overall width with a central row of $3 / 16^{\prime \prime}$ square drive holes at $3 / 16^{\circ}$ spacing. The average rase of feed of the music throuch the instrument is 4 it $t / m i n$ from left to right, transport being from the rigit. hand sprocket (i.c., front of the combs).

The libellice appears to baje been the witesac of a nimber at petarits taken nut by Dro Friencist Adsin Ricinter, whose $x^{-1}$ ress is shown a. 65, Notistarzburgstrasise, Rudolstact in the principality of sol hwarzburg-Rudolstedt, Germany. The first relevent: patent was taken out ing 1895 and a British 5 ytent, No. 17.317, was grainied for the invention in that year. The tert of this is reproduced alongside in this page, and the drawine is shown overleaf.

This patent (and rubsequent patents which will be looked at in a moment), are listed under the muaic preasure bar. It seems that very few Libellions can have been manufactured and the example exaurined belonging to Member Vince Bond, and facilitated jy Member Grahaw Webb, bears the serial number 82 atanped on various parts, ann also chatked on the underside of the cast-iron bedplate.

Examination of the Libellion patents gives an intrigueirg insight into Dr. zichter's concept.

The Fatent 17,317 , shown here, is a development and improvement of an earlier design patented in England on October 13th, 1894, No. 17,041.


Pat. 17,317

It is extremely significant that, in British Patent No. 11, 816 of 1900 reference is made to unpleasant mechanical noise caused by the spring-returned levers coming back against their stops. A number of methods of avoiding this by the provision of buffers is described in the specification, and the drawings with this patent are reprinted in the next column - they are self-explanatory.

There oan be little doubt that Bichter was not onily an ingenioun inventor but also a creative ane - there is a difference! He did not set out to copy basic corponentas (i.e. the atar wheel) as did Brechisusen, and 30 meny others who folloved, bat to doviee anantirely new plucking media - the sliding lever. Whether or not it was a succeas, we can onily conjectare. That it had its shortcomings is evident. It could not, for example, perform ss rapidly as a rotating, atar wheel, the moving parte ani lieir mase vere againgt thia. Hevertheless, one feels that these inequalities were largely offaet ty the ability to play music of alrost infinite Iength.

Bichtor'm sliding ater wheel, hovever, was, in principle at leant, mare acceptable for a aimilar syetam kes sdoptad ly Menood in the Stella wherein the projectionless disc of music beld down the atar wheel.

Fichter obviousily dide ${ }^{1} t$ lack ideas. In 1895 he patented a completely radical form of instrument to piagy eniless bsnis of muaic (Britiah Pat. lio. 17,318), This was an oval box around which the masic was wrapped. It was alviven by a clockyorik motar and used the Zichter sliding lever method of pluckins, coveredily the inmediately prior British Patent llo. 17,317.

It remains only for us to ponider why the works of this pan heve remained ignored (or loat) to us for so long. We are, after all, dealing with but 66 years ago. The interosting thought muat arise now that other instruments may well be awaiting diseovery.

Why the Lifbellion never 'caught on' reasins a Hystery, for it was certainly a worthwhile irven-
tion. At least five years in gestation, this was long enough for eny 'bugs to be ironed out' of it. Perhaps it auffered from poor advertising and presentation - a little surprising from what we know of the Richter manufacturing empire. Perhaps again the names of the 'Big Tvo' in Polyphon and Symphonion were too illustrious to challenge. Perhaps the venture vas blue-pencilled by pressure of other involv́ements in industry. More likely, however, was the influence of the phonograph which Hes by this time killing the musical box induatry and its eclectic followers and mist have suffocated many embryonic diveraifications in that field regardless of intrinaic merit.

Whatever the answer, the fact remains that the Iibellion remained forgotten until the discovery, by Member Nesle of Hertford, of the Lifbellion advertisement some aix montha ago.

The instrument shown in the accompanying illustrations is, lamentably, mute. Whilst it has survived in the most perfect condition, ita fine inlaid case not even acratched and vith en obvious history of careful preservation and little use, alas! when Member Vince Bond-acquired this several yeara ago, no music was to be found for it.

Vince Bond, who has carried out a most ambitious programe of investigation into the type of zuaic required, has produced a tuining acale and a list of dimensions for the muaic slots. His careful calculations have culminated in the making of a cardboard strip punched with drive holes which will pass through the instrument correctly. To date, no actual music has been cut. llatarally, if and Nember should come across books of music $9 \frac{i}{n}^{\prime \prime}$ wide with a central drive, he vould be delighted to hear.

## 

Me regret to recard the death of Canon Moel Boston at the age of 55 whilst on holiday in Morthumberland on 17 th July.

One of the most girted and best-knom clergymen in Bast Anglia, he was a residentiary canon of Bury St. Binuni's Cathedml, founder of the liational Society of the Friends of Ancient Bnglish Churches ani also of the Norfolk Society.

It wes also in his extra-clerical duties that hia fame apread. Antiquary, musician, preacher, author, brosidonstar, lecturer and organiser, Noel Boaton was a richly gifted man who lived life with gusto. Is a television peraonality, he was vell-lmown throughout Bast Anglia and frequently appeared to discuas old rireams, musical instruments and many other items in which he was passionately interested. Fis ald vicarage at Dereham housed a fantastic collection of early church band instruments of the types woed belare organs were adopted in the 18 th century. He could ploy all of theme

Although not a Namier of the Huaical Box Society of Great Britain, hia research in the field of pechanical masic in of great value to all historians and lovera of the barrel-organ. A specialist in the history and atuady of the early Engliah church barrel-organ, he amassed a collection of these and cocpiled a coaprehensive list of the tunes and chants which they piayed. As co-author with Member Lendessy Iangwill, it is fortunate that his contribution to the forthooming work "The Barrel Organ Book" had Just been completed. The book is to appear in the New Year.

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[^0]:    THE MUSIC BOX is printed by Data Sift Ikmited, Fernshaw House, Fernsh road, London, S.W. 10 and published four times each year by The Musi Box Society of Great Britain at 11, Devonshire Place, Wimpole Str London. W.1.

    Autumn,

