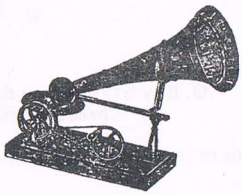


The Phonographic Record

The Journal of The Vintage Phonograph Society of New Zealand

A Society formed for the preservation of Recorded Sound

VOLUME 16 ISSUES 3 & 4 FEBRUARY & APRIL 1981

EDITOR: W. T. Norris
"Waipapa"
Swannanoa,
Rangiora R.D.1.
NEW ZEALAND.

SECRETARY: Mrs L. Drummond,
P.O. Box 5175,
Papanui,
Christchurch,
NEW ZEALAND.

Registered at Post Office Headquarters, Wellington, as a Magazine.

OBITUARY

We were saddened to learn of the sudden death, on March 29th 1981, of Auckland member Mr Harry Buckley.

Harry had been a member of the Society for a number of years.

He and his late wife Joyce, attended the Convention in Christchurch in June 1977 and made many friends there.

The Society extends sympathy to his son, Peter and family.

FOR YOUR INFORMATION

We are always sorry for mistakes, and the major one in the last issue was the omission of an article to go with illustrations of Overhorn Disc Machines.

With the start of a New Year, we look forward to the same enthusiasm for the hobby by members, as we have had in the past. We would like to thank members who have written in appreciation of the magazine and of parts we have supplied.

In recent months we have entertained a number of out-of-town and overseas members, and this seems more than usual, and if the trend continues this could be a record year for visitors.

Visitors to Christchurch are always most welcome and a joy to meet and exchange ideas with.

We look forward to meeting out-of-town members, but we would like to suggest that intending visitors please write to the Secretary and inform her of their plans with estimated time of arrival.

WANTED:

Needle roller bearing to fit Edison Standard.

When the late Bill Dini was in the United States he obtained a few of these, which replace the pot bearing on the standard without a gate.

This bearing disintegrates and often has to be replaced.

If anyone knows where these can be obtained, would they please write to the Secretary.

We have had numerous requests for Edison gears to fit a Home. These we hope to make in the near future and members will have to be patient.

Tee-shirts are selling well. We now have one with "cat" design $6.00 postage extra.

SUBSCRIPTIONS

Final Reminder:

A small number of members have still not paid their subs. As postages and printing costs are rising substantially, we would appreciate immediate payment to ensure continuation of the magazine.

Over the Christmas period the Society received numerous cards and letters from both New Zealand and overseas members. We appreciate these and thank all concerned.

VINTAGE PHONOGRAPH SOCIETY OF N.Z. (INC.)

P.O. Box 5175, Papanui,
Christchurch.

NOTICE TO ALL MEMBERS:

To assist us in future development at Ferrymead, we would appreciate if you could fill in this questionnaire and return to the above address:

1. Do you wish to receive the Ferrymead recorder?
2. Are you prepared to pay for same?
3. Should it be included with our present subscription?
4. Are you prepared to assist with our display operations?
5. If yes to No. 4, how many days per year?
6. Can you help with Easter Fair activities (Annual event)?
7. Can you assist with Saturday work (and/or) special events?
8. Can we have general comments pertaining to our display and operations at Ferrymead?

Walter T. Norris, President.

ILLUSTRATIONS

EDISON THE MAN:

This film has been shown many times at conventions and end of year functions, and we are pleased that some members saw it shown on T.V. recently.

Robert Sleeman watched this film and has recorded his comments in this issue. We have been able to hunt up an illustration or two taken from the film.

OUR NEW SOUND BOX:

When my wife and I were last in Auckland, we were fortunate to visit Keith Walker who has an over horn machine with what we thought was an unusual reproducer. This we tried to photograph with a small camera we had, but without success, but managed to get a picture of a machine, (see illustrations).

On returning home we discovered in a catalogue owned by a Christchurch member a good illustration of the same reproducer in an advertisement.

This type has a knob on the top which, when pushed, releases the needle.

The advert makes all the usual claims, large size, will fit most disc machines . . . "The construction of this sound box is different from and the reproduction superior to any on the market. The parts are not stamped but pressed, and are of the best and most careful workmanship. The needle is automatically clamped on the stylus, not pushed inside, and can be dropped by simple pressure on the button of the automatic needle holder". Price 12/6d. each. . . .

POST CARDS:

These are now a collectors item and like tobacco tins, fetch a high price in New Zealand. We have the one illustrated, sent to us by an old friend in Holland. It is unfortunate that we can not use colour, as this machine is made out of violets.

WITCHES HAT HORN:

This is an illustration of the small horn which we made to fit a standard. Has a small brass flare and is in great demand.

RECORD LABELS (PART 3)

D. L. Taylor

Carinia, red label, made in Australia (perhaps for the migrant market). Other examples have either green, blue or purple labels.

Chappell, white label, excellent sound, made in England, about 1960??

Chas. E. Blanks Pty. Ltd., Australian made, white label. The disc itself is made of tortoiseshell coloured material on an aluminium base and is obviously a private recording. As far as I know, Chas. Blanks is still in business, making advertising slides for the cinema.

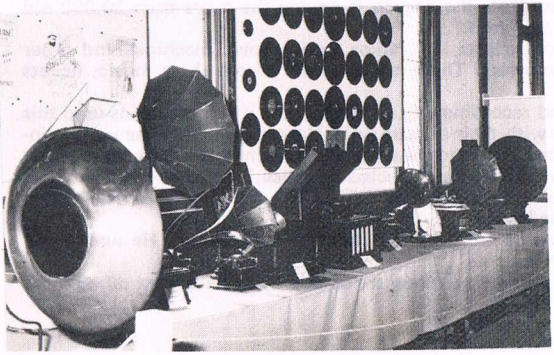
Coast, red label, another ARC product. Note the catalogue number!

FERRYMEAD DISPLAY

JOFFREY MARSHALL WITH HIS STANDARD

DIANE MARSHALL AT THE PIANOLA

SEVERAL VIEWS OF MUSEUM DISPLAY



MORE MACHINES AND RECORDS

MUSEUM BUILT FROM A DREAM
Old Sound charts history of records
By Kathryn Griffin, Special Writer

EAST DENNIS — Seventeen years ago, Ben Thacher embarked on "a dream that's changed a million times," abandoning his Boston theatrical agency to crate old records to Cape Cod. Historical voices from the Ziegfield follies, P. T. Barnum and Florence Nightingale were a foundation for Thatcher's Old Sound Museum in East Dennis which opened in 1976. Thacher's collectables from magic lanterns to talking dolls form the only full phonographic museum on the East Coast.

"This is a comprehensive cross-section of the whole business from Edison's first phonograph," Thacher says. "Even the Smithsoian does not have a comparable collection on view."

When the country celebrated the one hundredth anniversary of Edison's 1877 phonograph, RCA asked Thacher to prepare an exhibit at the World Trade Center in New York. RCA had no antiques to display and was forced to borrow from the Old Sound Museum.

Thacher gathers the valuable artifacts — he won't put a price tag on them — at second hand shops and flea markets. He also floods the mailboxes with communications to collectors around the country.

The soft-spoken father of nine says he is independent: "Otherwise I wouldn't pick a business without any pattern to follow." He says the idea for a museum had been with him for years.

During his boyhood days in South Dennis, young Ben raided his grandfather's house for Indian arrowheads, old coins and muskets "wanting people to look at them." Ten years ago he held a children's carnival, including an "odd house" that allowed children to view arrowheads and shark's teeth.

He opened his Harwich shop six years ago primarily to sell old records. Meanwhile, Thacher's attic became full of phonographic toys — roosters, boxers and couples danging to the propulsion of a record. His 8-foot auditorium horns and tiny bamboo, wooden or whalebone needles overflowed into a trailer. Soon Thacher's dream — the Old Sound — became the largest phonographic museum east of Indiana.

With gusto, Old Sound's proprietor cranks up and ancient music box phonograph which releases nickelodeon music into the museum. "Basically I consider myself an entertainer," he says.

Thacher is a versatile entertainer. He attended dramatic school and worked straw-hat theater and nightclubs. He's written songs and comedy material, and has played master of ceremonies. But his real fascination is magic. "I work for humor mostly" Thacher says. Children watch him produce rabbits and turn cookies into guinea pigs.

Yet he has no magic solutions for those wishing to establish a museum.

"I only know the mistakes I've made and where I've succeeded," he says. "There's no one to ask before you make a mistake."

Thacher climbs aboard his three-wheeled, canopied, 75 miles per gallon motorbike, planning more changes for Old Sound. A new building doubled the exhibit space this month. He hopes someday to have a vaudeville book and record library. But for now, Thacher is content to chug up Route 134 "as independent as a hog on ice."

Cape Cod Times, Wednesday, June 25, 1980.

MASS. RESIDENT COLLECTS OLD-TIME RECORDED SOUNDS

East Dennis (AP) — During the presidential campaign of 1908, Republican candidate William Howard Taft gave a stirring speech in which he commended Irish immigrants for keeping their sense of humor in the face of adversity.

The speech, however, wasn't delivered in front of a cheering crowd as in the style of today's politicking.

Like many politicians of his time, Taft recited his speech nearly alone while it was recorded on a wax cylinder, then distributed and sold to voters across the country.

Recorded four months before Taft was elected president, the speech is among the more than 30,000 old recordings housed at Ben Thacher's Old Sound museum and shop.

The four-room museum contains 200 antique phonographs, 30 radios, early movie machines and other memorabilia from the recording and entertainment industries. There also are piles of old sheet music, tickets and playbills.

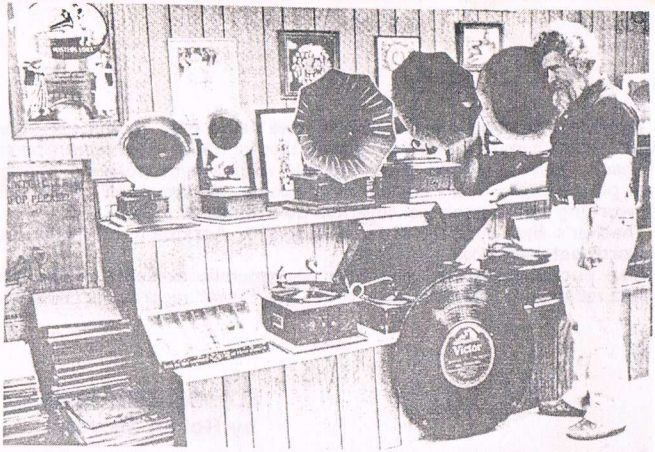
The Taft cylinder is one of Thacher's most cherished recordings. It is a relic of the days politicians used this recording form that preceded flat discs to communicate with their constituents. Voters purchased the wax cylinders over-the-counter and played them at home to hear candidates make campaign speeches, Thacher says.

"They also used them to keep in touch with people after they were elected to office," Thacher said.

What started as a hobby for Thacher has turned into a business. Opened in 1977, his museum is one of two of its kind in the United States, he says. The other is in Indiana.

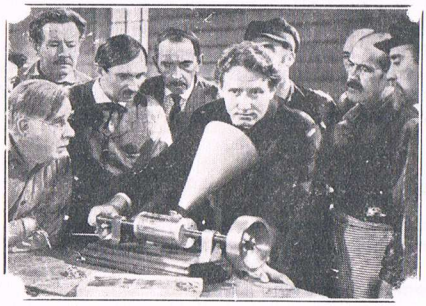
He began his collection by purchasing the recordings of old time entertainers 18 years ago. He was — and still is — a puppeteer and magician, and met many performers.

But he bought most of the museum's pieces at flea markets, antique shops and from people who had them "kicking around the house" too long, he said.



RECORDED HISTORY — Ben Thacher examines some of the phonographs in his collection at the Old Sound museum in East Dennis. The museum is the largest of its kind on the East Coast.

(Staff Photo by Gordon E. Caldwell)



ABOVE TAKEN FROM EDISON THE MAN

MR EDISON THROWING THE FIRST STRIKE IN A BASE BALL GAME

UNUSUAL POST CARD

Victrolas, Edisons and Columbias have value only to the person who appreciates them. "To the guy who doesn't want them in his attic anymore, they're not very valuable," he said.

Thacher's favorite is a 1904 Victrola with a large polished mahogany horn and a clear sound. One of the rarest phonographs in his collection is a Jameau talking doll, made in France in 1885, only eight years after the first working phonograph was invented by Thomas A. Edison.

Thacher's first phonograph cost him $10. Antique dealers now estimate that turn-of-the-century Victrolas are worth between $200 and $300.

Like phonographs, old recordings are generally available on the collectors' market, he said. The exceptions are jazz recordings from the early 1930s and "race" records, recordings of music aimed at a black audience.

Associated Press, October, 1980

EDISON THE MAN
by Robert Sleeman

On a recent Saturday afternoon, for want of something better to do, I sat down to watch the "box" and what should be on, but the rerun of "Edison, the Man", a 1939 black and white MGM film starring Spencer Tracy, Rita Johnson, Charles Coburn and Gene Lockhart, which lasted 1hr.40min. Naturally to cover "Edison, the Man" would take many times as long as this, so I wasn't surprised at the scanty cover of some areas in favour of the more sensational aspects of his life. There was an interesting insight into his married life and his financial difficulties, all very romantic, but how authentic, I don't know. Spencer Tracy made a good fist of the image of Edison, the "clean-cut hardworking humble American". The angelic image being further promoted by the portrayal of his devoted staff; loyal through thick and thin. Factually, the film dealt only with a few of his inventions, notably the "ticker tape machine", and "light bulb" both of which I found very interesting. Unfortunately the coverage of phonographs was scant with only the tinfoil being mentioned as an accident whilst developing another machine, the attempt at infusing humour into the script by having the baby cry into the machine was overdone.

Overall, an interesting diversion for a Saturday afternoon, but not very meaty and rather a flowery account.

HOW TO PLAY CYLINDERS ELECTRICALLY

From an overseas member came a photograph of how he uses his stereo to reproduce electrically his cylinders.

Close study will show how he does this by setting his stereo to the same height as his Edison Gem and swinging the reproducer arm across so that it connects with the cylinder.

We must confess that we have never tried this, so would like to hear from members who have.

The record player would have to have a stereo type cartridge, we feel.

LAMP PHONOGRAPH

For some time now, we have been holding this illustration of what appears a most unusual machine.

The photograph was taken by Larry Schlick and he is the proud owner of what he calls a lamp-o-phone.

We have discovered that this machine is in fact, a "Kurtzmann Electric Phonograph" for other models see Vol. 14 October 1978 pages 3-4 and 8. These were made in Buffalo, New York, U.S.A. These are rare in New Zealand, so far we have not discovered a collector with one.

They appear to all have been electrically driven, and all have the lamp in the left hand corner of the machine. It also appears that the tone arm can be turned to enable hill and dale records to be played. More information would be appreciated.

RECORD LABELS

More labels from D. L. Taylor from Australia. He has very kindly sent us a lot more of these which we hope to use in the future.

FERRYMEAD

We have had a nice set of photographs taken of our display at Ferrymead and some of these we have included in this issue.

Anyone wanting good prints of these, please get in touch with the Secretary.

TASMANIAN MUSEUM

Don Taylor sent us an illustration of an Old Time Music Parlour in Tasmania. His letter is as follows:—

15 Summerhill Road,
West Hobart,
Tasmania 7000, Australia.

Here is some information which might be worth publishing. Tasmania now has a specialised shop/museum for phonograph enthusiasts. It is called the "Tasmanian Old Time Music Parlour" and is located at 66 High Street, Oatlands (about 25 miles from Hobart). On display are phonographs, gramophones, 78s, cylinders, plus a wide variety of mechanical music devices. Well worth a look when you are next visiting the state.

ADVERTISEMENTS

Wanted to Purchase: Carriage to fit 'Fireside' to take Model 'B' Diamond reproducer. Could use two if available. Apply: F. James, 23 Chelford Street, Alderly, 4051, Brisbane, Queensland, AUSTRALIA. (Have a number of parts to exchange. These include feed nuts, carriage arms to fit Triumphs, Homes, Standards and Firesides. Unfortunately only for two and four minute type wax cylinder records).

Wanted: To purchase model C and H Reproducers. Sell or swap many and various motors, parts, cabinets for 1920's table and floor machines. I also have a large collection of at least 100 different various box cameras available in exchange for cylinder or overhorn machines. Write — Robert Sleeman, C/- 112 Kerrs Road, Christchurch.

Player Piano (electric and manual) "Goulay" Reproducer in excellent order **FOR SALE** plus quantity of rolls. Offers wanted. Also sell one manual "Goulay" pianola with excellent tone $975 ono. Old music box **WANTED TO PURCHASE** — Phone 884-385 Mrs L. R. Laird, 204 Shortland Street, Christchurch, N.Z.

PHONOGRAPH HUNTING
by R. Sleeman

Always keeping my ear to the ground, I happened to hear the other week of a cylinder machine in a small country town 150 miles south of Christchurch. The machine was reputedly an Amberola type machine in a "Cheney sort of" cabinet. After asking another collector, we came to the conclusion that it could have been an early Amberola cabinet model and worth a visit. The following day I woke at 5a.m. and having nothing better to do, I headed south. Arriving at 8a.m. I knocked on the shop owner's door and was greeted by a large yawn dressed in pyjamas. Ten minutes later, after a cup of tea, we went through the shop and down to the back shed to view the machine. Fighting through cobwebs we reached the far corner of the building and I saw what I feared, it was only an Amberola 30 in a Cheney type case and not really worth the asking price. On the way back through the building I spotted a red gem horn at $30 and Monarch tin horn $40 both in poor condition and which I presume are still reposing there. I ended up leaving the shop with nothing more than a cup and saucer to placate my wife!!

On the return journey I visited all the local haunts of "junk" and "antique" dealers, but I only discovered an Amberola 30 motor, which again I had no use for at the price. My last stop uncovered a box of 50 blue Amberols and 4 minute wax in mint condition at $2.50 each, but being by now of an indifferent disposition, I bought only two and headed home in a disgruntled frame of mind.

As a humorous postscript, the collector with whom I had earlier discussed the machine, unbeknown to me, also took a trip south a few days later with the same idea as me in mind, only to be disappointed in the same way. We both had a good laugh about it afterwards.

Editor's comment:— I believe that a few years ago, I was the proud owner of this machine, and sold it to a man down South, having no use for it and believing it to be not in its authentic case. This adds more humour to the story. . . .

BILLY GOLDEN AND JOE HUGHES

Those who have collected cylinders will have come across records by these two artists.

We would like to know more about them.

A small amount of information is contained on a cylinder slip in our possession and this is as follows:—

Billy Golden was born in Cincinnati, but grew up in St. Louis. He made his first stage success in the latter city, where he originated the "cane Pat" now so universally used by buck dancers.

Joe Hughes cracked his first joke in Chicago and his initial endeavour was such a success that he has been at it ever since. He has appeared in all the first class vaudeville houses and has sung with many famous minstrel companies. Golden and Hughes joined forces many years ago. They earned an enviable reputation together on the vaudeville stage as black-face, rapid-fire talking comedians. They carried their talents into the Phono-

graph field, and now after many years of one success after another are ranked high in popularity among Edison entertainers. . . .

Cylinder records recorded in blue amberol are as follows:—

1948 Bears Oil.
1511 My Uncle's Farm, Vaudeville sketch.
1571 Darktown Eccentricities, Vaudeville sketch.
1644 Unlucky Mose, Vaudeville sketch.
1712 Darky School Days, Vaudeville sketch.
1769 Turkey in the Straw Sketch, Vaudeville sketch.
1880 Doctor's Testimonials, Vaudeville sketch.
1907 An Easy Job on the Farm, Vaudeville speciality.

More information would be appreciated.

EXTRACT FROM LETTER RECEIVED FROM MEMBER
Mr O. C. Williams, Australia.

I would like to take this opportunity to add something which might be of interest to some of your members. I have received from a fellow member, an advertisement concerning a gentleman in Auckland who occasionally auctions Edison material, and will accept bids by post, including overseas. His name and address are as follows:—

Mr Rod Cornelius, 16 Jubilee Avenue, Devonport, AUCKLAND, NEW ZEALAND.

A list was recieved entailing 156 record titles (mostly Blue Amberols but including a few wax two-minute Standard and 4 minute Amberol records) and also five Edison reproducers. A minimum bid ranging from $3.00 to $5.00 was required for some (but not all) of the records, and a minimum bid for all of the five reproducers, as follows:—

1. Edison Diamond Disc (Nickel) Minimum bid $ 40.00
2. Edison Diamond Disc (Gold Plated) Minimum bid $ 40.00
3. Edison Model S (2 & 4 Min. Cylinder) Minimum bid $ 70.00
4. Edison Model O (2 & 4 Min. Cylinder) Minimum bid $ 70.00
5. Edison Diamond Disc, Long Playing Minimum bid $100.00

I sent a letter containing bids for some of the records, and after the auction closed on 1st October, received a letter from Mr Cornelius advising me of those titles where my bid was successful; a list was enclosed of the successful bids — some being as high as $12.80 N.Z. per record. The records subsequently arrived, beautifully packed, safely and undamaged (by sea-mail). Mr Cornelius stated he would compensate for any breakages, but there were none, due to the excellent packaging, and he will place the name and address of any interested person on his mailing list for future auctions. I might add that although there was some of the inevitable rubbish among the 156 titles on this auction, there were also quite a few of the 'cream' of the Edison Catalogues — records by Peter Dawson, Pie-Dawson duets, Harry Lauder, etc., many of which, I am sure, would greatly interest those among your members who are interested in the records on the Edison Phonograph.

Secondly, a new Blue Amberol Catalogue is available in America. It is in two volumes; Vol. 1 was published last October in a limited edition of 500 and Vol. 2 is still in preparation. It is entitled "EDISON BLUE AMBEROL RECORDINGS 1912-1914" by Ron Defthelfson. Vol. 1 covers the popular issues from 1501 to 2500 and contains re-prints of 300 of the record slips placed in many of the early issues. Pictures of artists and phonographs are included, as well as biographies; the Blue Amberols are cross-indexed to Diamond Discs and the earlier Wax Amberols. Vol. 2 will cover the remainder of the Blue Amberols down to 1929 when production ceased, and also include a section on the classical and grand opera titles.

The price of Vol. 1 is $20.95 U.S. currency) and this includes sea-mail postage to Australia and New Zealand. For a copy sent Air-mail, include extra postage for a two-pound book plus a few ounces for packing. The address of the publisher is:

Mr Allen Konigsberg,
650 Ocean Avenue,
Brooklyn, N.Y. 11226,
UNITED STATES OF AMERICA.

SOCIETY DIARY
by Gavin East

Our first meeting of 1981, held in the Parish Room of St. Mary's Church Hall, Merivale, got the year off to a safe start with an old-fashioned cylinder recital presented by your correspondent. Old-fashioned indeed, as instead of the usual Blue Amberols we heard two-minute black wax, played on a Columbia BV or Trump of 1907 attached to a thirty-inch brass horn held up by the crane on an Edison Home! The tiny machine acquitted itself very well, beginning the programme with Gilmore's Band playing **Turkish patrol** by Michaelis on Columbia

31806. The "patrol" enjoyed a spell of popularity around the turn of the century, allowing bands and instrumentalists to show off a basic control of volume in its simulation of approach, march past and disappearance. Examples which spring to mind include **American patrol** and **Japanese patrol**, the latter composed in 1902 when the rising Eastern power was looked on favourably by "us" as a check to Russia. W. H. Krell's **Mississippi rag** of 1897 employs the same form.

Two tuneful instrumental cylinders followed: **Violets**, piano solo by Albert Benzler (Edison 8394) and **Angel's serenade** by harpist Charles Schuetze (Edison 9509). The former illustrated the difficulty of making realistic solo piano records. Next we had two sentimental songs, one American, one English. Byron G. Harlan sang a derivative Tin Pan Alley pot-boiler if ever there was one, **Won't you waltz "Home, sweet home" with me for old times' sake?** on Edison 9710: from the English music hall came Arthur Lennard, born in 1867, with his famous **Skylark** on Edison Bell 5911. These ditties are gentle, inoffensive period pieces: coon songs, two of which followed, can be most embarrassing to our enlightened (?) ears. Cal Stewart's **The laughing coon** (Edison 4005) is relentlessly cheerful, with the bonus of an early (c.1904) postlude of ragtime piano solo, but S. H. Dudley's **The whistling coon** on Edison 4012 – well, if Bing Crosby's vocal on the Frankie Trumbauer recording of **Mississippi mud** could give offence, this relic ("He'd a pair of rubber lips like a pound of liver strips, and a cranium like a big baboon", etc.) would cause a riot if played in the wrong surroundings.

To conclude we had an early English recording for which no apology need by offered, **The railway porter** by W. H. Berry, later famous in musical comedy, on Columbia 200522, made in London in 1903. A good dig at one of those subjects which are still fair game for comics, and an excellent, clear cylinder.

In these last months of our summer we have been delighted to see several out-of-town and overseas collectors. Unfortunately their time in Christchurch has often been very brief and has prevented them from meeting more than a few of the locals. Ray and Nancy Phillips from Los Angeles passed through town recently. Your president and I were fascinated to see photographs of Ray's superb collection of very early machines, including several tinfoils, a water-powered spectacle type, Berliners (German handcrank and American lever-wind models) and others. Ray has collected since 1935 and discovered the Mexico City Bettini cylinders – truly a "collector's collector", a term used by (and of) another distinguished visitor, George Frow. Last Thursday (12 March), Pam Rogers, Robert Sleeman, Neil Johnson, Bruce Petrie, Alan Robb and I spent a pleasant and informative evening in the company of George and Bess. Happening to be at Robert's in Rangiora on Monday 2 March, I was able to meet Richard Scott from London who had just visited Walter Norris and Joffre Marshall. Richard concentrates on dog-models and their close relations and is involved in identifying and cataloguing machines for Sotheby's phonograph auctions.

George and Richard were able to tell us about the EMI sale. As a result of EMI's takeover by Thorn, the huge collection has been auctioned, only a few early Berliners and experimental prototypes being retained. The market in phonographs in England has been depressed lately and the sale attracted collectors from America and the Continent. Judging by Ernie Bayly's catalogue of the EMI collection, most of the interest lay in the old Gramophone Co. "house" collection – the material purchased from Holland more recently seemed to include many indifferent machines of suspicious appearance. Despite the quantity, however, prices were regarded as excessively high, most deserving enthusiasts of modest means simply missing out (as one of our recent visitors noted, "When you have Paul Getty Junior and Arab oil sheikhs buying phonographs . . ."). Of all the machines illustrated in the catalogue by Ernie Bayly, my pick was the Model E Bell-Tainter Graphophone. I believe this sold for £5,000. Some choice items, notably the weight-driven London Stereoscopic Company tinfoil, were bought by the British Institute of Recorded Sound so will stay in Britain.

Nothing much seems to be on the market around here, except for a package deal heard about on the grapevine. It seems that an enterprising local dealer has been offering an organette (possibly a Concert Roller Organ), an Edison Amberola 50 and a "two-foot long musical box with drum and bells" for $3,000 the lot. Even on today's market, that would have to be a mighty good musical box!

. . . FOLLOWING THE FOOTPRINTS OF GREAT INVENTORS . . .
ALL THE WAY TO HI-FI RECORDING
HISTORICAL REVIEW OF SOUND REGISTRATION

It is now more than three-quarters of a century ago, that Thomas Alva Edison astonished the world by recording the human voice on a cylinder of wax by mechanical means. To hear that inventor's squeaking, tin-like phonograph to-day, one can hardly imagine how people could then have become so enthusiastic about such a machine, and yet in those times it must have been something extraordinary to see an inanimate thing imitate the human ear and the human voice.

It would not be disparaging Edison's genius when we say that his recording and reproduction of sound waves was not exactly true to nature. However, his idea formed the basis for the modern and almost perfect technique of phonographic recording, just as the "picture wheel" invented by the Belgian physicist Plateau led to the present-day development of cinematography. As is the case with most inventions that have proved to be a great success, the principle was extremely simple, being based on the discovery that when we speak our voice sets up waves which travel through the air and we are able to hear these sounds because of the vibrations set up in the drum of the ear, which transmit impulses to the brain through the auditory nerve.

Really Edison was more or less guilty of plagiary, if we may be permitted to use that word for his having taken advantage of the fact that the wonderful structure of the human body is not patentable, for in point of fact he only imitated the ear drum. He used a thin plate of metal, to which a small pin was attached, which when resting perpendicularly on a rotating cylinder of wax cut a helical groove in it. Words spoken a short distance away from this plate (the diaphragm) caused it to vibrate and the effects of these vibrations produced on the wax cylinder were subsequently studied. This was the first mechanical demonstration of an acoustic vibration. Farther on we shall come across the same principle, only developed to an extremely fine state of perfection.

The gramophone:

About the turn of the century Edison's invention was greatly improved by Berliner. Whereas the sound track, cut by Edison's machine, was all hills and dales Berliner discovered that the sound could be reproduced stronger by giving the needle a lateral movement, instead of an up-and-down motion. The "lateral script" was obtained by employing a small arm for connecting the needle to the diaphragm, held perpendicularly over a disc of wax.

Subsequently (in 1888) an invention of the Italian Bettini made it possible for recordings to be multiplied by means of a matrix, the discs being moulded at that time from ebonite; later on shellac was used, but nowadays more and more use is being made of the unbreakable and more durable plastic material. The inventions of Berliner and Bettini opened the way to a brisk trade in "preserved sound". Several gramophone record companies rose out of the ground and judging from the vast numbers of mechanically produced records still found today, with no little success.

But it was realized that this method was far from being perfect, and it meant a great advance when the radio valve was invented and it thus became possible to amplify sound. The sound waves were then picked up by a microphone converting them into electrical pulses which, after amplification, via electro-magnetic means excited an engraving system. For reproduction of the recording the reverse process was followed, the record being "scanned" by an electro-magnetic pick-up sending a succession of pulses to the amplifier, these amplified "signals" then being carried to an electro-magnetic loudspeaker, in which a specially shaped paper cone set up acoustic vibrations in the air, so that we could hear the sound. This was a most remarkable step towards achieving fidelity in the recording and reproduction of sound, for the frequency range had thereby been greatly extended.

Photographic recording:

Meanwhile investigations had been started in a field other than that of the gramophone, for with the advent of the sound film (1928) the system hitherto employed was found to be not ideal for all applications. For a number of years Edison and many other inventors had been occupied with the question how to make the gramophone suitable for sound reproducing apparatus in combination with the "cinematograph" reproducing moving pictures. At first all efforts failed in face of the problem of synchronization, i.e. the exact timing of the sound with the picture. Even in 1926, when Warner Brothers produced their first sound film of normal length ("Don Juan") the sound was reproduced from gramophone records of large diameter played on special discs, rotated at a speed of 33-1/3 r.p.m. and coupled to the transmission mechanism of the picture projector.

One can well imagine the complications involved by such a system. The large gramophone records, which had to be transported together with the film, were highly fragile, so that it might well happen that while the film was being shown in a cinema there would be a break of about 20 minutes in the sound, owing to one of the records having been broken in transit. Further, the pick-up had always to be set in exactly the right place, as otherwise there might be all sorts of comical effects, such as a film kiss on the screen being accompanied by the sound of a smack on the face, with which the heroine rewards the villain's audacity. Moreover there was the possibility of the film itself breaking, and when the two ends were joined together again it was often found that the sound was then no longer synchronized with it. It was, therefore, a great improvement when in 1928 Fox Movietone produced a film with the sound track incorporated in it. Attempts had been made before to achieve this with the mechanical recording system, but all had failed. Now it had been done by photographic means, the sound track running beside the picture elements being again scanned by an optical system. Although manufacturers of sound cameras each applied their own patented system, the principle was much about the same. It is difficult to explain this principle in a few words without representing some details in a very simplified form.

Roughly, sound recording by the photographic method is done in the following way. The sound waves picked up by one or more microphones are converted into electrical pulses which, after amplification, are conveyed to an oscillograph. Such an instrument may be described as consisting of a metallic mirror, placed in a magnetic field, the strength of which is governed by a small coil, through which the pulses mentioned are conducted. The variations in the strength of the magnetic field cause the mirror to oscillate in rhythm with the sound waves picked up by the microphones. A beam of light from an exciting lamp is thrown onto the mirror through a triangular aperture in a mask, thus forming a triangular spot of light, which owing to the oscillations of the mirror is reflected at a certain angle. The reflected beam of light passes through another mask having an aperture in the shape of a narrow slit, then striking upon the sensitized layer of the film. Thus a sound track of varying width (maximum 2mm) is formed, and after the negative film has been developed it appears beside the pictures in the copy.

In the scanning of the sound track while the film is being shown in the cinema, a beam of light is thrown onto it from an exciting lamp through a slotted mask, while behind the track is a photo-electric cell, which converts the photo impulses (these varying with the varying width of the track) into corresponding electrical pulses. An amplifier and loud-speakers then complete the reproduction of the sound.

But this is only a very simplified representation of what takes place. In fact the sound camera contains various systems of lenses for focusing the light, and not all systems produce a track of varying width. The system described here is called the bilateral system, the shape of the track being that of a double sawtooth, while there is also a unilateral system, with one side of the track bounded by a sawtooth; finally there is the variable density system, which appears to consist of strips across the width of the track which vary more or less in transparency.

The Philips-Miller system:

The photographic recording system, with which sound tracks of very good quality were produced, had found to answer quite well in film studios, but for other professional purposes, such as in radio broadcasting studios, it was not so suitable on account of the high cost of 35-mm film material and the too cumbersome photographic processing. Neither was the gramophone record ideal for every purpose, being then still rather inferior in quality and limited to a short playing time.

An American by the name of Miller therefore devised a system for recording sound mechanically on a long reel of film. Philips worked out according to his method a combined recording and reproducing apparatus, which was placed on the market in 1935 and before the war had become part of the normal equipment of many broadcasting studios in Europe. The principle of recording was as follows:

A reel of film 7mm wide passes at a constant speed in front of what is known as a sound writer, which consists of a wedgeshaped cutter (apex angle 174°), making a vertical movement with respect to the film according to the strength of the electrical impulses. The film is made up from a base (or carrier) of celluloid and on top of that a transparent layer of gelatine with a deep-black covering layer. Where the cutter touches the film, it cuts away part of the black covering layer, leaving a transparent track. As the electrical impulses vary in intensity, so the cutter penetrates more or less deeply into the film (max. 1 micron), and owing to the wedge-like shape of the cutter a transparent zigzag track of varying width is produced. The film is scanned on the same machine at a distance of a few centimetres from the recording head by means of a photo-electric cell and an exciter lamp. Obviously this minimum difference in time between the recording and the reproduction is a great advantage, since what is being recorded can be heard almost at the same moment through a monitoring loud-speaker, thereby making it possible to check and regulate the volume and timbre.

to be continued

"BILLY FORTUNE'S PA" WRITES A LETTER TO THE PHONOGRAPH COMPANY

I had sworn that I would never "fall" for a phonograph. You see it was this way: I had been brought up on good music — the real thing. My mother was a concert singer; my father a concert pianist. One time or another I had heard most of the great voices, most of the great orchestras, most of the great soloists of the world belonging to my generation. I didn't want any substitutes, nor any makeshifts, nor any compromises. At its best, every phonograph I had ever listened to was just a compromise and nothing more.

Then one day I was down town drifting around the streets, and happened to pass a music shop. Within, somebody was playing the violin. I knew the number he played. It was Sarasate's Romanza Andaluza. I stopped on the walk to listen.

"My soul!" says I to myself. "Just hear that rascal! Why, he's a master! Who can it be away down here?" I went inside and took off my hat to the pretty girl who came to meet me.

"Who's playing?" I asked.

"That's a record by Gregor Skolnik," she told me.

"Record?" I said. "You mean — You don't mean — You can't mean —"

"It's the Edison," said the girl. "Won't you come back and hear it?"

I went back. Three times that record was repeated for me. Then I went out to the street and wandered about. I didn't believe it.

"Why, it can't be true," I told myself. "It's perfectly absurd — perfectly impossible. It was nothing but a music box."

But the golden glory of that wonderful tone had got into my fibre. By and by, because I couldn't help it, I went back to the store.

"Please play that violin record again," I begged; and the pretty girl did it, with never a word. She didn't have to talk. The strings sang themselves into my heart.

"Heavens and earth!" I said. "Have you any more like that?"

"Hundreds," said the pretty girl. "Do you know the Liszt Rhapsodies? We have a fine record of the Second Rhapsody."

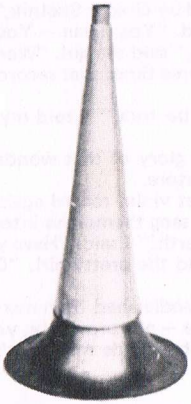
The Liszt Rhapsodies had been mixed with my milk as a babe. I sat spellbound while that record was played. Then I swore a little — not profanely, you understand, but reverently.

"By the Hand that made me! That's music! That isn't an imitation — that's music. No let me hear something else."

UNUSUAL LAMP PHONOGRAPH OWNED BY LARRY SCHLICK

Billy Golden
Comedian

Joe Hughes
Comedian



WITCHES HAT HORN SOCIETY MAKES

The pretty girl put on a record of Heinrich Hensel's singing of the Schubert Serenade. I love that song. The tone went from silver to pure gold, and from gold to the radiance of priceless jewels. Before the song was finished I surrendered.

"For pity's sake!" I said. "Please sell me an instrument like that. I want to take it home with me. And all the good records you have. Don't leave out anything!"

Well, I've had my instrument in my home at Happy Hollow Farm for four months. Do you think you can get it away from me? Just try it! You might take anything else first — my books, my good horses — anything on earth except my wife and children. That instrument has become meat and drink to me. Yes it's more than that. It's an intimate and beloved companion. It's man and a woman by turns — great artists both; a violin, a 'cello, a symphony orchestra or a concert band — not a substitute but the reality. Hundreds of pounds in money would look mighty cheap and shabby offered in exchange for the profound joy it gives.

If you don't believe it, just go into a music store and ask them to let you hear the record of Elizabeth Spencer's singing of "My Heart at Thy Sweet Voice," from "Samson and Delilah"; or the 'cello record of "The Evening Star," from "Tannhauser"; or the record of Marie Rappolds singing of "Inflammatus," from Stabat Mater; or the record of Carl Flesch's violin playing of the Schubert "Ave Maria"; or the record of Charlotte Kirwan's singing of the Bach-Gounod "Ave Maria"; or — oh well, whatever you like best. Then you will understand.

And here's the best of it. After the first excitement, I began to look for a reaction. I thought the first extreme of enthusiasm was bound to get faded and dulled. I thought defects must inevitably show themselves, dimming the fulness of enjoyment. The honest truth is that my delight grows greater day by day. I'm not discovering defects, but new perfections. It's wonderful. Though I had limitless money, I couldn't command the pleasure music gives in any greater degree than is now mine, in my own home. That's strong language, but I mean it just so, every word of it.

(Signed) WILLIAM R. LIGHTON.

Naturally, The Phonograph Company is very proud of this letter and so are we. Mr Lighton, its author, is one of "The Saturday Evening Post's" staff of writers. He is the creator of the "Billy Fortune" stories that have given pleasure to thousands. When he has a story to tell, he knows how to tell it. He wanted to let everybody know what he thought of the Diamond Disc. We don't believe anyone could have done better.

Edison Phonograph Monthly, November, 1916

TALKED A HOLE THROUGH A BOARD
Experiments Suggest Use of Talking Machines as Drills

Literally talking a hole through a board was the unusual feat performed recently during the course of scientific experiments conducted to ascertain the action of phonograph membranes under certain conditions. The apparatus used in making the tests was so constructed that the force of vibrations of the human voice acting on a recording diaphragm, such as is used in making original records, was made to revolve a drill, which in turn bored through a board.

The needle in the centre of the thin, vibrating membrane of a transmitter, rested on a lever that operated a ratchet wheel. This gear was fitted with a worm shaft that revolved a larger gear, the shaft of which constituted the drill spindle. This latter member was so weighted that it pressed the drill head against a board. Thus, when a person talked loudly into the phonograph horn, the drill, through the action of the intervening mechanism, was made to bore into the wood.

In this way a young woman talked a hole through a board two-fifths inch in thickness in 15 minutes. Further tests illustrated the varying powers of the voices of different individuals and showed that the feminine voice has a pronouncedly greater effect than the masculine. — *The Talking Machine World.*

Edison Phonograph Monthly, November, 1915

FEATURES OF SONG WRITING

One of the features of song writing is that a college education is not needed. It's a handicap. A vocabulary of 150 words is quite sufficient. All that one requires is a publisher, a musical ear and the ability to make rhymes and rhythm. Another queer thing is that no one knows just what new song will take. Teddy Morse thought "M-O-T-H-E-R" such a poor song that he gave it away to a professional singer for a new hat.

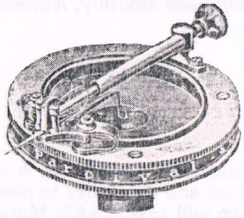
OUR NEW SOUND BOX.

LARGE SIZE. WILL FIT MOST DISC MACHINES.

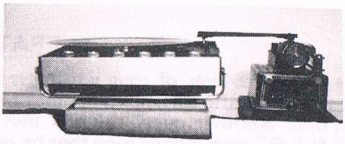
Price 12/6 each.

The construction of this Sound-box is different from and the reproduction superior to any on the market. The parts are not stamped but pressed, and are of the best and most careful workmanship. The Needle is automatically clamped on the stylus, not pushed inside, and can be dropped by simple pressure on the button of the automatic needleholder.

We have a great variety of Sound Boxes ranging from 5/- upwards to suit all Machines, and can quote on hearing requirements.



UNUSUAL REPRODUCER



MEANS OF PLAYING CYLINDERS ELECTRICALLY

When the song began to sell in 10,000 lots the singer turned it back to Morse. "Good-bye, My Blue Bell," "Love's Lullaby" and several others are among the songs composed by Morse. "Good-bye, Mr Blue Bell," ten years ago, was sung by every urchin throughout the country. Today only musicians and song-writers remember it.

Harry von Tilzer is the daddy of all song writers. He has been writing songs twenty-five years and started out by selling "My Old New Hampshire Home" for $15. He wrote "Just As Your Mother Was" and "I'd Leave My Happy Home for You."

Wolfe Gilbert started life in a Philadelphia cigar shop. He was fired by the foreman because he spent too much time writing parodies of popular songs. He has accumulated a fortune with such productions as "The Robert E. Lee," "Are You from Heaven?" and "Lily of the Valley."

Frederick Knight Logan, whose "Missouri Waltz" was dubbed a joke by publishers and musicians, has sold more than a million copies, bringing him close to $50,000. He published the songs himself and made his own terms with the publisher who is now featuring it. His "Blue Rose Waltz" is another home-run hit.

Earl Carroll started life as a program boy at $6 a week. No one wanted the first hundred songs he wrote, so he wrote another hundred. His success began with "Dreaming," which was followed by "Isle D'Amour" and the songs for "So Long, Letty," and "Canary Cottage." He built a $40,000 bungalow on the roof of a skyscraper and then gave up an income of $50,000 to join the army at $30 a month.

Edison Phonograph Monthly, October, 1919

THOMAS ALVA EDISON

"In the phonograph," writes Edison, "we find an illustration of the truth that human speech is governed by the laws of number, harmony, and rhythm. And by these laws we are now able to register all sorts of sounds and all articulating utterances even to the lightest shades and variations of the voice in lines or dots which are an absolute equivalent for the emission of sound by the lips; so that, through this contrivance, we can cause these lines and dots to give forth again the sound of the voice, of music, and all other sounds recorded by them, whether audible or inaudible, for it is a very extraordinary fact that, while the deepest tone that our ears are capable of recognising is one containing sixteen vibrations a second, the phonograph will record ten or less, and can then raise the pitch until we hear a reproduction of them. Similarly, vibrations above the highest rate audible to the ear can be recorded by the phonograph and then reproduced by lowering the pitch until we actually hear the record of these inaudible pulsations.' "To make the idea of the recording of sound more clear, let me remark one or two points. We have all been struck by the precision with which even the faintest sea waves impress upon the surface of a beach the fine, sinuous line which is formed by the rippling edge of their advance. Almost as familiar is the fact that grains of sand sprinkled on a smooth surface of glass or wood on or near a piano sift themselves into various lines and curves according to the vibrations of the melody played on the piano keys. These things indicate how easily the particles of solid matter may receive an imparted motion, or take an impression, from delicate liquid waves, air waves, or waves of sound. Yet well known though these phenomena were, they apparently never suggested until within a few years that the sound waves set going by a human voice might be so directed as to trace an impression upon some solid substance with a nicety equal to that of the tide recording its flow upon a sand beach. "My own discovery that this could be done came to me almost accidently while I was busy with experiments having a different object in view I was engaged upon a machine intended to repeat Morse characters which were recorded on paper by indentations that transferred their message to another circuit automatically when passed under a tracing point, connected with a circuit closing apparatus. In manipulating this machine I found that when the cylinder carrying the indented paper was turned with great swiftness, it gave off a humming noise from the indentations a musical, rhythmic sound resembling that of human talk head indistinctly. This led me to try fitting a diaphragm to the machine, which would receive the vibrations or sound waves made by my voice when I talked to it, and register these vibrations upon an impressible material placed on the cylinder. The material selected for immediate use was paraffined paper, and these results obtained were excellent. The indentations on the cylinder, when rapidly revolved, caused a repetition of the original vibrations to reach the ear through a recorder, just as if the machine itself were speaking. I saw at once that the problem of registering human speech so that it could be repeated by mechanical means as often as might be desired was solved."

John Krusei, the man who made the first phonograph died in 1899, but his voice is still preserved among hundreds of other records in the store closets of the Orange laboratory. Edison has often affirmed that Krusei was the cleverest mechanic who ever worked for him, and it was in no small way due to him that the invention of the phonograph was brought to so speedy and successful an issue. He was wonderfully quick at grasping the principles of any new discovery, and was an adept at making models which would perform all the duties expected of them. When Edison had conceived the phonograph he called Krusei to him, showed him a rough sketch of the proposed machine, and asked him to build a model as quickly as he could. In those days Edison's model makers worked by piece, and it was customary to mark the price on each model. In this instance the cost agreed upon was eight dollars. Krusei was asked how long it would take him to complete the model, and he replied that he couldn't tell, but he promised that he wouldn't rest until it was finished. This was in the Menlo

Park days when Edison was looked upon as the sleepless wonder. He was accustomed to his chief assistants working with him for two and three days at a stretch without rest, and no man showed more tireless energy than Krusei. He could do with as little repose as the inventor himself, and would become so absorbed in his work that fatigue was unfelt and time was forgotten. The principles of the phonograph he absorbed with lightening rapidity, but it took him thirty hours to make the model, thirty hours without rest and very little food. At the end of that time he brought to Edison the historic machine which is now preserved in the South Kensington Museum.

It was a large clumsy affair, tinfoil was used as the material on which the indentations were to be made, and the cylinder was revolved by hand. If Edison was in any way excited on receiving the first model of his invention for recording human speech he did not show it, and those who were with him on that memorable occasion affirm that he regarded it at the time more in the light of a queer toy than that of a machine which would create any great sensation. Among those who were present when Krusei brought in his model was Carman the foreman of the machine shop; and this man, unable to believe what he had been told, bet Edison a box of cigars that the thing wouldn't work. The inventor with much good humour, accepted the wager, and then with a smile, born of absolute faith in his deductions, slowly turned the handle of the machine and spoke into the receiver the first verse of "Mary had a Little Lamb". Then the cylinder was returned to the starting point, and faint, but distinct, came back the words of that juvenile classic faithfully repeated in Edison's familiar tones. Those present were awed rahter than astonished, and the tension was not broken until Carman, in accents of pretended disappointment, and with a look of assumed disgust, exclaimed, "Well, I guess I've lost."

The first patent on the phonograph was filed in the United States, December 24, 1877, and was granted February 19, 1878, No. 200,521. Prior to this, however, in an application filed in Great Britain on July 30, 1877, No. 2909, Mr Edison disclosed not only a cylinder phonograph, but also an apparatus embodying his original conception of an embossed strip. Under these circumstances, perhaps, it is not unreasonable that Great Britain should now possess Krusei's original model, though its loss is one which America will doubtless deplore in years to come.

During the early days of the phonograph it formed the basis of many amusing jokes in the Edison laboratory. The "boys" were not slow to find out that the matrix, after having been used to record one conversation or poem, as the case might be, would also admit of another being superinduced, the two being reported in a very jumbling manner. In this way a lot of fun was obtained. On one occasion the affecting words of the first verse of "Bingen on the Rhine" came out as follows:—

"A soldier of the legion lay dying in Algiers,
'Oh, shut' Oh, bag your head'.
There was lack of woman's nursing, there was
"Oh, give us a rest'
lack of woman's tears.
'Dry up'?
But a comrade stood beside him while his life
'Oh, what are you giving us? Oh,
blood ebbed away.
'Cheese it'?
And bent with pitying glances to hear what he
"Oh, you can't read poetry 'Let
might say.
'up'.
The dying soldier faltered, and he took that com-
"Police, Police, Po-"
rades hand,
'lice',
And he said, "I shall never see my own, my
"Oh, put him out' Oh, cork,
native land.?
yourself'?"

Mr Edison enjoyed these phonographic liberties and laughed like a schoolboy. The inventor himself was not slow to have his joke with the phonograph, and once hid a machine in a guest's room. Just as his friend was about to get into bed a sepulchral voice exclaimed, "Eleven o'clock, one hour more." The visitor sat up for some time in anything but a peaceful frame of mind, but as nothing further happened he composed his nerves and lay down again. But sleep refused to visit his eyelids. He lay awake wondering what the end of the hour was to bring when the midnight chime sounded, and a second voice, deeper and more sepulchral than the first, groaned out, "Twelve o'clock, prepare to die". This was a little too much for the astonished guest who leaped out of bed and dashed into the landing, where he was confronted by the inventor, who was holding his sides with suppressed laughter. The mystery was explained and the guest returned to his bed, much relieved, if somewhat abashed, that all his fright had been caused by a phonograph.

to be continued