



The Phonographic Record

The Journal of The Vintage Phonographic Society of New Zealand

A Society formed for the preservation of Recorded Sound

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AUGUST 1977

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FOR YOUR INFORMATION

We would like to thank members who have written to us with information on how the 100 years of Edison's Invention of the Phonograph is being celebrated in their part of the world. We would also expect any member who for some unforeseen reason finds he is a copy short of our bi-monthly magazine, to immediately write to the Secretary.

We are to have another steep rise in postage in New Zealand, starting on October 1st, 1977. The Society has agreed not to raise subs for the 1977-78 year, but we advise members who are ordering parts in the future to expect increased charges on postage. We are sorry, but this is unavoidable. Our Secretary is grateful to the many members who have forwarded subs so promptly, and would be pleased to receive remaining subs due, at an early date.

WANTED TO BUY

*Cylinders of Vernon Dalhart
Overhorn gramophone*

Please apply: Mr H.B.Burkin, 601 Park Road North,
Hastings, New Zealand.

ILLUSTRATIONS

HOT AIR GRAMOPHONE

Two clear photographs taken by Stewart Hobbs, one of Bill Dini with his restored Paillard "Maestrophone" Gramophone taken outside the boatsheds, and the other of the motor as viewed from the top. The cylinder fly wheel and governor can be clearly seen.

EDITOR: Further information on this machine would be appreciated.

Victor Catalogue with Illustration of Sousa. See article with extract as taken from Catalogue and Readers Digest, October 1976.

WORKING PARTY AT FERRYMEAD

This photograph was taken on the evening of 2 June 1977, when we were preparing the Ferrymead display for the Convention. The stalwarts enjoying a break are, from left: Stuart Hobbs, Adair Otley, Peter Mattison and our invaluable parts maker, Joffre Marshall. For the benefit of shutterbugs anxious to keep up with the latest trends in sophisticated photography, this view was taken by Gavin East on a vintage Six-20 'Popular' Brownie, using not flash but a 'count to five' time exposure.

AN ENCYCLOPAEDIA OF BERLINER DISC PHONOGRAPHS ELDRIDGE JOHNSON

1901

VICTOR MONARCH DELUXE

NO.32

This, I think, would without a doubt be the most elaborate machine we have been fortunate enough to be able to illustrate. There was also, an even more elaborate finely carved record cabinet for the machine to sit on, which was also available from Eldridge Johnson. Neither cabinet nor machine were cheap. The Victor Monarch Deluxe sold for \$60.00 and together with cabinet sold for \$150.00. The Victor Monarch and the Deluxe model came supplied with standard sound box (as illustrated) but for an extra \$3.00 the Victor Concert sound box (also shown) could be obtained. The claim for the improved model was that it fully doubled the volume as well as improved the sound quality.

SOUSA, THE MARCH KING SAYS ...

"Dear Mr Johnson: — Your "Victor" and "Monarch" Records are all right". *"John Philip Sousa."*

The Victor Disk Talking Machine, with its practically indestructible Record, is already so widely known (our factory having made more than a quarter of a million) that it is hardly necessary to explain its many advantages over any other type of talking machine, but such vast improvements, both in the manufacture of Machines and Records, have recently been made, there is positively no comparison between the sound reproductions of even three months ago and the magnificent results produced today. Place the "Victor" Talking Machine where it cannot be seen and anyone will declare it's the human performer.

By the early 1900's, Sousa had made for himself a big place in the musical life of America. Advertised everywhere, his face was probably more familiar to people across the land than that of any other American. He was less successful, however, in his ferocious one-man war against the gramophone. Although he had been one of the first to make recordings, he disliked machines and the "mathematical system of megaphones, wheels, cogs, discs and cylinders." "Canned music is as incongruous by a campfire as canned salmon by a trout brook," he once wrote (thereby introducing the term "canned music" into the language).

Sousa never revised this opinion, even though recordings did extremely well for him. "Your gramophone is all right" was all he could be moved to say as an endorsement for the Victor Talking Machine Company. In May 1923, when the nearly septuagenarian and slightly deaf Sousa was introduced to the nearly octogenarian and almost completely deaf Thomas Edison, the two were soon embroiled in a shouted argument about recordings.

Research by Stuart Hobbs.

DISCOVERY & RESTORATION OF A PAILLARD "MAESTROPHONE" GRAMOPHONE, DRIVEN BY HOT-AIR MOTOR

by Bill Dini.

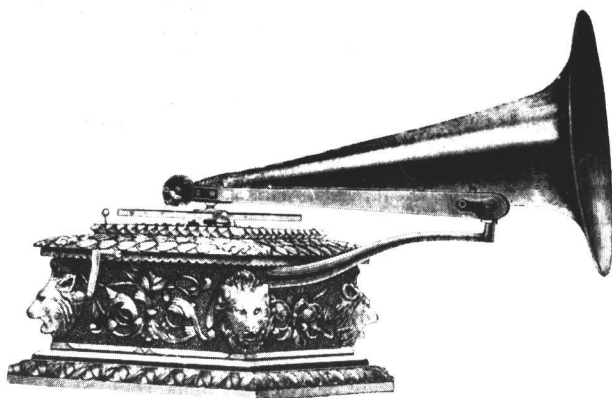
There have been many varied types of gramophones and phonographs, but practically all were turned by hand, by electricity, clockwork, treadle, water-tap motor or weights. The only exception I know, is one model Paillard, a Swiss gramophone of around 1908, which was driven by a hot-air motor. My first knowledge of such an instrument was when I read a copy of Chew's, "Talking Machines", printed in 1967.

On page 75, I read —

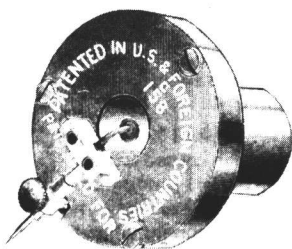
"Although the early Edisons were driven by electricity, the spring-driven motor remained the only practical source of motive power for mass-produced domestic instruments until the majority of households were connected to the public electricity supply mains, and even then the full advantages of electrical drive were realized only when these mains supplied alternating current. But one interesting experiment with motive power was made during this period (around 1908), namely the use of a hot-air motor. An instrument with such a motor, made by the Swiss firm of Paillard, was shown at the Spring Leipzig Fair of 1910 and it was later marketed in this country (England) as the APOLLO No.10. It ran for 12 hours with one charge of methylated spirit (should be one pint). Of its claims to be both noiseless and fireproof, only the former is consistent with the Author's experience."

I thought nothing more of this freak machine until in January of this year, when in Timaru, I was lucky enough to acquire from a fellow member, Ray Bennett, the incomplete motor of such a machine. There was absolutely no way of finding the rest of the instrument, so after much thought, I was inspired to try and restore the machine to

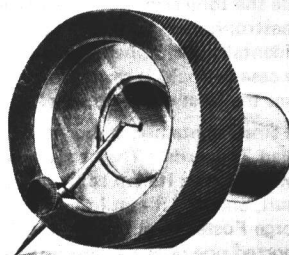
VICTOR DE LUXE



NO. 32



Standard Sound Box, \$2.00



Concert Sound Box, \$5.00



Sousa, the March King, says:

Dear Mr. Johnson:—Your "Victor" and "Monarch" Records are all right.

John Philip Sousa

The Victor Disk Talking Machine, with its practically indestructible Record, is already so widely known (our factory having made more than a quarter of a million) that it is hardly necessary to explain its many advantages over any other type of talking machine, but such vast improvements, both in the manufacture of Machines and Records, have recently been made, there is positively no comparison between the sound reproductions of even three months ago and the magnificent results produced to-day.

Place the "Victor" Talking Machine where it can not be seen and any one will declare it's the human performer.



FROM VICTOR CATALOGUE

1902

WORKING PARTY AT FERRYMEAD

FROM LEFT S HOBBS. A OTLEY. P MATTISON
J MARSHALL.

a playable condition. I cast about for all the information and pictures I could find on the model. There was an illustration in Chew's book, but unfortunately the photograph was reversed. An Italian catalogue also showed the photograph, but it had an incorrect caption. In a book "The E.M.I. Collection" by E. Bayly, Editor and Publisher of "Talking Machine Review", who is one of the most knowledgeable of English experts, an illustration appears with the following description: On the Paillard, the turntable was caused to rotate by hot air striking a vane under it, rising from spirit burning in a shallow pan. An air-intake "horn" is seen at the left. When used, these models become extremely hot and likely to ignite. As we will see, the operation of the motor given there, is totally incorrect. My next and most educated source of information was a reprinted Paillard catalogue put out by "City of London Phonograph and Gramophone Society". This book devotes 5 pages to the 'hot-air' model and states: "Last novelty 'Maestrophone' driven by hot-air motor (patented). Handsome appearance, strong and reliable mechanism. Patent ball cranks. Absolutely silent regular running. Minimum consumption of alcohol (alcohol); one pint is sufficient for running the motor 12 hours. No broken springs. Can be started and stopped at a moment's notice. No perceptible heat and no danger."

But alas, once again, there are mistakes in the text. With all this information (correct and incorrect) I proceeded to restore the motor and build a case. First, I did not understand a hot-air motor, so studied all the literature I could borrow on such motors. Then I called on Geo. Whittle, a fellow member who lectures on Engineering at Canterbury University, and between us we designed a displacer cylinder (which was missing) and he made it. The motor functioned poorly, so a larger cylinder was tried. The motor now is quite functional although it is obvious that the displacer cylinder should be of thinner material (it is of exhaust piping) and I think, could be of tin. The thick cylinder makes the starting a protracted business (sometimes, ten minutes). The motor is very temperamental and is susceptible to such things as room temperature and water vapour in the enclosed air. Now, having got the motor running satisfactorily (although slow to start) I went on to make up the instrument case, horn support and other details. The horn used, was one I had; practically identical to the one in the catalogue. The elbow is a 'plumbers' bend' (for a bath tub); nickelled, it looks like the original. The heavy collar to take the tone-arm top is from an H.M.V. portable, while the tone-arm itself is exactly as illustrated, and came from my junk pile. The reproducer is a genuine "Maestrophone", probably off a spring-driven model, while the handle occasioned no trouble, as there isn't one. Incidentally, I swapped the reproducer for an identical one labelled "Sonora", courtesy of a member, Gavin East. The case (of oak) is made from bed-ends from ex. member Les Brehaut, and though making it was time consuming, it was the least of my troubles.

The small container, or burner, is cut from the bottom of a small spray-can, and 1/2 inch of methylated spirits has played 7 records. The heavy bracket for supporting the horn and tone arm caused some thought. I had a good view of it in an Italian catalogue and it was quite ornamental, but after study I produced a wooden model carved to suit, and had it cast in brass and nickelled. It looks absolutely original. I have learnt recently from member George Foster, that the late Mr C.E. Woledge, our first Patron and an early phonograph and gramophone dealer, imported one only Paillard hot-air model, but owing, no doubt, to its much higher retail price, he was unable to sell it, so he substituted a clockwork motor, and sold it off as an ordinary Paillard. The hot-air motor is undoubtedly the one you see here, and over the years had made its way to Timaru. The "Clockwork" model, no doubt, went the way of the great majority of "overhorn machines" and may have finished up in a rubbish dump, but who knows, some day I may spot it, acquire it, and remove the clockwork and handle and restore the hot-air motor to its original home. I have not heard of a functional Paillard hot-air model anywhere among collectors.

Some details of the hot-air motor may be of interest, especially to those of a technical bent, as it is a rare type of motor these days, although 70 years ago it was a common sight on farms driving a water pump (our President has such a one 'non functional'). For fuel, these used wood or any burnable rubbish. A hot-air motor has a closed quantity of air which is heated in the displacement cylinder, forced up a port by expansion and drives the working piston down. On its return up the cylinder, the working piston forces the now cool air into the displacement cylinder for reheating and expansion to drive down again. The same air is used back and forth, and there is no connection outside. The trumpet-like bell on the side, is the chimney to dissipate the heat from the burning spirits. (Not an air intake as suggested by the E.M.I. book). The fins are to cool the air before re-transfer and re-heating and the motor has a conventional governor to regulate the turntable speed.

You notice I have employed plenty of asbestos sheet in the vicinity of the burner to minimise the danger of fire—disclaimed by Paillard, but emphasised by both Chew and Bayly. "A fan fitted under the turntable, draws air therefrom and discharges it over the fins of the top or working cylinder thereby assisting to cool the trapped air before its return to the bottom cylinder for reheating. It was the existence of this fan which no doubt prompted Ernie Bayly to think that this was a 'vane' which caused the turntable to revolve by rising hot air heated by the burner." Hot air motors are once more to the fore, they are now being made, driven by solar heat, reflected by

a mirror through a quartz window direct to the displacement area. It has also been found that to compress the trapped air, more power is obtained; or better still, by using helium instead of air or compressed air, the result is still greater power.

Since writing the above, I have learned (via Walter Norris from Mr Woledge's scrap book), that the hot-air motors were made for Paillard in Liege, Belgium and as World War 1 started in 1914 and Liege was completely destroyed, it seems doubtful that any more hot-air gramophone motors were ever made. Later, during the recent Convention to mark the Centenary of Edison's invention of the phonograph, I demonstrated the "Paillard" at one of the sessions where it prompted great interest. One member from the North Island assured me that to see the hot-air motor start with the flick of the flywheel and play away without any winding, was worth the trip down alone. A very interesting and intriguing gramophone. The photos show a general view of the "Paillard", a close-up of the hot-air motor and also the "home-made" bracket.

JULY MEETING REPORT

G.East

Adair Otley played us a tape containing recordings by the great syncopated pianist-composer Billy Mayerl (1902-59), who recorded for Vocalion and HMV in the mid-1920's but was better served in his later Columbias. The style of pianism epitomised by Zez Confrey's Kitten on the Keys has been, perhaps unfairly, dismissed as a decadent, 'novelty' elaboration of 'classic' ragtime — certainly it can seem flashy and trivial if compared to the best rags of Scott Joplin, James Scott or Joseph Lamb. But Mayerl was different: a trained musician in the English show and dance band world, he combined dazzling technical virtuosity and infectious vigour with elegance and impeccable taste. Wisely content to confine himself to the idiom in which he excelled, Billy Mayerl composed and played some of the most charming and poignantly graceful light music of this century. I will not comment on the machine demonstration (Bill Dini's 'Variol' Edison Gem) since this will be dealt with in an article.

AUGUST MEETING REPORT

G.East

Not much I can say, really. Bill Dini spoke entertainingly of his recent North Island holiday, bringing us up to date on some seldom-seen members and their collections. Most interesting, but little point in my quoting chunks of it.

SIR CHARLES WHEATSTONE

by N.Johnson

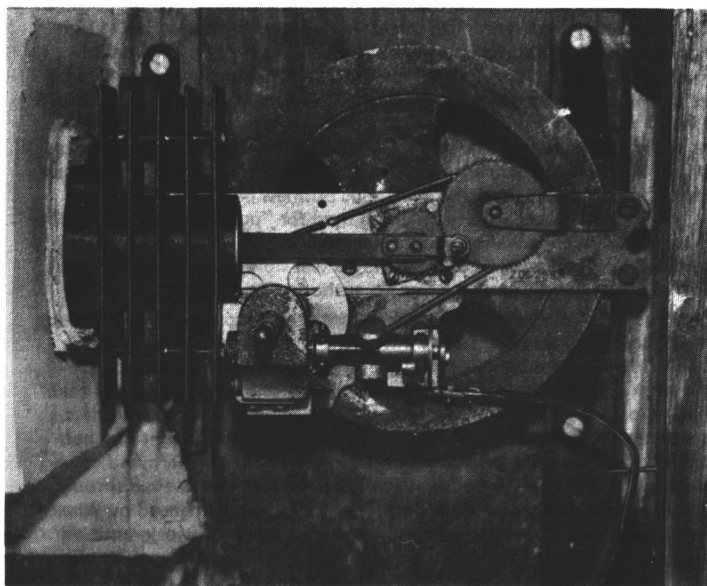
During the late 18th and early 19th centuries, efforts to devise an electric telegraph were made by a surprising number of individuals. But for the final perfection of the first successful telegraphs, four names have come to stand out above the others. In Germany, there was Carl von Steinheil (1801-70), who elaborated and made practicable the earlier telegraph invented by fellow Germans, Gauss and Weber. In the United States, Samuel Morse (1791-1872) developed his famous version of the telegraph, while in England the honours fell to Charles Wheatstone and William Fothergill Cooke. (Another inventor came very close to achieving success at about the same time as the above four. He was Baron Schilling, who developed a very workable telegraph in Russia, but who died before being able to erect his first commissioned line.) Fothergill Cooke (1806-79) was a man whose foresight blended advantageously with his natural enthusiasm and determination. Witnessing in 1836, a laboratory demonstration of what he later called "one of the common applications of electricity to telegraphic experiments which had been repeated without practical results for half a century," he perceived the enormous business possibilities which a properly perfected telegraph would possess. Deciding that electricity could be used for "purposes of higher utility than a lecture", Cooke who previously had been employed in military and then medical duties, set about to construct his own electric telegraph. He made substantial progress, but his apparatus was slow-working and of short range. So in early 1837 Cooke contacted Wheatstone, who was a well-known authority on electricity.

Charles Wheatstone (1802-75), the son of a music-seller, showed few signs of talent as a schoolboy. While still an intensely shy 14 year old, he was sent from Gloucester to work in London with his uncle, who ran a musical-instrument maker's business in the Strand. During this time he developed the mechanical skills which would become of such value to him in his scientific work. Later, his brother joined him in setting up a business of their own, making and selling musical instruments. Working with these instruments fostered an interest in acoustics, and from experiments in this field, Wheatstone developed a simple but intriguing device which brought him considerable renown. This was the "Enchanted Lyre", a sounding board fashioned in the shape of a harp and connected by a long wooden rod with a musical instrument in another room. The sound vibrations travelled through the rod so that the "lyre" seemed to be emitting music on its own account. The illusion was enhanced by Wheatstone's pretending to wind up the "lyre" before each performance! He published a paper on his work, entitled

HOT AIR GRAMOPHONE



S HOBBS. PHOTO



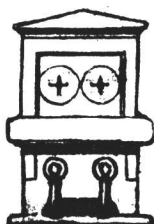
BILL DINI AND HIS HOT AIR
DRIVEN GRAMOPHONE
MOTOR VIEWED FROM ABOVE

CHARLES WHEATSTONE



"New Experiments in Sound", which aroused considerable interest in scientific circles. Other papers followed, including one on the nature of musical sounds, and in 1829 Wheatstone took out his first patent on "Mouth-blown instruments". Within a few more years, the self-taught scientist had turned his attention to electricity; and one of his most widely reported experiments was his determination of the velocity of electricity, which he carried out in 1833. Using a rotating mirror, a capacitor and spark-gap, and a wire 402 metres long, Wheatstone calculated that the discharge had passed through the wire at a velocity of 463, 133 kilometres per second. This incredible figure remained in many textbooks for years, until it was demonstrated that at the very most, the velocity of electricity through a wire could not exceed that of light (300,00 km/sec.), and that usually it would be less (due to the resistance and capacitance of the wire.) Wheatstone's investigative work on acoustics and electricity brought him such scientific renown that in 1834 he was appointed professor of natural philosophy (i.e. physics) at King's College, London. His experiment on the velocity of electricity led him into studies which determined some of the electric and magnetic effects that could be produced by electricity in very long lengths of wire, and the conditions which had to be met to make such effects possible. Because of this work, he had already devised by 1836, a laboratory-bench telegraph of his own design.

Unlike his contemporary, Michael Faraday, Wheatstone was not a good lecturer. Although he could converse with ease and eloquence, especially upon his favourite topics of sound, light and electricity, as soon as he had to face an audience his volubility and confidence deserted him. He wrote little, but read widely, and gained a reputation for his ability to recall facts and figures with amazing ease. A small man, seemingly full of nervous energy, he applied himself to science with singular devotion. In early 1837, Cooke brought his experimental telegraph to Wheatstone. By a practical application of the known laws of electricity, Wheatstone succeeded within a matter of months in producing a workable telegraph for long distances. It was built around five galvanometer needles which were deflected either left or right depending upon the polarity of the current. These deflections could be given a particular sequence, which could represent letters and words.



The 2 needle version soon replaced the original instrument and was used successfully for many years.



Cooke and Wheatstone's 5 needle Instrument of 1837

The first public trial was in July 1837. It was a success, and Wheatstone wrote of the occasion:

"Never did I feel such a tumultuous sensation before, as when, all alone in the still room, I heard the needles click; and as I spelled the words I felt all the magnitude of the invention pronounced to be practicable beyond cavil or dispute."

Strangely enough, enthusiasm for the new device grew only slowly within official circles. But Cooke, by his deed of partnership with Wheatstone, had arranged to have control over the laying of lines, and in 1846 he established the "Electric Telegraph Company" which bought out the Cooke and Wheatstone patents. As well, the Company paid six hundred pounds to Edward Davy to obtain the patent of the relay he had invented, and also came to an agreement with Alexander Bain, a Scotsman who had devised a number of improvements in telegraphy. Meanwhile Wheatstone, recognizing the limitations of an apparatus which received messages in the form of needle deflections, had devised a new instrument with a pointer and dial, around which the letters of the alphabet were arranged. This became called the alphabetical transmitter or ABC instrument, and since it did not require a trained operator, it became very popular for private or business lines. Having simplified the operation of his apparatus, Wheatstone now turned to the problem of increasing the speed of transmission. This involved perfecting some form of reliable machine that could transmit faster than the human hand. This was the type of challenge to his mechanical ingenuity which Wheatstone excelled in. He liked puzzles of all sorts, and had a public reputation for solving them. He had once been brought a secret despatch of Charles I, which had remained incypherable since the 17th century; within a short time he had revealed its message.

What Wheatstone did to automate telegraphy was to utilize a paper tape which was punched by triple rows of holes that were arranged to conform by a certain pattern to the Morse code which was now (1867) being used in England.

The tape was fed into the automatic transmitter which was able to operate at high speed. The receiver inked the message as a series of dots and dashes, but a later development translated the signals into alphabetical letters. Although it took time to prepare each tape, transmission speed was so fast that many more messages could be sent during any given time, thus increasing the traffic capacity of the lines which were now being so widely used. Wheatstone was more a clever experimenter than a theoretical scientist. In conjunction with his brilliant technician, Mr Stroh, he produced delicate and ingenious apparatus, the functions of which he could explain with incredible clarity to any small gathering. After his investigations into light and eyesight, he devised (in 1838) the first stereoscope, which, due to developments in photography, became so very popular in the Victorian parlour. Then in 1843, he introduced what became known as the Wheatstone Bridge, a valuable electrical circuit for delicate measurements. This was an embellishment of the original bridge circuit devised ten years earlier by S.F.Christie. It was developments such as these which Faraday probably had in mind when he eulogized Wheatstone with the claim that there was nothing he touched which he did not adorn. Fothergill Cooke would probably have been less idealistic. His partnership with Wheatstone was not an easy one; neither liked the other getting too much credit for their 'invention' of the telegraph. Yet from their temporary union, shaky as it was, emerged what seems to have been the first non-experimental telegraph system to be opened for business anywhere in the world. It was Cooke who had the vision to aim for commercial success; and it was Wheatstone who ensured the practicability of the idea, and much of the technical means for its first 3 decades of growth.

RECORD LISTENING POST NO. 22

by Barry Sheppard

Opening Record Listening Post No.22, I have two recent releases for this issue from the EMI Studios which I hope, will please readers. The first up — a fine pressing by a singer who is still popular, that of Cliff Richard. The recording "Twenty Greatest Hits — Volume Two" (EMI-Hits 30). Listening to this L.P. I found all 20 tracks clear, and the voice of Cliff Richard was once again enjoyed. Such numbers as "Devil Woman", "A Girl Like You", "Gee Whiz Its You", "Nine Times out of Ten" and "Blue Turns to Grey", many of which I have heard on the little 45 rpm record. For the hundreds of Cliff Richard fans, I think this pressing should delight your ears as each track has been pressed with quality by a company who, for many years has delighted every listener, EMI.

Second choice goes back even further, one of Bing Crosby's. In this recent release, EMI have produced a pressing which not only covers Bing Crosby but also many of his friends. The title, "Bing Crosby and Friends" (EMI-Hits 29). Born in Tacoma, Washington, Bing Crosby's career runs the gamut from his early days as a vocalist with the Paul Whiteman and Gus Arnheim Bands (there was also a stint with Tommy and Jimmy Dorsey orchestra) to the Bing Crosby show, one of the most popular of all radio shows. Listening to this recording (produced to commemorate Bing's 50th year as an entertainer), I found the production boys had done a fine job bringing the voice of an old master back into our living rooms. Such tuneful oldies as "Lady of Spain", "Zipadee Do Dah", "Mona Lisa", "I Got the Sun in the Morning", "Two to Tango" and "Don't let the Stars get in your Eyes". Also covering this album are many of Bing's close friends such as Rosemary Clooney, Kay Thompson, Andrew Sisters, Ozzie and Harriet Nelson, Rudee Vallee, Nat King Cole and Walter O'Keefe, all of whom join Bing to make this L.P. one of the finest recordings to cover the songs and melodies of yesterday. "Bing Crosby and Friends", released by EMI. Well, two worthwhile recordings to think about; ones which I'm sure may find a place in your sound recording library. Until next time, very happy listening.

PATHE

In Volume 12 Issue 2 page 14, we illustrated a Pathe oriental label. Since then, member James Heath of Christchurch, New Zealand, has written to us with further information which is printed below—

The banner round the top of the record label reads 'Shanghai Pathe Record Company'. In the years preceeding the first war a number of English and French firms opened branches in China. The process the Chinese used to translate these 'foreign Companies' names is fascinating. They start with the name, pronounced with a Chinese accent (obvious eh?), then break it into syllables or sounds, as, in our case, Pathe, sound like BA-TDAI, becomes BA & TA. Next, and this is the part that surprised me, there is not just one Chinese character that sounds like BA, and another that sounds like TA. There are well over a hundred characters, all pronounced BA, another hundred odd for TA. How do we choose which one? Well, each character, as well as having a sound, has a meaning. So we could, for example, choose characters meaning THIN or NEW or BLUE or FISH, all of which would be pronounced exactly the same. For Pathe, the symbol chosen for BA (3rd from the right) means HUNDRED, and the symbol for TA (4th from the right) means GENERATIONS. What better way to hope that a business will have a long and profitable life? These two symbols would then have been registered - just as we register a trade name, with its particular spelling- and in future, Pathe would always be known by these same two characters.