

#### The Phonographic Record

Journal of the Vintage Phonograph Society of New Zealand (Inc.)

A society formed for the preservation of recorded sound

Polune 48, Issue 3

June/August 2013



Robert Sleeman photographed this intriguing ceramic trio on his windowsill as a reminder that both pets and phonographs are good for the "elf" (and if you think that is a dreadful pun, take a deep breath before viewing page 16)

A A A

#### THE PHONOGRAPHIC RECORD

**VOLUME 48, ISSUE 3** 

June/August 2013

Editor: 1965-1972: Pam Rogers Editor: 1972-2012: Walter Norris

Magazine team 2012-:

Honorary Editor in Chief: Walter Norris Editor: Gavin East, Gavin.East@lincoln.ac.nz

Photographer: David Peterson

E-mail: nzphonosociety@hotmail.com

Secretary: Mrs S McGuigan P.O. Box 19839 Woolston Christchurch 8241 NEW ZEALAND

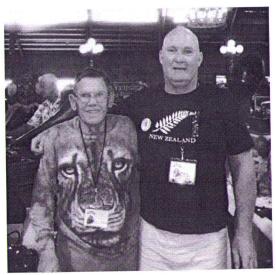
#### For your information

This issue is later than it should be but I hope it is worth the wait. Harold Braker's Victor motor article is such a fine piece of technical writing and illustration that I thought it should be printed complete rather than spread over two issues. If anyone would like it emailed or printed out in a larger format, please contact me.

As always I am grateful for members' contributions, David Peterson's photography and Jill Green's quick and professional assembly of each issue from my barrage of "I think we can use this" emails.

Gavin East Editor

#### A tribute to Larry Schlick 1931-2013



Larry with Mark Dawson at the 2012 Union show

Thanks to Mark Dawson of Napier for letting us know of the death earlier this year of long time member Larry Schlick of Wauwatosa, Wisconsin. Though not many New Zealand collectors besides Mark and, in the 1970's, the late Bill Dini, met Larry in person he was an enthusiastic supporter of our society from the earliest years and supplied Walter Norris with bulging envelopes full of photos and information for the magazine, particularly of each year's "Union", the phonograph show held at Union, Illinois.

For an outline of Larry's full and rewarding life I cannot do better than quote his death notice from the internet:

### Lawrence Anthony "Larry" Schlick

Schlick, Lawrence Anthony "Larry" Age 82, died, in his home in Wauwatosa, Friday, June 14, 2013. He was born March 28, 1931 in Chicago, Illinois. He was forever grateful to have been adopted

(1932) and raised by Paul and Pauline Schlick of St. Paul, Minnesota. He was graduated from St. Paul Academy and Macalester College. He worked for 12 years at the Worthington Daily Globe as photo editor, where he won many awards for his photography. In 1969 he began teaching at what was then the Academy of Basic Education, now Brookfield Academy. He retired from teaching at B.A. in 1996, and taught for several years at Mercy Academy. His other lifelong interests were sports, collecting antiques, and dogs. He is survived by his wife of 55 years, Patricia Cramer Schlick and four children, Deborah Schlick (Brian Miller), Laura LaBlanc, Michael Schlick (Nancy), and Mary Peveto (Mikal). He is also survived by seven grandchildren, Anna, Adrian, Madeline, Isabella, Haile, Parker, and Lucia.

Published in Milwaukee Journal Sentinel on June 18, 2013

By the late 1960's Larry had built up a very fine collection which provided the basis for his pioneering book, "A portfolio of early phonographs", intended to help collectors identify machines and assess their originality. There was so little printed information for collectors back then that many copies of Larry's large spiral-bound book soon became tattered and worn from constant checking against new acquisitions.

Mark tells us that Larry's health was already failing when they met last year. Looking back, we should have realised this when Larry didn't send the annual account of the Union show. Larry made a huge contribution to collecting in general and our society in particular and we are sad to have to accept the passing of a devoted friend

# Victor 3, 4, 5, 6 & Victrola motors type "M" and "AM" (Salvage, Repair, and Improvements) By Harold Braker 2013

Supplement to: Victor – Victrola Motor Identification (and repair information) By Harold Braker 1988

This is also an article of caution and warning to anyone who takes this motor apart. If you do not re-assemble it correctly, you seriously risk the bull gear stripping its teeth off. This article should fully explain why it happens and how to prevent damage.

I spent 39 years in the automotive industry, most of these years as a service rep. with multinational companies, later specializing in power train failure analysis of HD Allison transmissions.

This article spans 45 years of collecting phonographs and specializing in repairs of Victor motors. I currently have over 40 type "M" to rebuild, and many of them have stripped bull gears. All of the repairs, modifications and machining described herein have been tested, and the results thus far indicate a stronger and longer lasting motor. Most of these motors are found in high value Victors, especially in Victor 5's and 6's. Eventually the making of reproduction gears, etc. would be time and money well spent, but substitutes are explained here.

The "M" motor has weaknesses not found in the later models (240 + 440) orthophonics. The following tackles the repair and modification of the motor before and or after it has ground to a stop. This article includes drawings and photographs which are part of the text.

Firstly, let's visualize the power flow as it is viewed from the bracket/station end. The winding gears drive the first arbor shaft clockwise, centre winding the spring farthest from the turntable spindle. This "first" spring pulls the double barrel outside hook clockwise. The double barrel now pulls from the second (outside) hook the second (inner spring) which pulls the arbor sleeve clockwise. The arbor sleeve winds the 3<sup>rd</sup> spring clockwise also, putting pressure by the bull gear down into the spindle. All three springs are wound into the barrels clockwise, but yet when the center spring is viewed from stantion it appears to be wound in counterclockwise.

Victor describes the Big Brass gear as the spring barrel gear, "which is the name used for the "M" motor. For the type 240 + 440, this gear is called the "turntable spindle driving gear", which is not attached to the barrel. This latter gear we will use to modify the "M" motor and henceforth we will simply call these two different gears as bull gears, as the dictionary aptly describes them.

#### Inspecting the Unwound Motor and Assessment

Before we re-grease the springs or attempt repairs to the "M" motor, it would be helpful to see and note if the bull gear has been running aligned with the centre line of the spindle, or off to the side? Does the barrel assembly wobble around with end play? If you find any of these signs, some repairs should be performed before re-assembly. Even if it is only a broken main spring initially, we want to be aware ahead of time if this motor can be re-assembled without replacing parts or machine work. If misalignment or wobble is noticeable, the bull gear and barrel holes will be worn and the arbor shaft also with wear grooves. If the motor is re-assembled this way, the risk of a stripped bull gear is high.

If you decide or give the task of disassembly to others, note if the arbor washers, Victor \*3145 & \*3146 are in place along with thrust washer \*3016. (.060). Also note if the barrel arbor bracket bushing screws are tight, why? Because if this motor has had a previous spring replacement possibly the arbor washers have got lost. It is possible Victor only used \*3145 & \*3146 when found necessary – we check this out on final assembly and readjustment of the bracket bushing screws.

This pre inspection applies to working or worst case stripped bull gears, the latter will have a tooth profile similar to this . See photo E.

A closer look at the damage, how and why does this happen? A close up of tooth faces are examined under a 20× binocular microscope. On what's left of the tooth face a normal wear pattern can be seen. There is no evidence of wear progression; instead you see the stripped tooth section as if sheared off at the top outside corners. It is always the same; something has allowed the double or triple spring barrel assembly to back away from the spindle. The following text will look at the possible cause and how to prevent this kind of failure. A stripped fine tooth brass bull gear is simpler to replace than a course tooth gear since we only have fine tooth steel replacements which require a matching fine tooth spindle. Machining details are not fully covered here, as the machinist by looking at the drawings and parts supplied can determine what has to be done.

However it is important to repeat some key aspects of the motor's adjustments, so bear with me as this narrative continues......

As shown in the 1911 Victor parts catalog there are two different arbor washers used (shims?) or not at all, or maybe more than two. Later on we will test to see if and where they might be necessary. Photos  $A+B_{\star}$ 

#### Repairing the Motor

Figure 1, 2 and 3 illustrate the repair options which are highlighted. It might be that only the bull gear hole is worn, and require a custom fit bushing to give a wider bearing surface.

Replacing a stripped coarse tooth bull gear (Photo E) with a "240" steel version will require a fine tooth spindle as was later used on the "M" motor, or a modification made using the upper part of the original and the lower part of the "J" motor spindle (which is shorter) to combine the two halves into one with a length of 6", see Figure 2. This work requires that the lathe

chuck be dead accurate, and the two halves be press fitted with "loc-tite".

Replacing the bull gear with either a 3/32" or 1/8" thick gear requires the barrel and the gear to be "chucked" from the outside for a concentric fit of the bushing. When riveting of the barrel and gear, the assembly should be clamped together onto something solid as shown in **Photo #D. Photo "C"** shows the prior countersinking of the 1/8" thick bull gear for the rivets, so as to not interfere with the winding gear. Rivets of copper or brass 1/8" dia. × .260 ± work quite well using a hollow punch.

#### Preparing the Assembly

It is important that each barrel cap be fitted to its barrel. If the cap inner edge is sharp, ever so slightly file a bevel so as to allow the press fit of cap into barrel access. Tap it lightly to ensure the cap sets evenly and flush with barrel recess. The whole assembly must "click" together struoothly before springs are installed to ensure minimum arbor end play, see Photo B. (The light squeeze of "C" clamp may help to seat all the barrel components together). If we have no arbor end play (or too much), deciding where to

use arbor washers "3145 & "3146 has to be determined, Figure 1 shows five locations 1, 2, 3, 4, & 5 where "shimming" may be necessary. It is not known if washer "3145 & "3146 were always installed at the factory, or lost during a broken main spring replacement, or never there to begin with. NOTE: When upon final assembly, the main springs must be below recess so as to allow the barrel caps to seat as tested. Once the arbor shaft has been shimmed as in Photo B, the assembly is ready for the dry run. See below \* some further notes.

#### \*Assembly - The Dry Run

Place the barrel assy into the brackets; tighten mounting screws on end bracket. If the bull gear centers with the spindle and barrel assembly has minimal end play, we can assume that the end bracket brushing and set screws were correctly set at the factory. We are now ready for the main springs and final assembly.

#### \*Some further notes:

With reference to:

- #1. "Preparing for assembly", if washers "3145 and "3146 are not there, a useful first step may be to assemble the barrels into the motor frame using only a 5/16" rod of the same length as the arbor, to note the amount of end play and bull gear alignment initially.
- #2. Photo "B": The test stand shown has a hole drilled @ .312 to allow the arbor shaft to enter up to the shoulder at (1) in Figure 1. The end play testing is done with thrust washer #3016, or without if a custom fit bushing has been installed.
- #3. Photo "A": This photo shows where clearances (3)and(4) are feeler checked.

  Minimal clearances should be here see Figure

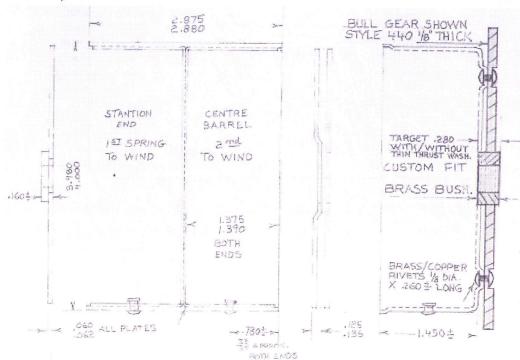
  1. If the test bar is found to rest on the arbor

shoulder, a washer(s) is necessary at (2) (between caps) to raise the double barrel up. Install end cap and test for end play as in Photo "B". Record now where the original (or added) washers were used at (1), (2),(3),(4), or(5) locations in Figure 1, for in case of a future disassembly. The arbors and barrels must freely turn independently with minimum of end play ensuring the alignment of bull gear to the spindle.

#4. Final Note: Unforeseen problems. See
Figure 1 \_\_\_\_\_\_ variations in original
manufacturing (machining) of the arbor, I have
found the shoulder to shoulder (1) and (4) to
vary up to .025 in length. So in deciding
whether to add washers or machine the arbor it
is up to the machinist when parts are replaced or
interchanged.

The arbor sleeve (#1670A) bushings if worn can be reamed out oversize if the arbor requires sleeves to repair worn grooves. The two middle barrel caps @ (2) depend on the sleeve to arbor clearance to being at least a "grease" fit to minimize barrel wobble.

H. Braker 2013



#### VICTOR MOTOR TYPE "M" FIGURE #1 BY H. BRAKER

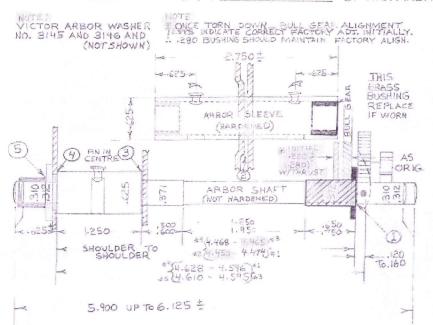
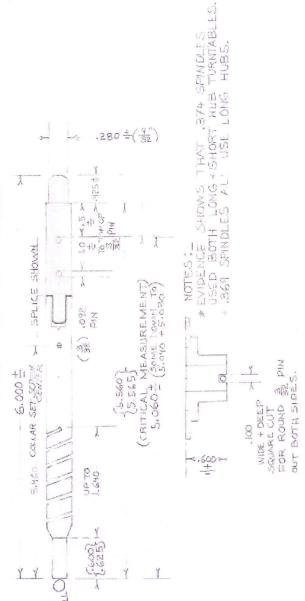
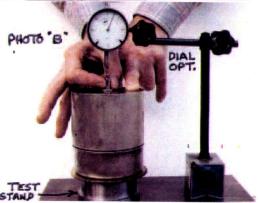
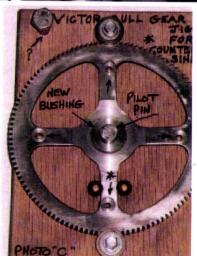


FIGURE #2 WH.BRAKER

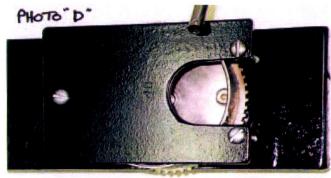


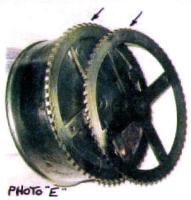






A 4 4

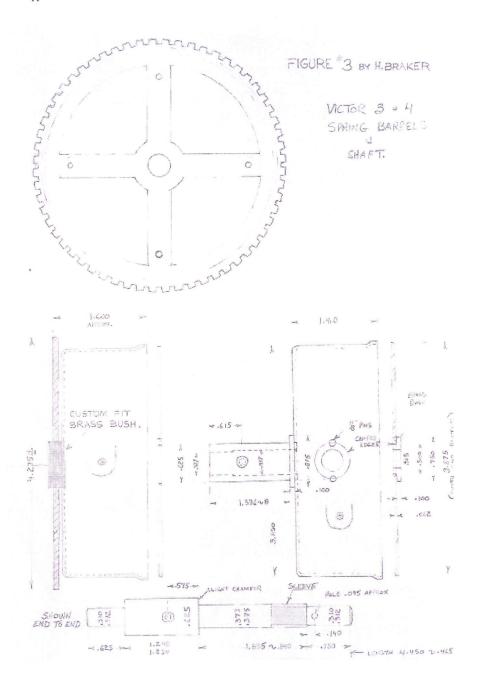




#### PRICE LIST OF PARTS

PART No.	FINISH	NAME OF PART	LIST PRICE
3044B 3005A 3005 3005 3006 3007 3006 3007 3044A 3065 3011 3048 3012A 3050A 3064 3146 3146 201 1670A 3065 3017A	ZZZEGEZEZEGEZEGEGEGEGEGE	Spring Barrel (Complete) (Single with sear) (Single with sear) (Single with sear) (Hook Care Rivet (Double) (Oouble) (Cap Cap  (with bushing Arbor Hook Washer  Thrust Washer  Sleeve Washer  Washer	\$14.00 1.50 2.50 5.00 5.00 2.00 3.00 1.00 1.00 1.00 1.00 1.00 1.00 1







This 1929 Auckland newspaper advertisement has been for sale on Trade Me recently and highlights what was understandable then but very sad to see now. Claude Woledge, our first Patron, was Manager of Edison Hall in Christchurch at this time and remembered sending the remaining diamond disc machines to Head Office in Auckland to be modified to make them saleable. Unfortunately this meant more than just fitting a Fletcher type "78" head as in many of these conversions the tracking gear and lifting lever were removed and the horns cut back and fixed in position. All able to be restored back to original specs of course but it makes for fingers crossed when checking out an "Edison gramophone" being offered for sale eighty years on -- Ed.

#### **Recent Meetings**

By Gavin East

#### February 2013

Taking advantage of the long summer evening, we drove inland up the steady rise of the Canterbury Plains to enjoy Roger and Voila Brown's hospitality at their home at Coopers Creek near Oxford. Roger had arranged with the owners of Village Green Antiques in the main street in Oxford to open the shop for us to have a look round before the meeting. We admired the impressive display of good quality ceramics, glass and furniture.

In discussion on parts we were pleased to hear from Roger that the firm which cut the last batch of Amberola 30 front grilles still has the pattern on file and will quote for a new order shortly.

After closing the meeting at 8.45 p.m. we enjoyed supper and conversation. Roger had asked me to bring a 78 or two to play on a favourite machine from his collection, a table model Cheney which struck us, David Peterson and me in particular, as unusual and rare. Cheneys sold very well in New Zealand but this was the first time we had ever seen a table model. I hope to feature Roger's machine in a future issue along with other Cheney material including the illustrated catalogue owned by David.

And of course some of us felt that we could not possibly leave without paying our respects to Roger's HMV 193 Reentrant and Jacobean diamond disc upright, enjoying the wonderful sounds coming from behind each grille!

#### March 2013

The evening of Monday 25 March 2013 saw a good turnout at David Peterson's home in Upper Riccarton, Christchurch. We wish we could enjoy Alan Brehaut's company more often but those hundred or so miles between Christchurch and his home in Timaru are enough to make a Phonograph Society meeting a very long evening indeed!

David Peterson welcomed new member Laurence Varlet and hoped she would enjoy being part of the Society.

When I mentioned several popular parts list items now critically low in stock, for example the Edison reproducer holding screw, HMV spindle cap or turntable screw and HMV Monarch clamp and screw set, Alan Brehaut suggested

that a Timaru engineer might be able to make these parts. Naturally we agreed to send Alan some samples in hope of making some progress.

In conversation on machines recently listed on Trade Me, David and I related our unsuccessful "consortium" attempt to buy an Edison Long Playing Console listed from near Feilding in the North Island. Though only the smallest of the LP Console range it was very appealing for being a scruffy "barn find" in completely original condition, complete with standard and long playing reproducers, instruction booklet and oiler plus over seventy diamond discs including some long playing ones. So many diamond disc machines in New Zealand were converted to "normal" 78 specifications to clear them from dealers' stock around 1930 that an unaltered one on Trade Me is almost the exception.

In an earlier meeting report I mentioned the neat little front mount Victor R which David had imported from the USA. In the course of buying the R, David had bought enough parts to form the basis of a second, slightly different version and at the March meeting we were interested to see both machines in immaculate restored condition, the newly-acquired one playing an early seven inch Victor disc surprisingly well with a rebuilt Exhibition soundbox.

David also played some lively records on the Edison Opera and L-19 Laboratory Model diamond disc machine before giving us the opportunity to look through his impressive collection.

#### **April and May 2013**

Lyndsey and Bill Drummond hosted the April meeting at their home in the Christchurch suburb of Bryndwr. As always it was an enjoyable get together with the small amount of formal business needed to meet our responsibilities as an incorporated society.

I was able to report that I had sent Alan Brehaut samples of several parts list items in the hope that an engineer in Timaru can make them. As well as the Edison reproducer holding screw, HMV spindle cap and HMV Monarch clamp and screw set, I had included in the package an Edison mandrel collar and an Edison threaded winding handle for the Model B Standard, Fireside etc.

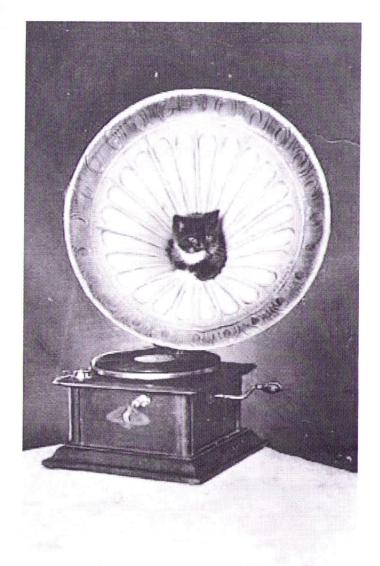
For the May 2013 meeting we appreciated the hospitality of Bob and Nu

Wright at their architecturally unique home in St Albans, Christchurch. After the routine business of correspondence and accounts we turned to the usual conversation about recent comings and goings, in the course of which David Peterson and I mentioned a most enjoyable if slightly hectic day trip to Levin, north of Wellington to collect a horn gramophone. David had bought on Trade Me an example of a Gramophone & Typewriter Ltd. (odd that they didn't use "Co.") model of ca. 1907 catalogued in England as the Mahogany Senior Monarch but now also widely known as the Ionic from its classical Greek pilaster capitals. Until I read the Oakley and Proudfoot HMV book I had no idea that, thanks to the Society's reprint forty years ago of a 1908 catalogue from Mr Woledge's collection, these Australian/New Zealand style names such as Doric and Ionic have been adopted by collectors all over the world.

When David learned that the seller of the Ionic was a Society member named Bill Mudge, he thought it would be good to pop up to Levin and collect the machine rather than just have it sent down. David didn't mind me tagging along for the "day out" so off we went with a fairly tight schedule based around budget air fares. Bill and Noeline Mudge made us very welcome and it was great to make personal contact with a collector who has been a "name on the roll" and has enjoyed the magazine etc. for many years but whom we had never met. As so often in New Zealand our small, scattered population with the (so far) unbridgeable Cook Strait in the middle means that people can be much farther apart than a straight line on the map might suggest.

Though I was just "along for the ride", I was also happy to come home with a ten inch plum HMV by the brilliant, tragically short lived pianist Raie da Costa. This 78 came to light in a huge second hand shop hidden behind a modest façade in a residential street in Levin. Had we not checked the web for Levin shop locations we would never have known about that one!

To end the meeting Bob Wright showed us a very interesting DVD about Whittaker's Musical Museum on Waiheke Island near Auckland. Mr Whittaker's narration combined a personal account of his musical journey, starting with teaching himself to play the accordion as a boy in the 1930's, with demonstrations of the many fine concertinas, accordions, reed organs and pianos in the collection. Mrs Whittaker joined her husband in an entertaining piano duet. Though the DVD was made several years ago and the collection has since passed into trust ownership, we understand that Mr and Mrs Whittaker are still able to take part in demonstrating the instruments.



#### A MEW-SICAL TURN

Thanks to Mike Tucker for this outbreak of cuteness, enlarged from a 1920's de Reszke cigarette card. The calm expression of the kitten and the unscratched horn suggest that neither suffered any cruelty in the making of this photo – Ed.

#### **ADVERTISEMENTS**

#### Phonograph Society of New South Wales Inc:

From cylinder to CD, the Society is for those interested in all aspects of historical sound recording and reproduction at its monthly meetings in Sydney. One subscription for all: \$A30 pa Australia and overseas. Write to The Secretary, Phonographic Society of NSW (Inc), POBox 215, Epping, NSW 1710, Australia, or visit our website www.phonographicsocietynsw.welcome.to

#### Phonograph Society of South Australia:

An organisation of enthusiasts interested in the collection and preservation of the artifacts of sound recording and reproduction and research into their evolution. The PSSA NEWSLETTER, containing interesting articles and news, is published quarterly. Relevant books and reprints are also sold. Annual dues (Australian currency); NZ, Asia and South Pacific \$28.00; Rest of the World \$32.00; Write to: the Secretary, PSSA, P.O. Box 235, Kent Town, S.A., 5071, Australia. Phone and Fax (+61-8+8337-7134) E-mail: nelsent@picknol.com.au

#### The Antique Phonograph Society:

The California Antique Phonograph changed its name at the beginning of 2012. We are now **The Antique Phonograph Society**. Our mailing address remains P.O. Box 169, Victorville, CA 92393 USA. However, our website changed a few years ago to: <a href="https://www.antiquephono.org">www.antiquephono.org</a>. Rates for members outside North America are \$40 USD (check) or \$42 USD (through the website / paypal)

## The City of London Phonograph and Gramophone Society Limited (CLPGS)

To join us, contact the Membership Secretary: Tim Wood-Woolley, 28 Park Terrace, Westcliff on Sea, Essex, SS0 7PH, United Kingdom or email clpgsmembership@blueyonder.co.uk. For more information visit the CLPGS Web page at www.clpgs.org.uk

#### Wanted to Purchase:

Any part of a Marathon Gramophone. W.T. Norris, 650 Two Chain Road, Rangiora, RD 6

#### Wanted to Buy:

33 1/3 rpm vinyl records of the Moms and The Dads. Unusual reproducers and needle tins. W. T. Norris, 650 Two Chain Road, Rangiora, RD 6, 7476 NZ

#### Wanted:

Any part of the Zonophone illustrated turntable, reproducer, horn arm and support elbow, handle and case. W.T. Norris, 650 Two Chain Road, Rangiora RD 6, New Zealand.



#### Wanted to Buy:

Dancing Rastus or similar figures to fit on old gramophone records. Please email: vandrbrown@xtra.co.nz or phone 064 3 312 4477 (NZ).

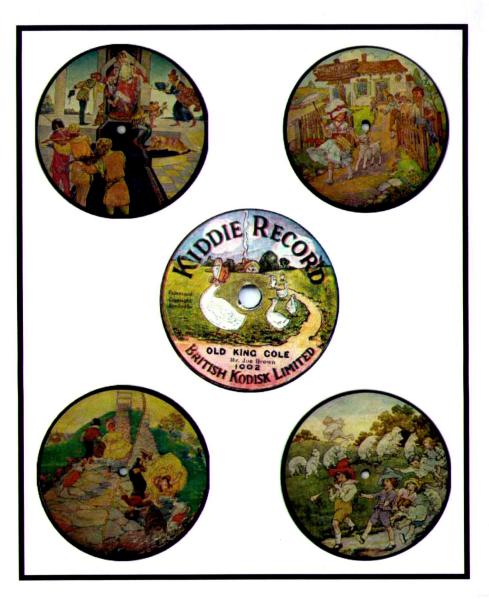
#### Wanted to Buy or Exchange:

HMV No. 4 soundbox, gold finish and early style with "His Master's Voice" printed on the front.

Record dusters with New Zealand shop names.

Gavin East, 4A Lyttelton St., Lincoln 7608, New Zealand, email Gavin.East@lincoln.ac.nz.

We have a lot of early back issues of the Phonographic Record which anyone can have if they pay postage - Editor



Christchurch member Wilf Boon recently turned up five of these (1920's?) seven-inch British Kodisk Kiddie records in their original album. Each disc has a recording on one side with a picture printed on the back. Clockwise from top left: 1002, "Old King Cole"; 1003, "Mary had a little lamb"; 1005, "Tom, Tom, the piper's son"1004, "Jack and Jill".