Burmese Colour Needles: An Outline History

Andrew Briggs

This article (an abridged version of which appeared in the City of London Phonograph and Gramophone Society journal, For The Record, Summer 2018) is an account of the origins and early years of BCN, and an initial attempt at tracing the major English brands of thorn needles. Beyond the early 1930s it probably raises more questions than it answers, and a fair amount of conjecture is indicated. There are many gaps which the writer would be delighted to fill – all contributions will be gratefully received.



After a favourable review of samples in the previous October's edition¹, the following advertisement appeared in The Gramophone, March, 1929. It was also reprinted in The Hillandale News (Journal of the City of London Phonograph and Gramophone Society), No. 127, August 1982:

THE BURMESE COLOUR NEEDLE (THE MUSIC LOVER'S GRAMOPHONE NEEDLE) The most remarkable and fascinating discovery since the introduction of the Talking Machine

Briefly what it is, what it does, and why you should use it

WHAT IT IS

The Burmese Colour Needle's chief ingredient is a substance known as Keratin, obtained from the prickly pear — "the South African farmer's foe." The invention is the property of the Burmese Colour Needle Company Proprietary, Limited, Grahamstown, South Africa. The patent rights are covered throughout the world. During the past year the needles were marketed in South Africa with such successful results, that it was considered advisable to send samples to Mr. Compton Mackenzie, Editor of "The Gramophone," who wrote as follows: "I find the Burmese Colour Needles admirable ... the tone is certainly delightful ... the best I have ever heard!' The publication of this criticism, coupled with the laudatory report (October, 1928) of the Expert Committee of "The Gramophone," the supreme scientific authority on things gramophonic, elicited enquiries not only from all parts of Great Britain and Ireland, but from other parts of the world, including America, Australia, Canada, Tasmania, Sweden, Burma, British West Indies, and the Federated Malay States and contingent upon the interest thus shown, the Company decided to enter the overseas market at the beginning of the present year, and is, even at this early stage, meeting with an exceptional measure of success. This success is due solely to the fact that the needle genuinely does what is claimed for it. It turns mechanism into music.

WHY YOU SHOULD USE IT

Because firstly, it preserves your record indefinitely; that is to say, there is no wear on the record such as is encountered when employing steel needles. Secondly, one Burmese Colour Needle will play dozens of records. Thirdly, the surface scratch is entirely eliminated, and fourthly, it reproduces a tone, which during the last 20 years has never been excelled. These needles should be used on new records; not on records that are groove-worn by steel needles. If you follow carefully the simple instructions provided with each packet, you will without any question or doubt never be without a packet of Burmese Colour Needles. In fact, we are sure you will not use any other needle on the new records you buy in future. The Burmese Colour Needle Company Proprietary, Limited, is a 100 per cent. British industry, and is unique in that it is the only one of its kind in the world. The needle is the invention after four years of research work of an ex-British officer who is now the managing director of the Company, and is supported on the Board of Directors by well-known South African business men, who are all large shareholders. The Company, in manufacturing and marketing its needles, does not expect to eliminate the use or sale of steel

needles, but it is confident that in the logical sequence of events, because of the wonderful qualities of the Burmese Colour Needles, they will have a positive and definite appeal to Music Lovers in every country in which the gramophone is to be found. Additionally, its suitability for electrical pick-up is beyond any question.

> Buy your Packet now, extra Loud or Medium, and support a British Industry Price 2/- per packet ASK YOUR GRAMOPHONE DEALER FOR THEM AS THEY ARE NOW AVAILABLE From Messrs. ALFRED IMHOF LTD., 110, New Oxford Street, London, W.C.l

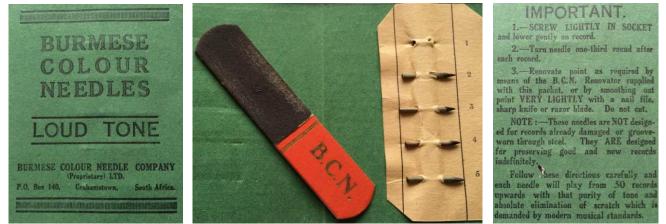
Trade enquiries direct to the Factory Representative (now in England), c/o BARCLAYS BANK, ST. MARTIN'S LANE, LONDON, W.C.

Evidently development of Burmese Colour Needles had commenced in 1924 or 1925. The inventor was a Scotsman, Charles Norman Matheson Ramsay, born in 1891. He had been a Special Reservist with the 3rd Battalion, Royal Highlanders from 1914², graduated from the University of Glasgow in 1916³ and continued in army service until 1923, rising to the rank of Captain and to positions at the Directorate of Staff Duties (Education) in the War Office⁴, so it is probably safe to assume that he is the "ex-British officer" referred to in the advertisement. By the mid 1920s he was a senior lecturer at Rhodes University College, Grahamstown and in 1926 became Head of the new Psychology department there⁵. We can surmise that he was also a keen gramophone enthusiast with an enquiring mind, a practical disposition and an eye for a business opportunity.

Christopher Proudfoot has commented on the patent which ensued. Quoting from a talk he gave at a City of London Phonograph and Gramophone Society meeting in 2017⁶:

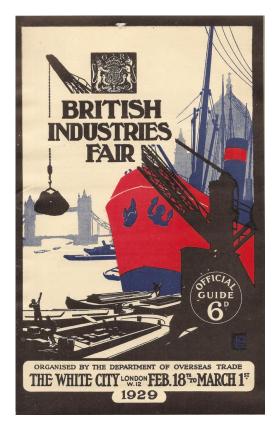
"The thorn needle stems from a patent of 1928-9 by one Douglas Keith Fairweather of Glasgow. His firm, Cruikshank and Fairweather also had an office in Chancery Lane in London; were they solicitors, or perhaps Patent Agents? The latter seems likely because an earlier patent [1926-8] referred to in their application, was applied for by the same firm, on behalf of John Watson MacDonell Williamson, a British Chartered Accountant based in Grahamstown, South Africa. His patent specified a means of fixing the thorn in a sleeve which enabled it to be placed in the needle socket of a soundbox. There was nothing about treatment of the spine itself. Did Fairweather take the idea and work out a better way of using cactus spines as needles, or was the second patent really Williamson's, but for some reason in Fairweather's name? The Fairweather patent was about the treatment of the spine itself, whereby the woody section was removed leaving what was described as the keratin, which was then chemically hardened and coated in some form of lacquer. The patent admitted that some of the processes might be omitted, which could account for the absence of lacquer on thorn needles (the later IM needles are treated in this way)."

Christopher also suggested that the substance surely cannot be keratin, and questioned whether the thorns actually originated from Burma (both of which matters are discussed below). That Fairweather was indeed a patent engineer has since been confirmed⁷; Ramsay was named in the patent as communicator, i.e. inventor. Ramsay also registered an equivalent but simpler patent in Canada in 1928-9; whether he did so in other countries is unknown. Also unknown is how or why it was he who took the lead following the ideas and earlier patent of his local fellow expatriate Williamson, who one imagines may well have been one of the businessmen directors referred to.



An early pack of BCNs, possibly the second iteration. The first types had a metallic coating or sheath at the butt end, and a resinous glaze; these were relatively short-lived

Commentary in The Gramophone identifies a Mr S.O.V. Williams, a vibrant and energetic character, as the factory representative to England until early 1930 when he had to stand down for health reasons⁸. During one of his first visits he attended the 1929 British Industries Fair, and by April of that year, sales and distribution had been taken up by Imhofs in London and by Keith, Prowse & Co. for the rest of England⁶.



The cactus in question, *Opuntia monacantha* (also known as the drooping prickly pear or Barbary fig) is not native to South Africa. It had been introduced as early as 1772 but proved aggressively invasive and as mentioned in the advertisement above, had become a pest to farmers, so the spines were freely available and had simply to be harvested. According to the patent, the first stages of manufacture were to remove woody material from the exterior of the spines: chemical and heat treatments were used to soften and stain the unwanted husk, which was then stripped manually to leave the pure fibrous core.



Opuntia monacantha

Various inaccuracies and myths have arisen over the years:

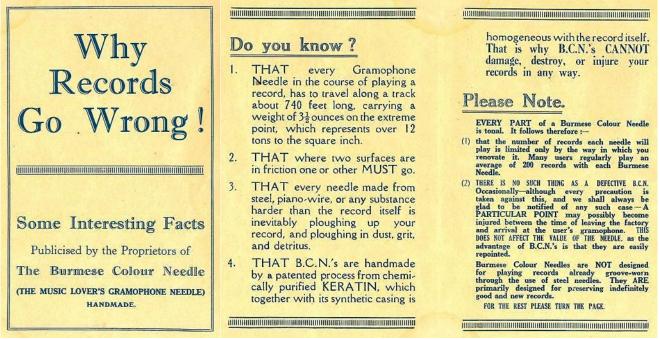
• The reference to the main constituent in the advertising and patent must be erroneous - no plant produces keratin (only animals do) and it is completely insoluble - rather, the chief

ingredient is undoubtedly **lignin**, the major constituent of cactus spines and the primary structural component of hard plant material. Chemically, it is a cross-linked phenolic polymer.

- Later eradication of *Opuntia monacantha* in the vicinity of Grahamstown (discussed below), and/or the fact that the Saguaro cactus (a later source of thorn needles in the US) has since gained protected status, probably led to the mistaken idea that the original plant is now extinct.
- Almost certainly, thorns never came from Burma. When asked about the name in September 1930, Ramsay himself said that "Burmese" was spurious, likening it to the protagonist in Oscar Wilde's The Importance of Being Earnest who took his name from a rail ticket (Ramsay had been travelling to Burma when he thought of the name) and that "Colour" related to production processes⁹. It may also be noted that in the gemstone and jewellery trades, the finest rubies are said to be of "Burmese colour" irrespective of their origin.

Ramsay's explanation notwithstanding, it has been suggested that perhaps the earliest BCNs might have been coloured with red lac extract, of which Myanmar (Burma) has been a major producer since the 16th century. Various other dyes and colours were used over the years (including a vintage fabric dye for the last few decades; dyestuffs have no effect on performance) but recent trials to replicate dyeing thorns with lac extract have proved successful, and chemical identification of surface colouration on the earliest examples is planned.

Lac extract is derived from the same material as shellac, which of course is the chief constituent of almost all 78s. Could use of lac extract, or indeed of shellac, have supported the advertising hyperbole with its claims of benefits from a substance "homogeneous" with records? From the patent, this appears unlikely. Although it describes coating needles with shellac or similar resins, this and other processes are indicated as optional, depending on natural variations in the actual spines used. Rather than being a chemical characteristic, compatibility with the record surface is clearly stated as a physical property – a similar hardness (slightly less than the record) being the functional requirement. Hardening is achieved by treatment with an alcohol or ether; and in the production process surviving to this day, the dye is applied simultaneously, dissolved in the same liquid. However, no solutes penetrate beyond the exterior of the thorn; hence neither coating material nor dyestuff can ever touch the record, i.e. at the sharpened point. Advertising hyperbole indeed.



Leaflet, 1929 or 1930

Another review in The Gramophone reveals that the "varnished" appearance of the earliest samples of 1928 had been dropped by late 1930¹⁰. Comparably, Peter Grey Laboratories in the US (see below) mentioned treatment with a "tropical gum" in sales literature for their cactus needles; however, only much later did any obvious, visible glaze return amongst British products, with Imhof's I.M. brand from 1937.

With unfortunate timing for Ramsay and his associates, use of the cochineal beetle as a means of biological control to eradicate the prickly pear¹¹ was highly successful (temporarily, at least – they are rampant again today¹²) and by 1930, the local supply of spines had dwindled so severely that the directors soon closed the factory they had set up in Grahamstown¹³. It is not known how the firm proceeded thereafter – they may have set up production elsewhere using thorns from another location, sold the business, and/or licensed the patents and processes to others.

Meanwhile Ramsay continued with other gramophone related developments including a new nonmetallic needle enterprise, Electrocolor (on which more follows below). Several further patents to his name in 1930-31 include one which resulted in the Aladdinite graphite dispenser for records, but at present these seem to be the last traces of him. A curiously enigmatic figure, he had been a divinity student in charge of the church at Inversnaid prior to his military service from 1914. Whilst in hospital in 1915, for some reason he persuaded his fiancée into a secret marriage at Dorking registry office in advance of their 'proper' wedding in Scotland a month or two later. Two sons resulted, but the marriage ended in estrangement and a colourful divorce in 1919, then Ramsay was ordered bankrupt a few months later; at both proceedings he was absent and his current address unknown to the courts¹⁴ despite his active military service continuing until at least 1921. During his subsequent academic career he was known as N M (Morris) Ramsay – had he reinvented himself somewhat before moving to South Africa? And did he eventually meet with some misfortune there too? In 1930 he was moved from his prestigious position as Head of Psychology into a seemingly lesser role⁵.

Returning to BCN activities in England, Christopher Proudfoot again takes up the story⁷:

"Barber & Kent, of Mark Lane E.C. 3 had taken over [as agents] by December 1930, when the needles were said to be 'Improved', reflecting the arrival of a rival. The Electrocolor needle was described as being invented by the inventor of the BCN, and as being 'even better'... I cannot say who went on to develop this competitor, but it sounds like another E.M.Ginn schism. Electrocolor needles were distributed by Keith Prowse, who presumably took the side of the ex-British officer in whatever divorce had occurred.

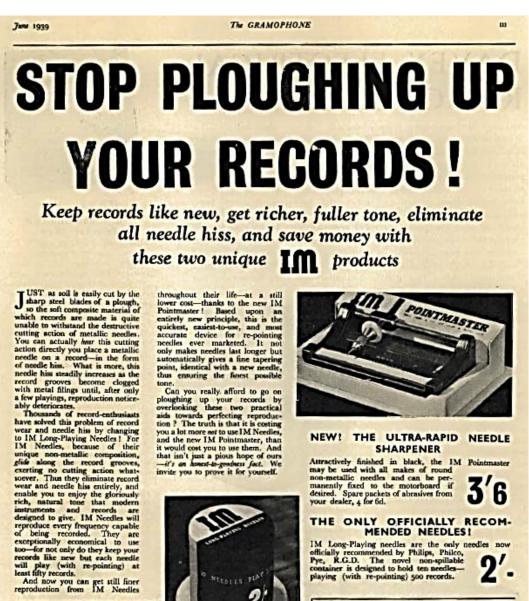
"The Electrocolor seems not to have survived for very long, but the BCN proved a stayer, establishing an office in London, though later this moved to various addresses in the Croydon area."

For the next few years, full or half page advertisements for Electrocolor's needles and other products (including Aladdinite, which BCN also sold) appeared regularly in The Gramophone, but BCN were evidently less well-resourced – their adverts were much less prominent. What BCN did have, however, was a strong reputation as the original trusted product. They were mentioned frequently in The Gramophone's technical writings and correspondence, and used routinely for equipment reviews. When and why Ramsay's newer Electrocolor products eventually disappeared is unknown as yet.



Electrocolor advertisement (including Aladdinite), The Gramophone, October 1933

The later 1930s saw more competition. Imhof's of New Oxford Street, originally a musical instrument company, had diversified into gramophones as early as 1896 and became a major London retailer of machines and records. In 1937 (when, incidentally, BCN won a silver medal at the Paris Exhibition) they introduced their IM Long-Playing Needles¹⁵, black in colour with a resinous glaze, and presented in novel and convenient top hat shaped cartons. Apart from the coating they were essentially the same as BCNs, but Ramsay's patent would not expire until some twelve years later. Were the processes licensed to Imhof's, did Imhof's take over the Ramsay-led Electrocolor operation, did either BCN or Imhof's actually manufacture both (or even all three) brands - or was the patent unenforceable in some way? The latter seems unlikely given its precise claims and elaborate wording. (On the other hand, closely equivalent products were not without precedent: in 1933 Universal had sold needles which were near identical to BCNs¹⁶ – but although their excellent sharpeners still turn up fairly regularly, their needles do not, so perhaps action was taken to stop them.) Imhof's was a large enough player to take regular whole-page advertisements in The Gramophone, and like BCN, supplied needles to record shops throughout the country. IMs soon became at least as ubiquitous as BCNs.



IMHOF'S

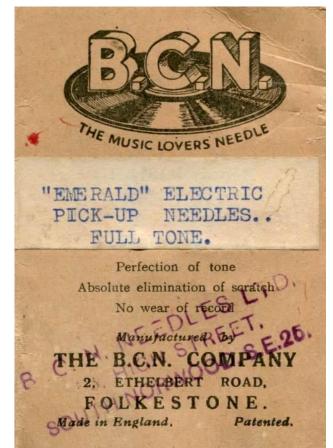
IMPORTANT!

Most good murit and radio shops can nepply you immedi-ately with IM Nordies and the IM Pointmaster, but subserver difficulty is experiment please uvrite to IM Lang-Playing Needles, 12 New Oxford Street, Landon W.G., molasing remittance and the name and address of your usual gramophone shop. Pootsage charges: I IM Nordies—op 6 % doors, ad.; 5 hoxer, yd.; 6 hoxes or more, past free. IM Point-master (and one bas of IM Nordies), 3d. IM Lang-Playing Needles and the IM Pointmaster are products of Alfred Indust Ltd., New Oxford Street, W.G.1. Museum 3944.

Imhof's advertisement, The Gramophone, June 1939

LONG-PLAYING NEEDLES AND POINTMASTER Buy them together !

A telling exchange appeared in the September 1940 editorial of The Gramophone¹⁷. One of BCN's then directors, Mr C.W. Davies, sent a letter vigorously objecting to what he had mistakenly read as a bias against non-metallic needles the previous month; in it he revealed a striking lack of knowledge of the original 1928 to 1930 reviews, to the extent that Compton Mackenzie retorted "old records of the BCN company must have vanished". Given the circumstances in South Africa from 1930, it seems plausible that at some point during the intervening years the original company in Grahamstown may have been wound up, and a new company formed in England. Other small pieces of evidence are that by 1933 the English concern was known simply as BCN, thereafter using neither the full "Burmese Colour Needles" wording nor the Burmese pagoda motif; also that BCNs sold in Canada (where the one other known patent existed) and America were made in England. Whatever the history, the BCN name continued in one guise or another until at least 1952.



Pack of BCNs circa 1948, showing a Folkestone address predating one in South Norwood (image courtesy of Christopher Proudfoot)

By way of further conjecture, could BCN patents and processes have been licensed in other countries, e.g. to Peter Grey Laboratories in the US for their Kacti brand? Their advertising claims followed remarkably similar lines, albeit more exaggerated, which resulted in action by the Federal Trade Commission in 1943¹⁸. This was mainly to stop them claiming that records actually improved when played with their needles (also reminiscent of Ramsay's dubious claim under the Electrocolor banner that Aladdinite would "repair" old records).

From early times BCN had catered for electrical as well as acoustic reproduction, offering various different grades including one specifically for autochangers. Later on as pickups became more refined, miniature thorns were developed, around one-third of the dimensions of regular needles. Eventually such designs gave way in turn to the types of phono cartridges and styli still current today, and demand for even miniature thorns gradually dwindled. Sometime during the 1950s, full commercial production of thorn needles appears to have petered out.

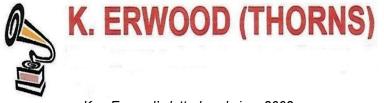
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orcen p		ckups 10 C 3/11
Five gr	ades : Electric, Emerald, Miniature for Pi nd Medium for Gramophones.	^{ckups.} 10 for 2/11

The last known BCN address, shown on a packet from March 1952 or later, was in London WC1 – incidentally, the district where Imhof's were also located – but the street is not stated.

The following sources continued to cater for continuing demand from enthusiasts (only confirmed dates are shown; those of the first two are likely to have been wider):

- December 1952 or earlier to January 1954 or later: R.A.C., 23a Connaught Street, London W2 (advertised regularly in The Gramophone magazine)
- July 1970 or earlier to November 2002 or later: Erwood (Thorns), 30 Vincent Road, Kingston; then from June 1971, Aragon Road, Morden (advertised regularly in The Gramophone magazine throughout the 1970s)
- 2006 to February 2018: David Williams, Hinchley Wood, Surrey (advertised regularly in For The Record)
- From February 2018: Andrew Briggs, Whitstable, Kent

Ken Erwood 'rescued' and took over the remains of Imhof's thorn production facility sometime prior to mid 1970. It is said previously to have employed two women working shifts in the top room of a private address somewhere in central London¹³.



Ken Erwood's letterhead circa 2002

Although of Imhof's lineage, the finished product of recent decades resembles original BCNs more than it does IMs, further strengthening the hypothesis that production of both had been linked in some way

or even common. The present thorns also bear a strong resemblance to those of EMG – were they also related? EMG/Davey and Expert of course made their own unsurpassed fibre (bamboo) needles for many years, but little is known of the thorns they sold except for surviving packets. David Williams recalls Ken Erwood mentioning that he had known personnel of either or both firms, and may have supplied them; if so, this seems more likely to have been EMG or the later Expert Pickups, since Expert itself went into sharp decline following E.M. Ginn's ill health in 1957 and passing in 1959.



EMG Davey thorns with ingenious packaging. Were these related to BCN?

The operation as it stands today includes a large quantity of raw thorns of indeterminate age, but certainly many decades old; clearly these have been through the initial purification processes long ago. The other key items are two old machines, a cutter and a sharpener. The electric motors in these indicate that they are of considerable age and it is hoped that a more accurate date will be revealed in due course. The sharpener is straightforward enough, a large, highly efficient and precise version of the familiar hand sharpeners (also driving its own dust extraction) – but the cutter, or rather the manner of cutting, is particularly interesting. It performs a sort of rolling kiss-cut or slicing action against a slightly yielding rubber surface. David Williams was occasionally persuaded to sell a few raw thorns for enthusiasts to "have a go" at making their own needles, but no other attempts at cutting, sawing, shearing or snapping them have ever proved successful: fractures and cracks are always caused, severely impairing sonic properties.

Whatever the ultimate identity of the stock, machinery and processes, today's thorn needles are to all intents and purposes the same as those produced by BCN from 1930 onwards, and conform fully to Ramsay's patents. Also, it has become common practice amongst many current users to refer to them generically as Burmese thorns. The decision has therefore been taken to re-adopt the Burmese Colour Needles name.

As stated in last month's issue of For The Record, the present writer hopes to be a worthy custodian and eventually to pass the operation on into safe hands in a healthy and historically appropriate state.

- ¹Burmese Colour Needles A Report By Our Expert Committee. (1928). *The Gramophone*, October, 1928.
- ² *The London Gazette*, 21 August, 1914. Page 6600.
- ³ Graduate record for Charles Norman Matheson Ramsay. University of Glasgow [online].
- ⁴ Catalogue description of War Office: Officers' Services, First World War: Charles Norman Matheson Ramsay. *The National Archives* [online].
- ⁵ Psychology Department: Early History. *Rhodes University* [online].
- ⁶ Proudfoot, Christopher (2017). A Fibrous Tale (talk on fibre and thorn sharpeners). Unpublished transcript.
- ⁷ Obituary webpage for Captain Douglas Keith Fairweather. *Mearns History Group* [online].
- ⁸ Trade Winds and Idle Zephyrs. (1930). *The Gramophone*, February, 1930. Page 401.
- ⁹ Turn Table Talk. (1930). The Gramophone, October, 1930. Page 222.
- ¹⁰ Technical Reports The New Burmese Colour Needles. (1930). *The Gramophone*, December, 1930. Page 379.
- ¹¹ Weeds Biocontrol, *Plant Protection Research Institute Leaflet Series*, 2.12.
- ¹² Unpublished personal research and communications.
- ¹³ Smit, Bernard. (1964). Insects in Southern Africa: A Handbook for How to Control Them (page 161). Oxford:
- Oxford University Press.
- ¹⁴ The London Gazette, 22 October, 1920. Page 10253.
- ¹⁵ Full page advertisement for Imhof's, *The Gramophone*, April 1944. Page cover 1.
- ¹⁶ Technical Reports The Universal Needles. (1933). *The Gramophone*, June, 1933. Page 42.
- ¹⁷ Editorial. (1940). *The Gramophone*, September, 1940. Page 78. (Also reproduced in *The Gramophone*'s Anniversary Supplement, 1993.)
- ¹⁸ Phono Needle Co. Agrees to Change Advertising. (1947). *Billboard magazine.*

Addresses displayed in BCN advertising and packaging include:

South Africa

The Burmese Colour Needle Co. (Proprietary) Ltd. 6, Anglo-African Street, Grahamstown, Cape Province, South Africa (also P.O. Box 140, Grahamstown)

England

1934 to 1940: The B.C.N. Company Waddon Factory Estate Stafford Road Croydon

1941 to 1944: The B.C.N. Company Cargreen Road, South Norwood, SE25 (also 24, Station Road, unconfirmed dates but probably the same address)

1948: The B.C.N. Company 2, Ethelbert Road, Folkestone, Kent

1949 to 1951: B.C.N. Needles Ltd 53 High Street, South Norwood, SE25

March 1952 or later (most recent pack known): B.C.N. Needles Ltd BCM/BCNNL London, WC1

Unknown dates: B.C.N. Needles 83 Thornton Crescent, Old Coulsdon, Surrey

Canada

Distributors: Heintzman & Co., Limited, 193-197, Yonge Street, Toronto, Ont. (BCN Emerald Electric Pickup Needles; packet states "Sole Distibutors for the Dominion of Canada" and "Made in England")

U.S.A.

Distributors: Read & Harding Inc. 989, Sixth Avenue New York (*Made in England*)

Australia

Distributors: The Alba Import Coy., Perth (imported BCNs from circa July 1929)

New Zealand

(traces exist of BCNs being sold by Ernest Dawson, Ltd., a music shop in Wellington, but the importer/agent is unknown)

Other known manufacturers, brands or significant sellers of thorn needles:

United Kingdom: Astra Connoisseur (miniature) Electrocolor* (from 1930) Embassy (a Woolworths brand, but not exclusively; Christopher Proudfoot is currently researching) E.M.I.: HMV and Columbia (miniature) E.M.G. Davey* (standard and miniature) Expert Gramophones Ltd. (miniature and, presumably, standard) Expert Pickups Ltd. (miniature) Imhof's* (from 1937; also, much earlier, one of the first English agents for Burmese Colour Needles in 1929) Phonoservice (from early 1980s, under royalty agreement with CLPGS; probably Erwood thorns) R.M. (Recorded Music Developments, 38 George Street, London W1) Rimington, Van Wyck Ltd. (from August 1939 or earlier) Universal* (from June 1933 or earlier) * these are mentioned within the above article United States: Beltone Cactus Duotone Decca Fibra Tone (possibly only sharpener; probably a variant of Peter Grey) Peter Grey Laboratories - Kacti brand Peter Grey Laboratories - Greythorne brand Philharmonic Red Top