



1.00pm Display  
to  
The Royal Philatelic Society London



Perkins, Bacon  
the Company and its Work

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President

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## Perkins, Bacon stock background design for Bank Notes and Stamps

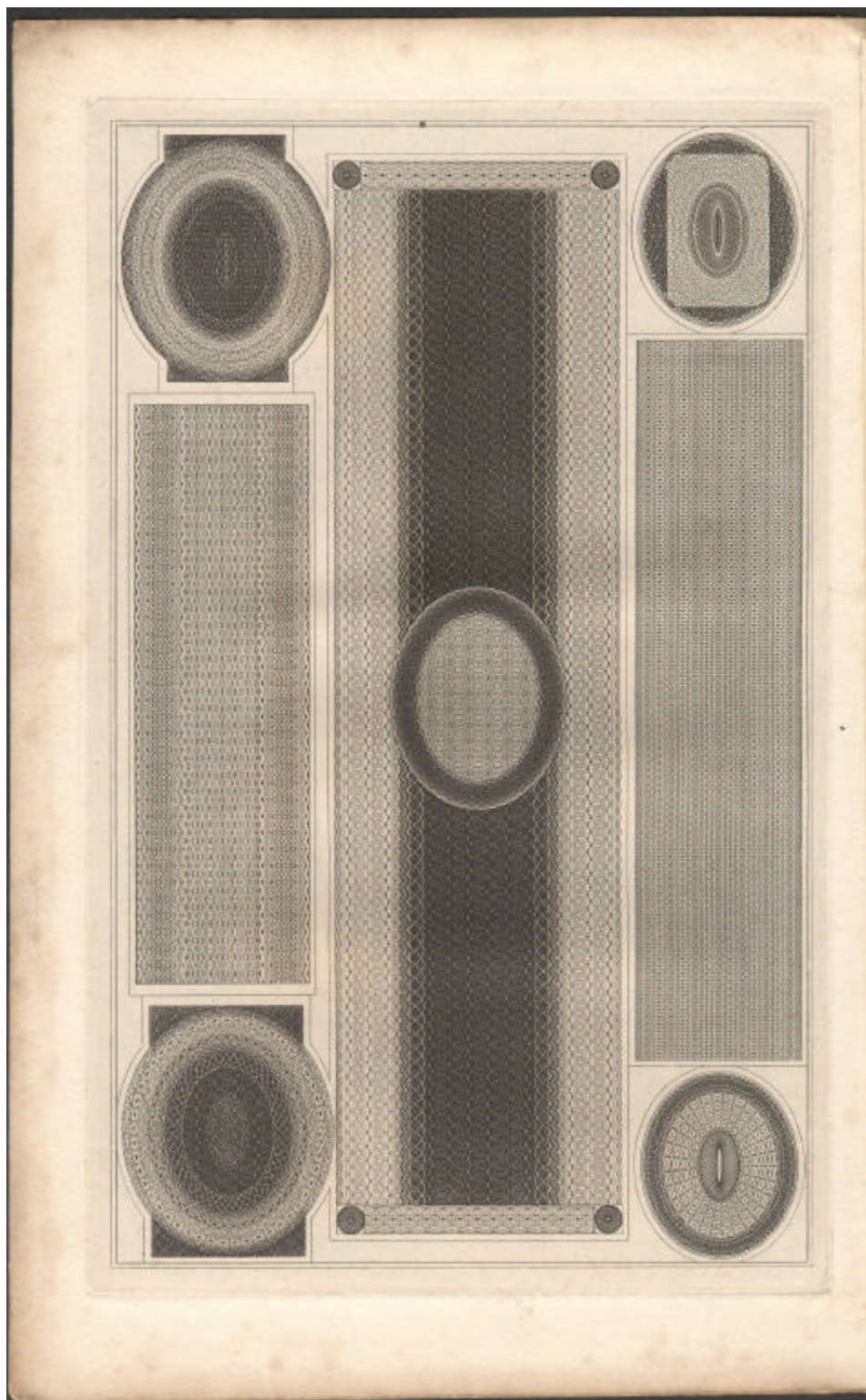


Plate from "*An Essay on the General Principles and Present Practice of Banking in England and Scotland*",  
T. Joplin, 6th edition, 1827.

The well known 1d Black background is quite likely to have been engraved in the USA prior to 1819.  
It was reprinted for the book "*The essays, proofs, colour trials & re-prints of the line-engraved postage  
stamps of Great Britain printed by Perkins, Bacon & Co.*",  
Sir Edward Denny Bacon, KCVO, 1936



## Introduction

This display is a collection of items whose unifying feature is that they have a connection with Perkins, Bacon. The story is the story of the printer and their work from 1819 to about 1890 plus some later miscellaneous items such as printer's samples, reprints and related forgeries. The subject is a large one and much is missing, although I hope that much of interest will be found.



The original engraving of the portrait of Queen Victoria after Alfred Edward Chalon  
(the so-called "Coronation Robes" portrait).

Used for the 1853 1d of Nova Scotia and the 1855 values of New Zealand

I came to the study of the stamps of Perkins, Bacon relatively recently, although I have collected Queensland for 30 odd years. It was when I was acting as peer review on the book *Joshua Bacon, The Printer of Banknotes and the First Postage Stamps* by David Rowse that I first became fully aware of the story of the men who came from Philadelphia, USA in 1819 with the avowed aim of gaining the contract to print bank notes for the Bank of England.

The group who set sail in the ship *Telegraph* on 30th May 1819 did so with the knowledge that some preparation had already been made in terms of promoting their cause. J. C. Dyer, an American who had lived in England since 1811, had been very active over some years in campaigning for the Bank of England to adopt the "Perkins Process" of security printing for its bank notes. In the event, Perkins, Bacon were not awarded the Bank of England contract, but nevertheless Jacob Perkins and his son in law Joshua Bacon founded a firm that produced wonderful security printing work for banks and commercial firms, as well as having a major impact on the production of the first postage stamps for many of the British Colonies and several foreign countries. The foundation of this was the siderographic process of security printing, by which detailed and complex designs could be transferred repeatedly from a steel die to a steel plate with no loss of detail.

The display traces the historical progression of the work of the firm. It covers early bank note production and stamp production across many countries rather than focusing on a single country. The progress is largely chronological. However, the aesthetic quality is not always best when presented in totally chronological form and so the decision was made to be rather more flexible in order to give a more pleasing visual impact. The chapter headings should be clear but each frame or page may include items from other chapters. Included as Appendices are a number of tables, which I have found useful for myself when studying this subject, since they help to establish the chronology of printer, paper, perforation etc.

There are a number of names through which the company that we most usually call Perkins, Bacon evolved. Throughout these notes it is referred to by the one name, even when not strictly correct for the timeframe being referred to.





## Siderography & The Spencer Geometric and Traversing Lathes

The process by which Perkins, Bacon manufactured engraved dies and plates that were used to produce stamps and bank notes has been described many times in philatelic publications based upon Perkins' UK Patent No. 4400 of 1819. Lines of the design intended to appear coloured on the bank note were cut in reverse into a soft steel die. The die was then surface hardened and placed in a press where the design was taken up under several tons pressure by a soft steel transfer roller. The resulting image on the roller was now 'in relief'; the lines that would eventually hold ink were raised above the surface of the roller. The transfer roller was then surface hardened and the image was rocked into the soft steel printing plate, which was then itself surface hardened. This process of transferring images is known as Siderography or the Perkins Process.

For printing, ink was spread on to the finished plate. The surface of the plate was then wiped clean, leaving ink only in the recessed lines. Using the famous Perkins 'D' printing press, wetted paper was then laid on to the inked plate and pressed firmly enough into the plate to transfer the ink from the recesses. Areas which were not intended to carry colour were at the same level as the surface of the plate. They therefore did not hold ink and appeared white in the final printed impression.



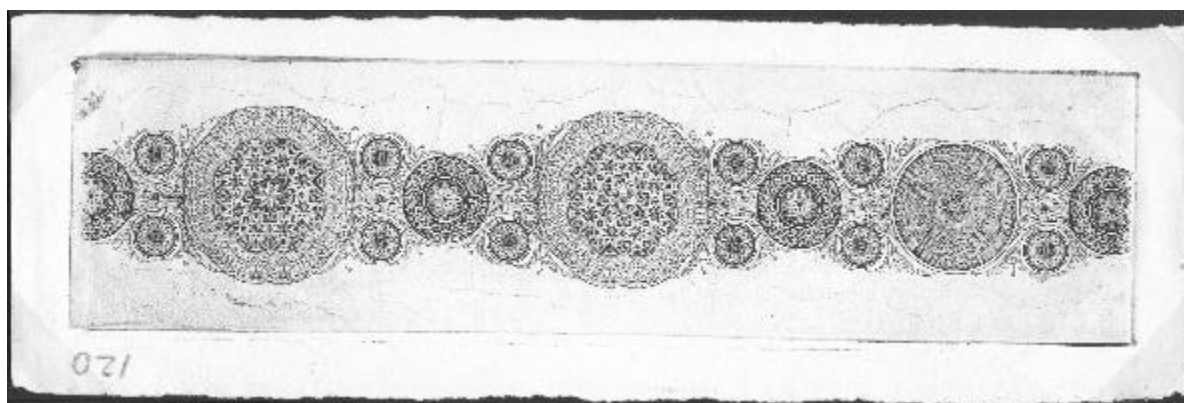
Specimen bank note dated circa 1820 advertising the siderographic process

This explanation is over-simplified and the manufacturing process of the original printing plate is rather more complex than this. The 6<sup>th</sup> edition of the book "*An Essay on the General Principles and Present Practice of Banking in England and Scotland*" by T. Joplin (1827) contains examples of the Perkins Process (see Frames 1 & 5), and gives more information. In particular it emphasises the key security feature of the Perkins Process as being what was called "White Line Engraving" and it is this aspect that is missing in previous philatelic explanations of the Perkins' siderographic process. In white line engraving a geometric unprinted pattern is superimposed on top of the coloured geometric background. These white line patterns are engraved at the transfer roller stage. The relief image on the soft steel transfer roller is cut away to the depth of the surface of the roller. When the roller is subsequently surface hardened and the image is rolled into the printing plate, these cut away parts are now at the same level as the surface of the printing plate. They do not therefore hold any ink and appear as white lines superimposed on to the coloured geometric background design.

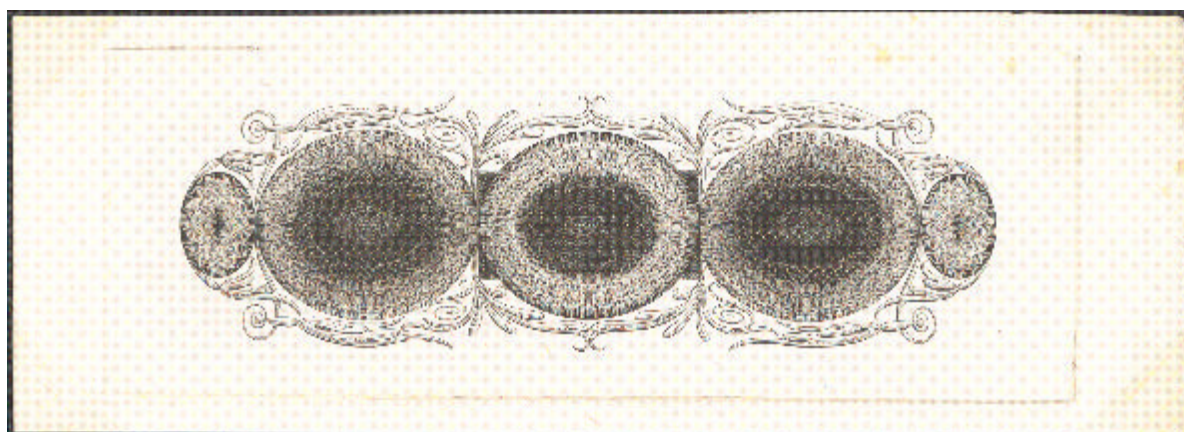
Contd/.

## Siderography & The Spencer Geometric and Traversing Lathes

The secret to this process is the two lathes invented by Asa Spencer, one of the original group of Americans who arrived with Jacob Perkins from Philadelphia. These lathes were originally patented by Spencer in the USA, although the details are lost following the destruction by fire of the US Patent Office. The patents for these lathes were purchased off Spencer by Jacob Perkins prior to their coming to England and are identified in the Perkins' patent No. 4400 of 1819. However, the importance of these lathes has been misunderstood and they have been confused with the Rose Engine. The Geometric Lathe allowed the engraving of interlocking geometric patterns on any surface, including the curved surface of the transfer roller. The Traversing Lathe did the same but was able to engrave straight lines or regular wave patterns which traverse the design horizontally or vertically. It was the Spencer lathes that provided the white line engraving, the unique security feature of the Perkins Process. The vertical borders of the 1d Black background clearly demonstrate the effect (see central strip of frontispiece).



Printer's sample background design - used for certain values of New Brunswick, Nova Scotia & Newfoundland



Printer's sample background design - used for the first stamps of Great Britain  
The central oval was used the stamps of St. Vincent



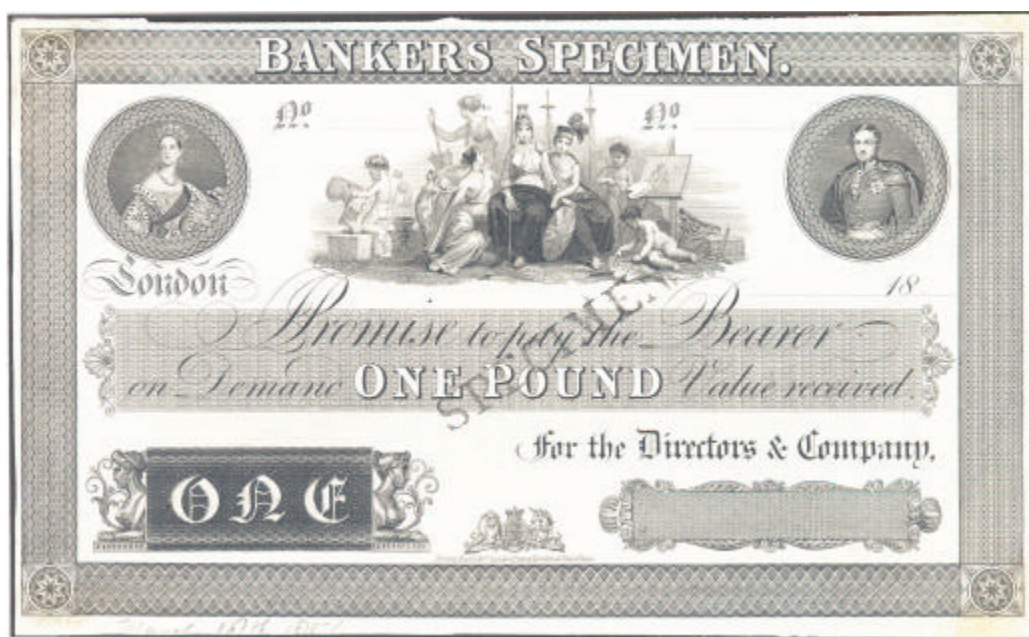


## The Display in the Frames

- FRAME 1 TRIAL BANK NOTES AND TRADE SAMPLES  
Note the trial bank note with the portraits of Queen Victoria and Prince Albert. This engraving of The Queen in her coronation robes was used for the design of the 1853 1d of Nova Scotia and the first issues of New Zealand from 1855.
- FRAMES 2 TO 3 BANK NOTES AND CHEQUES FOR PRIVATE BANKS  
Those proof cheques that exist come from the sale of a number of these by The Royal Philatelic Society London in the early 1970s.
- FRAME 4 THE PERKINS PROCESS - SAMPLE DESIGNS  
There are large numbers of sample designs of Perkins, Bacon, some of which are later reprints. They show stock head and background dies from which designs were built up.

The idea of an American company being appointed as printers of Bank of England bank notes seems far-fetched. During the Napoleonic Wars, which only ended in 1815, the Americans had supported the French and the American War of Independence was still a memory. It was also unfortunate for Perkins, Bacon that one of the committee who were asked to examine and recommend methods for greater security was Sir William Congreve, who himself had a rival system which was eventually adopted for the printing of revenue stamps, including on the reverse side of bank notes. Jacob Perkins and his companions did not succeed in this particular objective, despite producing some very fine specimen notes inscribed "Bank of England" to show the quality of their workmanship. These trial notes are most interesting both historically and as fine examples of siderographic printing. The Congreve process was largely abandoned in 1826 due to its cumbersome nature and the ease with which it could be forged.

Perkins, Bacon became significant as printers of bank notes for British provincial banks and for various colonial and foreign banks. The first quarter of the 19<sup>th</sup> century saw a proliferation of provincial banks in the United Kingdom, many of which issued their own notes. There were perennial problems with loss of confidence and many banks failed, including over 90 in the crisis of 1826, when even the Bank of England was under pressure as people cashed in their notes in favour of coin.



Dated 18th March 1856 - Specimen bank note showing the "Coronation Robes" portrait of Queen Victoria





## FRAMES 5 TO 7

### BRITISH POSTAGE STAMPS - 1840 TO 1850s

The background design used for the 1d Black and most other early line engraved stamps of Great Britain pre-dates the issue of postage stamps by many years. It is quite likely that the plate was in fact engraved in America in about 1819. The early line engraved stamps of Great Britain are not generally rare but it is a challenge to obtain them with good margins and attractively postmarked.

## FRAMES 8 TO 9

### EARLY BRITISH REVENUE STAMPS - 1828 TO 1860s

Perkins, Bacon had been given the contract to print the Duty Ace of Spades in 1828. When, on 1st September 1862, the duty was removed from the Ace and was charged on the wrapper alone, they produced designs for the new wrapper. The first design mock-ups and other progress proofs are shown. When, in 1844, Perkins, Bacon won the contract to print the Paper Duty labels they took over three of the Congreve printing presses.

The successful business of Perkins, Bacon as bank note printers and the security afforded by their siderographic process made them a prime candidate to print the new postage stamps in 1840. The Treasury Competition of 1839 saw many hundreds of submissions offering ideas for new methods for paying postage. Perkins, Bacon did not even make a submission to the competition, but by early in the new year of 1840 they were well advanced in planning and working with Rowland Hill towards the production of the first postage stamps.

Perkins, Bacon were not unknown to the Inland Revenue and Stamp Office since they had printed the Duty Ace for playing cards since June 1828. They also took over certain Congreve printing machines in 1844 when the contract for printing the large Paper Duty labels was transferred to them and continued until the duty was repealed from 1st October 1861.



1856 - Paper Duty label - Printed in black and green for use in Ireland



## FRAMES 10 TO 16 THE EARLY OVERSEAS CONTRACTS - FOREIGN & COLONIAL

The stamps of the Pacific Steam Navigation Co. and their reprints are considered by many to be one of the most attractive stamps printed by Perkins, Bacon. The first small Britannia design stamps of Trinidad, Mauritius and Barbados were printed in sheets of 110 (R10 x 11).

The Perkins, Bacon Archives, acquired by The Royal Philatelic Society London in 1935, identify that the company received an enquiry during 1842 from Brazil, the second country in the world to issue stamps, asking them to quote for their production. Prior to this, Perkins, Bacon had produced bank notes for Brazil but there is no indication that they ever fulfilled a postage stamp order. The design of the Bulls Eyes might be taken to be the work of Perkins, Bacon but the plates were in fact produced and printed from locally.



Pacific Steam  
Navigation Co.  
November 1847

The first overseas contract for the printing of stamps received by Perkins, Bacon was for the stamps of the Pacific Steam Navigation Company, which went on to be used in 1858 as the forerunners of the official, government issued stamps of Peru. The dies for the two values were completed in late September 1847 and the first delivery was invoiced on 16<sup>th</sup> November 1847.

The first British Colonies to issue stamps were Mauritius and Trinidad. Their first stamps were printed locally, although they also ordered stamps from Perkins, Bacon through their London agent. The initial delivery was received by the London agent on 21<sup>st</sup> December 1848. The Mauritius die had been the first to be made, with the Trinidad die being made via a transfer roller impression from the same master die. A series of progressive proofs was in the Sir John Marriott collection of Trinidad that would probably be more appropriate as the introduction to a collection of Mauritius (although they are listed under Barbados in *The Perkins, Bacon Records* by Percy de Worms). Trinidad issued its first stamps in August 1851 but, mysteriously, Mauritius continued to use their locally printed stamps for a number of years and the Britannias, whilst being gazetted for issue from April 1854, were not actually available for use until March 1858, some ten years after their arrival on the island.

Many of the earliest issues had no values included within the design and relied on colour to distinguish the price that they should be sold for. This caused complications, both within the Colonies due to confusion over which colour was intended for what value, and internally for Perkins, Bacon itself.



Mauritius &  
Trinidad  
December  
1848

The stamps of Mauritius are a catalogue of disasters, with Perkins, Bacon delivering wrong numbers of the wrong colours on more than one occasion. Trinidad had similar complaints but more or less ignored colour and initially used any number of different colours as 1d stamps. The solution was of course to include the values within the design and this was done for most plates made after late 1858.



CONTD/.

## FRAMES 10 TO 16 THE EARLY OVERSEAS CONTRACTS - FOREIGN & COLONIAL

The designs of the stamps for all three of the North American Colonies whose stamps were printed by Perkins, Bacon have similar designs for many values. Note the original die proofs of Newfoundland and the 5/- coin design large die proof of New South Wales.

The North American Colonies of New Brunswick and Nova Scotia ordered postage stamps from Perkins, Bacon in the summer of 1851 and the three high values were of a similar basic design. This design was again used on certain values when, in 1856, Newfoundland ordered its first stamps. The 1d value of Nova Scotia (issued in 1853) used the Coronation Robes portrait of Queen Victoria after the painting by A. E. Chalon, which had previously been used on sample bank notes and issued notes for banks in both North America and Australia.

The plates for New Brunswick and Nova Scotia were sent to the Colony but were never printed from in the Colony other than in 1895, when 5 sheets of each value were reprinted.

The famous Cape of Good Hope triangular stamps stand as a tribute to the craftsmanship of Perkins, Bacon but also to their impracticality when considering matters such as perforation.

The first Australian Colony to order plates from Perkins, Bacon was New South Wales, although no issued stamps were ever printed in London from any of the New South Wales plates.



1890 reprint from the original plate



1851  
Plate proof  
Few 3d known



? Date  
Colour proof  
Unrecorded by Pratt



1853  
Perkins, Bacon on  
white paper



1863  
De La Rue



1860  
Die proof on India paper  
Designer Edward Corbould  
engraved by Frederick Heath



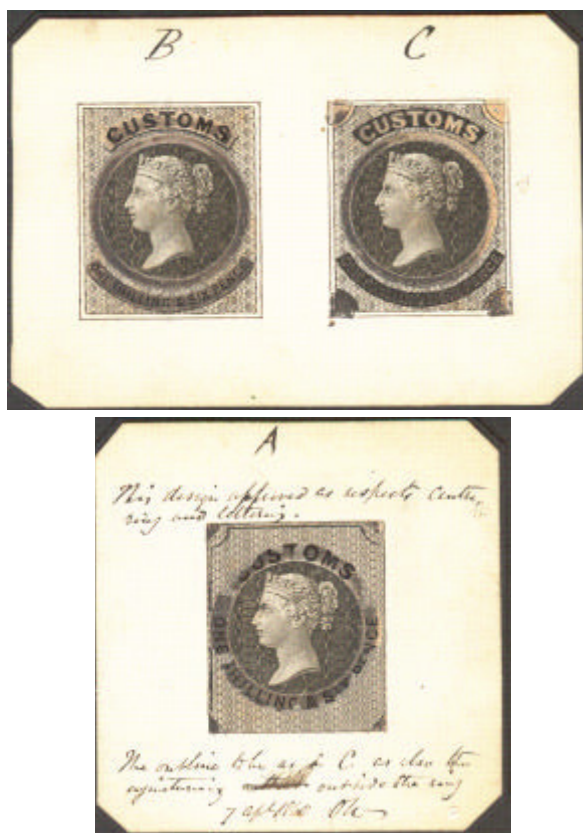


## Essays of Perkins, Bacon Revenue Stamps



Final Approved design of the Customs Bill  
of Lading stamp - signed by Ormond Hill  
*Ex Robson Lowe Collection*

Partly hand drawn essays for the Life Policy issue of 1853 using the Postage Head Die I  
*Ex Marcus Samuel Collection*



Essays for the 1860 Customs Bill of Lading stamp using the Postage Head Die II  
*Ex Robson Lowe Collection*





## FRAMES 17 TO 20 BRITISH REVENUE STAMPS - 1853 TO 1890S

The essays for the Customs Bill of Lading stamps were last shown at The Royal as part of a display by the Revenue Society of Great Britain (February 1993) when they were in the Robson Lowe collection. Perkins, Bacon die proofs in colour are very unusual and the one shown is signed and dated by Ormond Hill. Due to their large size, the Life Policy stamps are difficult to find in good, four margined condition. The attractive essays emanate from the collection of the late Marcus Samuel.

The larger sized revenue stamps printed by Perkins, Bacon provide some of the most spectacular designs among the whole range of postage and revenue stamps.

The Perkins, Bacon essays have an interesting history. Unlike the designs of De La Rue, where many essays became available to the philatelic market when the company records were sold in the 1970s, such essays are rare for stamps produced by Perkins, Bacon. A group of original drawings and designs for the early stamps of a number of countries was found in a drawer in the Perkins, Bacon office in December 1934. The Colonial ones, other than those for Bahamas, were presented to King George V and now grace The Royal Philatelic Collection. The Bahamas essays were presented to Louis Bradbury, who had already identified that his collection of Bahamas was to be donated to The Royal Philatelic Society London and these essays would therefore not be sold. The remaining essays, relating to various foreign countries and to various revenue issues in which the King was not interested were sold. The ones shown have come from this source.



1853 - die I  
wmk. Small Cabled Anchor



1855 - die II - Blued paper  
wmk. Large Cabled Anchor



1872 - die II - Line perf. 12½  
wmk. 18mm Anchor



CONTD/.

## FRAMES 17 TO 20 BRITISH REVENUE STAMPS - 1853 TO 1890s

The colour trials for the Mayor's Court and the Guildhall Consultation Fee all emanate from the Marcus Samuel collection and are mostly the only known examples. They date from the end of the nineteenth century and the reason for them is not known. The Peter Langmead collection in The British Library contains complete proof sheets of 16 of each value of the Electric Telegraph Company stamps with the exception of the "20 words and under 100 miles" value, where it contains only a half sheet. The half sheet shown is probably the missing block.

A long surviving Perkins, Bacon contract was for the various local court fee stamps used at the Guildhall in the City of London. Fees charged and fines imposed were met by adhesive stamps from 1869 until the 1930s. The Mayor's Court stamps were issued in a wide variety of values. The Guildhall Consultation Fee was used for a short period only and paid the fee for the hire of a private room at the Guildhall for consultation purposes.



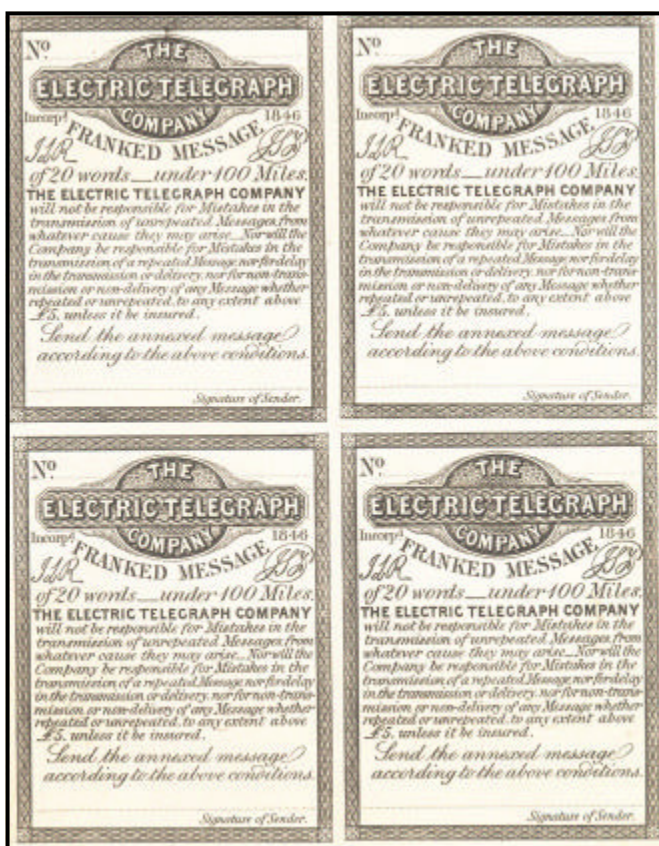
Circa 1900  
Reprint colour trial  
Line perf. 12½



1892  
Die proof  
or colour trial



Circa 1900  
Reprint colour trial  
Line perf. 12½



1853  
Plate proof on card



## FRAMES 21 TO 24 LARGE COLONIALS - LARGE STAR WATERMARKED PAPER - 1854 ONWARDS

The Chalon head shows up particularly well in the larger Tasmania stamps. The first local printings of New Zealand by Richardson have distinctive colours when compared with most later printings by Davies. The small provisional printing by Davies on pelure paper is rare. Ceylon provides a wonderful array of colours, with no less than 11 different values in two different designs.

During 1853, Perkins, Bacon received three requisitions for postage stamps from Edward Barnard, the Agent-General for the Crown Colonies. These were for Van Diemens Land (the spelling adopted by Perkins, Bacon), Victoria and South Australia. The adopted designs were the same width but slightly taller than the British stamps. The requisition required watermarked paper to be used and this led Perkins, Bacon to instruct Mrs. Wise of Rush Mills, Northampton to make the Large Star paper. The plates for all three Colonies were 240 set in 20 rows of 12 stamps.



The order was for the plates, inks, watermarked paper and other equipment to be delivered to each Colony. Victoria never used the plates for locally printed stamps, although both Tasmania (Van Diemens Land) and South Australia used certain of the plates up to the end of the century.

The stamps of New Zealand (1855), St. Helena (1856) and Ceylon (1857) were all the larger size stamps and again were printed on the Large Star paper. New Zealand had ordered that the plates be delivered to Auckland and all subsequent issues were printed in the Colony.



1854 Die proof on India paper



2d - Plate II  
wmk. Large Star  
Davies perforated period  
Variety imperforate prior  
to damage to the plate

Circa December 1865



1854 London printing - wmk. Large Star



1856



1854



1859



1859

Wmk. Large Star





## FRAMES 25 TO 35 SMALL COLONIALS - SMALL STAR WATERMARKED PAPER - 1860 ONWARDS

The range of bright colours in the issues of Queensland shows off the Chalon portrait well; in contrast to the duller colours of many of the other Colonies. The exception to this is St. Vincent who, from their first order, required that their stamps be in striking colours. Over the more than 20 years of the Perkins, Bacon contract for St. Vincent there is an astonishing array of different colours used.

The Colonial Secretary's Office, Brisbane in a letter dated 1st February 1860 instructed their London Agents, F. Mangles & Co., to arrange for the production of postage stamps for Queensland. The specific instructions were that the design should use the same portrait of the Queen as that used on the stamps of Tasmania and that the colours should match those used for the stamps of Great Britain.

Mangles & Co determined that the stamps should be perforated. Perkins, Bacon at that time had always struggled with perforating and were only to take possession of their first effective perforating machine in the summer of 1860. It was this requirement that they be perforated that seems to have decided the size of the final stamps. They were the same size as the stamps of Great Britain and in the same 240 sheet size in 20 rows of 12 stamps. This required a new colonial paper. The paper, watermarked with a Small Star (sometimes referred to as the Queensland paper), was ordered but did not arrive in time for the first printings, which were consequently made on the larger sheet size of the Large Star paper.



Die proof on India paper  
Scalloped corners were cut  
on the transfer roller

The first issues of Queensland are therefore particularly interesting, being the last Perkins, Bacon stamp issued imperforate and among the very first stamps to be perforated by Perkins, Bacon.

The Small Star paper became the standard paper for most of the Perkins, Bacon Colonial issues until they lost the last early contract, that for St. Vincent, in February 1882.



1860 - wmk. Large Star - Line perf. 14-16

The first delivery of 1d, 2d and 6d values had a mixture of imperforate and perforated stamps



1861 - Row 1 Stamp 4 shows a re-entry - best seen in the country name





## Perkins, Bacon and Perforations

### PIN PERFORATIONS

Perkins, Bacon were slow to accept that the perforation of their stamps was an important feature. The stamps of Great Britain had been perforated as a standard since October 1853 in respect of most Revenue stamps and since early 1854 in respect of all Postage stamps.

The Henry Archer patent for a comb perforation machine was owned by the Inland Revenue. The Archer machine itself had been a failure but the firm of David Napier & Co had supplied the Inland Revenue with a number of most efficient comb perforators. The Inland Revenue had agreed that a number of overseas administrations could also be supplied by Napier but consistently refused permission to any British based printer, including Perkins, Bacon.

In 1858, Perkins, Bacon had experimented with a rotary perforation or rouletting machine made by Bemrose of Derby but this was not successful, although similar machines were used very successfully over long periods within the USA.

Nevertheless they were under pressure from several Colonies to supply perforated stamps and, in June 1859, they had to resort to perforating a supply of stamps for Trinidad and a small order for Barbados by means of pin perforation. This involved using a metal rule and a wheel and was an extremely laborious process. In the letter attached to the delivery to Barbados the company wrote *"In the present instance it took 14 days to apply that operation to the stamps, each sheet requiring 23 careful operations, and we are ashamed of the price we have to charge to pay ourselves for doing it."*



Pin perf. 12½

There are two different gauges of pin wheels, measuring a gauge of 12½ and 13½ - 14. Very rarely a compound of the two is found. These are the first officially perforated stamps of the British Empire.



Pin perf. 13½ - 14

Pair enlarged to show the small cross cuts that are the identifying feature of the pin perforation



Pin perf. 13½ - 14



## Perkins, Bacon and Perforations contd/.

### “A” MACHINE - LINE PERFORATIONS - FROM 1860

Perkins, Bacon’s first operational perforating machine, the so-called “A” machine, was purchased from James Griffiths in June 1860 and, for the next 20 years or so, it was operated by the admirable Miss Stewart with remarkable accuracy. Her perforating records form part of the Perkins, Bacon Archives and we thus have a clear insight into the perforating work done by Perkins, Bacon over a very long period. The A machine was a line perforator with a gauge of 14 - 16 (although the Gibbons catalogues identify these differently from country to country, despite there being only the single machine). Almost certainly the first stamps to be perforated were the stamps of Trinidad and Queensland, although there are gaps in the perforating records of the very earliest period.



1860  
“A” machine  
Clean cut  
perf. 14-16

The perforating pins wore quickly and the early clean cut perforations deteriorated through an intermediate stage to the familiar rough perforations seen on the stamps of most Colonies. Comparison of delivery dates against the quality of perforations allows an accurate picture to be constructed of the state of the A machine at any given period.



1861 to 1871 - Rough perf 14-16 by the “A” machine

In June 1872 the A machine underwent major refurbishment, with many of the working parts being replaced and a new plate, guide and top plate being fitted. This changed the character of the subsequent perforations considerably.

“A” machine - refurbished state  
Used from late 1872  
Pins make very small holes



February 1874  
wmk. Large Star sideways

Line perf. 15 - Intermediate



December 1879  
wmk. Small Star upright

Line perf. 15 - Rough



## Perkins, Bacon and Perforations contd/.

### “B” MACHINE - LINE PERFORATIONS - FROM 1862

The “B” machine was acquired by Perkins, Bacon from John Francis, Islington in May 1862 and was again a line perforator, with a gauge of 11 - 12. The length of the arm was shorter than that of the A machine and therefore could not fully perforate the tall 240 set sheets. It was therefore generally reserved for those stamps produced in smaller sheet sizes. Apart from a few experimental uses for Antigua, Bahamas and Grenada, the Colonies for which this machine was used were Barbados, St. Vincent and Turks Islands.



Proof  
only

1862 to 1882 - Perf. 11-12 by the “B” machine



“B” machine compound with the “A” machine



1862 to 1882 - Perf. 11-12 by the “B” machine





## Perkins, Bacon and Perforations contd/.

### SOMERSET HOUSE – NAPIER COMB PERFORATIONS - COLONIAL USE FROM 1859

All postage stamps and most revenue stamps issued by Great Britain, whether printed by Perkins, Bacon or De La Rue, were perforated by the Napier comb perforators at Somerset House up until the summer of 1880, when De La Rue purchased the Napier machines from the Inland Revenue. Somerset House also perforated a significant proportion of the colonial work printed by De La Rue. However, Perkins, Bacon only had occasional access to these comb perforators for their colonial work, at times when their normal resources were stretched beyond their ability to cope

The requests by Perkins, Bacon for Somerset House to perforate their sheets often caused problems. The accuracy of the placing of individual images upon the printing plates is much more critical when the finished sheets are being perforated by a comb perforator rather than a line perforator. This was a recurring area of complaint when it came to the perforating of the Perkins, Bacon stamps of Great Britain. Use of wetted paper and generally smaller Colonial plate sizes all made for difficulties when it came to perforations.



Somerset House  
Comb perf. 14

The following Perkins, Bacon colonial printings were perforated at Somerset House:-

Natal	1859	1d, 3d	1861	3d
Western Australia	1861	1d, 2d, 4d		
Queensland	1861	1d, 2d		
Liannos Post	1865	5p, 20p, 40p		
Barbados	1873	3d, 5/-	1874	½d, 1d
Grenada	1875	1d, Revenue 1d to £1	1879	Revenue 1d, 2d, 4d, 2/-

### OTHER PERKINS, BACON PERFORATIONS

For the April 1881 postage issues of Grenada and the last issue of Grenada Revenue stamps (values between 1d and £1) Perkins, Bacon resorted to a new perforator about which very little is known. This is the only known use; it produced intermediate to rough perforations gauging 14¼ with small holes and is distinct from any other. From Miss Stewart's records it is certain that she did the perforating of these stamps, but using which machine is uncertain.



1881 - Perkins, Bacon mystery machine - Line perf. 14¼





## January 1862

### Crown Colony contracts move to De La Rue

Relations between the Crown Agents and Perkins, Bacon had often been strained. Perkins, Bacon may have been wonderful craftsmen, producing beautiful siderographic images but their commercial efficiency was not of a similar quality. The Perkins, Bacon Archives contain numerous frustrated letters complaining about late delivery, poor quality, and wrong deliveries. Eventually, for those Colonies for which they had authority, the Crown Agents required Perkins, Bacon to surrender the dies and plates, which were then passed to De La Rue.

Thus, in January 1862, the Crown Agents contracts for Bahamas, Cape of Good Hope, Ceylon, Mauritius (although no printings were subsequently made from the Perkins, Bacon plates), Natal, St. Helena, St. Lucia, Trinidad and Western Australia moved to De La Rue. Perkins, Bacon were left with those contracts which had been awarded directly by the Colony. These were Barbados, Grenada, St. Vincent and, later, Antigua and Turks Islands.

The signs are that De La Rue were not particularly organised for the arrival of all the additional Perkins, Bacon plates. These were plates made for a printing process that they did not favour and many were of non-standard sheet sizes and formats. De La Rue did their best over the years to persuade individual Colonies to adopt stamps printed by their favoured letterpress method. However, most chose for many years to retain their familiar designs.

Appendix B identifies the chronology of the production of plates and stamps by Perkins, Bacon, as well as showing the date when production was transferred to the Colony or to De La Rue.



## FRAME 36

NO WATERMARK - IMPERF., PERF. 11½ - 12, PERF. 11 & PERF. 13 - 1862/63

Most of these early De La Rue printings are scarce, especially in fine condition. The large holes of the 1862-63 issues of Bahamas and Trinidad produced by the 11½-12 line perforator are instantly recognisable. The line perf. 11 machine seems to have been used as a quality check to remedy missing rows of perforations and its use is rare. The Ceylon 10d value provides the only example of a stamp printed by Perkins, Bacon and perforated by De La Rue.

The first printings by De La Rue were on unwatermarked paper. These early issues are very distinctive; the colours are generally unlike later issues and the quality of the printing is normally rather blurred. Perforating obviously presented a problem to De La Rue, most of whose other production at that time would have been perforated at Somerset House on the Napier comb perforators.

The whole nature of De La Rue's production process and sheet format and sizes had been built around compatibility with these comb perforators. For the less accurately laid down Perkins, Bacon plates in unusual sizes, they had to resort to line perforators and in the first year three separate line perforating machines were in use. Print runs were small and create one of the most rarely seen and interesting periods of any of De La Rue's Colonial work.

Some, such as the triangular issues of the Cape of Good Hope were not perforated, as were, rather unexpectedly, the first 1d and 4d values of St. Helena. The St. Helena were printed in sheets of 240 in 20 rows of 12 stamps and the reason for their being left imperforate remains a mystery.



Line perf. 11 at left and line perf. 11½-12



1862-63  
Line perf. 11½-12



1863  
Line perf. 13





FRAMES 37 TO 39 CROWN CC WATERMARK - LINE PERF. 12½ - FROM 1863

FRAMES 40 TO 41 CROWN CC WATERMARK - LINE PERF. 14 - FROM 1876

The main attraction to this period is the wonderful variety of colours which comes from the increased use of aniline dies from Germany. An interesting feature of the Crown CC paper period is how often it was printed on the reverse side of the paper, producing the watermark reversed varieties. The paper was designed for letterpress printing and it seems that for line engraved printing it printed better on the “wrong” side.

According to the De La Rue records, the new dandy roll for the Crown CC paper was probably invoiced in August 1862. The format of the dandy roll produced 3 sheets each of 240 units divided into 4 panes of 60. The charge for this large piece of equipment was £95, including its own case. From the analysis of the printing records it appears that no stamps were printed on this new paper until early 1863. However, having moved from unwatermarked paper to the Crown CC paper, all subsequent De La Rue printings from Perkins, Bacon plates were on Crown CC paper, until 1881/82 when the new Crown CA paper was introduced.

By late 1863, for those stamps not perforated at Somerset House, De La Rue were using a standard perforation that was to last them for the next dozen years. It was a line perforator which gave a gauge of 12½ and was used across all Colonies until 1876 when, in the interests of standardisation, the gauge was changed to 14, again a line perforator. Some of the most varied and attractive shades come from this period, when the availability of aniline dies began to have a significant effect on ink technology.

The Perkins, Bacon plates for Ceylon taken over by De La Rue presented special problems as the design was larger than the normal and the plates were made up of 240 subjects in a single pane. The plate was larger than could be comfortably accommodated by the Crown CC paper. The invoices at the time show an intriguing solution in that De La Rue were printing from only part of the plate, since the units per sheet were identified as 228 (19 rows of 12) and sometimes 216 (18 rows 12). This was not a satisfactory long term solution and De La Rue commissioned a special pair of new watermark moulds, which were invoiced on 27<sup>th</sup> October 1866. Each mould was for two sheets of paper of 240 units each sheet. The later Ceylon paper was therefore hand made in moulds rather than being machine made using a dandy roll.

A conundrum concerns the stamps printed by De La Rue for St. Helena. Here the question is why these were not printed on the new special “Ceylon” paper. There was only a single plate, for the 6d value, and all other values were achieved by printing the 6d in different colours and surcharging with a new value. The design were the same larger size and the plate was the same 240 set as the Ceylon plate but was never, it seems, printed on the special Ceylon paper, as shown from certain printing invoices, where the practice was continued of printing from only part of the plate.



1863 - Line perf. 12½



CONTD/.

FRAMES 37 TO 39 CROWN CC WATERMARK - LINE PERF. 12½ - FROM 1863

FRAMES 40 TO 41 CROWN CC WATERMARK - LINE PERF. 14 - FROM 1876

This period shows the increased use of chemical dyes, which produce a spectacular range of bright (aniline) colours.

Wmk. Crown CC  
Line perf. 12½



Wmk. Crown CC  
Line perf. 14







FRAMES 42 TO 45 CROWN CA WATERMARK - LINE PERF. 14 & COMB PERF. 14 - FROM 1882  
CROWN CA WATERMARK - LINE PERF. 12 - OCCASIONAL FROM 1882

De La Rue as a company were ruthless in driving for greater efficiency in all they did. By the time that the Crown CA paper came into use, the standardisation meant that greater uniformity was the rule in terms of colour and perforations.

Before about April 1882 the Crown CC watermark paper for all the colonial contracts had been ordered directly by De La Rue from the paper mill and charged for in their overall price. The agreement with the mill was that all surplus paper was to be pulped. However, it became apparent that the pulping was not being done and, in mid-1881, the Crown Agents took over the ordering of the paper and the supplying of it to the printers, for which De La Rue reduced their overall printing prices.

As part of this change in procedure, the Crown Agents ordered a change to paper which was in future to be watermarked Crown CA. De La Rue had written to the Crown Agents on 22<sup>nd</sup> March 1881 explaining that Messrs. Turner & Co., the papermakers of Roughway Mills, had identified that the original dandy roll made in 1862 was becoming worn out. It was suggested that a new dandy roll should be made and that it should be slightly larger than the previous one. The new dandy roll produced Crown CA watermarked paper and was designed to produce 4 sheets each of 240 units divided into 4 panes of 60. The charge for this was £105, including its own case. The invoice for its supply was dated 29<sup>th</sup> June 1881. From 1882 onwards the great majority of De La Rue colonial contracts used this paper.

Wmk. Crown CA  
Line perf. 14



Wmk. Crown CA  
Comb perf. 14

Wmk. Crown CA  
Line perf. 12





## FRAME 46

## IRELAND - REVENUE STAMPS

Among the rarest Irish revenue stamps are those inscribed Record of Title. Most land in Ireland did not have its title registered and so the purchaser would record an interest in the land (using the Registration of Deeds stamps) rather than having absolute title. To find any of these Irish revenue stamps in fine condition is a challenge.

By tradition, the two recess printed Revenue stamps of Ireland have been attributed to Perkins, Bacon alone. However, study of the evolution of the colours of one of these, the Registration of Deeds set, strongly suggests that the plates were printed from by De La Rue in their later period of use. Such a conclusion is supported by the measurement of the perforations, which evolve from the first perforated issue, dating from about 1872, where the line perforation gauges 12½ but where the colour resembles the earlier imperforate stamps. These are likely to have been printed by Perkins, Bacon and perforated at Somerset House.

The later issues from 1882 are on 20mm Anchor paper (introduced in 1881). These stamps are line perf. 12, and from about 1887 are line perf. 14; the same gauges used by De La Rue for their Colonial stamps. At these later periods Perkins, Bacon had no machine with this gauge. Somerset House had virtually withdrawn from the business of perforating stamps with the sale of their Napier comb perforating machines to De La Rue in the summer of 1880. Both the colour of the inks used and the perforation gauges support the view that these later issues were printed by De La Rue from the Perkins, Bacon plates.



1861

Perkins, Bacon printings - wmk. Sailing Ships

Imperforate



1872

Line perf. 12½



1882

De La Rue printings - wmk. 20mm Anchor

Line perf. 12



1887

Line perf. 14



## FRAMES 47 TO 48 PRINTER'S SAMPLE SHEETS, REPRINTS AND MISCELLANEOUS

There are numbers of printer's sample sheets of stamps printed by Perkins, Bacon. Many were made using secondary, rejected or part finished dies and are printed in a wide range of colours. Their importance is arguable but they are nevertheless most attractive.

These reprints in a wide variety of colours, printed over a long period from the end of the nineteenth century up to the 1930s, are visually attractive. They are relevant to the study of Perkins, Bacon since they show the way that the issued stamps were built up from disparate stock designs to form a coherent whole. Examples of part completed designs or of rejected dies reveal some of the secrets that lie hidden



Ceylon Foreign Bill Plate

The two states of the plate are shown  
The later one has the addition of the  
New South Wales and Natal heads



when only considering the original finished stamp.

Many of these are printed in sheets of multiple designs, since cut down. Others are printed directly from original dies.

Some Colonies, notably in North America and Australasia, made later reprints from the plates in their possession.

## FRAMES 49 TO 50 ENGRAVED FORGERIES OF PERKINS, BACON DESIGNS

The theme of engraved stamps by Perkins, Bacon continues in the forgeries shown. The engraved forgeries of George Kirke Jeffryes rank as being among the most skilful forgeries ever made. They are each engraved by hand and the workmanship is of a very high standard. Of lesser craftsmanship, but nevertheless considered desirable among the collector of forgeries, are the engraved (in fact acid etched) forgeries of Erasmo Oneglia, which have traditionally been identified as "Panelli" forgeries. In fact they are all fully documented in the price lists issued by Oneglia at the turn of the nineteenth century and can definitely be attributed to him.

Ceylon 4d

Engraved by  
George Kirke  
Jeffryes



Ceylon 4d

Photo-etched  
by Erasmo  
Oneglia







## Appendix A

### The History of the Company and its Trading Names

1819 (Feb)	PERKINS & BACON Original partnership in Philadelphia.
1819 (May)	PERKINS AND FAIRMAN An agreement signed in Philadelphia between Asa Spencer, mechanician, Jacob Perkins and Gideon Fairman hiring Spencer for three years.
1819 (June)	Party arrives in the UK with seven American engravers and printers.
1819 (Dec)	PERKINS, FAIRMAN & HEATH - Charles Heath becomes a partner. Offices at 29 Austin Friars.
1820 (Sept)	Moved to 69 Fleet Street.
1820 (Oct)	First investment by George Heath.
1821 (Apr)	Charles Heath declared bankrupt but remains associated with the company.
1821 (Sept)	Joshua Bacon is summoned from America and leaves Philadelphia on 8 <sup>th</sup> September 1821.
1821 (Dec)	Joshua Bacon starts work for the company.
1822	George Heath buys 25% of the shares from Perkins & Fairman. Gideon Fairman (engraver) and Asa Spencer (engineer) return to America.
1822 (Nov)	PERKINS & HEATH
1823 (Aug)	Henry Petch joins the company.
1829 (Dec)	PERKINS & BACON - Joshua Bacon becomes a partner.
1834 (Jul)	PERKINS, BACON & PETCH - Henry Petch becomes a partner.
1838	Charles Heath declared bankrupt for the second time.
1849 (Jul)	Jacob Perkins dies.
1852 (Jun)	Henry Petch dies.
1853 (Mar)	PERKINS, BACON & CO - Shareholders Douglas Denon Heath (George Heath's third son), Henry Malden, Joshua Bacon, Margaret Ann Petch (Henry Petch's daughter)
1863 (Oct)	Joshua Bacon dies. J. Perkins Bacon (Joshua Bacon's son) buys the Petch shareholding.
1866	J. Perkins Bacon now managing partner.
1887 (May)	Shareholders Admiral Sir Leonard Heath, James Dunbar Heath (D.D. Heath's nephew), Charles Malden (Henry Malden's son), J. Perkins Bacon.
1888	J. Perkins Bacon retires.
1905	Company moves to Southwark Bridge Buildings.
1906 (Feb)	PERKINS, BACON & COMPANY LTD - Previous Company in voluntary liquidation with James Dunbar Heath as liquidator. Directors James Dunbar Heath, Douglas Leonard Heath, Charles Rynd.
1935 (Dec)	Company ceases to trade and goes into voluntary liquidation. Archives and records purchased by Charles Nissen & Co Ltd in association with Harry Nissen and Thomas Allen. Certain philatelic aspects and most of the records sold to The Royal Philatelic Society London. Bank note records were retained by the Nissen family.
1935	PERKINS BACON LTD. - NEW COMPANY BUT NO RELATION



## Appendix B

### The Perkins Bacon Stamp Printing Contracts & the use by other printers of the Perkins Bacon plates

<u>Start Date</u>	<u>Country</u>	<u>Type of Contract</u>	<u>Contract Termination</u>	<u>End Date</u>
1840 May	Great Britain	Direct Contract	Last printing by PB	1879 late
1847 Nov	Pacific Steam Navigation Co.	Direct Contract	One issue only	
1848 Nov	Mauritius	Crown Colonies Contract	Plates to De La Rue	1862 Jan
1848 Nov	Trinidad	Crown Colonies Contract	Plates to De La Rue	1862 Jan
1851 Jul	New Brunswick	Direct Contract	Plates sent to Colony	1851 Jul
1851 Jul	Nova Scotia	Direct Contract	Plates sent to Colony	1851 Jul
1852 Jan	Barbados	Direct Contract	Plates to De La Rue	1874 Nov
1852 Dec	Chile	Direct Contract	Plates to Country	1860 Aug
1853 Apr	Cape of Good Hope	Crown Colonies Contract	Plates to De La Rue	1862 Jan
1853 Aug	Western Australia	Crown Colonies Contract	Plates to De La Rue	1862 Jan
1854 Mar	South Australia	Direct Contract	Plates sent to Colony	1854 Mar
1854 Apr	Victoria	Direct Contract	Plates sent to Colony	1854 Mar
1854 Sep	New Zealand	Direct Contract	Plates sent to Colony	1854 Sep
1854 Dec	Tasmania	Direct Contract	Plates sent to Colony	1854 Dec
1855 Jan	New South Wales	Direct Contract	Plates sent to Colony	1855 Jan
1855 Jul	Ceylon	Crown Colonies Contract	Plates to De La Rue	1862 Jan
1855 Sep	St. Helena	Crown Colonies Contract	Plates to De La Rue	1862 Jan
1856 Sep	Newfoundland	Direct Contract	Last printing by PB	1861 Nov
1858 Oct	Ionian Islands	Direct Contract	One issue only	
1859 Mar	Natal	Crown Colonies Contract	Plates to De La Rue	1862 Jan
1859 May	Bahamas	Crown Colonies Contract	Plates to De La Rue	1862 Jan
1860 Jun	Queensland	Direct Contract	Plates sent to Colony	1861 Jun
1860 Nov	St. Lucia	Crown Colonies Contract	Plates to De La Rue	1862 Jan
1861 Mar	St. Vincent	Direct Contract	Plates to De La Rue	1882 Feb
1861 Apr	Grenada	Direct Contract	Last printing by PB	1881 Apr
1862 Jun	Antigua	Crown Colonies Contract	Plates to De La Rue	1871 Nov
1865 Nov	Liannos Post	Direct Contract	One issue only	
1866 Dec	Turks Islands	Direct Contract	Plates to De La Rue	1881 Mar
Overprinted De La Rue printings of Antigua from Perkins Bacon plates				
	Montserrat	Crown Colonies Contract		1876 Sep



## Appendix C

### The Periods of Use of Watermarked Papers for Postage Stamps

#### Perkins, Bacon Contracts

<u>Watermark</u>	<u>Country</u>	<u>Period of Use</u>		
Small Crown	Great Britain only	1840 May	to	1855 Aug
Large Crown (I)	Great Britain only	1855 May	to	1861 Mar
Large Crown (II)	Great Britain only	1861 ???	to	1880 Mar
Halfpenny	Great Britain only	1870 Oct	to	1879 Jun
No Watermark	Used for most early overseas printings	1847 Nov	to	1866 Dec
Large Star	Large Colonial stamps plus a few others	1854 Apr	to	1881 Apr
Small Star	Small Colonial stamps	1860 Jun	to	1882 Feb
Numerals	Used for London and local printings for Chile, New South Wales, Tasmania and Ionian Islands			
Swan	Used for London and local printings of Western Australia	1853 Aug	to	1862 Jan
Anchor	Used for Cape of Good Hope	1853 Apr	to	1862 Jan

Other papers used by Perkins, Bacon or used for printings in the Colony from Perkins, Bacon plates included - Small Truncated Star (Queensland), Script (Queensland), Broad Star (South Australia & Grenada), Crown & NSW (New South Wales).

#### De La Rue Contracts

No Watermark	Used for most early overseas printings	1862 Jan	to	1864 Apr
Crown CC	Used for most Colonies	1863 Jan	to	1882 Apr
Ceylon Crown CC	Special paper for 240 setting of Large stamps	1866 Oct	to	1872 Sep
Crown CA	Used for most Colonies	1882 Apr	to	1900 +
Anchor	Used for Cape of Good Hope	1863	to	1864

Other papers supplied by De La Rue and used for printings from Perkins, Bacon plates included - Crown & Q (Queensland), NZ (New Zealand), Crown & SA (South Australia).





## Appendix D

### The Periods of Use of Different Perforations for Postage Stamps printed by Perkins, Bacon or from Perkins, Bacon plates

#### Somerset House Comb Perforations

<u>Perforation</u>	<u>Country and Comments</u>	<u>Period of Use</u>
Comb Perf. 16	Great Britain	1854 February to 1857 July
Comb Perf. 14	Great Britain	1855 January onwards
	Colonial work	Occasional use 1859 onwards

#### Perkins, Bacon Perforations

Imperforate	Great Britain and most overseas contracts	1840 to 1860 June
Pin Perf. 12½	Trinidad, Barbados	1859 June
Pin Perf. 13½-14	Trinidad, Barbados	1859 June
Line Perf 14-16	"A" Machine	
	Clean cut perf.	Electric Telegraph Company, Trinidad, Queensland, Bahamas, Barbados, Ceylon, Western Australia
	Intermediate perf.	Many Colonies
	Rough perf.	Most Colonies
	"A" Machine repaired	Barbados, Grenada, St. Vincent, Turks Islands
Line Perf. 11-12	"B" Machine	St. Vincent, Turks Islands plus some trial printings
Compound	"B" Machine x "A" Machine	Barbados, St. Vincent, Turks Islands
Line Perf. 14¼	Grenada Postage and Revenues only	Occasional 1881 April - one delivery only

#### De La Rue Perforations

Imperforate	St. Helena, Cape of Good Hope	1862 to 1864
Line Perf. 11½-12	Bahamas, Trinidad, Ceylon	1862 to 1863
Line Perf. 11	Bahamas, Trinidad	1862 to 1863
Line Perf. 13	Bahamas, Barbados, Ceylon, Natal, Trinidad, Western Australia	1863 to 1864
Line Perf. 12½	Most Colonies	1863 to 1876
Line Perf. 14	Most Colonies	From 1876
Compound	Line perf. 12½ x 14 - Barbados, St. Helena, Trinidad	Occasional
Line Perf. 12	Occasional use for several Colonies	From 1882
Comb Perf. 14	St. Vincent	From 1882

circa 1840  
Proof of value tablet of a bank note (enlarged)



Known also with the "Coronation Robes" portrait of Queen Victoria  
in the central oval frame in place of £1