

FROM HILL TO BICKERDIKE: THE EXPERIMENTAL AND EARLY MACHINE POSTMARKS OF ENGLAND 1857-1901

By

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Jerry Miller's subject article reflects excerpts from his gold-award winning exhibit of the subject, which received the 'Tom Current Founder's Award' for 2005 and, more recently, received the Show Grand Award along with a number of postal history awards at WESTPEX (San Francisco) in 2006 . The illustrations shown are of material from that exhibit and collection which was formed over a twenty year period and is possibly one of the three foremost of this subject ever formed in North America and Europe.

This article offers the reader a brief introduction to the experimental and early machine postmarks of England as well as an overview of those machines and some of their representative markings.

Historical Background

Soon after the introduction of prepaid postage and use of the first postage stamp in England in 1840, the postal authorities recognized a need for clear, clean and legible postmarks, as well as a need for conservation of ink and an improvement in the handling and postmarking of the ever-increasing volume of mail. The Victorian Period in England was a dynamic one and is often referred to as the 'Period of the Industrial Revolution', where communications by mail, including the onset of advertising by mail and the introduction of the postal stationery card, were important aspects.

In 1853, Pearson Hill, son of Rowland Hill, so-called 'father' of the prepaid postage stamp and Secretary to the Post Office, became involved with the postmarking deficiencies existent in the early British postal system. By 1857, he had developed and patented the first 'rapid postmarking machine'!

Between 1857 and 1912, the London General Post Office tested and/or evaluated no less than 18 machines, most of which were of non-British manufacture and origin.

Pearson Hill Machine

Pearson Hill's machine (*Fig. 1*) was treadle-operated and could postmark about 100 letters/minute, considerably slower than an experienced postal clerk who could hand-stamp mail at about 200 strikes/minute, albeit a machine's durability and stamina surpassed that of a clerk. Nevertheless, in both cases the mail had to be 'faced', i.e. arrange and sorted so that the front side was always facing the clerk for stamping or feeding into the machine for proper postmarking.



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Fig. 1 — The treadle-operated first field-tested (Model 'A') 'Pearson Hill' postmarking machine, which could postmark about 100 letters/minute.

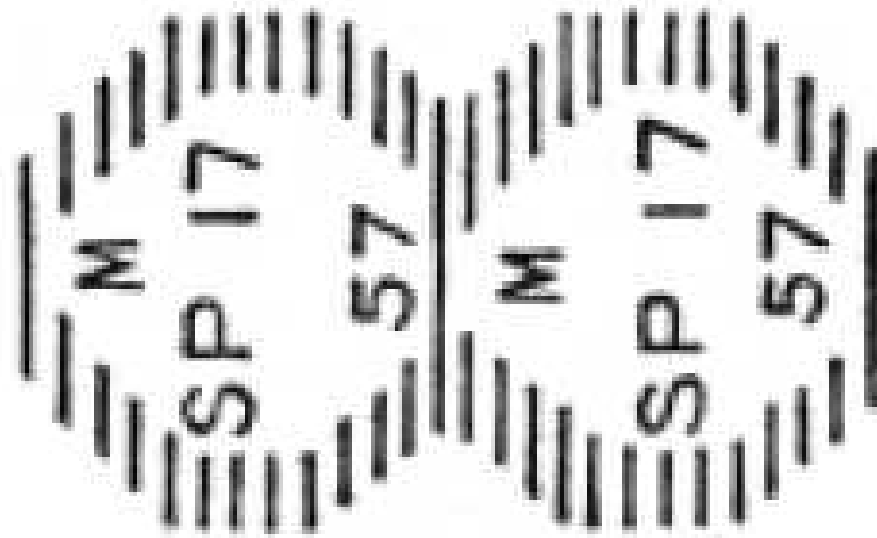


Fig. 1a

Demonstration of Hill's machine to the postal authorities took place on 17 September 1857. The die used for this demonstration was most probably made of wood. (see Fig. 1a). Three covers and three stamps are recorded.

On 21 September 1857 a commercially-built machine with a rubber die was delivered to the Post Office and commenced a field trial. In my collection I have a loose stamp with the 21 September 1857 earliest trial date with one cover known to me.

On 25 September 1857 the Post office commenced its full-day (day and night) trial of the machine (Fig. 2) with postmarks, mostly on loose stamps, recorded to 17 February 1858.

All postmarks from Hill's first machine had the letter 'A' in the periphery of the postmark. However, between **25 September 1857 and 17 February 1858**, several codes were used, placed above the date, which may or may not have reflected adjustments or alterations to the machine during this experimental test phase:

Die Number	Number of Days of Recorded Use
'A'	25+
'M'	6
'1'	1
'2'	4
'3'	3
'4'	3

Except for the 'A' (20+ covers recorded) and 'M' (two covers recorded), no covers are known for the other codes other than on loose Penny Reds. All known covers are to inland destinations, except for one example to France. (Fig. 3).

Fig. 2 — The only known example from the first full day of post office field trial service using the 'Pearson Hill' machine, 25 September 1857. The back-flap of the folded letter opened to illustrate the inking offset from the postmarking die.

Note the letter 'A' at periphery of postmark die as well as code 'A' in the mark itself.



Fig. 3 — 'Pearson Hill' machine: the only known foreign-destination commercial mail (folded letter). Dated 16 December 1857 to France. Letter has ink-bleed from written text. 4d single-weight letter rate.

The early dies were manufactured of rubber and, of course, could wear, resulting in potentially illegible markings. So, Pearson Hill improved his field-test machine into a second type, which now used a metal die having the postmark code 'B' (see Fig. 4). Recorded use: 21 March – 23 April 1858.



Fig. 4 — Because of its unusual design, markings from Pearson Hill's 'second machine type' ('B' die) became known as 'Opera Glass' postmarks. This example from 24 March 1858 is a folded letter with the back-flap folded out to illustrate the offset from the die and stamping pad.

Typical for postmark impressions of Hill's first and second machine designs were the offset postmark markings as shown in Figs 2 and 4 above. In an attempt to eliminate those, thereby achieving reduction of ink-waste as well as a cleaner postmark, Hill placed an inked ribbon between the metal die and the mail to be postmarked. This eliminated the need for the 'glue and treacle inking rollers' of the two previous machines. Thus, Hill's 'third' machine design ('C') was developed and used a less-ornate postmarking die consisting of two adjacent 19 mm diameter dated and coded single-circle dials (See Fig. 5). Known trial usage: 8-18 March 1858.



**Fig. 5 — Example from Hill's 'C' Machine.
Envelope dated 11 March 1858, sent from
London to Plymouth having Die 'CA'. One of
four recorded covers.**

This design, having an inked-ribbon between stamping die and the mail involved, was discarded by Hill at the end of March since he found the inking process using the earlier 'glue and treacle inking rollers' better. That method would subsequently be used on Hill's 'Parallel Motion Machine', which was much simpler and less bulky in design.

However, Hill altered the stamping die of his 'C Machine'. One circular dater die was now used singly to apply service postmarks to incoming mail, while the other was used for applying origin postmarks to outgoing mail, albeit a 'killer' or obliterator was now added to the dater dial to form a duplex cancel which henceforth became a standard for postmarks on outgoing mail (*see Fig. 6*).

The dater dials of Hill's 'C' Machine varied from 'CA' to 'CB' to 'CC'. The first 'C' was the code for the 'C' Machine while the next letter reflected the day of week where the series repeated

itself, e.g. 'A' = Monday, 'B' = Tuesday, 'C' = Wednesday, 'A' = Thursday, 'B' = Friday, 'C' = Saturday (see Fig. 7). No code for Sunday when no mail was postmarked.



Fig. 6 — Pearson Hill 'C' Machine 'service or receipt' postmark on the reverse of an in-bound letter. Note 19 mm single circle dater having 'CC' code in dial. One of two recorded examples from the earliest day of use: 20 March 1858.

Fig. 7 — Pearson Hill 'C' Machine postmark on the front of an outgoing letter to Germany. Note 19 mm dater dial with new duplex obliterator or 'killer'. Only known cover illustrating the earliest date of use: 23 March 1858.



Charles Rideout Machine

In January 1858, Charles Rideout, a retired post office surveyor, offered the London Post Office a new postmarking machine, which had been patented in October 1857, by his son-in-law, George Beard. Two machines would be tested by the post office between 1858-1859.

Rideout's new machines were of a compact design, could be placed on a table and could effectively apply receipt marks to incoming mail at a rate of 160 strikes/minute and duplex marks to outgoing mail at about 85 strikes/minute. In contrast, the Pearson Hill 'A' and 'B' designs were large and bulky and stood alone. Thus, in terms of design and capability, as tests showed, the Rideout Machines appeared to be a viable and important competition to those of Hill.

Two postmark types were used with each of Rideout's machines (*see Table 1*):

TABLE 1	
Rideout Machine Postmark Types	
<u>Machine 1</u>	
<i>Type I</i>	
19 mm circular dater dial code 'HS', 'LONDON' and date with '1' indicated in the duplex-killer between 12 vertical bars	
<i>Type II</i>	
19 mm circular dater dial code 'HS', 'LONDON' and date with '1' indicated in the duplex-killer between 11 vertical bars	
Receival marking: (orange-red colour) 19 mm circular-circle dater dial with code 'HS' along with 'LONDON' and applicable date	
<u>Machine 2</u>	
<i>Type I</i>	
19 mm circular dater dial code 'CR', 'LONDON' and date with '2' indicated in the duplex-killer between 9 thick vertical bars	
<i>Type II</i>	
19 mm Circular Dater Dial 'RC', 'LONDON' and date with '2' indicated in the duplex-killer between 9 thick vertical bars	
Receival marking: (orange-red color) 19 mm circular-circle dater dial with code 'CR' along with 'LONDON' and applicable date	



Fig. 8 — Postmark from Ridout's Test Machine 1, Type I. Mourning cover to Gibraltar. Single-weight letter rate — 6d.



Fig. 9 — Postmark from Ridout's Test Machine 2, Type II. Double-weight domestic folded letter to Edinburgh. Double-weight letter-rate — 2d.

As mentioned, Hill's previous machines were large and bulky. With Charles Rideout's introduction to the post office of a compact and more flexible machine compared to Hill's 'A' and 'B' designs, Hill was challenged and motivated.

However, it must, assumed that Hill was already developing improvements on his 'C' Machine design by the time Charles Rideout introduced his machine in January, 1858, since it would be only a few months later when Hill introduced a much improved more robust competitive machine of similar advantages requiring only slight hand movement with greater speed enabling clear postmarks, machine portability and easy exchange of stamping dies. In addition, Hill's new machine also included a parallel-linkage with a double-roller inking design which was economical with ink, and did not result in an offset marking on mail.

Hill officially introduced his new 'Parallel Motion Stamping Machine' to the Post Office on 13 May 1858, they started trials one day later – 14 May 1858, the earliest recorded usage. Testing continued from 1858 to 1860 along with post-experimental usage several years beyond and with a number of postmark varieties recorded.



Fig. 10 — Postmark from Hill's 'Parallel Motion Machine' on a single-weight cover from London to Ashburton dated 14 May 1858, earliest known usage. Postmark: 19 mm diameter dater-dial with 'LONDON' 14 mm in length along with a duplex obliterator (1.75mm from dater dial) having a '3' between 17 thin lines.

Fig. 11 — 'Third' postmark variety from Hill's 'Parallel Motion Machine' where the length of 'LONDON' in the dater dial is 16 mm in the dater-dial (instead of 14 mm) and with a '3' in a duplex obliterator having 14 widely spaced horizontal lines (instead of 17 thin lines). Cover: 10 August 1859, commercial (printed-circular) single-weight letter rate to Shanghai, China, 9d franking.



'Hill versus Rideout'

Although Person Hill's 'Parallel-Motion' Machine had been selected in 1859 as the one to be purchased by the General Post Office for field use, Charles Rideout pressed the post office for additional trials. Between October 1866 and July 1867, a second trial was conducted for Rideout on two improved machines which, however, ended in failure. Hill's design was determined to be more robust, more effective in stamping and field usage. Whether the influence of Rowland Hill, Pearson Hill's father, holding an important position in the Post Office, had any influence in this matter can only be speculated.

Fig. 12 — Postmark from Rideout's Second Trial at the London Post Office. Machine '1' usage only known on two covers: 10 & 12 October 1866. This example illustrates a 19 mm diameter dater dial with 'HS' and duplex obliterator having '1' between 11 thin vertical bars. This cover is the earliest known usage on a domestic local single-weight cover.



Fig. 13 — Postmark from Rideout's Second Trial at the London Post Office. Machine '2' usage from 23 October 1866 to 10 July 1867. This example illustrates a 19 mm diameter dater dial with 'CR' and duplex obliterator having '2' between nine thick vertical bars. This cover is the earliest known usage from Rideout's Trial using Machine '2'.

Hill's Parallel Motion Machine and a version thereof called the 'Pivot Machine' became widely used and 'mainstays' in the British Post Office for many years. Despite such widespread usage, the Post Office continued to evaluate other machine designs, which potentially could improve the postmarking and handling of mail. Most of the machines to be tested were now of non-British design and manufacture.

Hinrichsen (Azemar) Machine

In 1865, two German inventors, Carl Fischer and J.C.W. Maas, applied in England for a patent on their new postmarking machine. Although initially unsuccessful, a patent was eventually issued

in August 1867. Concurrently, inventors Maas & Fischer were also attempting to interest the Hamburg State & Prussian Post Offices in their invention, which would initially test their machine during 1866 and 1867 with subsequent trials of improved designs for a number of years thereafter.

It would, however, be a German named Robert Hinrichsen who would become owner and manufacturer of the 'Fischer-Maas' invention. Hinrichsen's sales representative in Britain was J.C. Azemar, who, in fact, was the contact person with the General Post Office in efforts to have them test and buy Hinrichsen's rapid postmarking machine.

The 'Hinrichsen', or 'Azemar', machine was unique at the time since it had 'three' postmarking die heads with mail being transported through the postmarking zone by a set of two or three needles. Thus, postal history examples having 'Hinrichsen' postmarks will have traces of these needle intrusions on the cover reverse. With each rotation of the stamping head, three postmarks could be applied to three individual pieces of mail, which offered a significant advantage and improvement compared with the machines by Pearson Hill or Charles Rideout.



Fig. 14 — Postmark from the First Trial with a coded dater dial having 'YI' and a split obliterator (only known example). Single-weight (1d) folded letter dated 8 April 1869.

Fig. 15 — Postmark from the Second Trial with a coded dater dial having 'AP' on a Paris-bound commercial folded letter. Only known example of this code. 3d single-weight franking.



Fig. 16 — Postmark from the Second Trial on postal stationery cards (one month duration — 4 January to 4 February 1871) having a rectangular dater and an obliterator having '89' in the center. The rectangular dater is similar to ones used in the German trials which had commenced in 1867.

The machine itself was treadle-operated and could achieve a postmarking rate of 500-600 pieces of mail/minute. However, although the machine appeared to be ideal for the Post Office, it was ultimately rejected after three primary trials because it did not effectively postmark 10% or more of the mail which passed through it, and it required a high level of maintenance!

The 'Hinrichsen' or 'Azemar' trial postmarks consisted of a 20 mm dater dial along with an obliterator having varied and various combinations of bar configurations of five basic types, as illustrated in Figs 14-16.

Three primary trials were conducted:

First Trial: 31 March 1869 to 24 June 1869 on folded letters and envelopes. Dater dial code: "YI" (all three die heads).

Second Trial: 4 January to 4 February 1871. Only on government-issued postal stationery postcards. Rectangular dater dial with '89' in the obliterator.

18 May to December 1871 on folded letters and envelopes. Dater dial codes: 'AB', 'BB' & 'CB' (one for each die head) and 'AP' on an overseas-bound letter (two examples recorded).

Third Trial: 17 May to 8 November 1872 on folded letters and envelopes. Dater dial codes: 'AB', 'BB', 'CB' (one for each die head).

Sloper Machine

With the introduction of the government-issued postal stationery card in October 1870, the General Post Office sought a device for effective postmarking of such cards in quantity. The Sloper perforating machine, which until now was used for perforating business documents or applying perfins to postage stamps, was initially tested in the City of London and subsequently in the cities of Liverpool, Manchester, Edinburgh and Bradford.

Several perforation or mutilation approaches were used during the five-year trial duration period. A 'Cross & Orb' perforation design was the first used at London. Examples from that trial are very scarce and known from 2-3 November 1870 for the 'standing orb' and from 9-21 November 1870 for the 'inverted orb'!



Fig. 17 — Sloper perforation 'Standing Orb & Cross' on postcard dated 2 November 1870. Earliest known example.



Fig. 18 — Sloper perforation 'Inverted Orb & Cross' on postcard dated 17 November 1870.

Vaile Machine

Having been unsuccessful in 1874 in selling his new postmarking machine to the New Zealand Post Office, Robert Vaile of Auckland, New Zealand, patented his machine in England in January 1877. With the assistance of high-placed individuals in British society, Mr. Vaile was able to successfully demonstrate his machine to the British Post Office at London during April 1878.

For that demonstration, ‘dummy’ letters or postal stationery cards were prepared and used on which three different postmarks were tried:

1. A three-line continuous bar obliterator having two dater dials (*Fig. 19*);
2. A two-line continuous bar obliterator having two dater dials;
3. A zig-zag continuous-pattern obliterator having two dater dials.



Fig. 19 — One of five reported surviving examples in private collections from the Vaile postmarking machine trial of April 1878, and the only known example having the illustrated postmark design. This cover illustrates a ‘shadow’ offset of the zig-zag pattern obliterator from the same trial.

Despite the trial having taken place at London in 1878, all dater dials indicated ‘C / N.Z. / AUCKLAND / SE 2, 74’. However, no mail was actually processed for delivery. Only seven recorded examples from that demonstration have survived, two of which are in the British Postal Museum & Archive.

For reasons unknown, the machine was reported as rejected on 17 May 1878.

Hoster Machine

In 1883, Albert Hoster, a German national, acquired the assets of Haller & Company in Germany. The latter was a manufacturer of postmarking machinery and had received a contract to supply the German post office with fifteen machines, which were intended only to apply receipt markings to in-bound mail, which were of primary interest at that time for the German Reichspost. However, Hoster's new company had the ability and know-how to modify the Haller Machine design so that it could apply 'origin-postmarks' to out-going mail, which was of primary interest to the British post office.

Albert Hoster recognized the potential of sales to the General Post Office in England and established in 1883 the Postal Stamping & Patent Machinery Company Limited in London. Between 1883-1886, the latter company sold the Post Office eight 'Hoster' Postmarking Machines.

Fig. 20 — Example of an early Hoster on a cover dated 23 September 1884 from London to Buenos Aires, Argentina. Only known Hoster machine postmark on cover to that destination. 4d single-weight rate to Argentina.



Fig. 21 — Example of a 'Type XII' Hoster marking on an early local advertising cover sent from the London office of the *New York Herald* newspaper.

The 'Hoster' machine was hand-operated having two postmarking dies able to postmark two pieces of mail with each rotation of the hand-wheel. During the field-trials and usage years 1883–1893, Hoster machines applied a number of different origin markings to out-going mail and also receipt markings to in-bound mail.



Fig. 22 — Example of a 'Dot Matrix' Hoster marking on an 1887 mourning cover.

Ethridge Machine

Based on a design and patent held by Martin V.B. Ethridge, the 'American Postal Machines Company' of Boston, Massachusetts, furnished the British Post Office in London with one of their steam-powered postmarking machines for testing in 1886. Although the machine trials were conducted over a reasonable period of time, the Post Office rejected the machine because of its size, its high cost and little or no advantage compared to Hoster Machines being concurrently tested.

The 'Ethrige Machine', as it is known in Britain ('American Machine' in North America) was the first postmarking machine to apply a postmark having horizontal obliterator lines. The full postmark consists of a 25 mm dater dial with six horizontal lines in the centre of which is an open space reserved for a machine number.

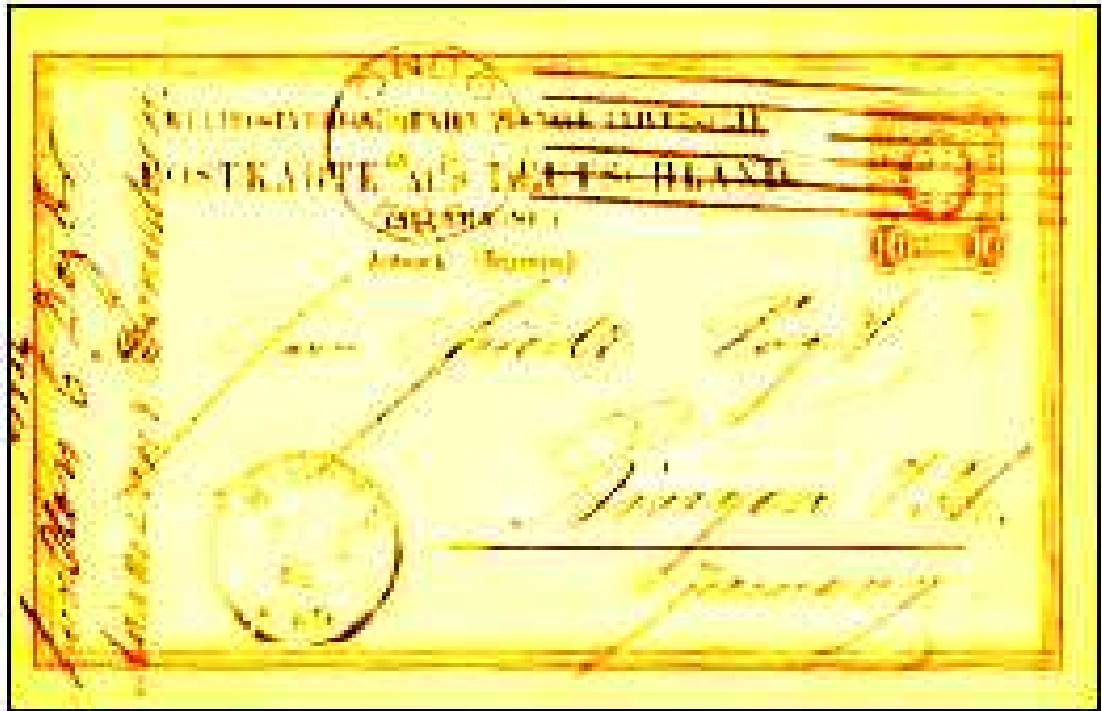


Fig. 23 — 'Ethrige' postmark applied to a German postal reply card returned at London to Germany on 6 December 1886. Only recorded 'Ethrige' postmark on a reply card.

Intermittently between September 30, 1890, and February 12, 1891, a 'six-month' trial was held with the Malin Machine. Little is found today in British postal archives about this machine other than it was rejected from consideration by the Post Office since it could only postmark a maximum of 100 letters/minute!

From the six recorded examples, it appears that the Malin Machine may have been dedicated to apply origin-postmarks to outgoing-mail having overseas destinations.



Figs 24 (inset) and 25 — 'Malin' postmark. The postal stationery card has Holland as its destination. 1d postcard rate to Holland.

International Machine (“Hey-Dolphin Machine”)

In August 1893, G.W. Hey & M.J. Dolphin, founders of the ‘International Postal Supply Company’ of New York, furnished the General Post Office, London, with a postmarking machine for testing, which took place between 25 August and 14 September 1893. According to reports, the electrically-operated machine generally functioned well and effectively, but it was subsequently rejected by the Post Office because of its need for regular maintenance for letters of different thickness or size as well as its high rental cost.

The postmark applied by the ‘International Machine’ had a 22 mm diameter single-circle daterial along with a seven-line (52 mm length) obliterator having the numeral ‘1’ on the right-side.



Fig. 26 — ‘International Machine’ postmark on a 14 September 1893 (only known example having this latest-known usage date), postal stationery envelope to Germany. Halfpenny printed-matter rate to Germany.

Imperial Machine

In July 1896, the Imperial Mail Marking Machine Company of Canada offered the Post Office their 'Imperial' Machine for evaluation and trials. Similar machines were already in field use in Canada and effectively applied markings to both in-coming and out-bound mail.



It would first be 1897 when the British Post Office would consider the machine and its postmark, which had a beautiful clear marking commemorating the Queen Victoria's Jubilee 1837-1897; similar postmarks were applied by field-use machines in Canada. No mail was processed during testing of the machine, but two proof examples are known of the postmark (*Fig 28*). The Imperial Machine was not accepted or seriously considered since the Post Office had already commenced tests with another more promising Canadian-built machine, the 'Bickerdike'.



Bickerdike Machine

In March 1897, an agent for the Canadian Postal Supply Company of Montreal, Canada, approached the British Post Office to offer at no-charge their electric-powered 'Bickerdike' postmarking machines for trials at London to which the Post Office agreed.

In September 1897, four machines were delivered to the London Post Office with test runs utilizing two machines for about three months. Very little mail was used or survived from those tests and that which is available is very scarce; recorded postmark examples are from October 5, 1897 to November 26, 1897.



Fig. 29 — Two postmarks designs were used for the trials, one type for each machine: one with, and one without, serifs to the 'VR' in the obliterator.

Fig. 30 — Postmark dated 6 October 1897, on a commercial cover to Switzerland with postage due covering the 2½d postage and similar penalty. Only recorded overseas example from the Bickerdike trial phase.



Empire Machine

Mr. Martin V.B. Ethridge, previously affiliated with the 'American Postal Machines Company', which had submitted their 'Ethridge Machine' for trials in 1886, approached the British Post Office in 1898 and attempted to sell them his rapid postmarking machine manufactured by his new company, Empire Canceling Machine Company.

Trials for that machine were held only four days, 15, 17, 18 and 21 March 1898, for one hour each day. Although the 'Empire Machine' looked and functioned similarly to the 'Bickerdike' which had been tested a few months earlier, its performance was inferior to the 'Bickerdike' and was rejected for additional consideration by the Post Office.



Fig. 31 — 'Empire Machine' postmark from 21 March 1898. One of five recorded examples.

Boston Machine

Soon after the Bickerdike Machine's first trial was completed in November 1897, a disagreement on purchase terms for those machines arose between the British Post Office and the Canadian Postal Supply Company. However, shortly before those trials commenced, the American Postal Machines Company of Boston had submitted their new 'Boston' machine to the Post Office for testing, which took place between 27 August and 30 September 1898. The 'Boston' machine was basically the same as the 'Ethridge' machine tested in 1886-1887, but the latter was powered by steam whereas the 'Boston' machine was electrically-operated.

The American Postal Machines Company of Boston offered to supply the Post Office twelve of their machines at a very favorable price and conditions. Learning of this, and since the Post Office was quite satisfied with the outcome of the 'Bickerdike' Trials, the Canadian Postal Supply Company matched the competitor's offer resulting in the Post Office deciding to lease six machines from each company. Those machines, now referred to as 'Bickerdike' and 'Boston' machines, were subsequently tried for another year and were successful.



Fig. 32 — 'Boston Machine' postmark dated 31 August 1898, from the trial period, on a domestic postal stationery postcard. One of twelve examples recorded.

Bickerdike & Boston Machine Field Trials

As indicated, six machines of each type were leased with subsequent field testing continuing between 1899-1900. In 1900, the Post Office purchased all twelve machines as well as two more from each company so as to conduct trials with the latter at the Liverpool Post Office.

The postmarks of each machine tried at London and Liverpool were numbered which is reflected in their respective obliterators.



Fig. 33 — 'Boston Machine' postmark from the second trial period of 1899-1900 with number '1' appearing in the postmark obliterator.



Fig. 34 — 'Bickerdike Machine' postmark from the second trial period of 1899–1900 with number '2' appearing in the postmark obliterator.

Upon the demise of Queen Victoria on 22 January 1901, the British Post Office ordered the alteration of the Bickerdike postmark obliterations from 'VR' to 'ER', since Edward, her eldest son, now became king. Such change took place mid-year 1901. However, although the initials changed in the obliterator, the 'Victorian Crown' remained in use with the 'ER' initials until it also was altered by September, 1901!



Fig. 35 — 'Bickerdike Machine' postmark with 'ER' in the obliterator but with 'Victorian Crown' on a domestic local commercial cover dated 15 July 1901.

The 'Bickerdike' Machine remained in field use for a number of years. The 'patriotic' postmarks from those six machines are collected in terms of their impression but also by use and destination.

Subsequent to the turn-of-the-century '1900' and after the 'Victorian Period', a number of other machines having higher speed as well as unique designs were tested and accepted for field use by the British Post Office. However, the machines and markings described above reflect the 'classical period' for experimental postmarking machines in Britain.

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Editor's Note: This article was originally published in the September/October 2005 issue of THE GB JOURNAL (Volume 43 Number 5) at pages 106-121, and was given the 'GB Silver Cup' Award for 2006 as their best article for the year, and is reprinted herein with some up-dated information included by permission of the author.

