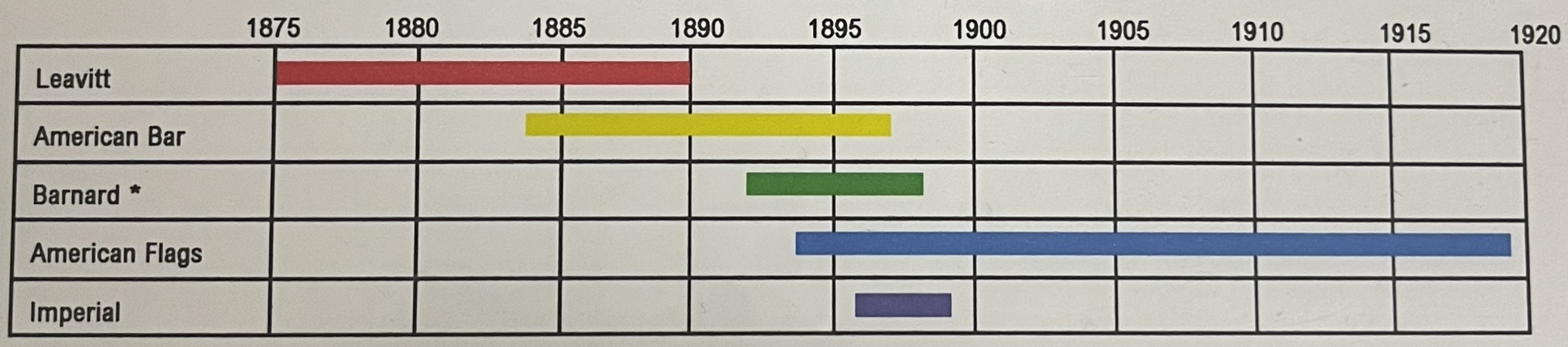
THE BOSTON POST OFFICE AND THE DEVELOPMENT OF MACHINE CANCELLATION

In the last quarter of the nineteenth century, Boston-area inventors, aided significantly by the Boston Post Office, were in the forefront of the development and dissemination of machine cancellation. Several local companies, linked by convoluted interchanges of patents, innovating personnel and financial backers, produced cancelling machines which were the first to have broad acceptance by the larger post offices around the country. These machines ranged from the embryonic Leavitts to the highly popular flag cancels–including what is almost certainly the most famous American experimental machine cancel: the unique "Eagle and Thunderbolts."

This exhibit aims to show the development and the ultimate decline of the machines first used in Boston during the nineteenth century. Examples of all major varieties produced by each company are included. Unusual cancellations are also shown where possible, including experimental machines, early and late impressions, cancellation errors, and alternative usages such as streetcar mail service and apparent short-term testing operations.

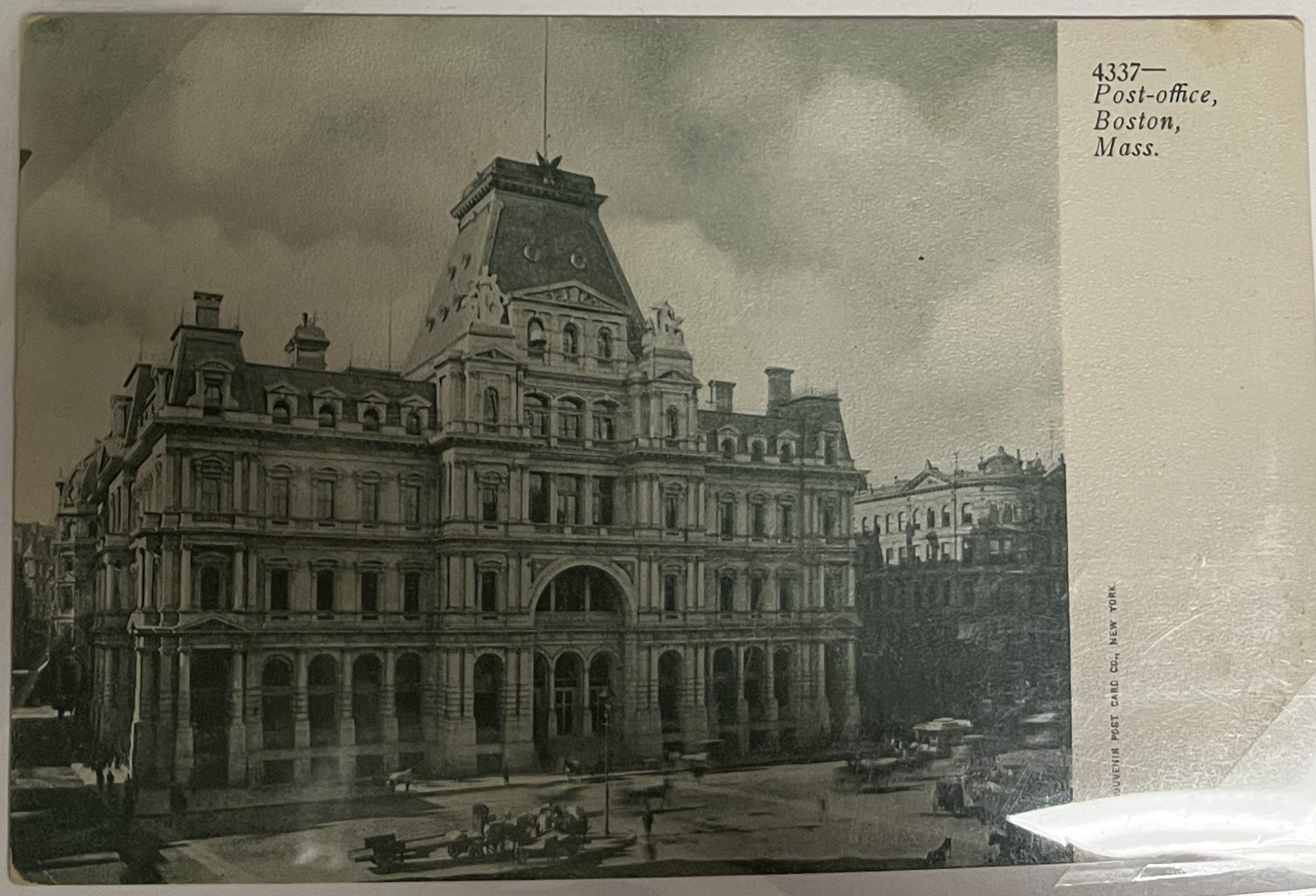
By the end of the nineteenth century the innovation period for Boston was over. During the next two decades the Boston Main Office held on to its locally-made machines longer than any other major post office in the country, but by 1920 the last of those machines had been abandoned.

Dates of Usage in Boston of Machines Developed There



*** The Barnard and American-Barnard machines were hand powered and were not used in the Boston Main Office. The dates in the table are those of usages in nearby Fitchburg and in Boston Stations**

Arrangement of the exhibit is generally in the chronological order of the introduction of the machines and/or cancellation types. Certain items which are of infrequent appearance or particular interest are outlined in red. New discoveries of varieties or information are similarly emphasized.



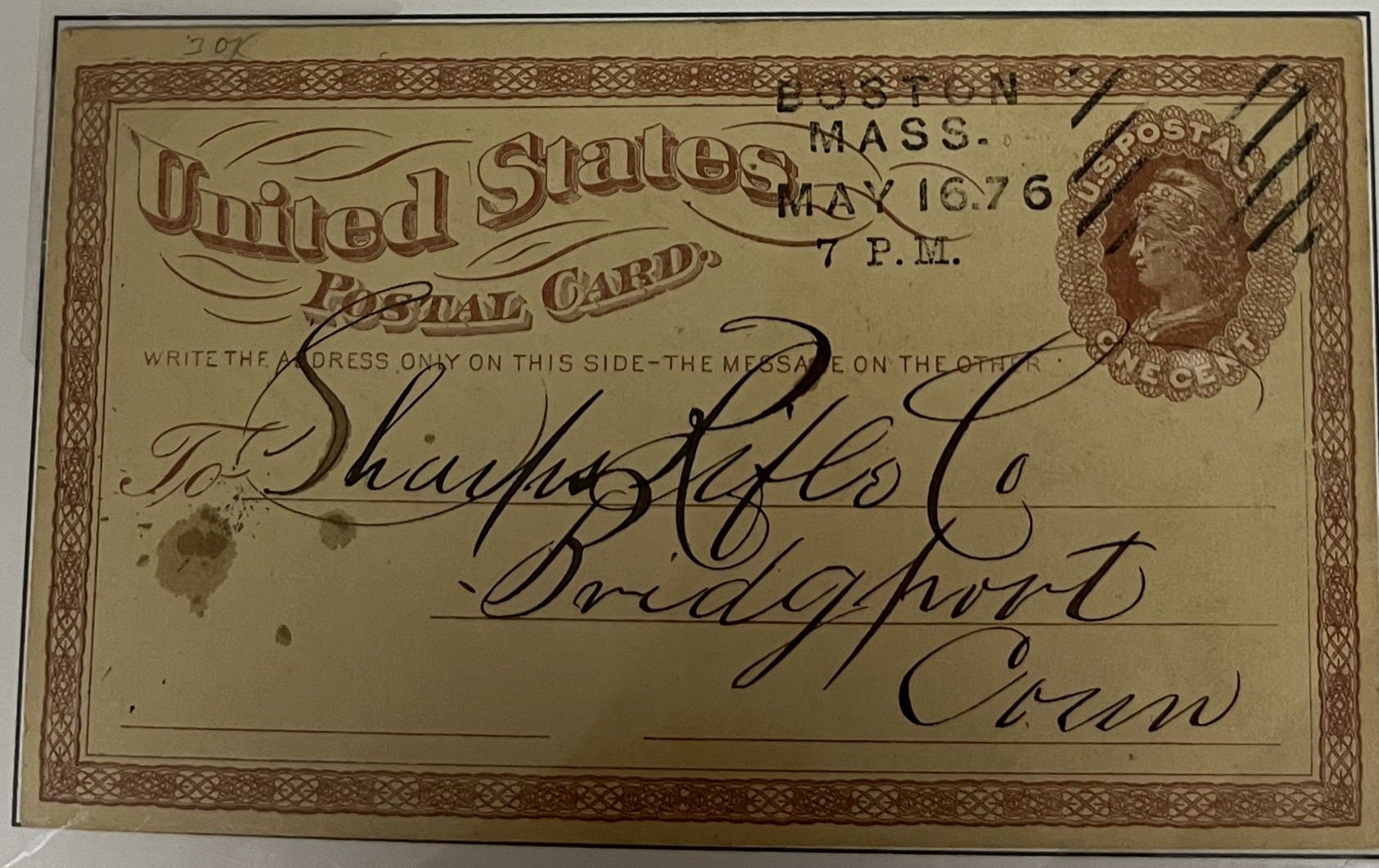
Boston Main Post Office
Souvenir Post Card Co.
268 Canal St., NYC
'Green and white' series
Probably 1906

The two-cork design of the killer was specifically intended to cancel covers with two stamps. Below is one of three known covers bearing two stamps. Since this machine was hand fed, it could handle either covers or cards. But only a few cards are recorded and only during the first five weeks of the machine's use. The example on a postal card shown is probably the earliest, with a manuscript date of Jan 6, 1876 on the message side. The last cover is only the third to be found using the 2¢ local rate and the only one franked with the vermillion stamp, the other covers being 2¢ postal stationery.

Thomas Leavitt

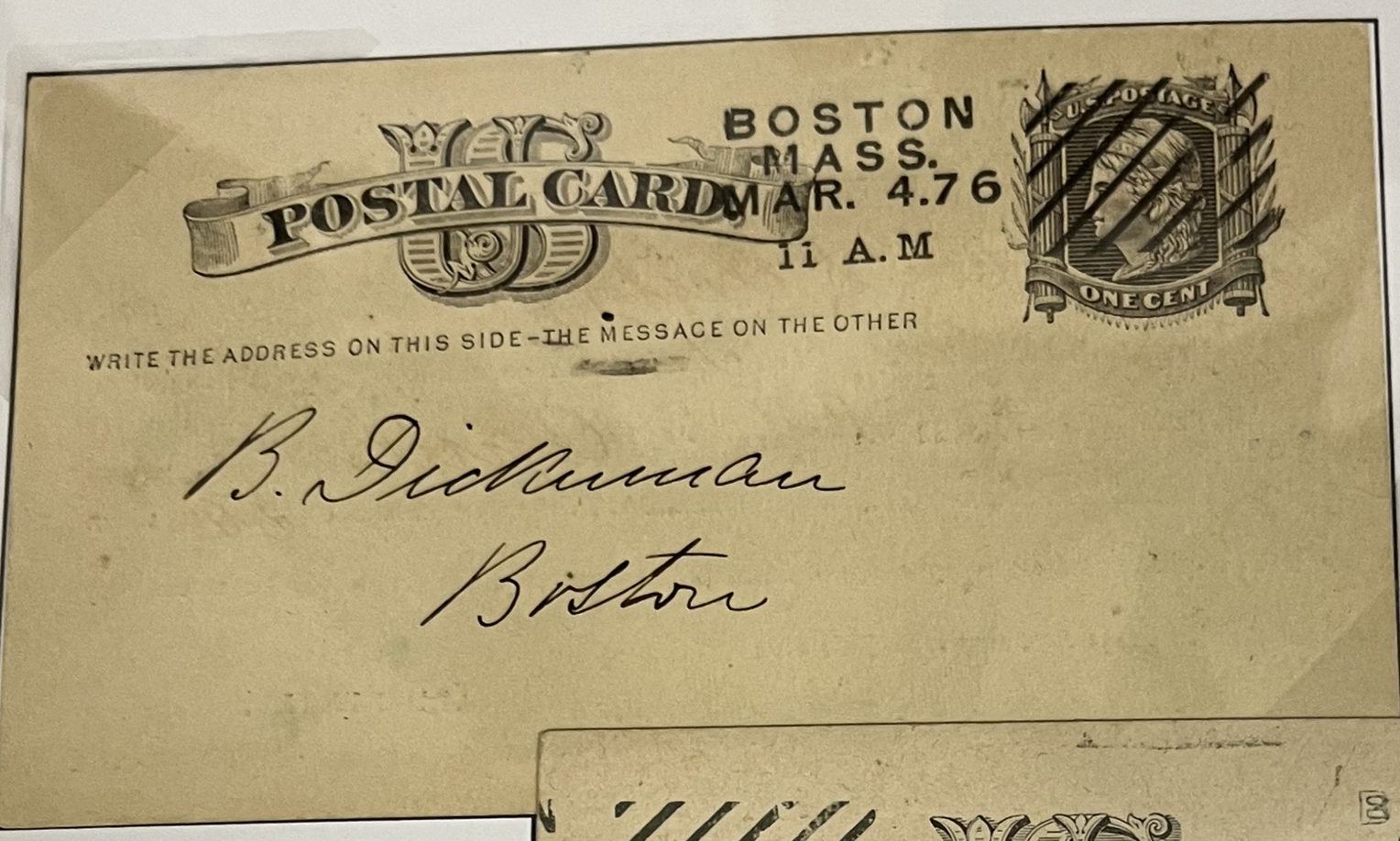
A second type of machine, with a mechanical feed but able to cancel only postal cards, was used from early February 1876 to the middle of April 1878. Despite its limited application, the machine met a substantial need, since the availability of postal cards in sheets increased their commercial use. A test of the new machine was made on February 2, 1876.

The cancelling device on the new machine had not received its new killer at the time of the test. **One of two recorded copies.**

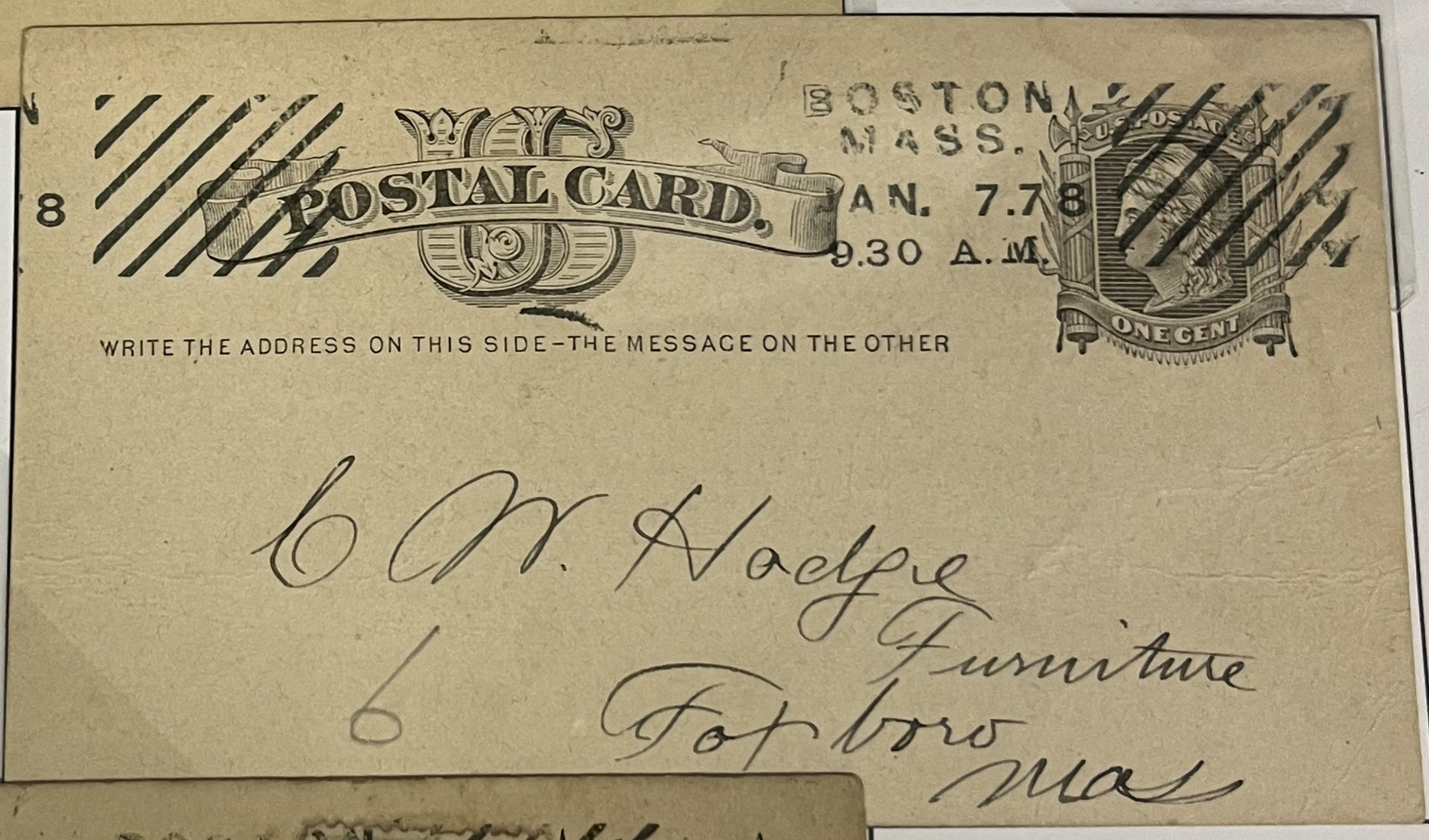


Leavitt cancels occasionally appear on U.S. postal cards with the first design, which had been replaced by the design above in 1875.

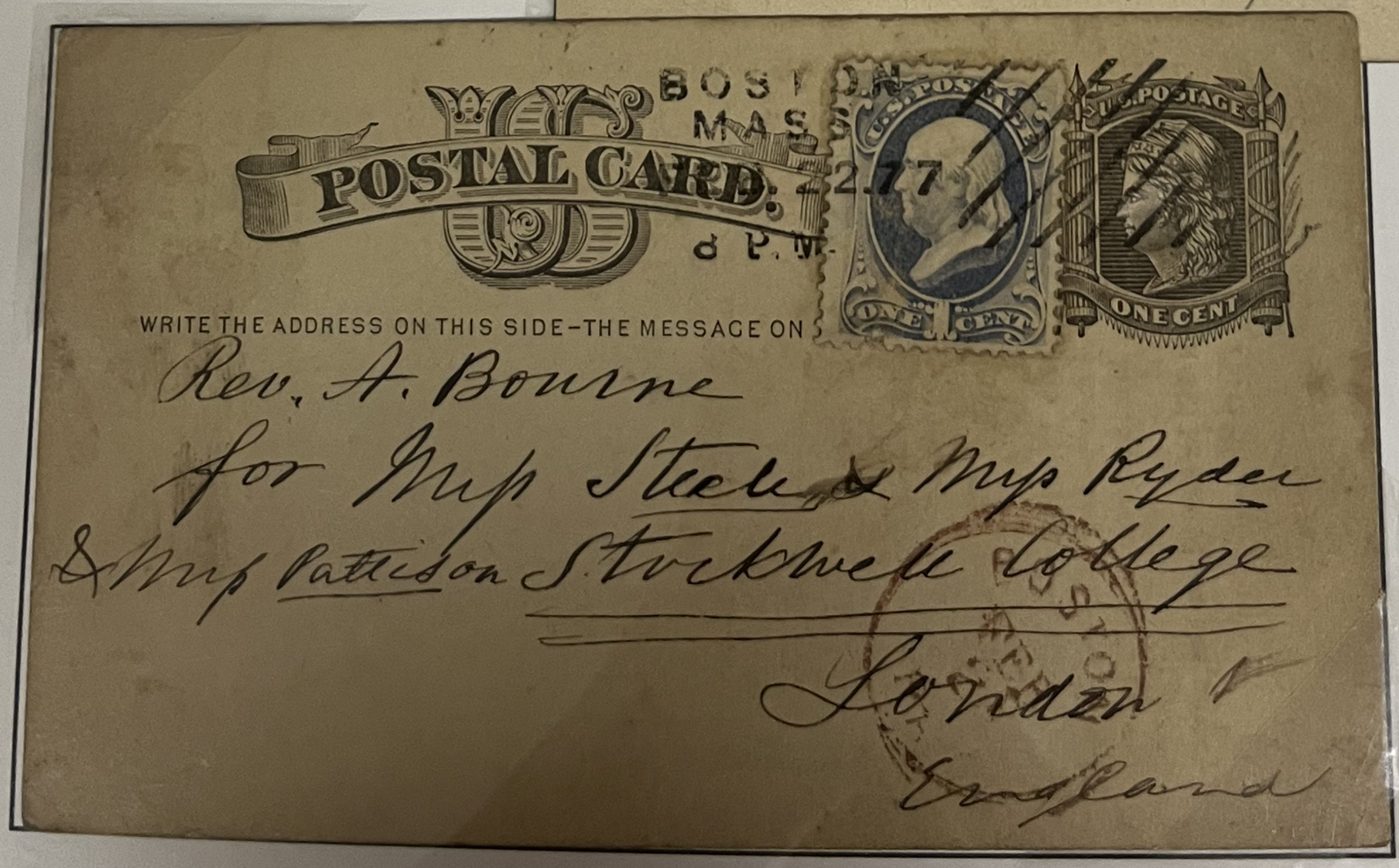
Two Boston machines appear to have been in use. Their cancellations are most easily distinguished by the distance between the **S** and the period in **MASS.**



March 4, 1876. Type I cancelling die.

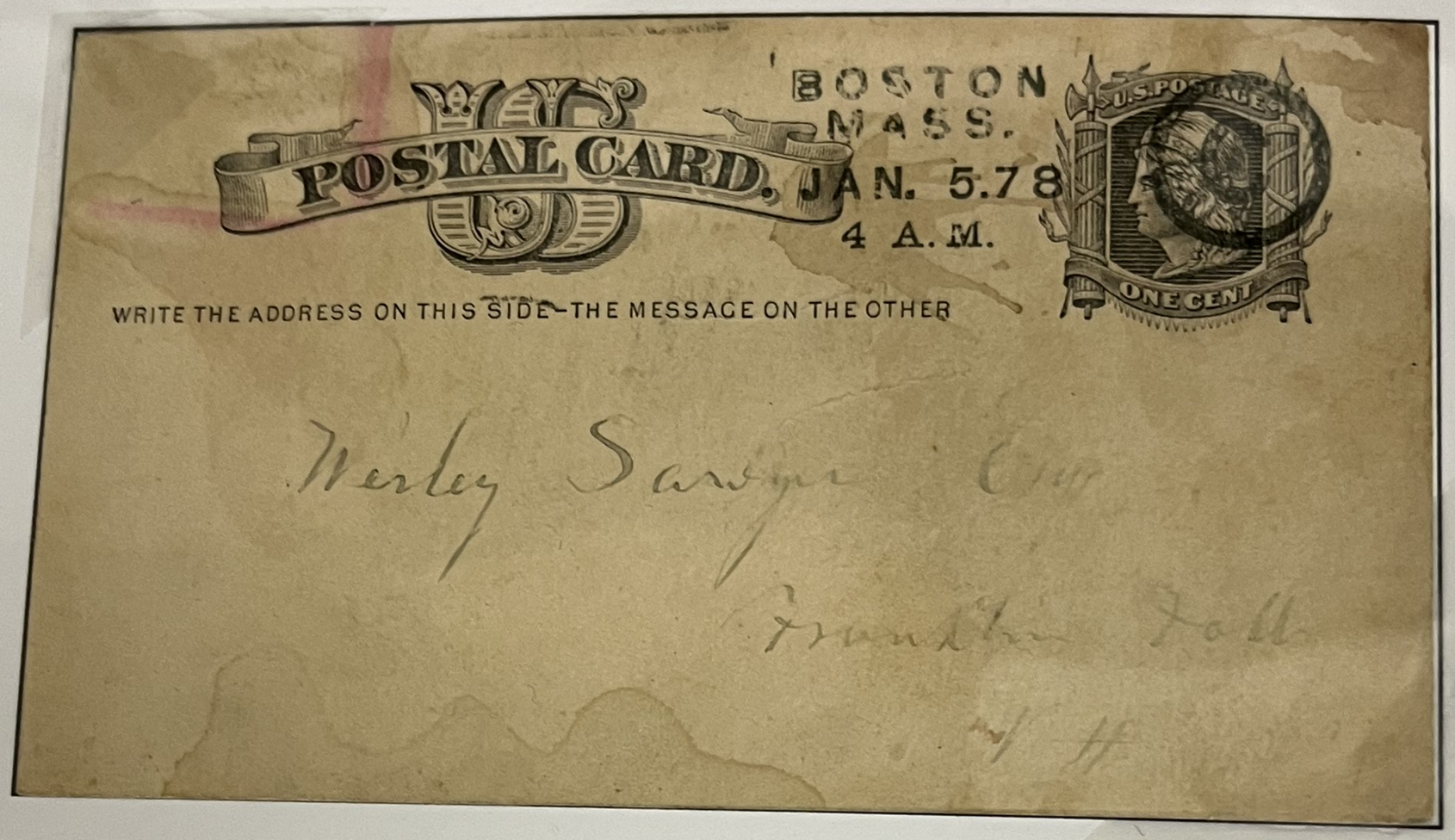


January 7, 1878. Type II die. Second impression clearly shows all nine oblique cancelling bars.

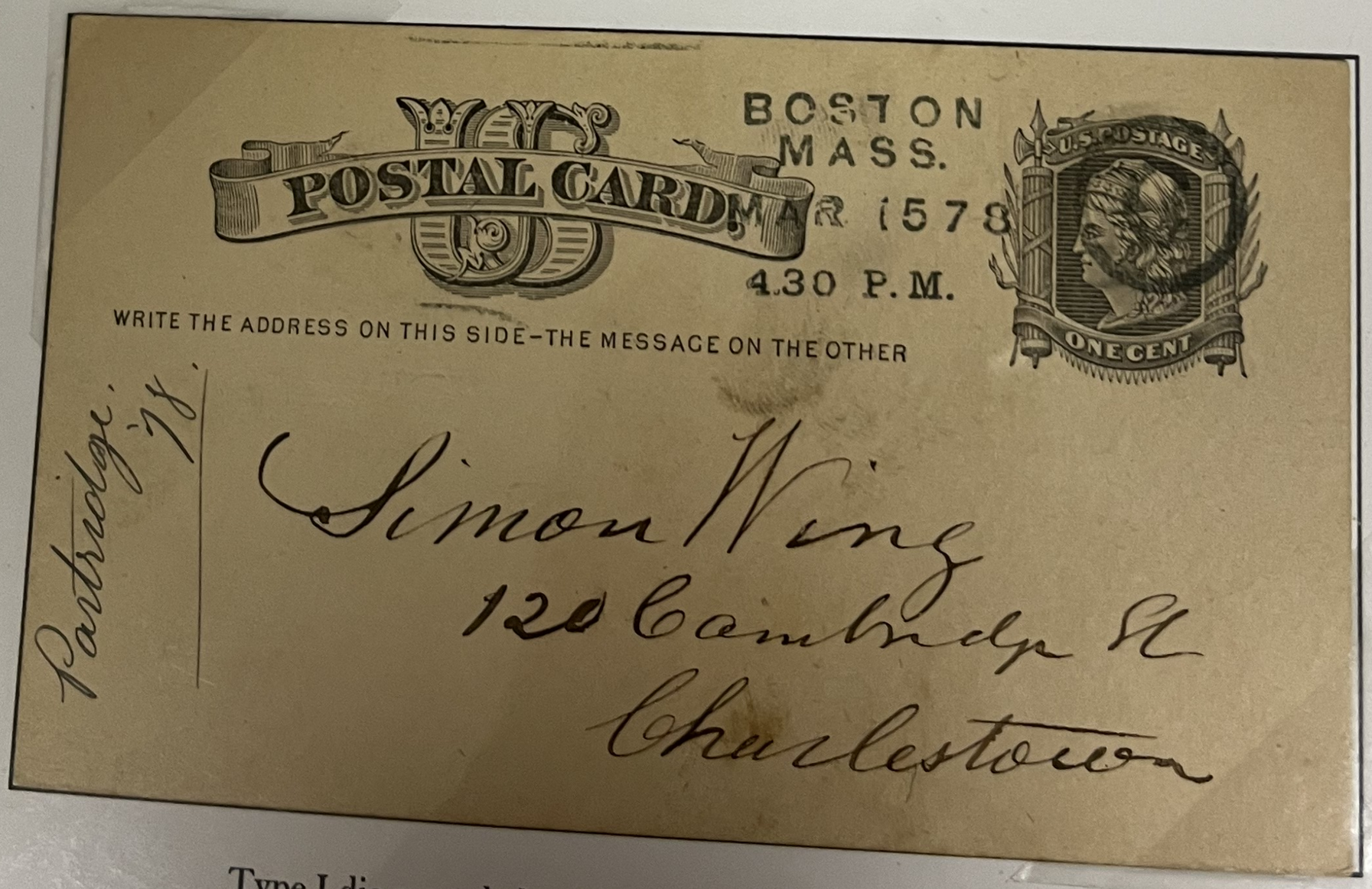


The machines generally were used for bulk mail. European destinations are unusual. **One of two recorded examples from this type of machine.**

From December 1877 to April 1878 the same machines and postmark dies were occasionally fitted with a **C** in the circle, a service mark meaning "Mail collected from mail boxes by carriers." Both Type I and Type II postmark dies were used with this service mark.

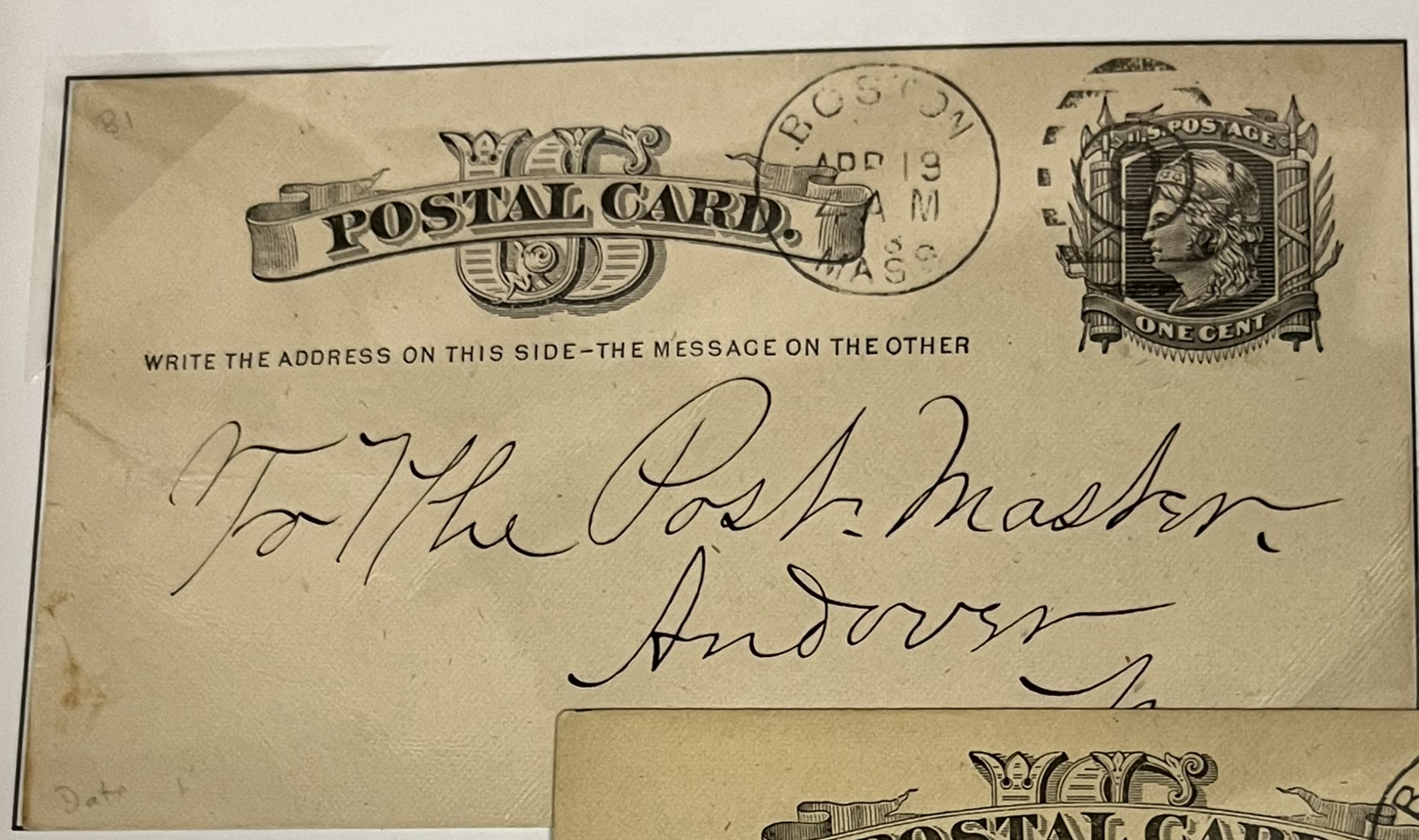


Type II die in use from December 24, 1877 to early March 1878

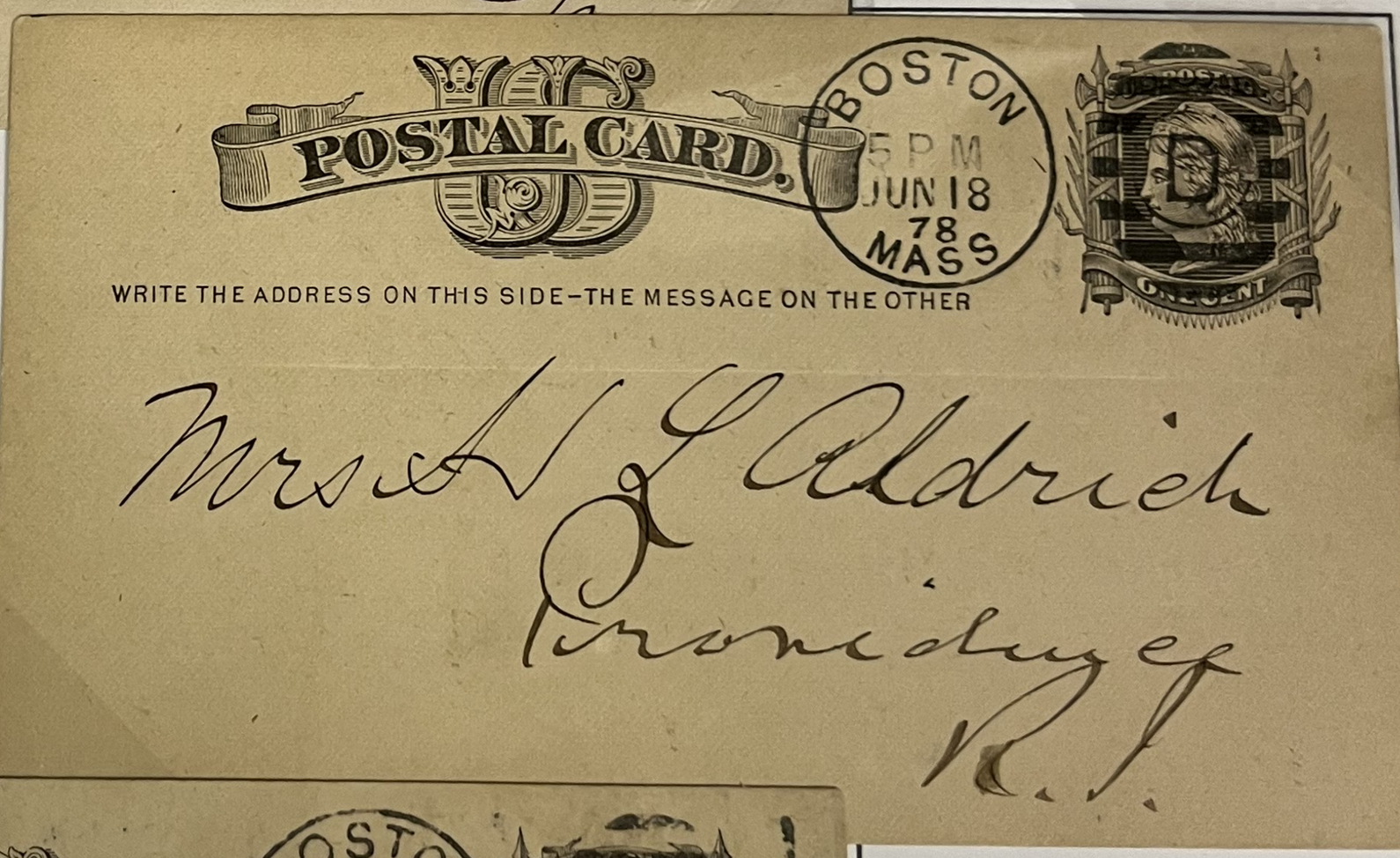


Type I die recorded only from March 11 to April 3, 1878

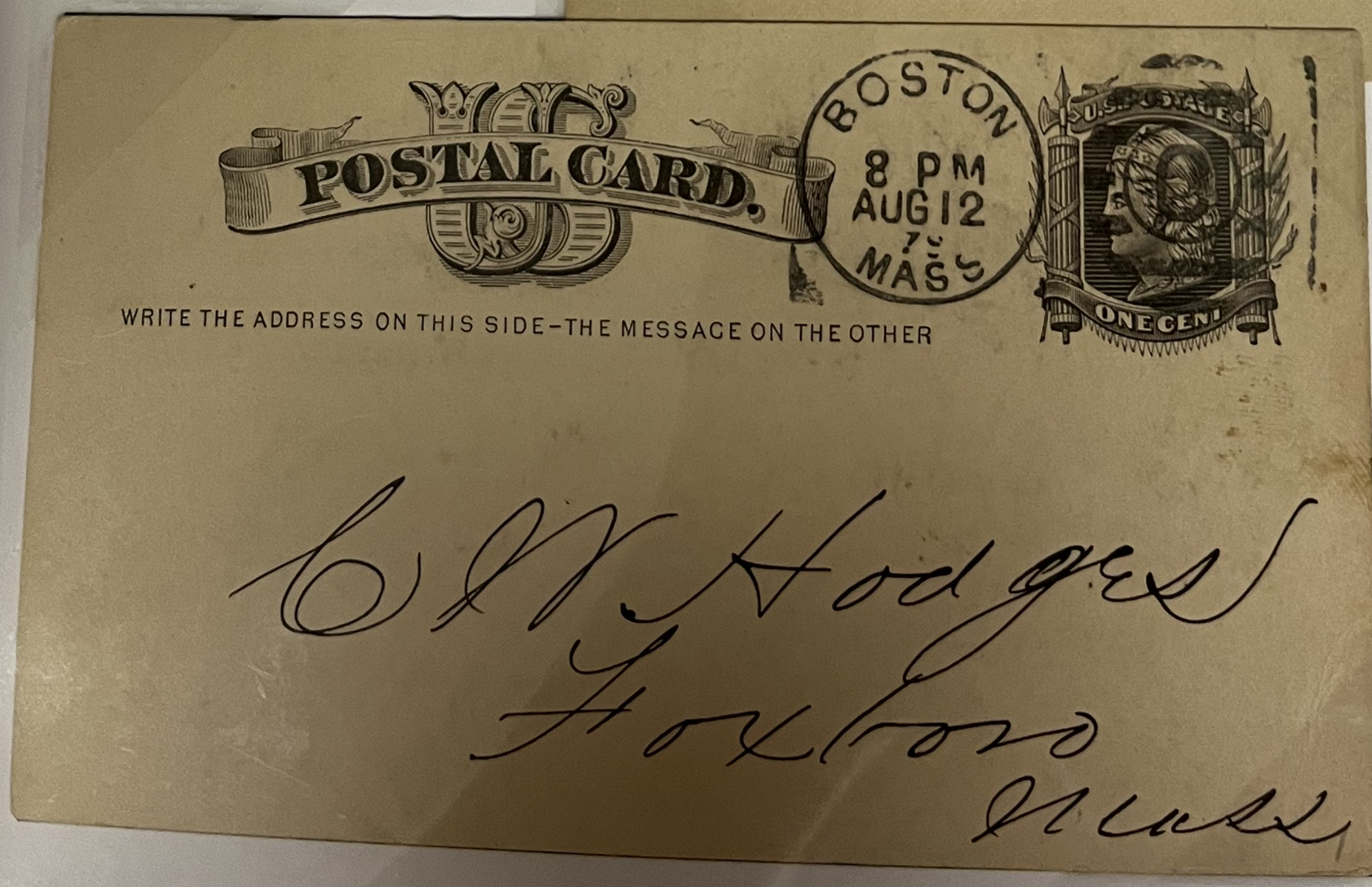
New cancellations with circular postmarks and a barred oval canceller became the most widely used of the Leavitt cancellations. Initially applied to existing machines in New York and Boston in early April 1878, this cancel was later used in 27 additional cities.



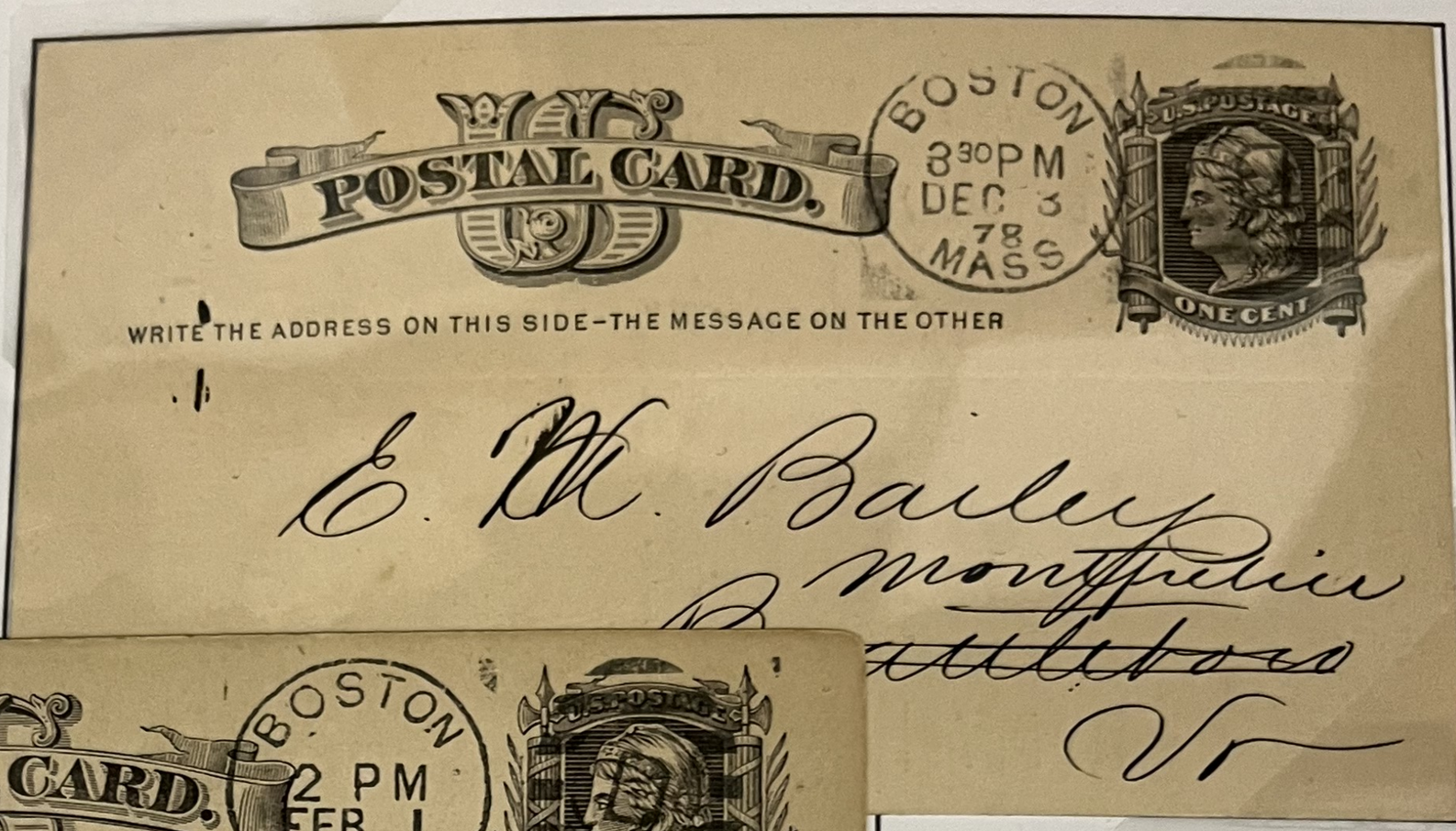
First type with seven bar canceller and small dial. April 1878 use with service letter **C**

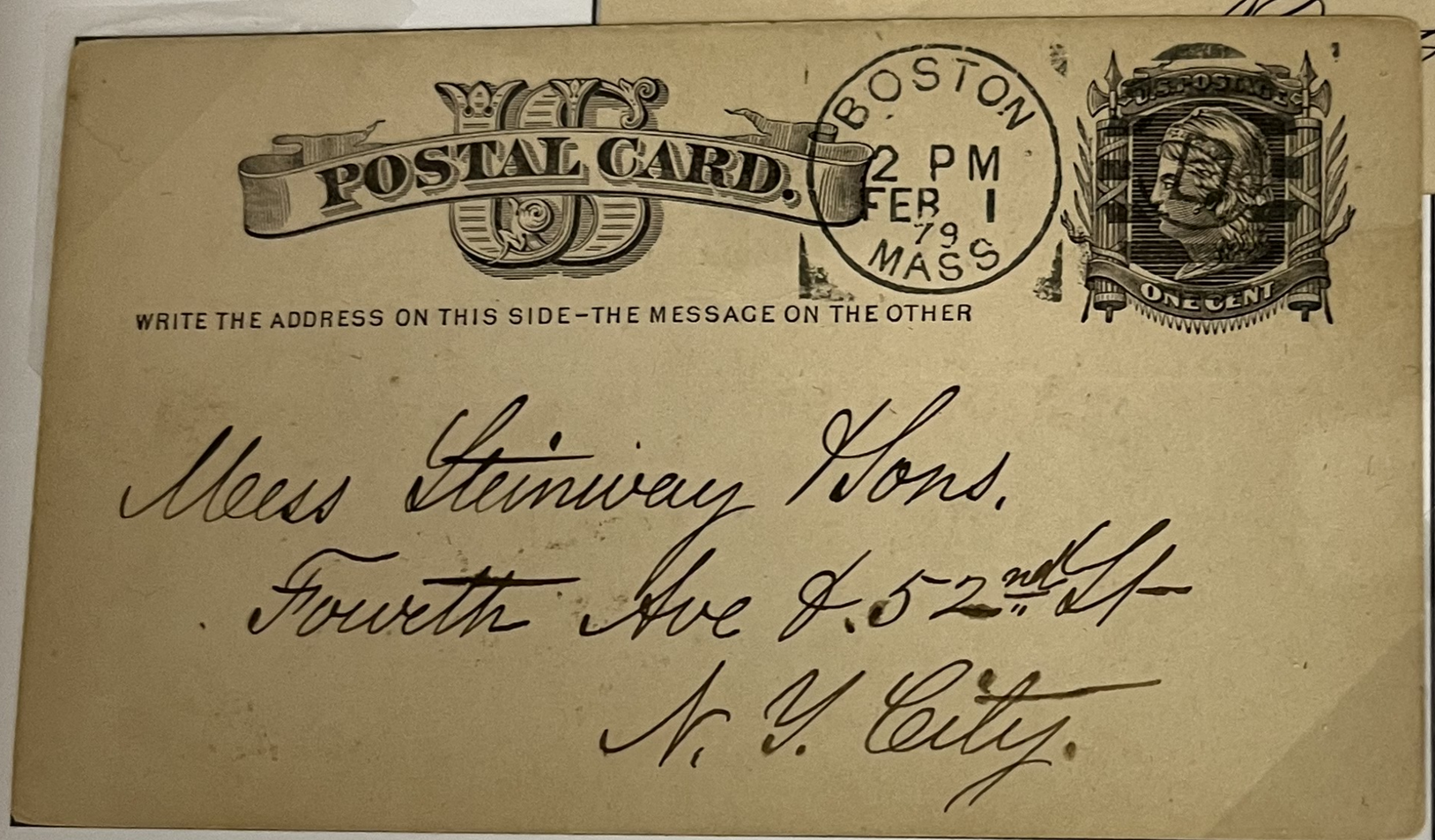


With a service letter **D**. Time and date reversed

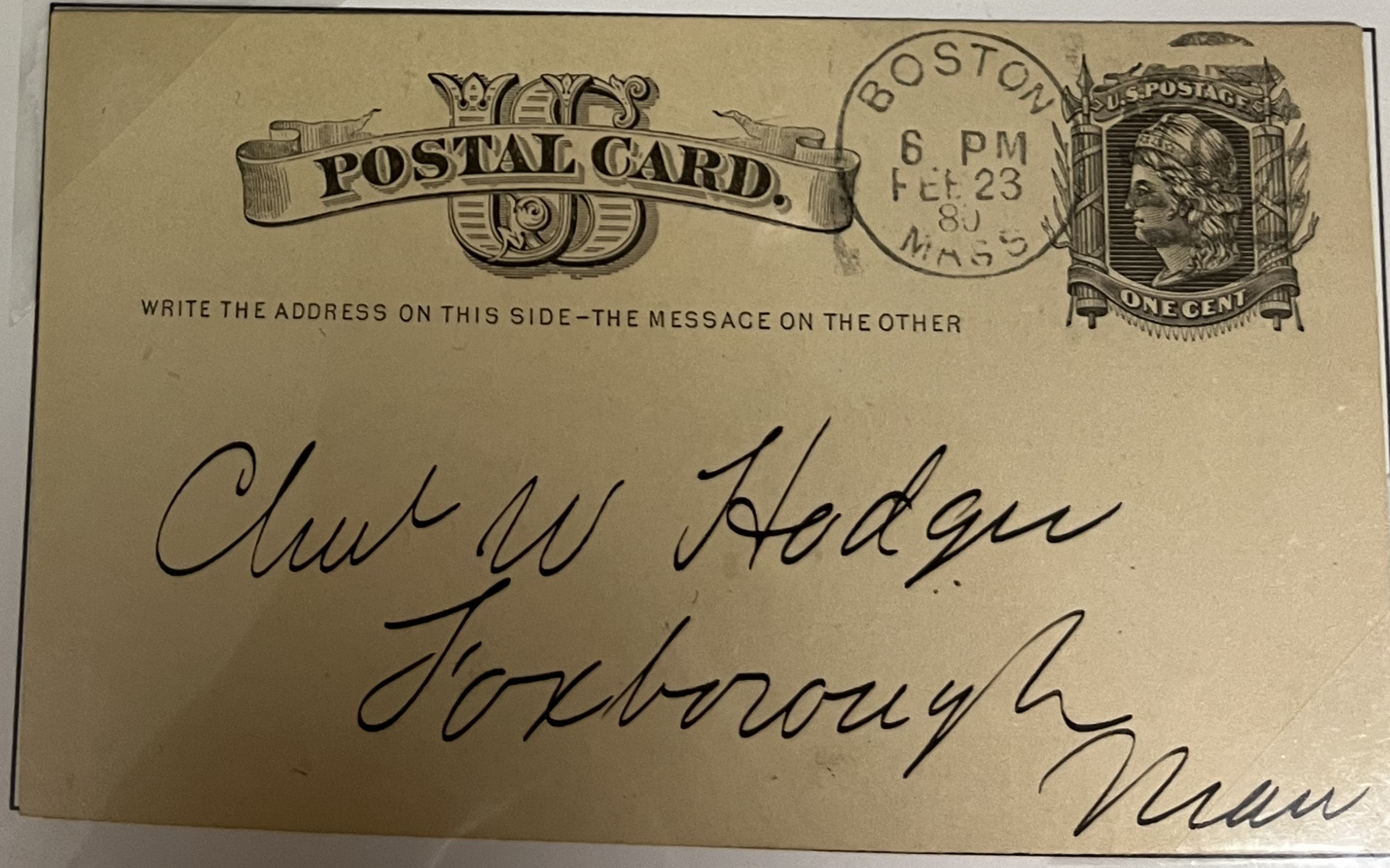


First type generally seen to July 31, 1879. Only a few examples are recorded after that date





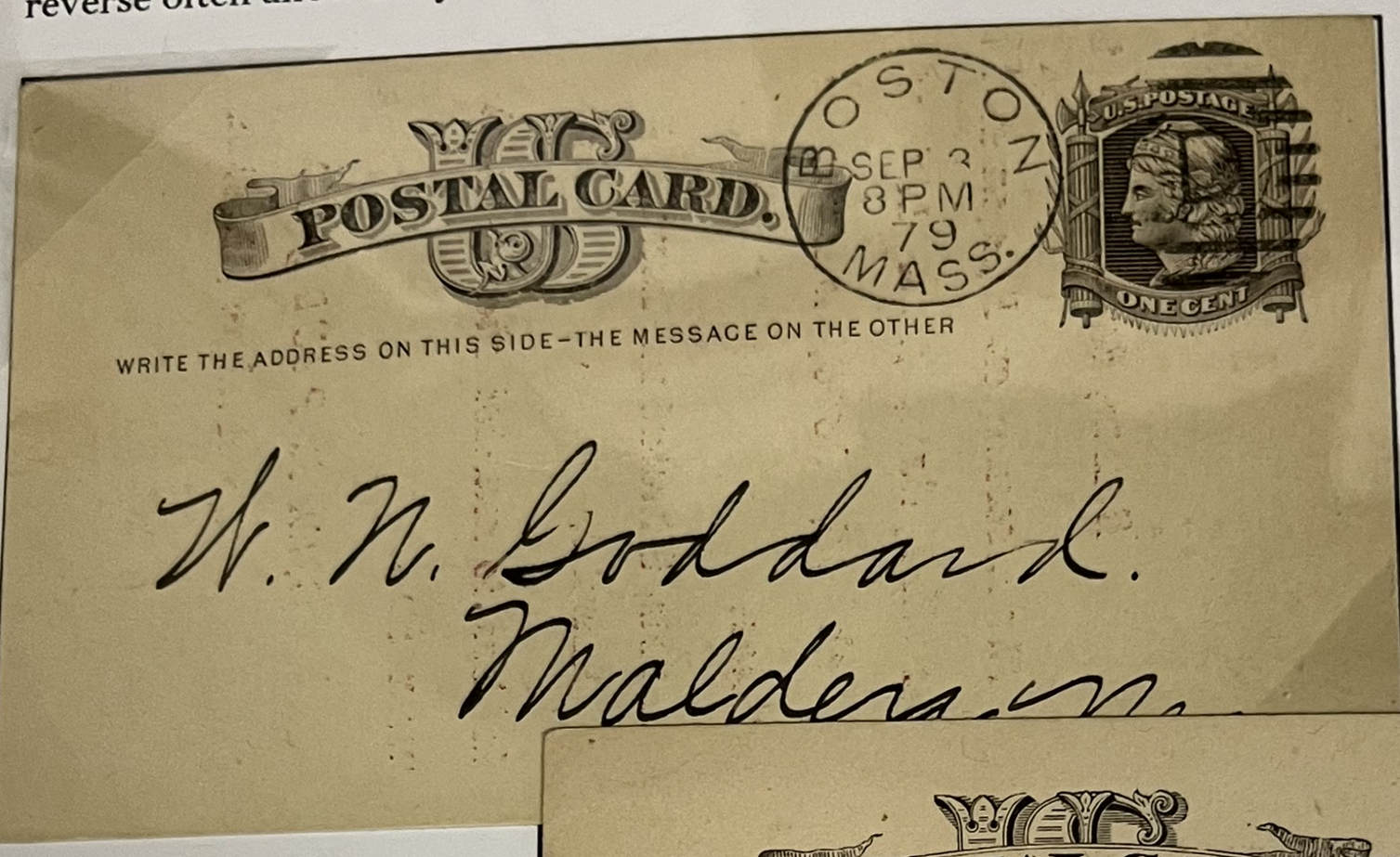
(Above and left)
Lack of a key or pinning system left service letters at times askew or inverted



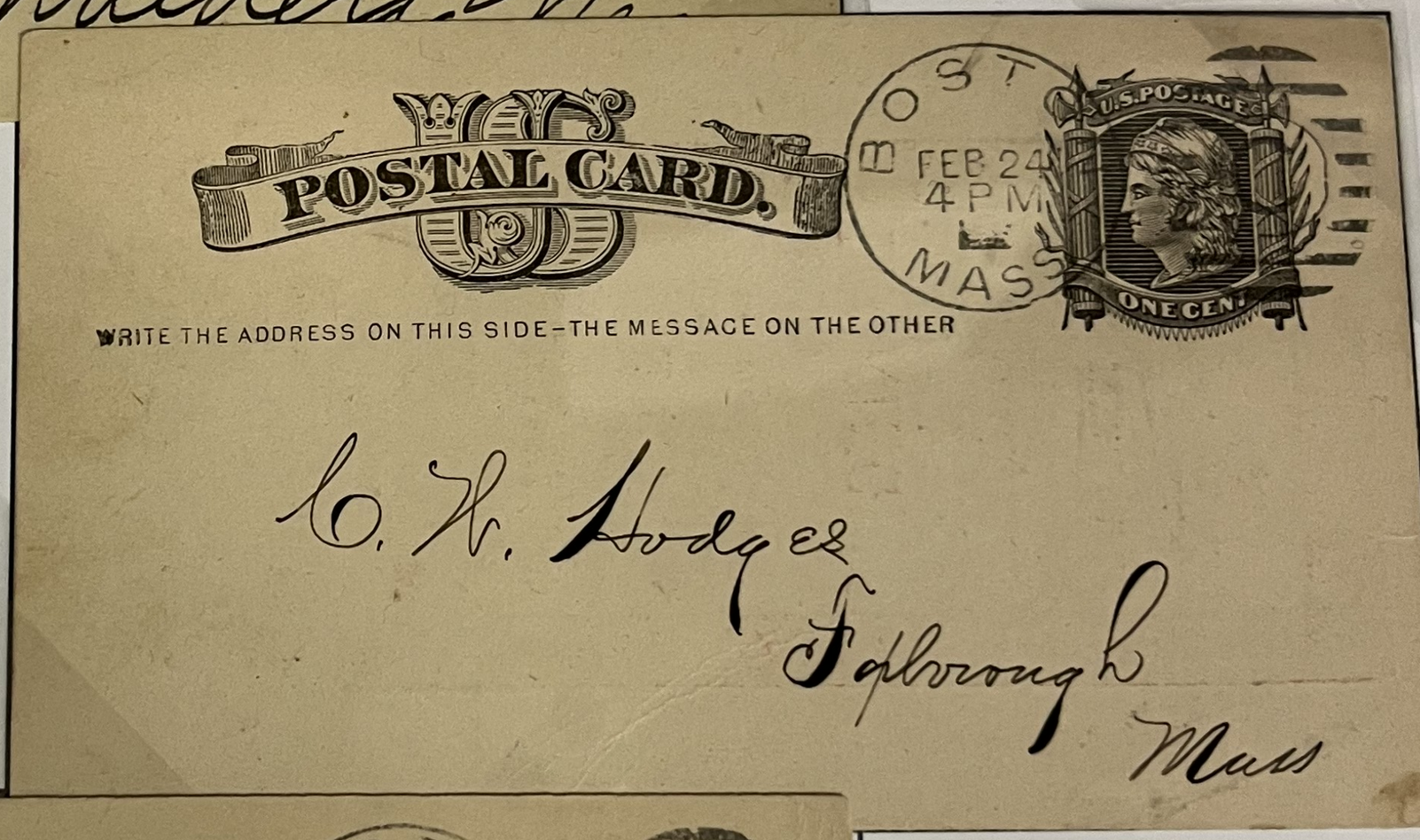
Type one cancels returned for six weeks in 1880.

Thomas Leavitt

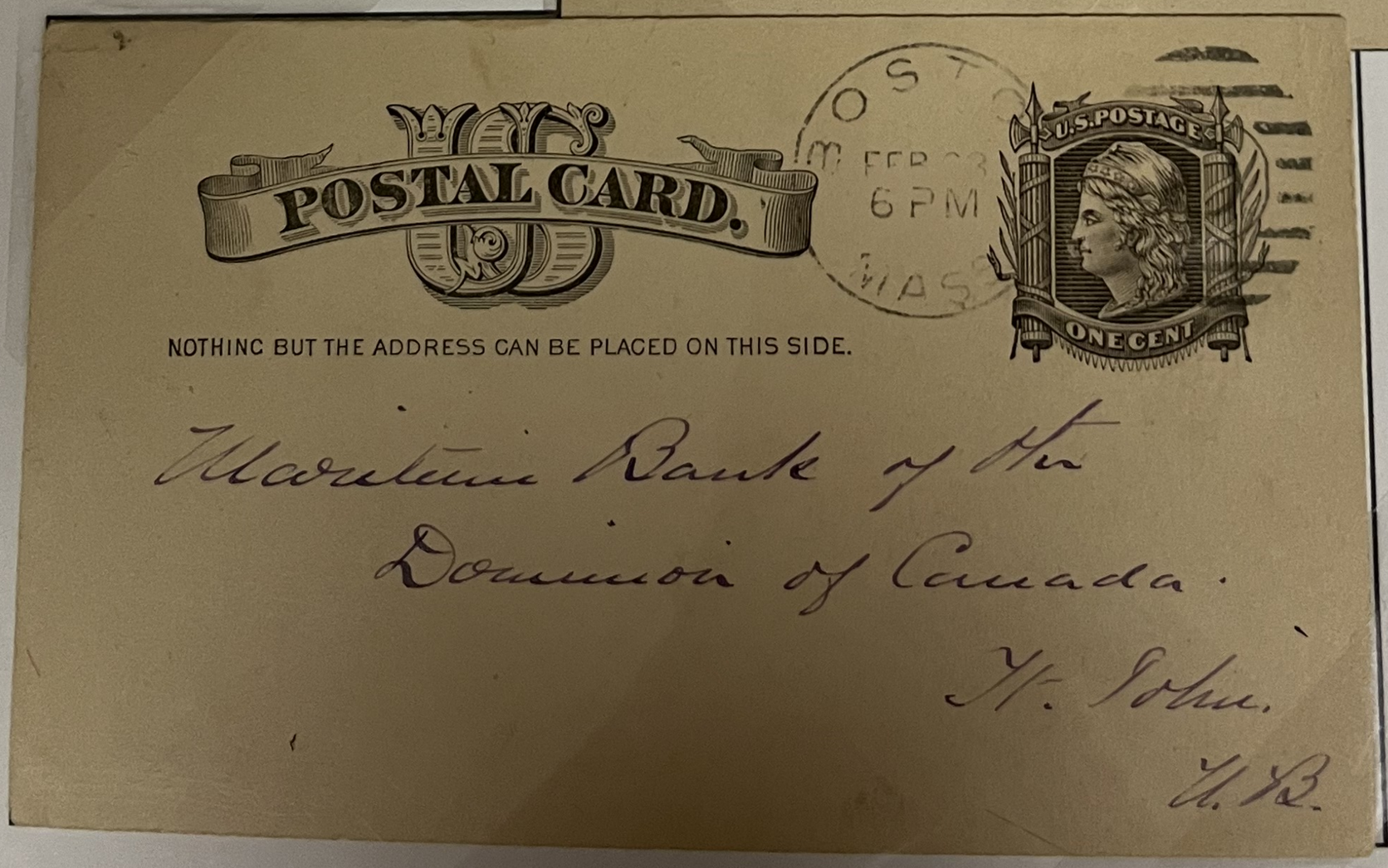
In 1879 a new eight-bar canceller was paired with a larger postmark dial (second dial type). In 1881 regulations allowed the omission of the year date (third dial type). Printed commercial messages on the reverse often allow the year date to be determined.



Second dial type, September 3, 1879



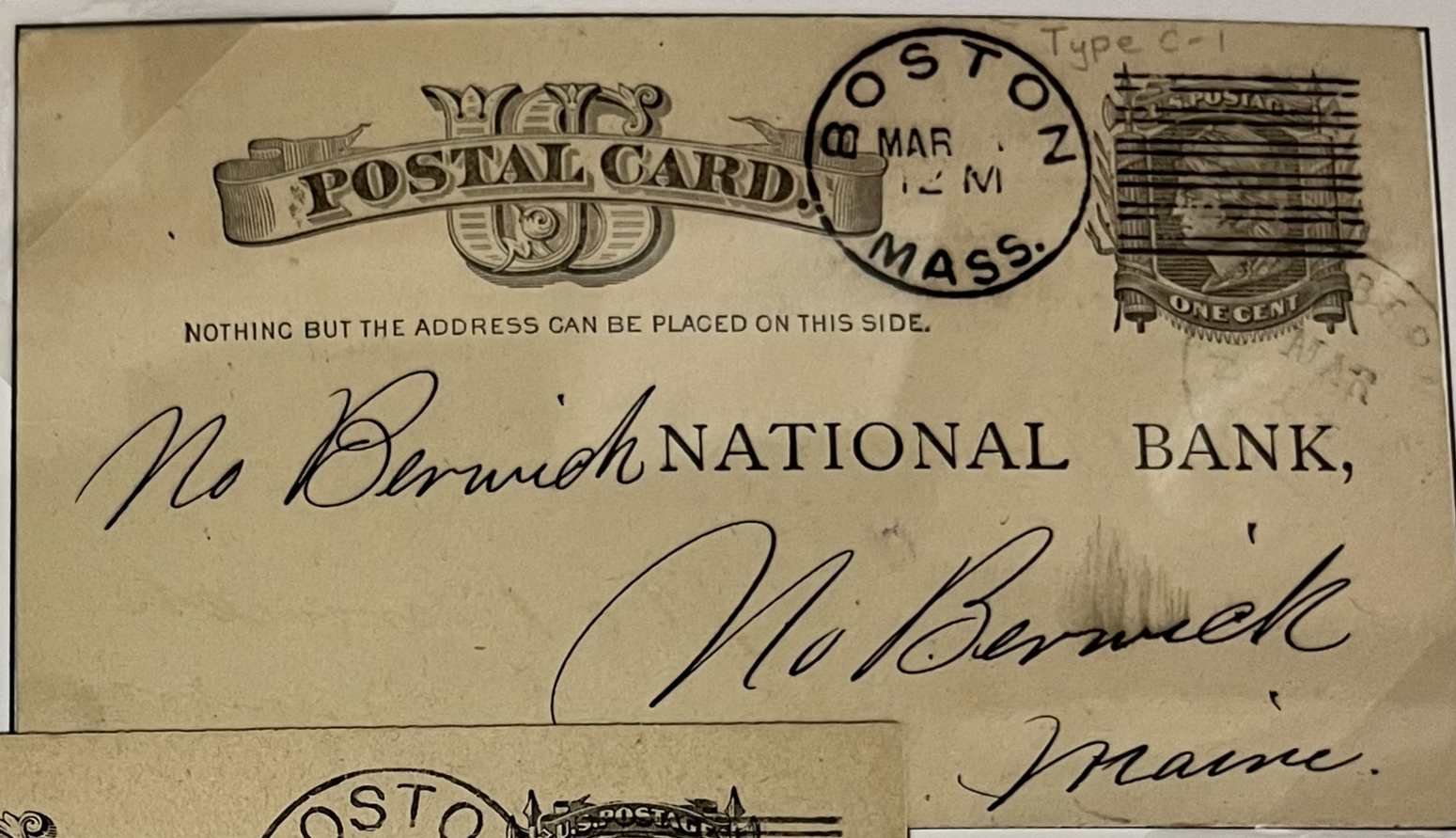
Transitional type with year-date slug inverted, February 24, 1881

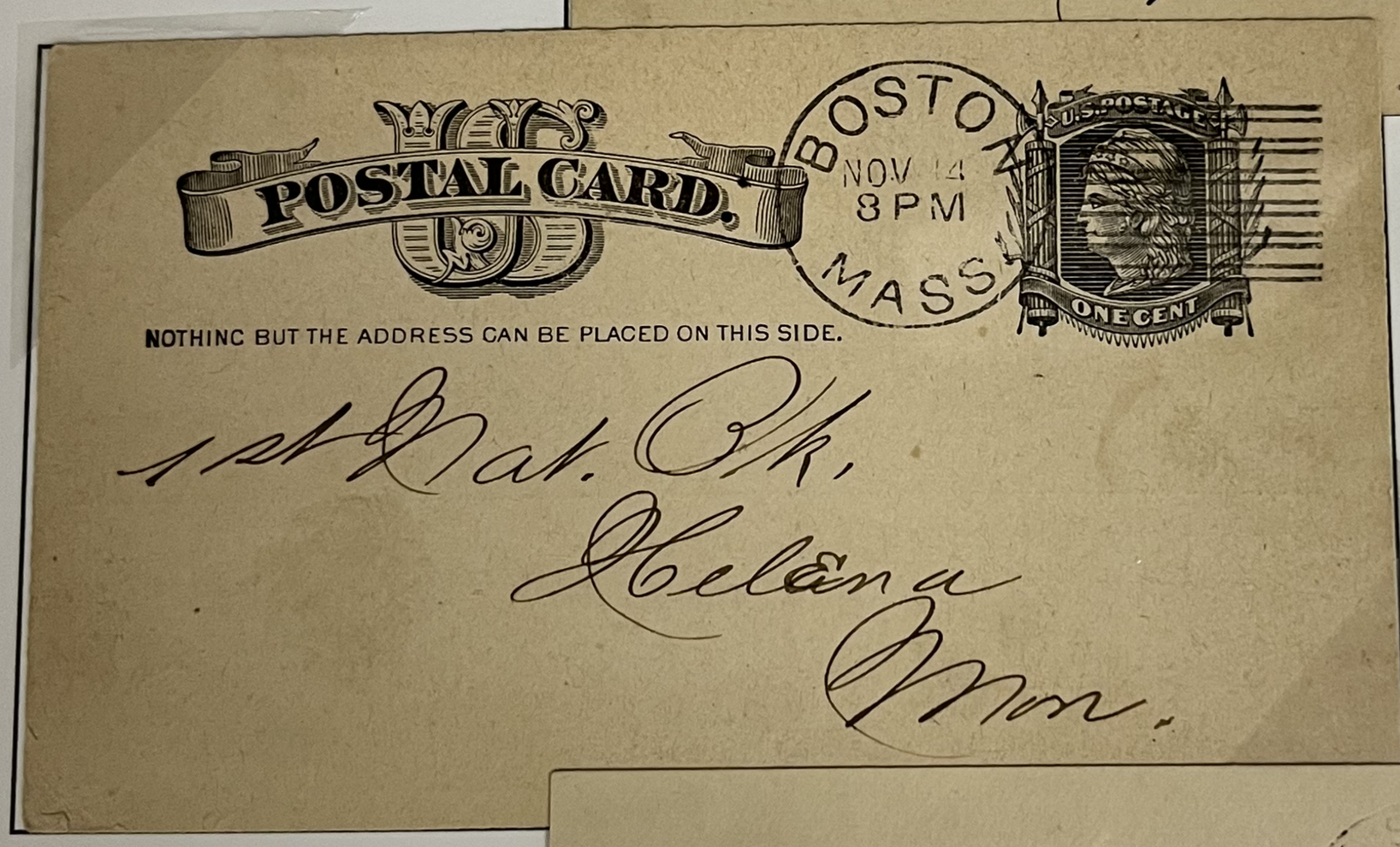


Third dial type, February 23, 1882. **Latest documented use**

A new type of cancelling die consisting of twelve horizontal bars in six pairs was introduced in March 1882 in Boston. Three types of dials were used with these cancellers, each varying slightly in diameter. Washington, D.C. and Baltimore received similar, although not identical, cancellers in the same year.

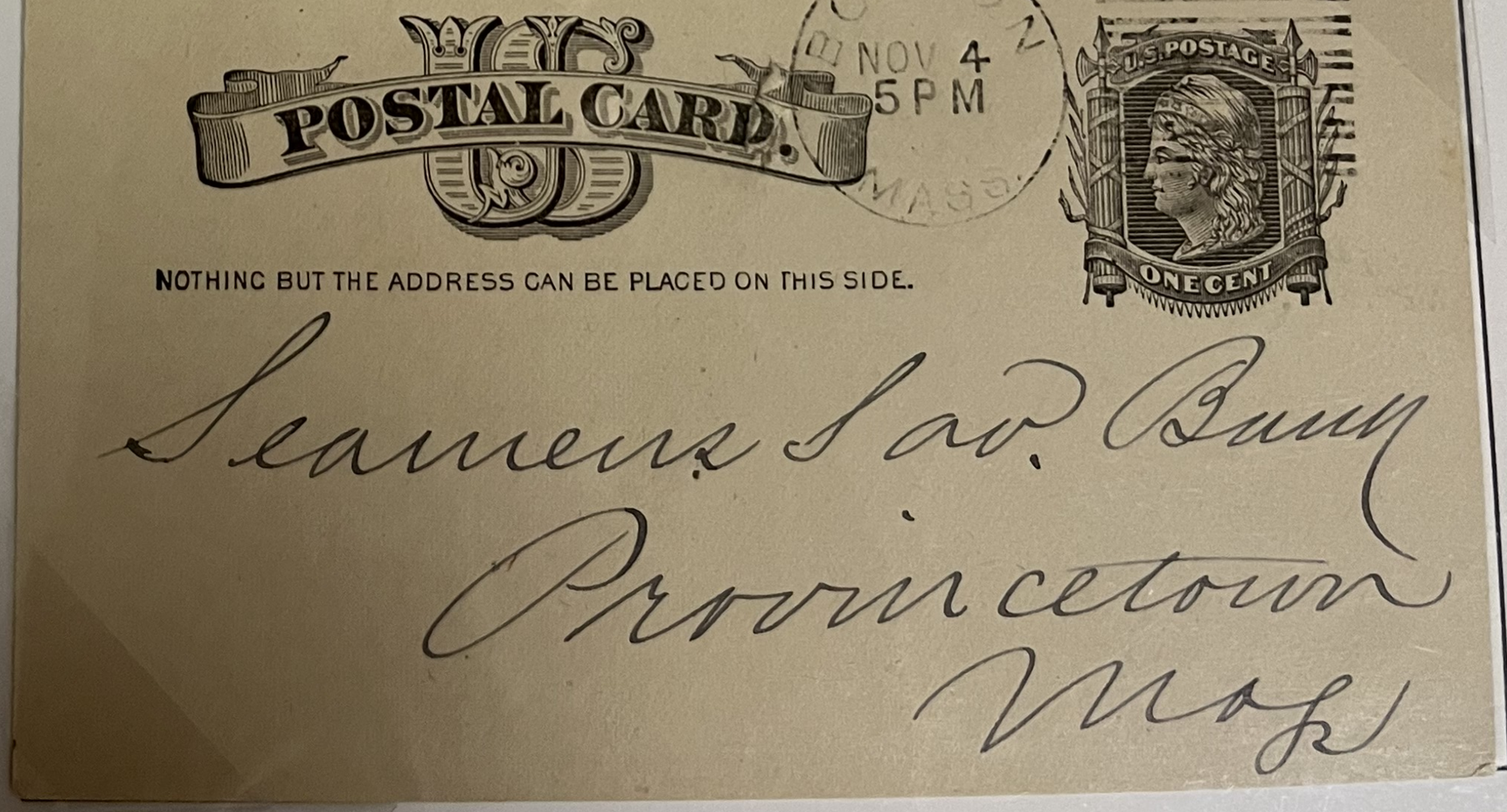
Dial type one, used March 1 to March 23, 1882



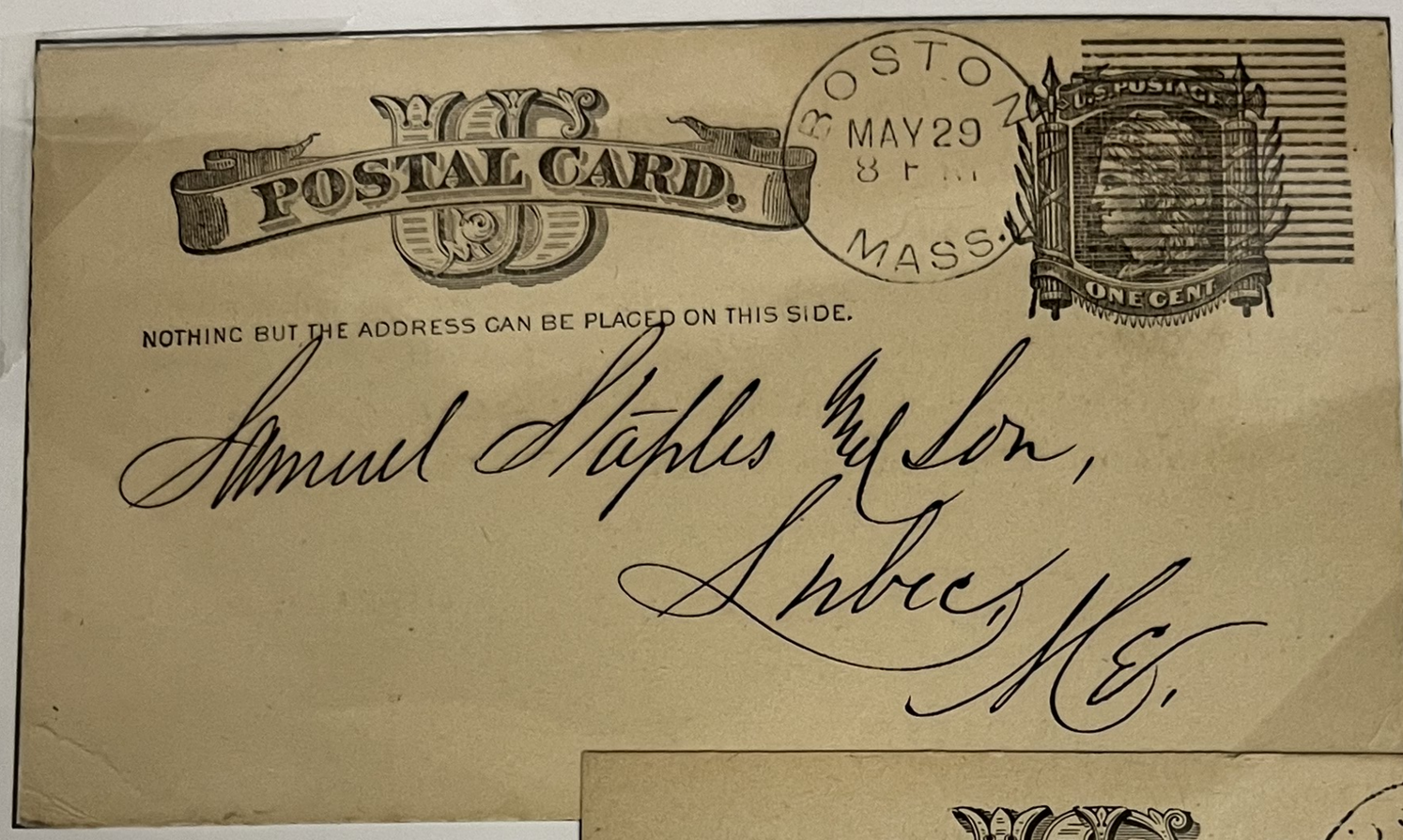


Dial type two, used March 30, 1882 to January 25, 1885

Dial type three, used November 4, 1885 to July 19, 1886. **Earliest documented use**

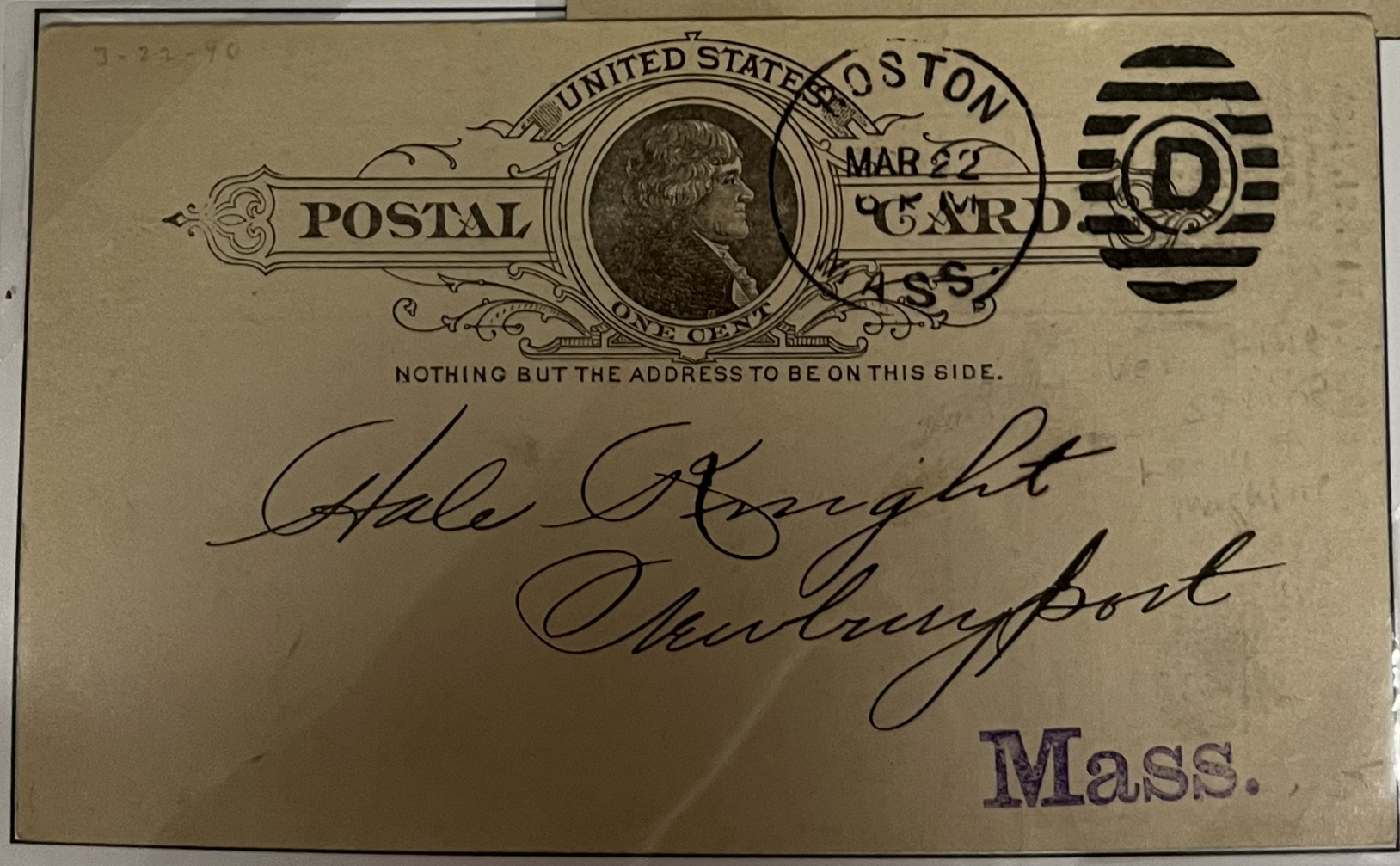


Beginning in 1882 three new designs were introduced and used only in Boston. When the final machine was retired in 1890 only a few Leavitt machines were in operation elsewhere in the country.



18-bar canceller in its first period of use, February 25 to June 30, 1882. Also used intermittently in 1884

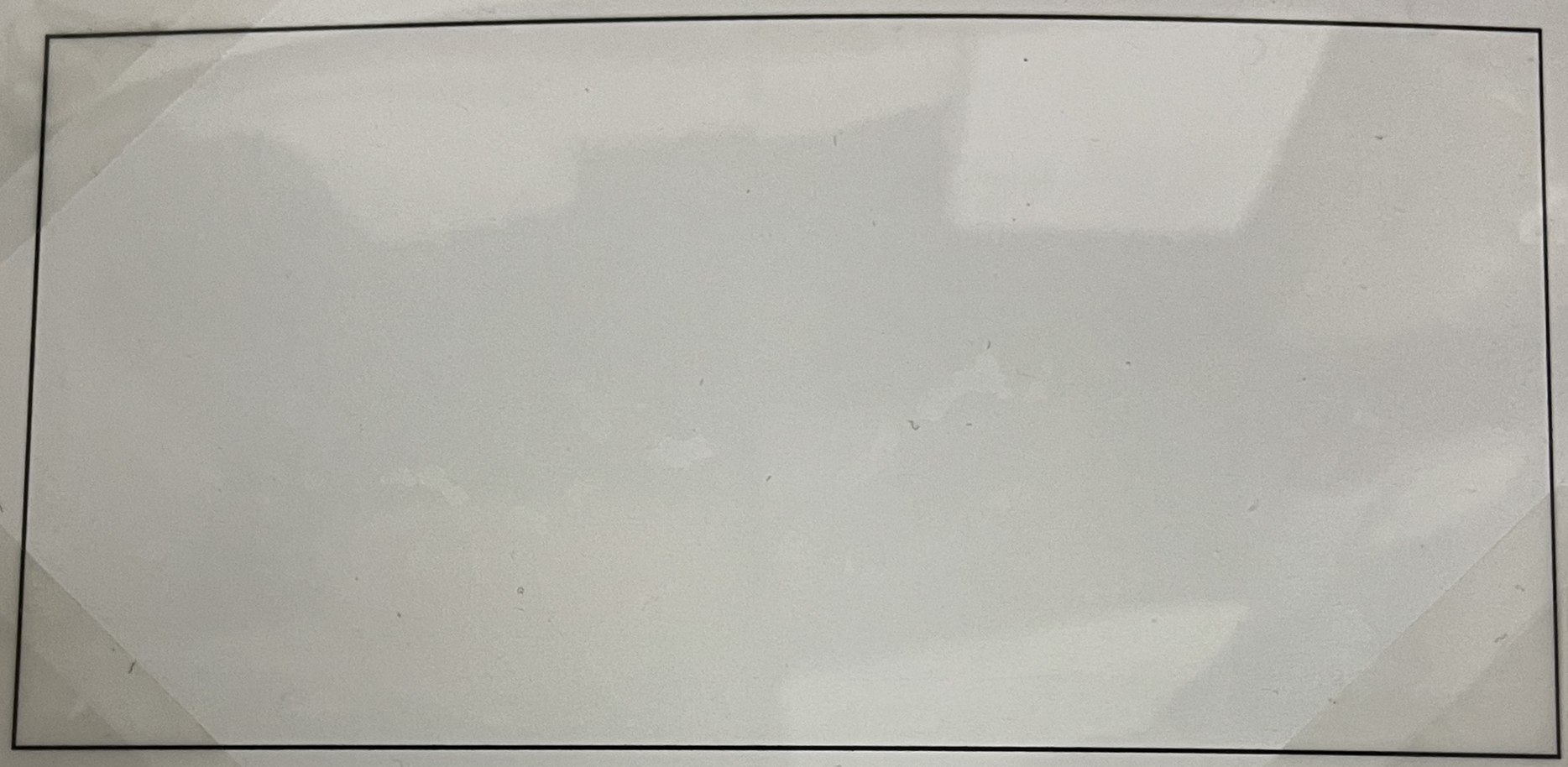
From January 27 to August 9, 1885, a 19-bar canceller was used



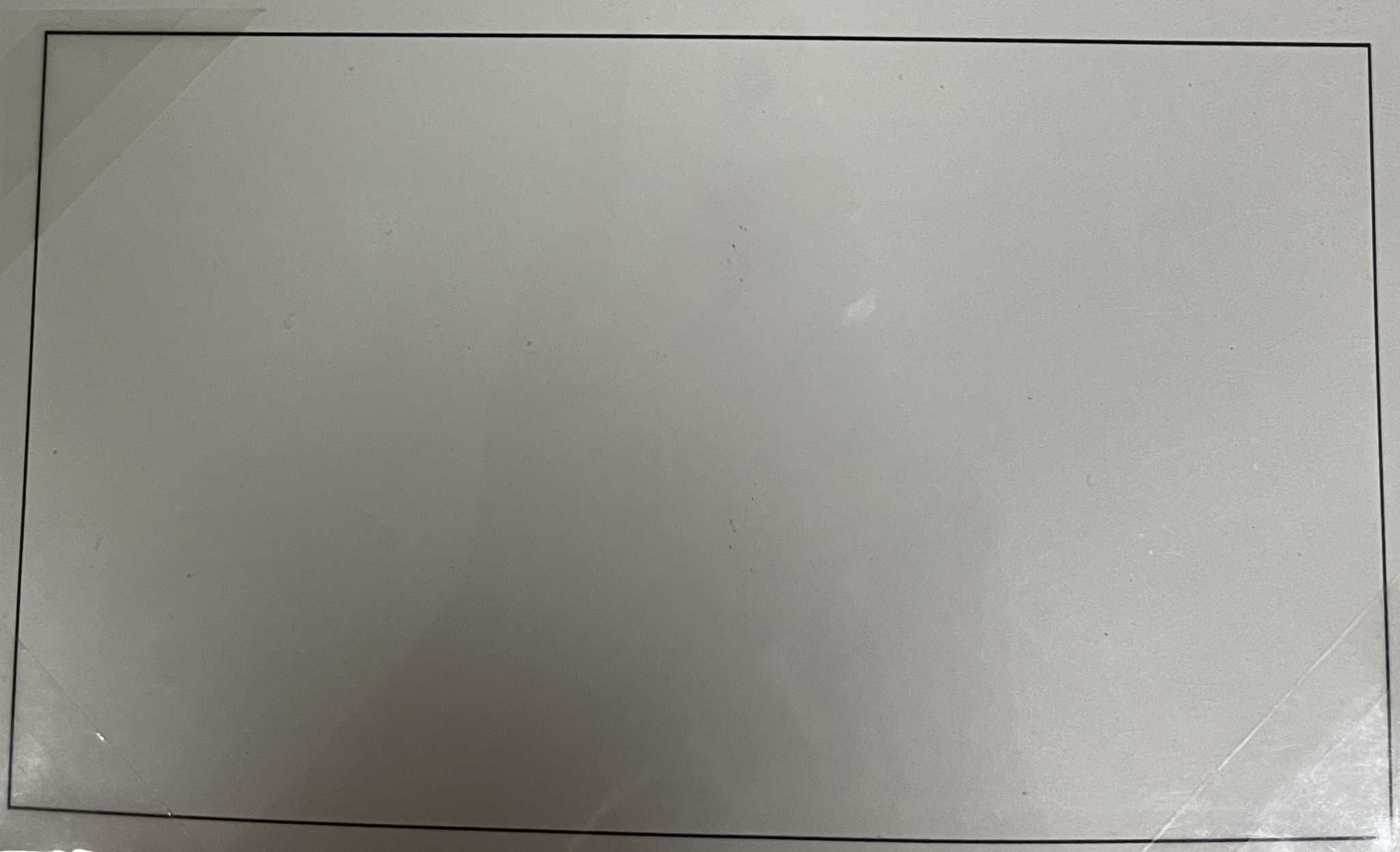
Final Leavitt canceller, in use 1886 to 1890. Known only with the **D** service mark

Leavitt Experimental Cancels **Pin Puncture Group 2**

These cancels are associated with pin punctures in two groups of four, with the two groups separated by about 23 mm. The canceller is a new design: a combination of a barred oval with a **D** (the only recorded service letter) and eight short bars. Known from September 30 to December 20, 1881

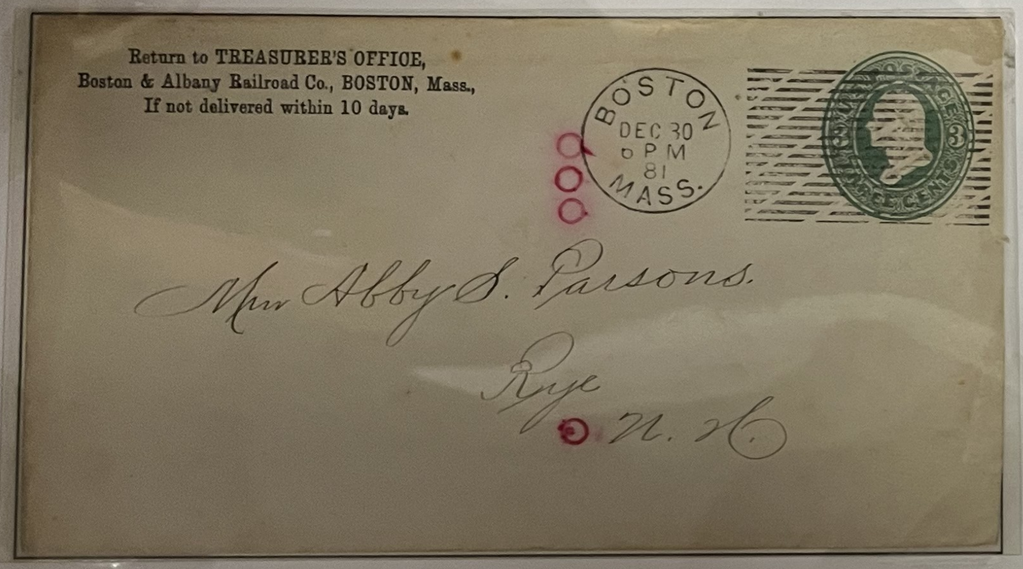


Four visible pin marks conform to the appropriate format, but the second, lower, group is absent. **Earliest documented usage for this cancel**



Five out of eight evident on this cover

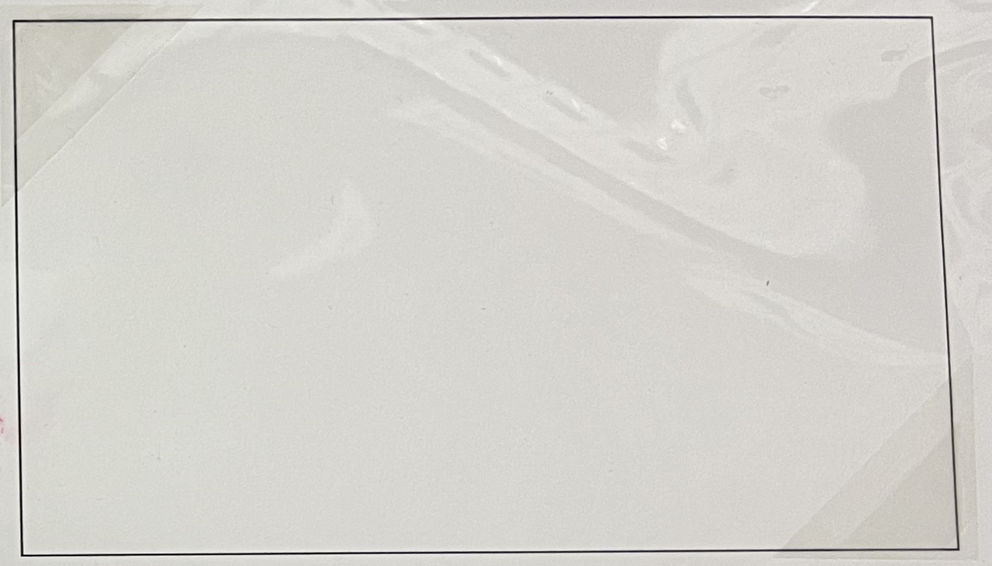
A new canceller was introduced at the end of 1881 with the same arrangement of two sets of four pin marks. Unfortunately, in early 1882 the new year-date slug had not arrived. A series of adjustments was made until the new slug was on hand.



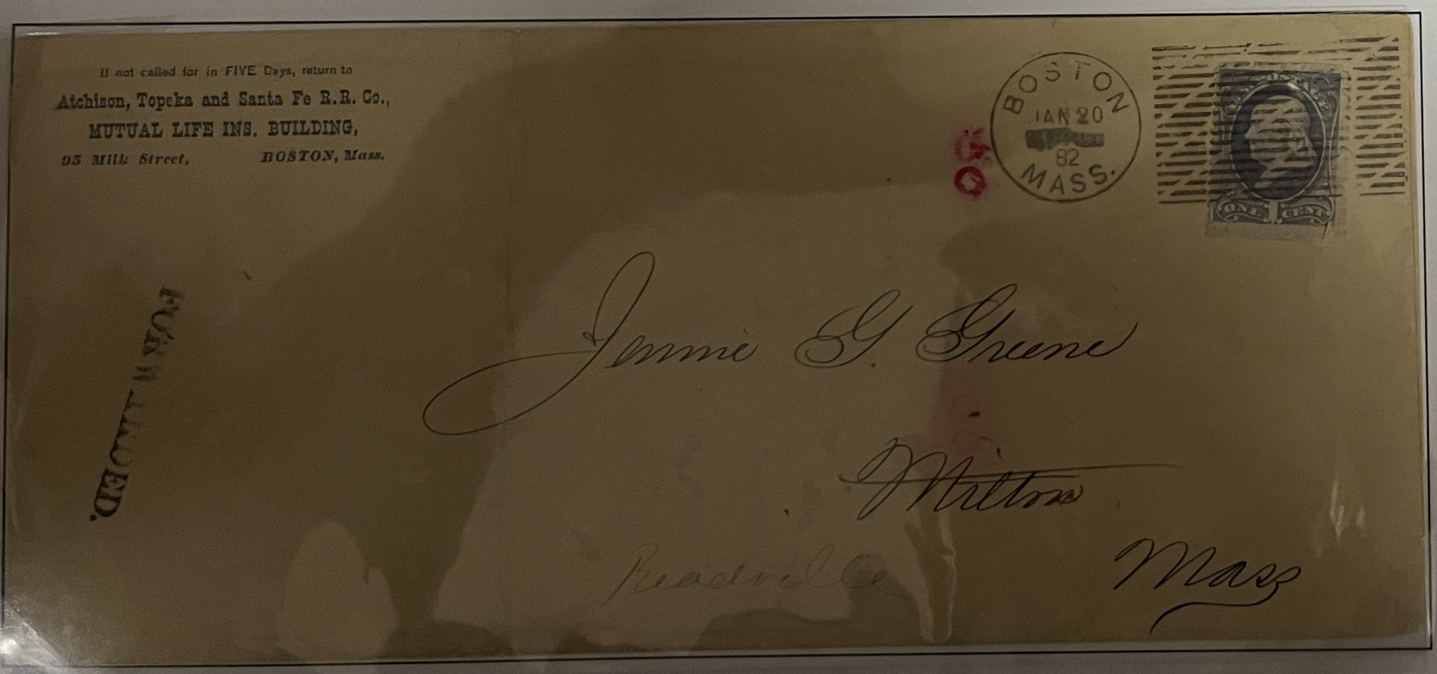
Dec 30, 1881

The new design of the canceller was in use from December 20, 1881 to April 19, 1882. Ten days into 1882, the '82 year slug had not been received, and the old slug was inverted. Ten days later, the new year was in place, but the time was inverted (**not previously reported**). After another ten days, all is well, but the canceller has a distinct downward tilt, and the pin punctures seem to show a different spacing.

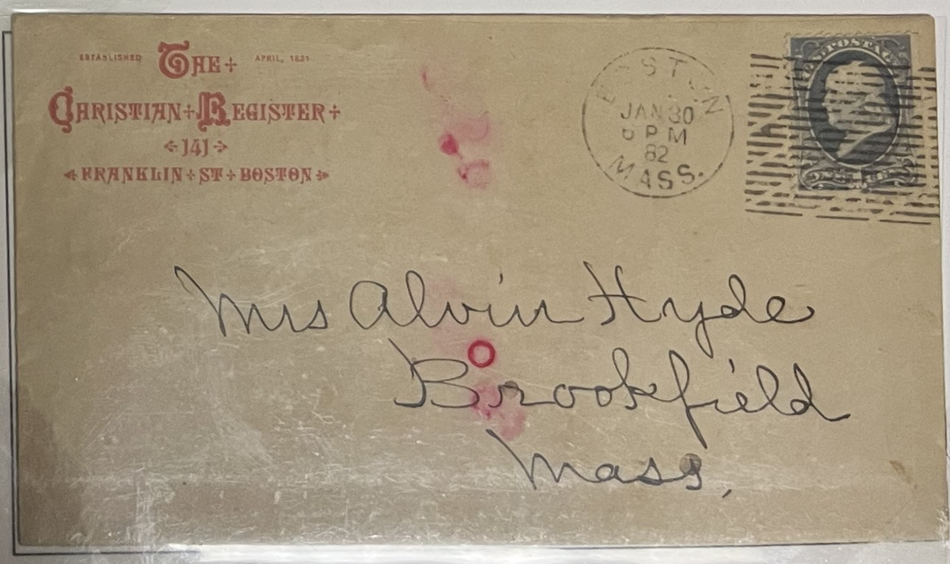
Jan 10, [1882]



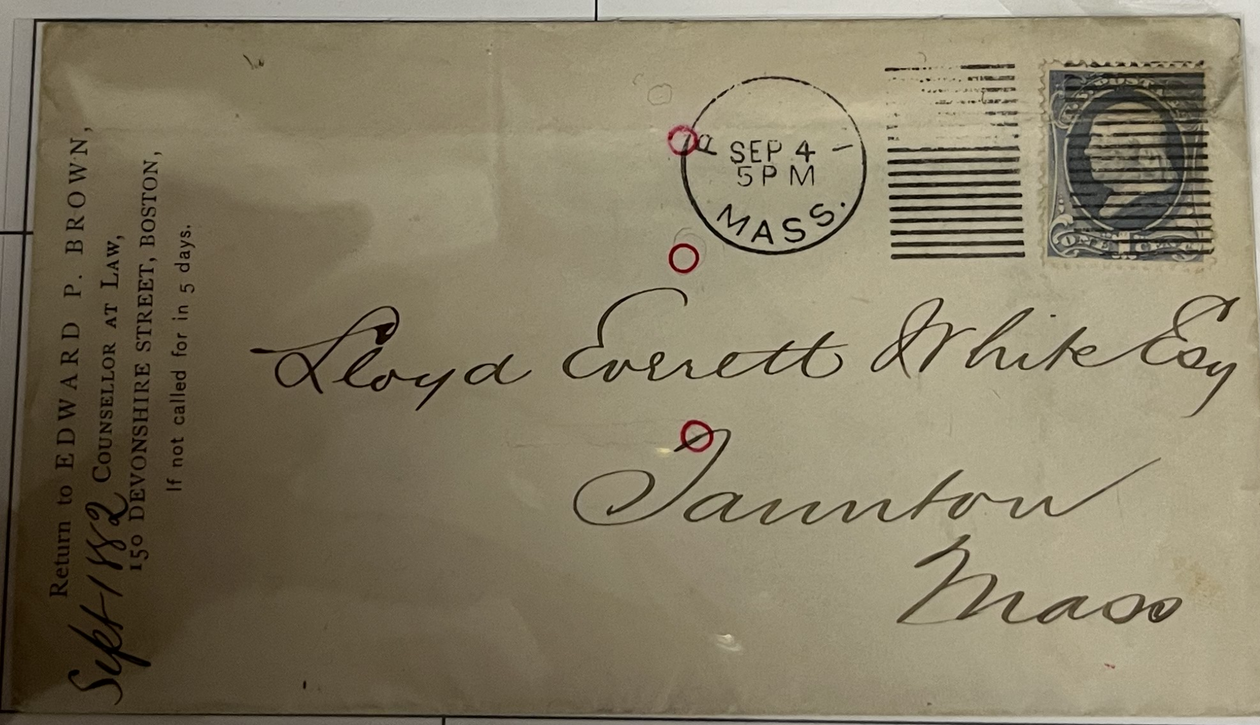
Jan 20, 1882



Jan 30, 1882



The final arrangement of the feeding pins consisted of two pins in two groups. Two machines appear to have been operating in Boston from early September 1882 to the end of the year. The first canceller design of two sets of 17 bars separated by a channel was in use from September 1 to November 3 with two different dials.



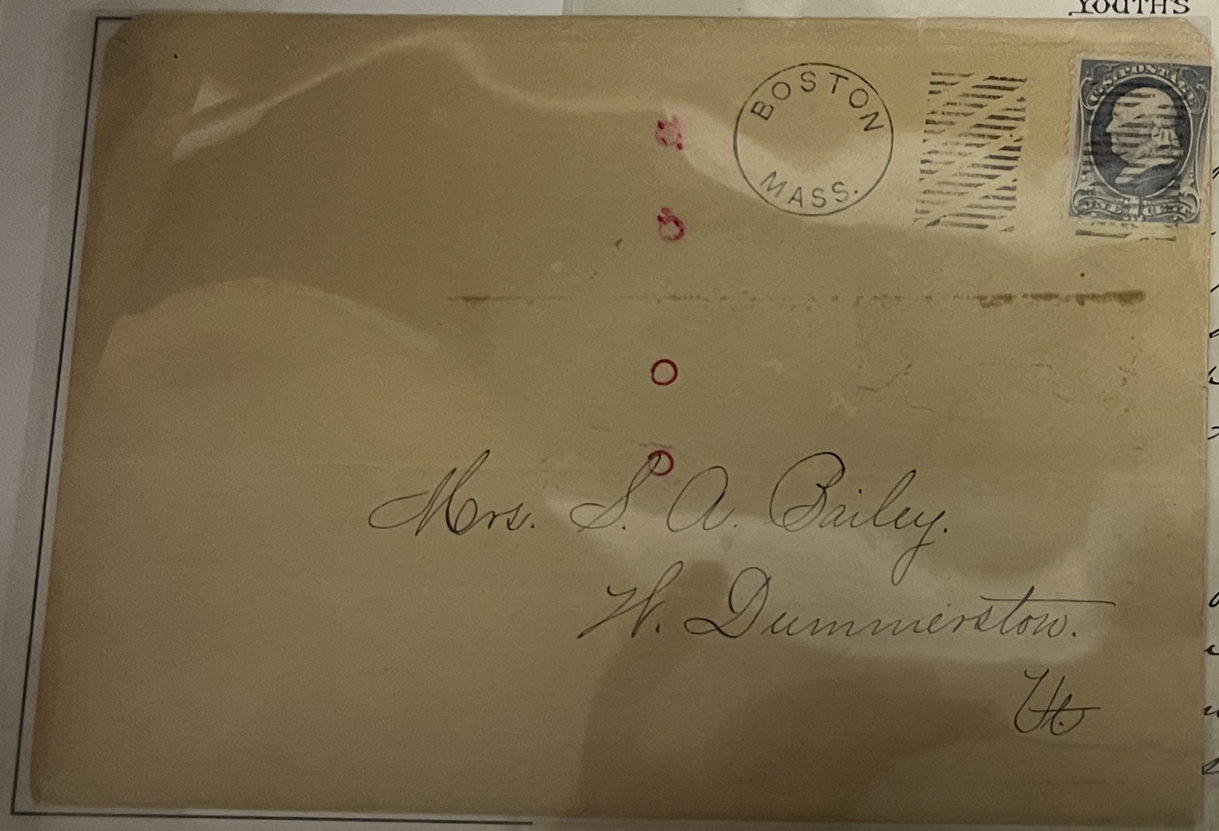
First day of use for this die, the first dial type with a relatively wide **A** in **MASS.** Only the top pair of pin marks visible

Three days later. After this date only one example is known with a date in the dial. Three pin marks visible.

The second dial type showing a relatively narrower **A** in **MASS.** Dated covers known only from November 1 to 3. Undated third-class usages may be somewhat earlier or later

Leavitt Experimental Cancels

A second experimental die was placed in service about September 9, 1882 and used off and on to the end of the year.



41 TEMPLE PLACE.

YOUTH'S COMPANION.
BOSTON, MASS.

October 19. 1882.

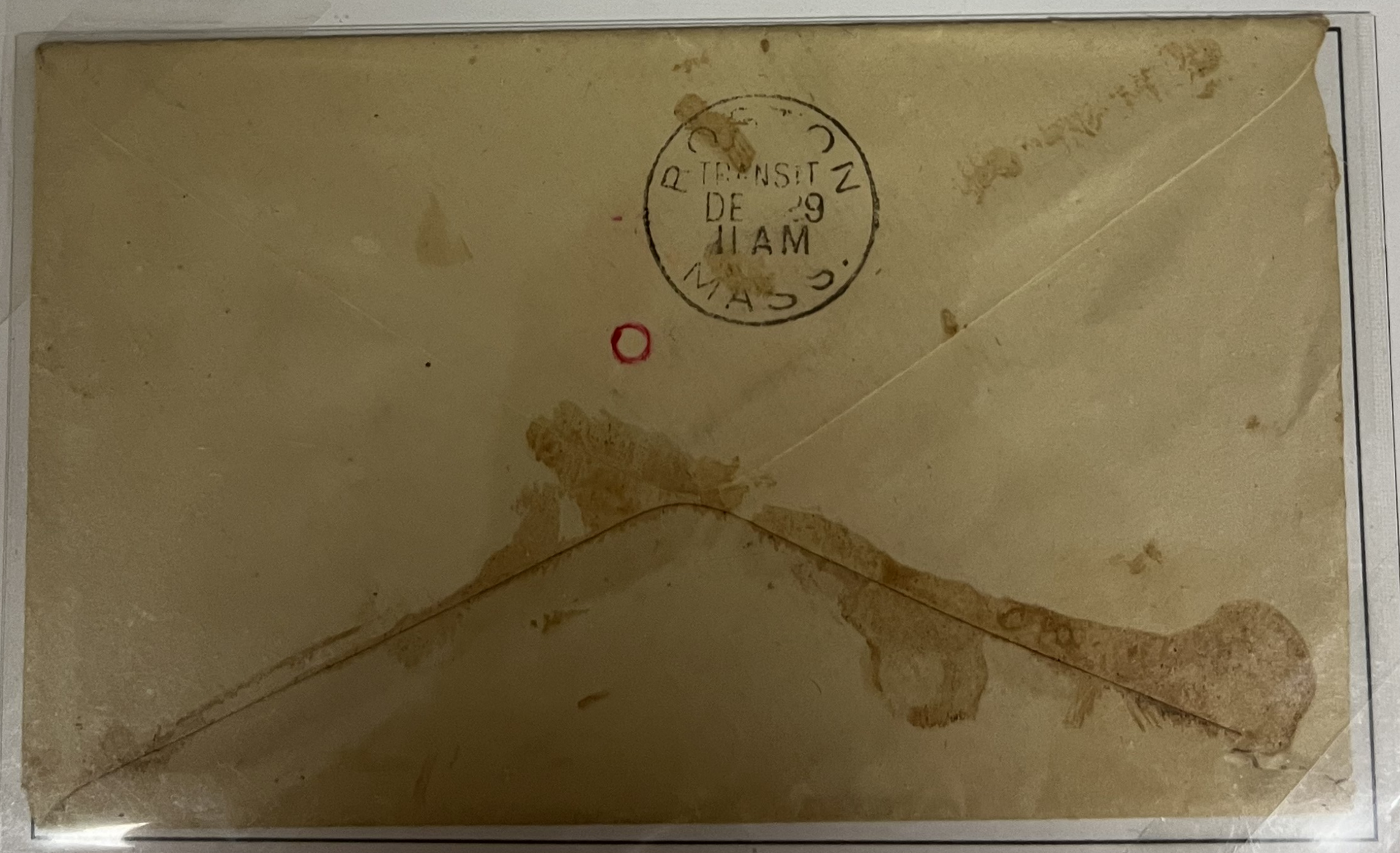
Pin Puncture Group 4, Second Die

The second cancelling die differs from the first by having oblique cuts through the bars. Nearly all covers with this die are third-class usages and lack dates in the dials. As with the cover to the left, surviving enclosures often provide the only evidence of dates. This cover shows all four pin marks.

The cover below is one of two or three first-class usages with month, day and time.

The experimental Leavitt machine was also used toward the end of 1882 as a transit marking created by removing the cancelling die from the machine and adding the word **TRANSIT** to the dial.

First type, with **TRANSIT** in the third line, used November 10 to 13, 1882



Second type, with **TRANSIT** in the first line, used the balance of 1882.
This cover, dated December 29, is the **last documented date of use**

Leavitt Experimental Cancels

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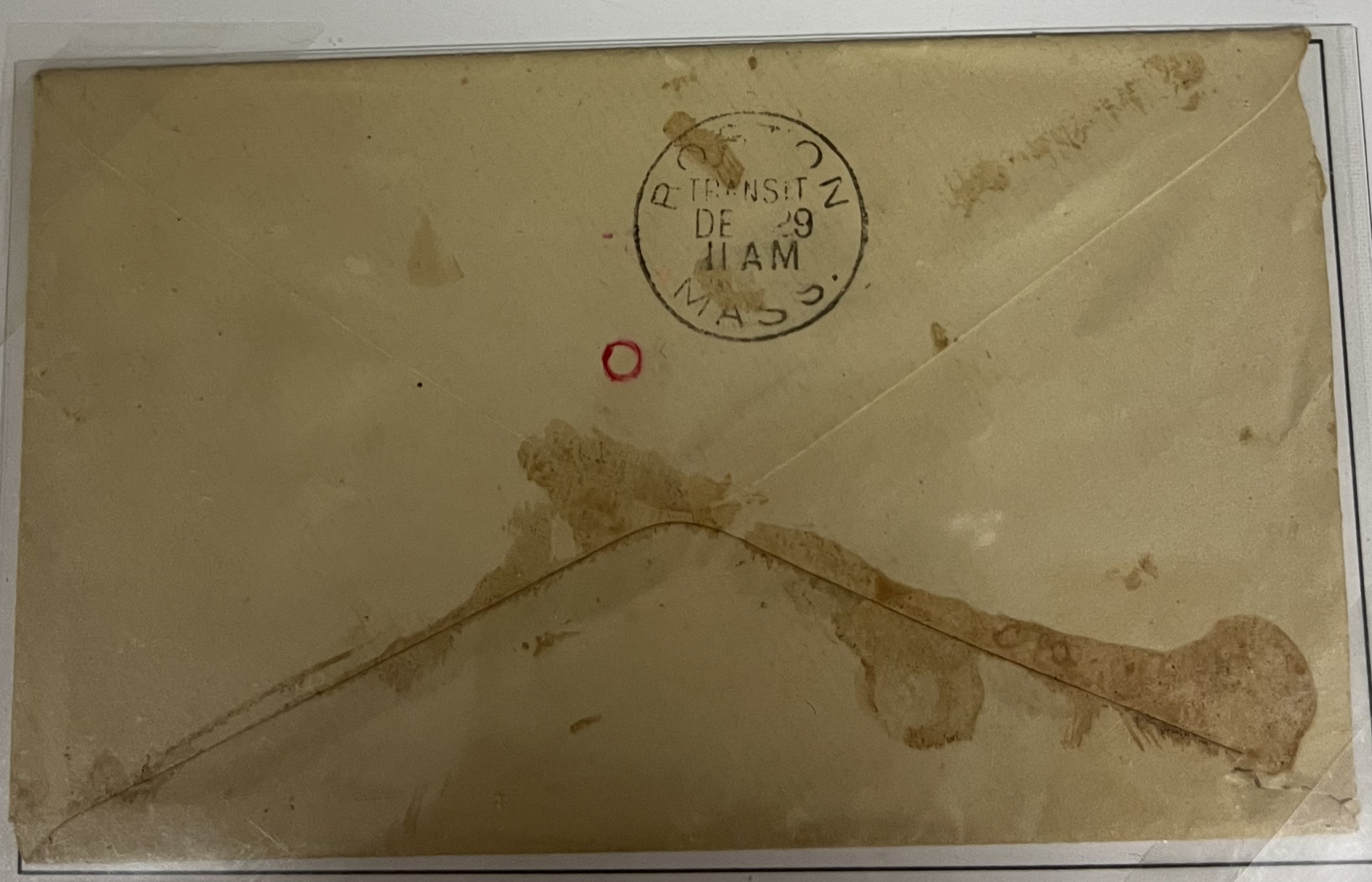

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This cover, dated December 29, is the **last documented date of use**

THE AMERICAN POSTAL MACHINES COMPANY
The Bar Cancellations

Beginning in 1883, Martin Van Buren Ethridge began to work on the problems of developing a cancelling machine that would handle general mail. On November 30, 1884 a Boston newspaper reported that a new cancelling machine was operating in the Boston post office that could cancel up to 300 letters a minute. The American Postal Machines Company was formed, bought out the Leavitt patents and almost immediately became the dominant producer of machines in Boston. The products of these machines have become known as American Bar Cancellations to distinguish them from the Company's later-developed flag cancellations.

Only one machine was in operation in 1884 from slightly before the date of the newspaper announcement, The few surviving cancellations are mainly third class usages, showing no month and day in the dial. **This is one of six first class usages recorded.** One has a December 1 date, and the balance are from the last ten days of December.

American Postal Machines Company

Earliest Recorded Usage

The first machine was installed on November 23, 1884. It was initially used only on third class matter.

HOUGHTON, MIFFLIN & CO.'S PERIODICALS.

THE ATLANTIC MONTHLY.
THE (LAW) REPORTER.
U. S. OFFICIAL POSTAL GUIDE.
ANDOVER REVIEW.
BOSTON MEDICAL AND SURGICAL JOURNAL.

EDINBURGH REVIEW.
QUARTERLY REVIEW.
THE ATLANTIC PORTRAITS.
HAWTHORNE, EMERSON, HOLMES, LOWELL, WHITTIER, BRYANT, AND LONGFELLOW.

☞ *All communications relating to the Periodicals should be addressed,* HOUGHTON, MIFFLIN & CO., *The Riverside Press, Cambridge, Mass.*

Boston Office,
4 Park Street.

The Riverside Press,

Cambridge, Mass., Nov. 24, 1884.

As we formerly numbered you among the sub=scribers to the Atlantic Monthly, we venture to send you the prospectus for the ensuing that you wi The atte and we be more

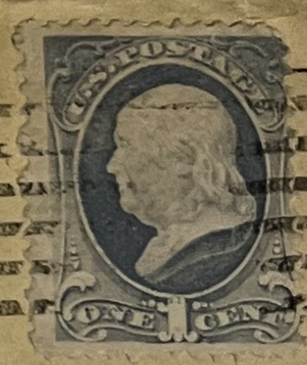
We c of Hawt Bryant, as most of art, a

We ta the exc edition of the leading English Reviews, namely: = The Edinburgh Review and The Quarterly Review, which are published by special arrangement with the English Publishers, and are printed from the

HOUGHTON, MIFFLIN & CO.
The Riverside Press,
Cambridge, Mass.

THE ATLANTIC MONTHLY
U. S. OFFICIAL POSTAL GUIDE.
BOSTON MEDICAL JOURNAL.
THE (LAW) REPORTER.

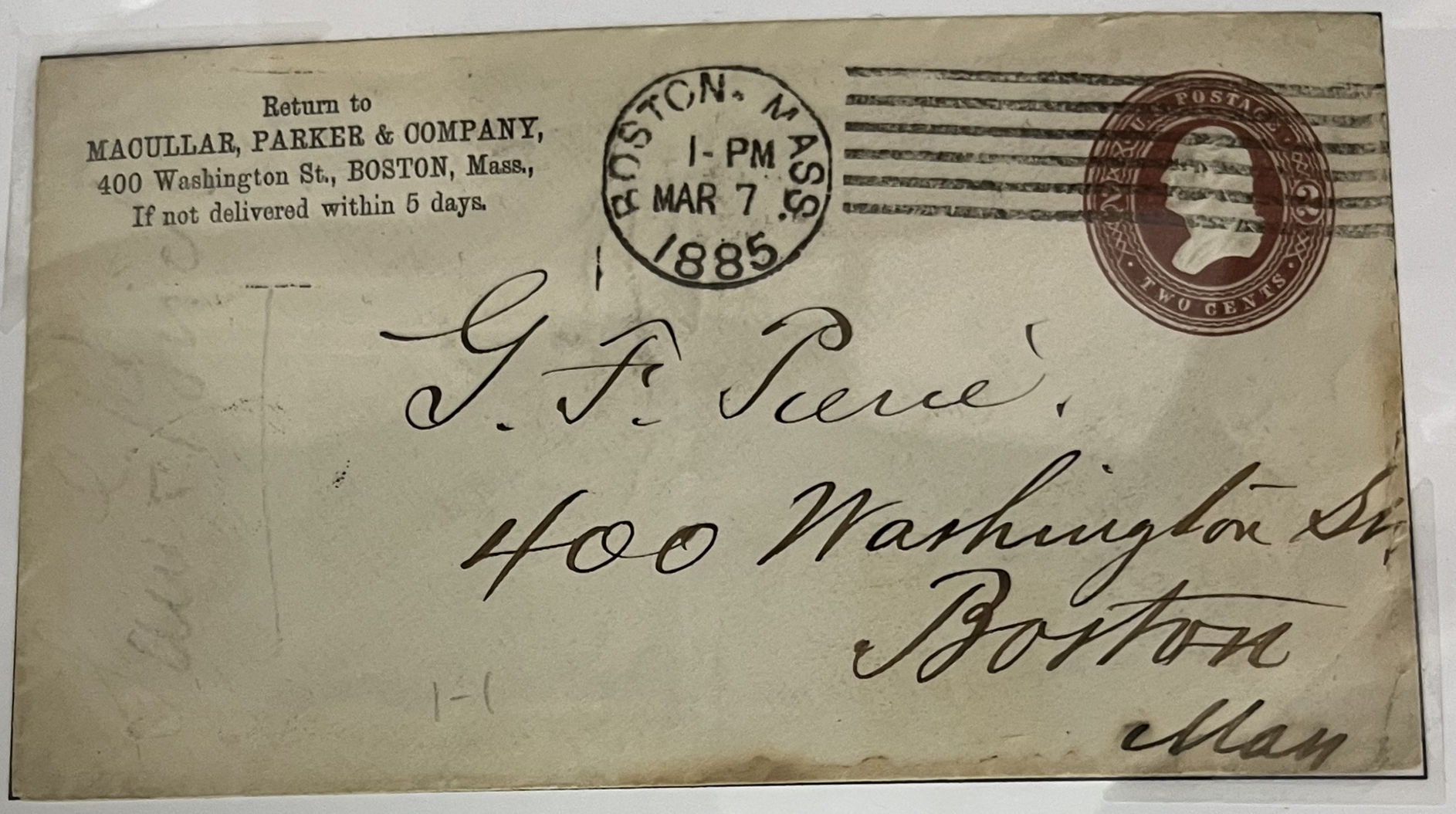
BOSTON, MASS. NOV 24 1884



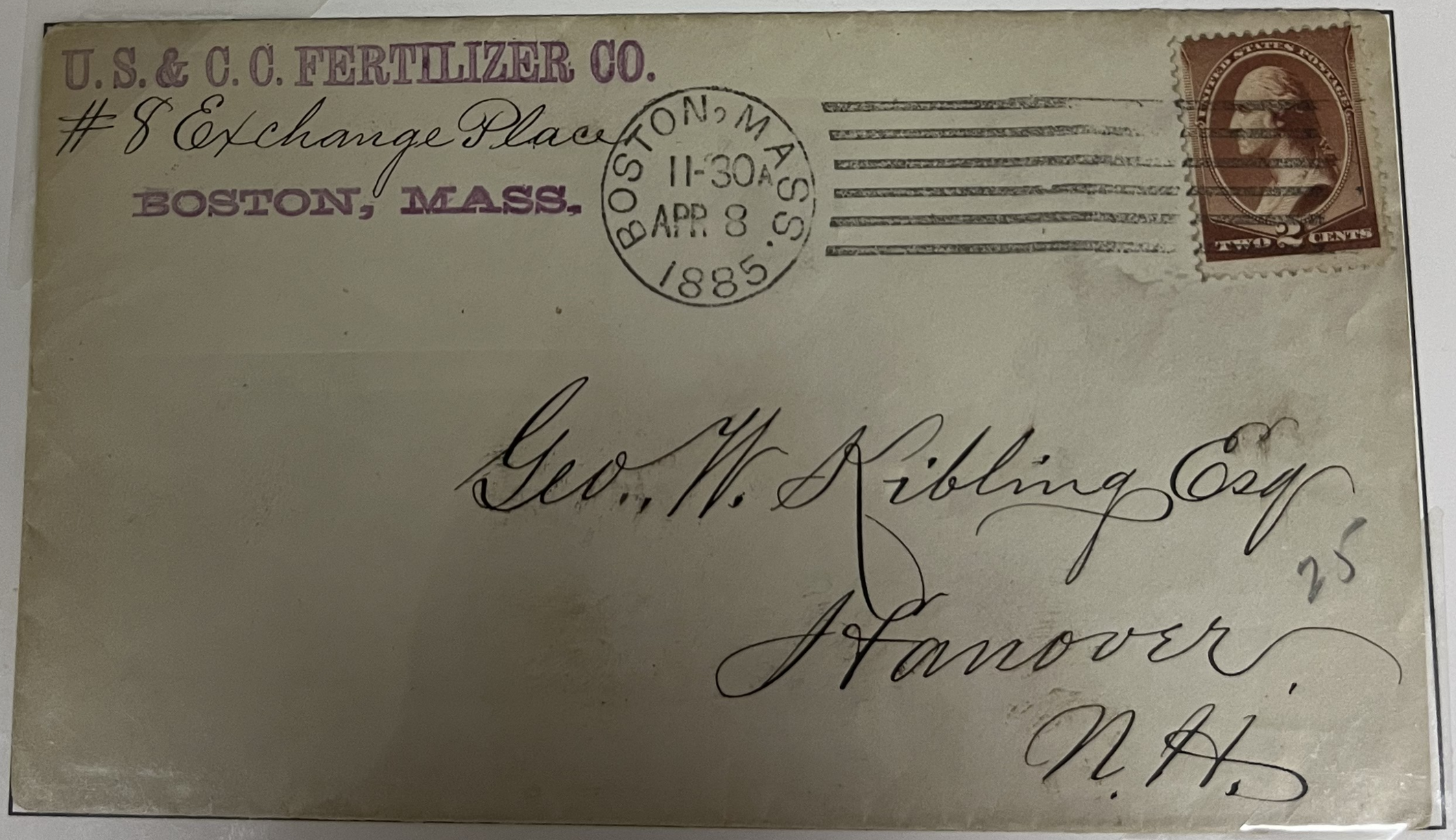
Whittier Society.
Kenyonrock Seminary,
New Lebanon
N. Y.

An undated dial, but **earliest recorded usage** based on date of enclosure.

The year 1885 was one of experimentation, with fourteen different cancels identified. The number of machines in use during the year, however, began with two and ended with six.



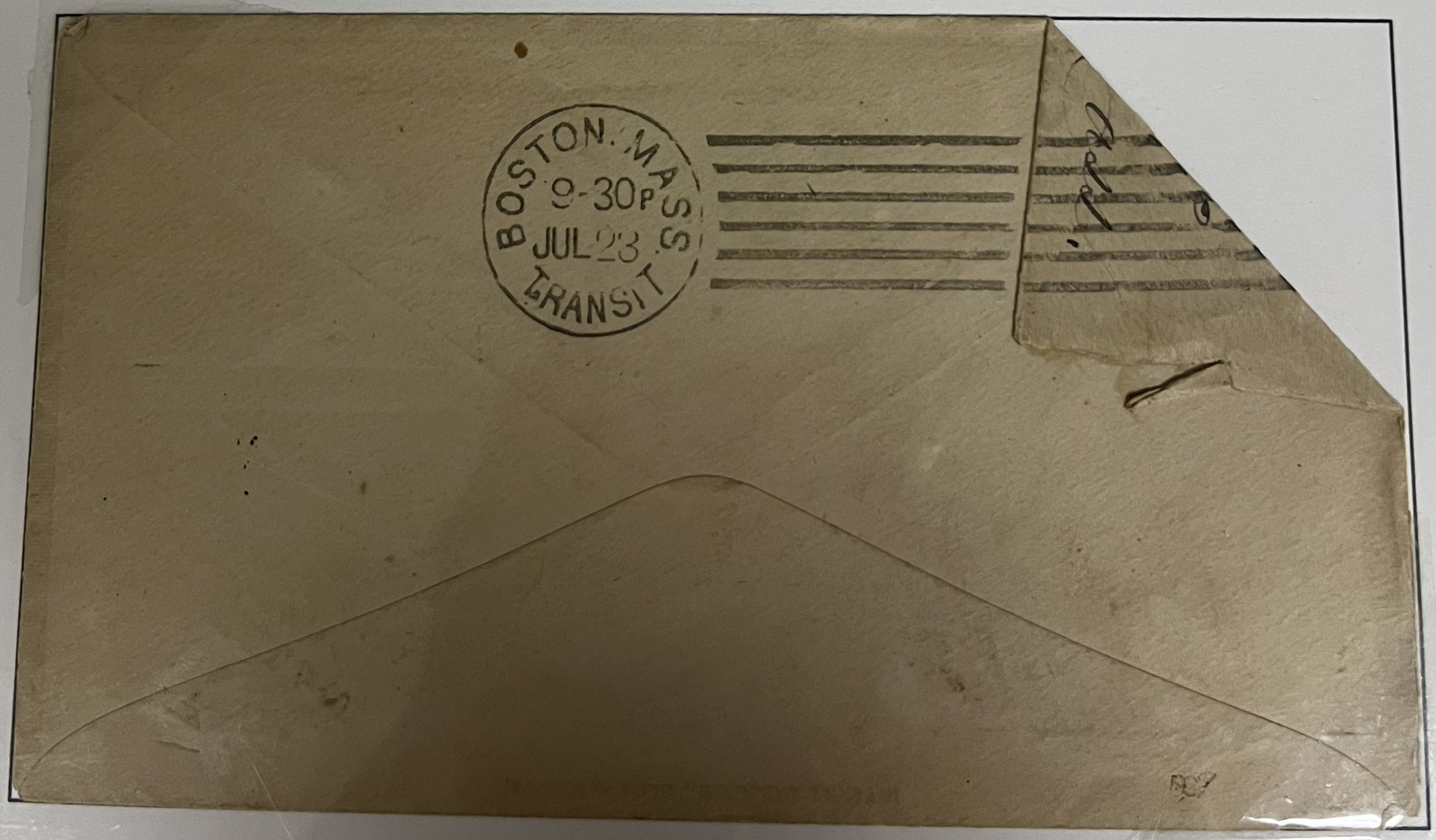
One of the two machines in use at the beginning of 1885. High and heavy killer bars similar to the original 1884 cancels. Killer cylinder disposed of at the end of March.



One of two very similar machines introduced in the first week of April with lower killer bars. In use to the end of October.

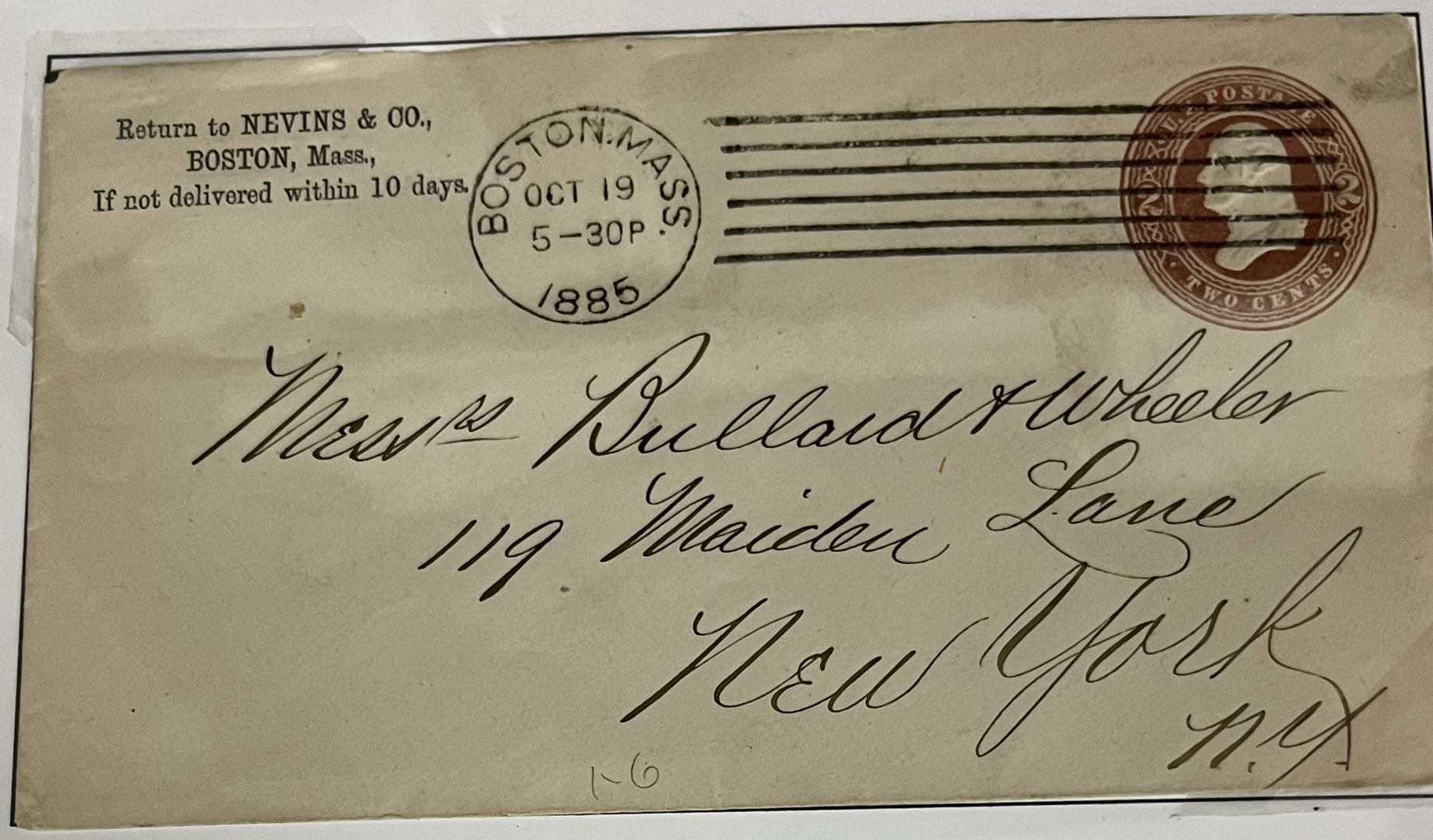
An unusual and short-term usage was a transit marking used for local mail routed through Boston. The word **TRANSIT** replaces the year date. In sporadic use from May 20 to the end of August 1885.

On a cover from North Easton, Massachusetts to Providence, Rhode Island.

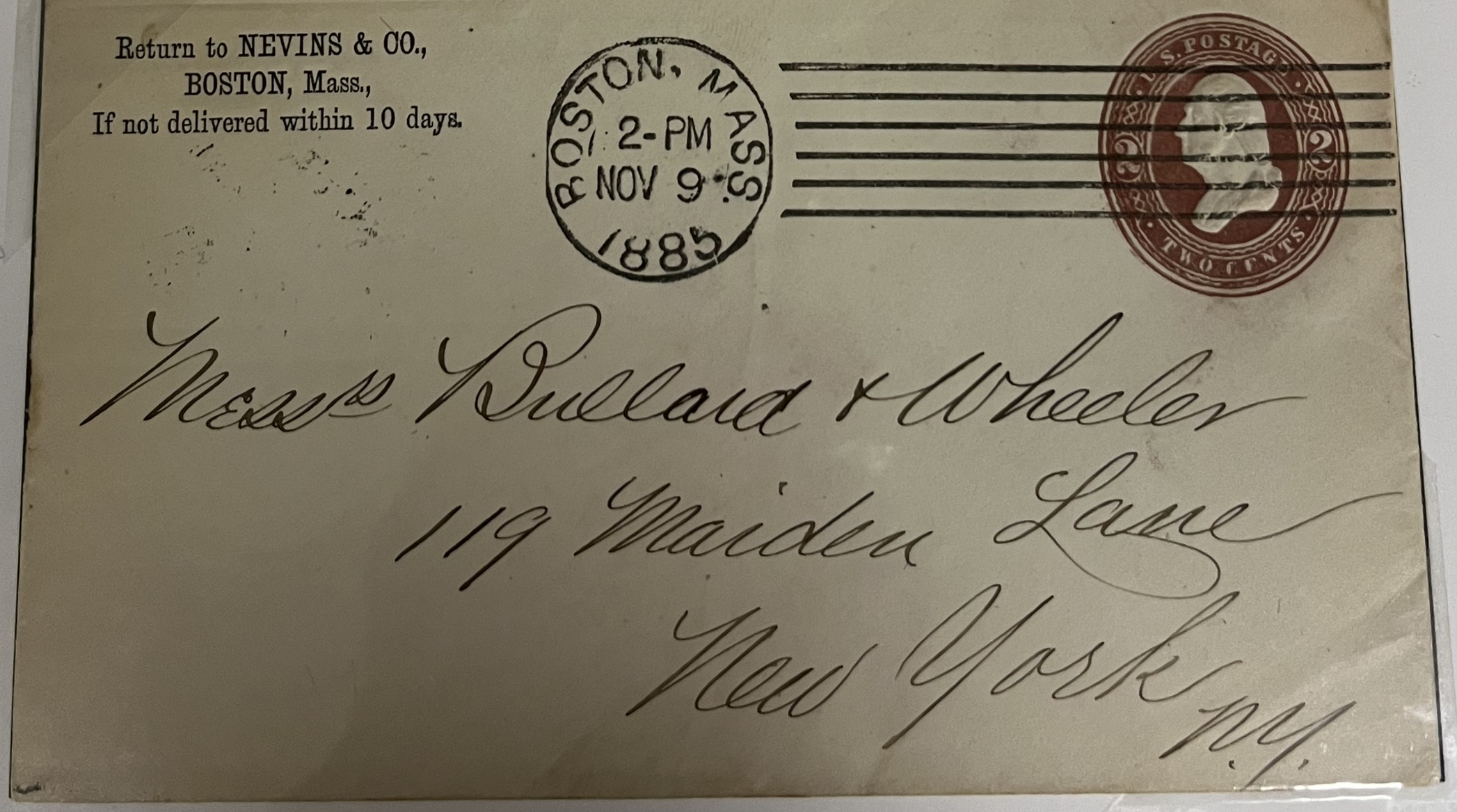


Folded corner apparently created by a machine jam.

In mid-October 1885 the thickness of the cancelling bars and dials were reduced, and the dials featured smaller and lighter letters. In the new dials the date now appears above the time.



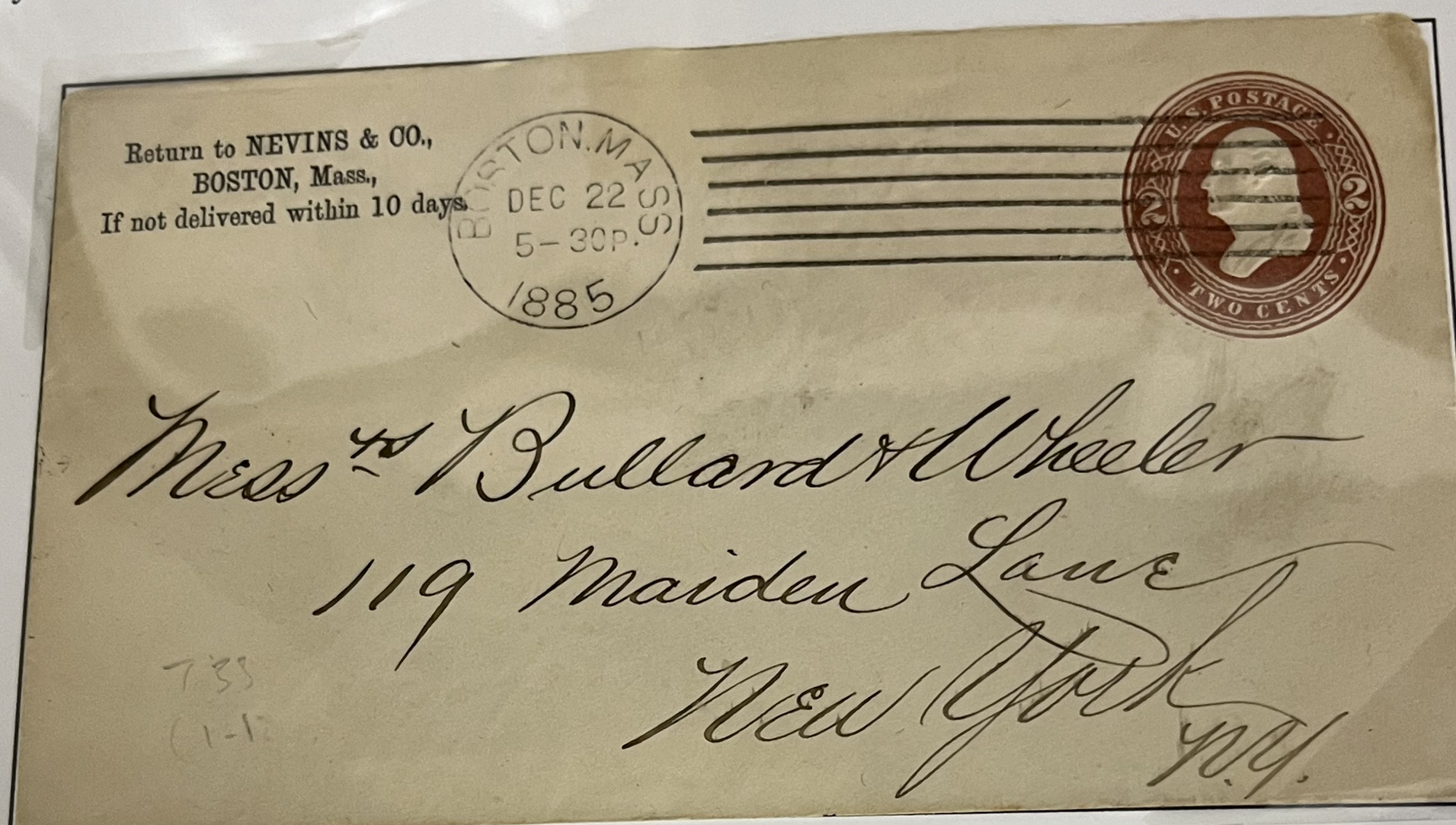
The first of the new machines in its first week of use. The four parts of the date and time were manufactured as quadrants of a circle. The date could not appear below the time unless inverted.



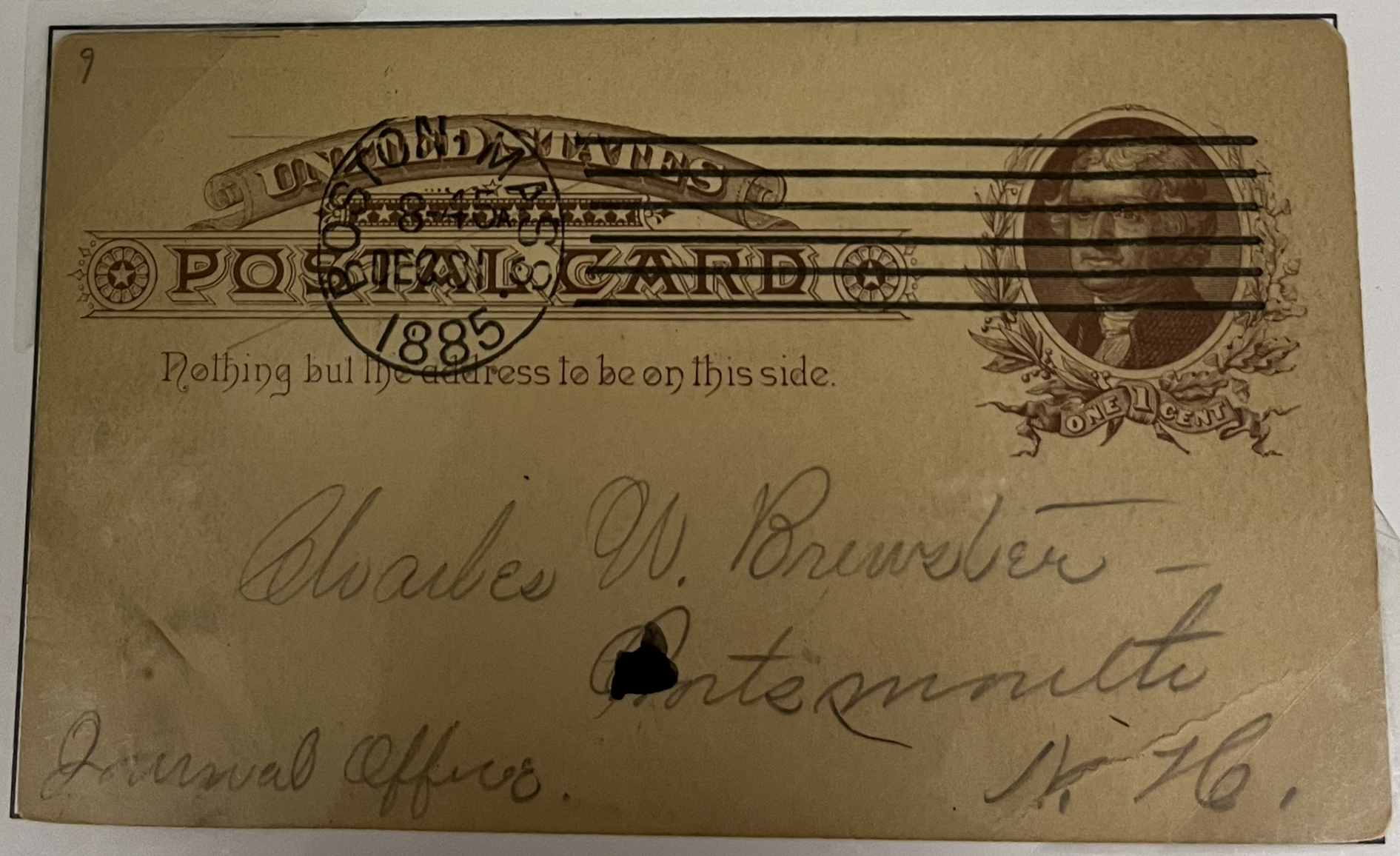
A mixture of old and new. The first dial type recycled with new killer bars.
Flattened left side of dial is one of several characteristics identifying the original dial.

American Postal Machines Company

In December 1885 five different varieties of the new-type cancellations appeared. These had usages of from ten days to nearly a month.



One of the five new types introduced in December 1885

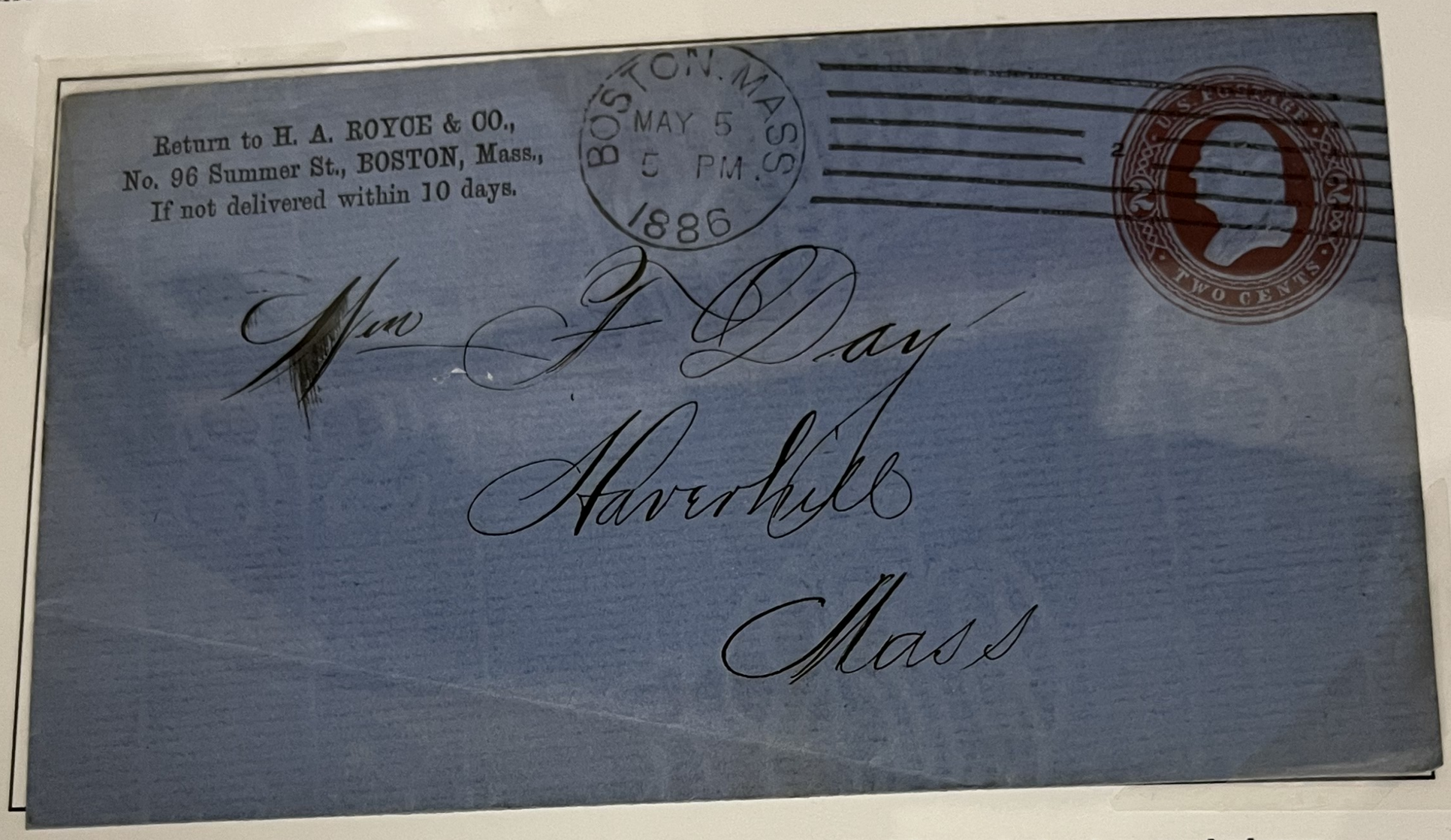


A final throw-back type (time above date), used the last ten days of December.

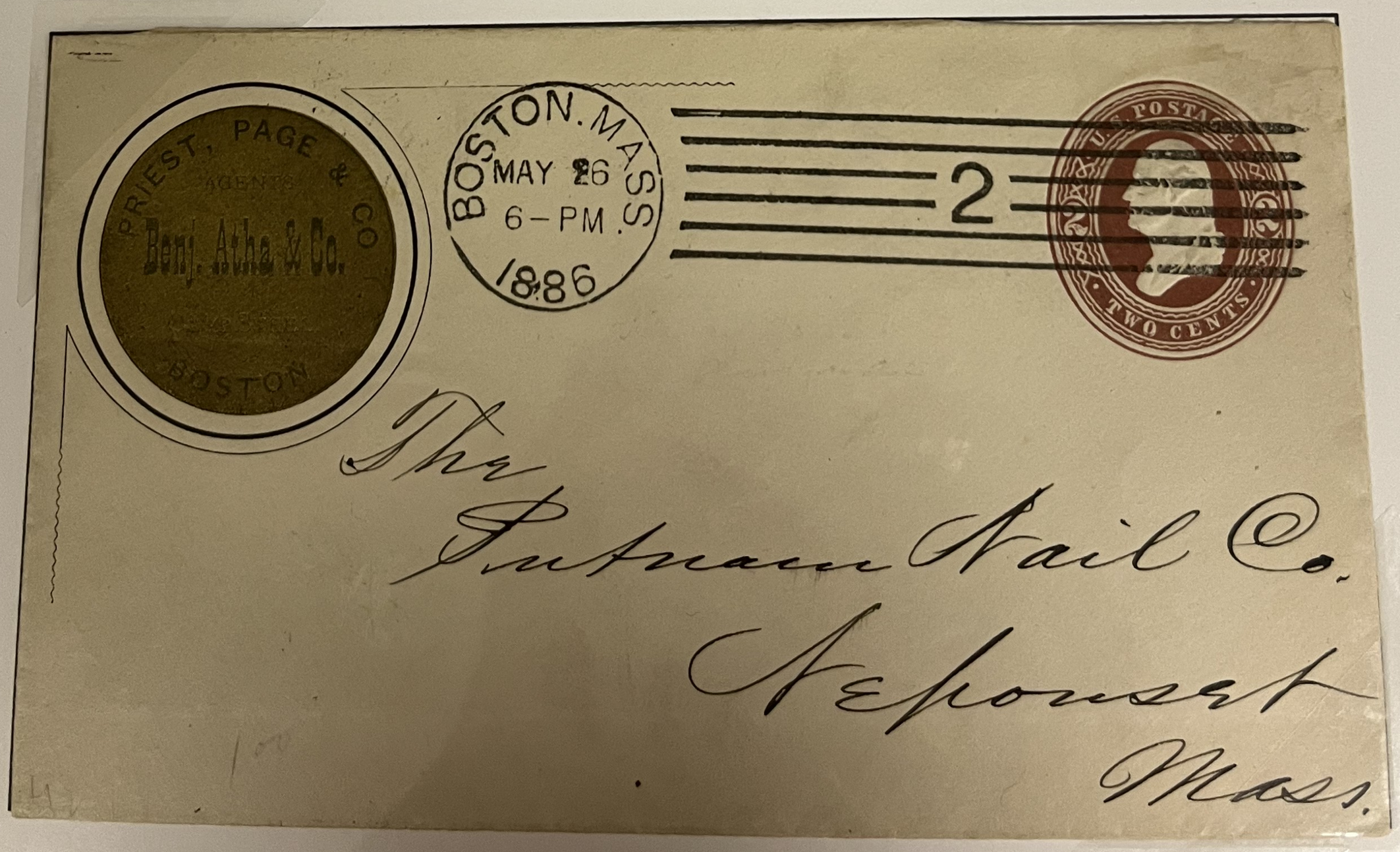
Discovery copy; final day of use.

American Postal Machines Company

If there was ever a tiny number surrounded by lines for Machine 2, it has not been seen. Neither Machines 1 nor 2 are known with blank die spaces, and the examples suggest that the tiny numbers filled the gap until the dies with the accepted large numbers were ready for installation.



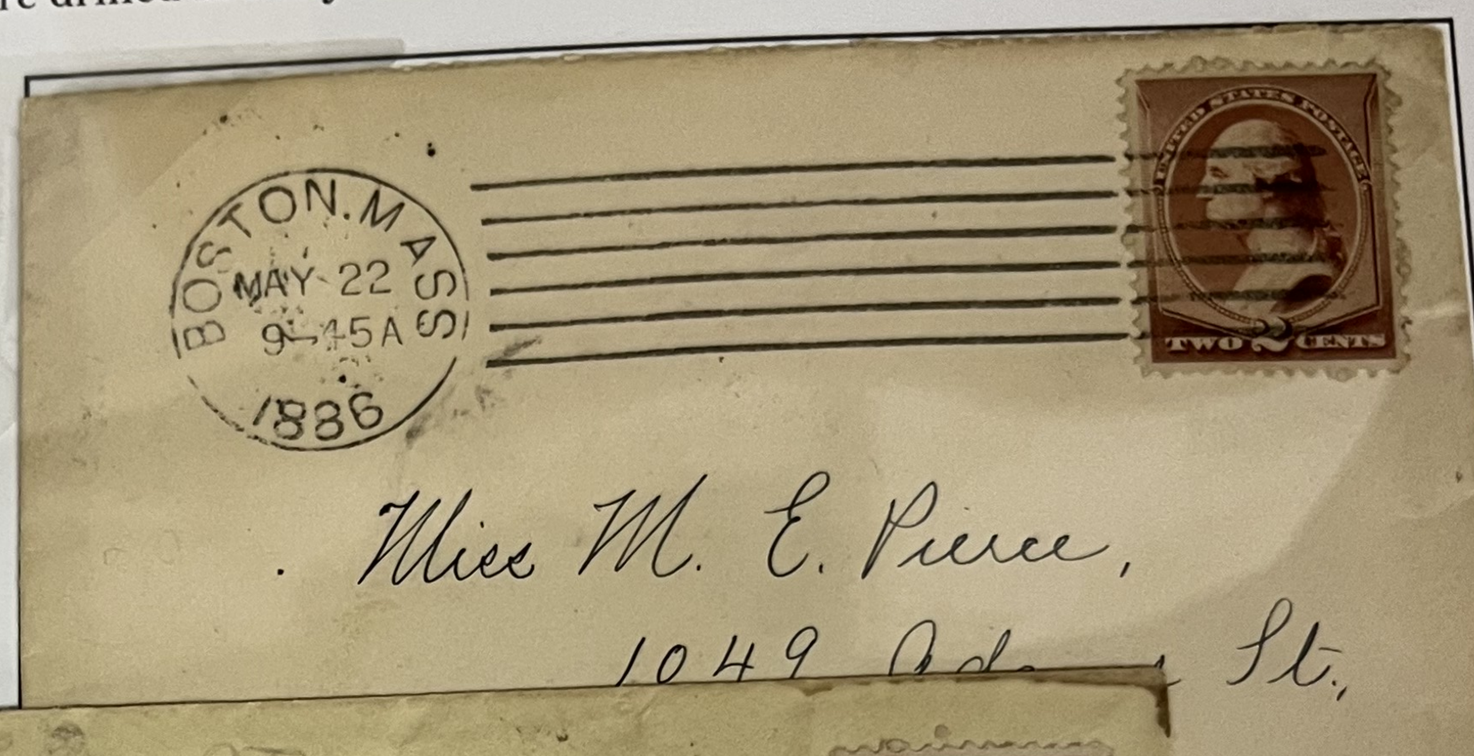
Tiny experimental number 2; known from April 28 to May 6. **Latest recorded use**

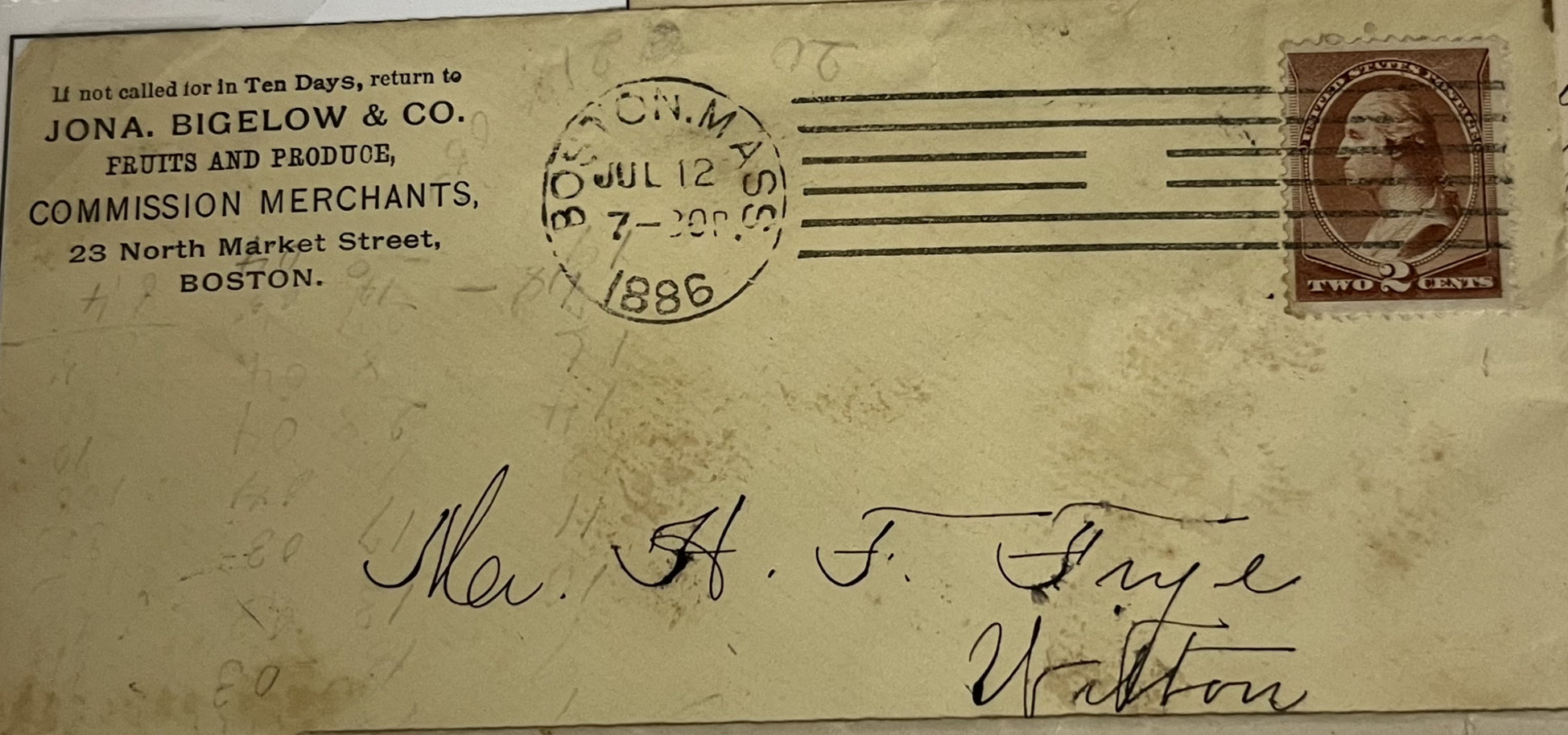


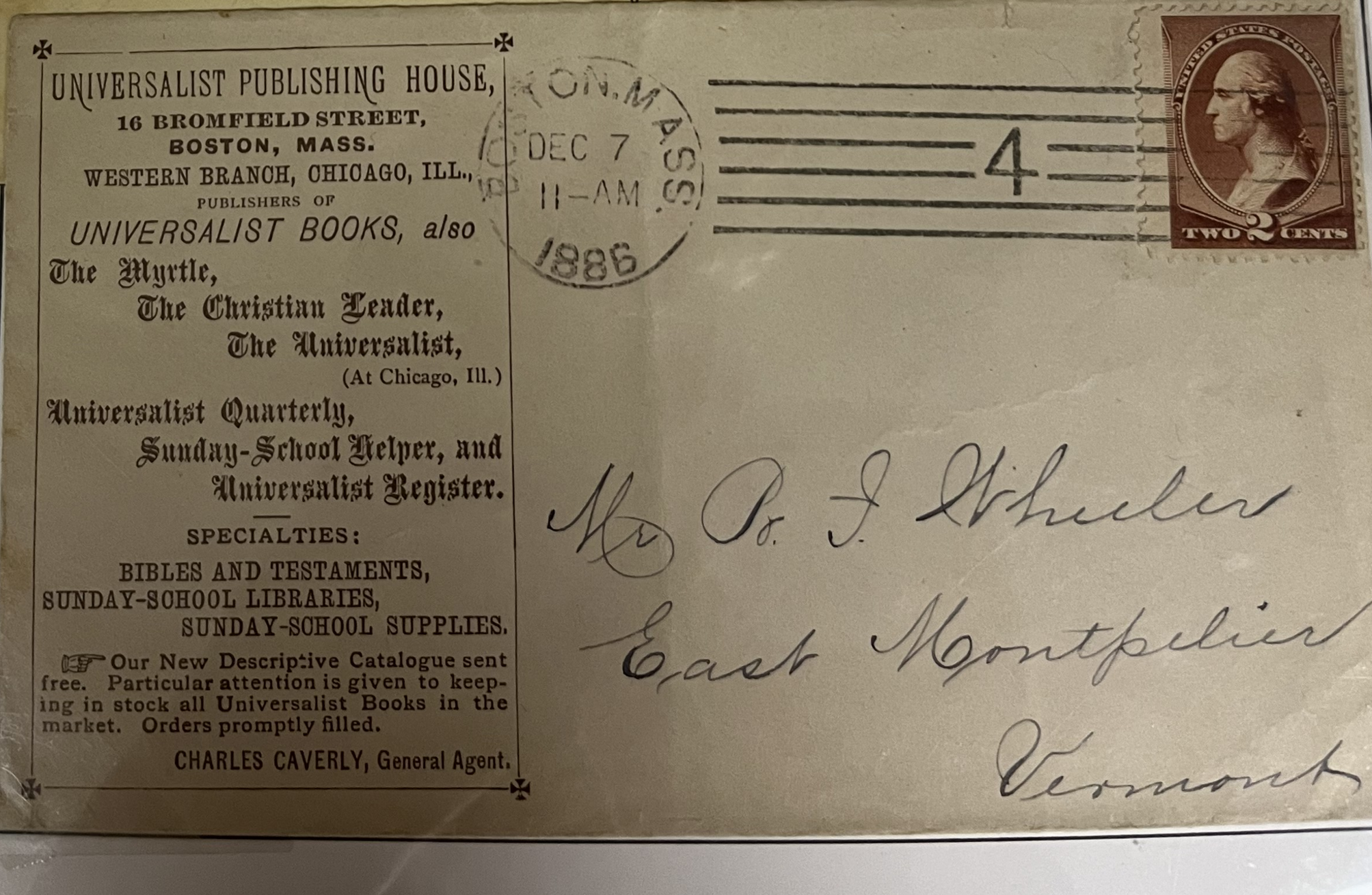
Approved design for Machine 2. In use from May 7 to the end of 1886

American Postal Machines Company

Four of the remaining five machines exhibited a more typical transition from no die space to a numbered die space. Machines 4 through 7 were drilled in early June and received their numbers in late July.

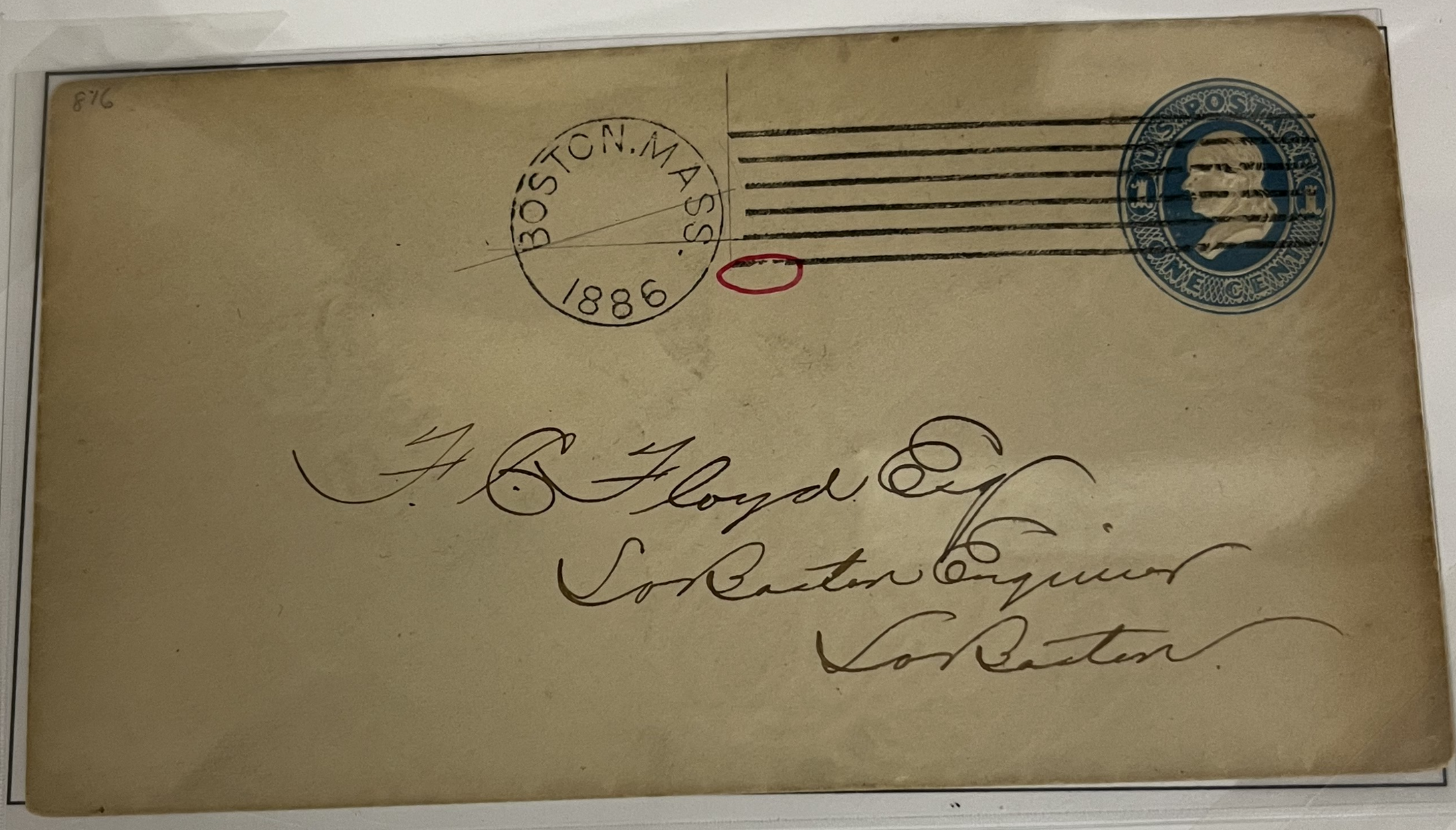






F. G. Floyd

Before leaving the developmental decade of rapid machine cancellation in Boston, it seems appropriate to pay tribute to Frederick Gillan Floyd (1869-1941) whose pioneering article, *The Machine Commats of Boston, Mass, 1876-1886*, published in Volumes XII and XIII of Billig's Philatelic Handbook, represented the first serious study and comprehensive listing of any machine cancels. While others have been able to make corrections many of of his conclusions, his work has to be taken into account by anyone writing about the period.



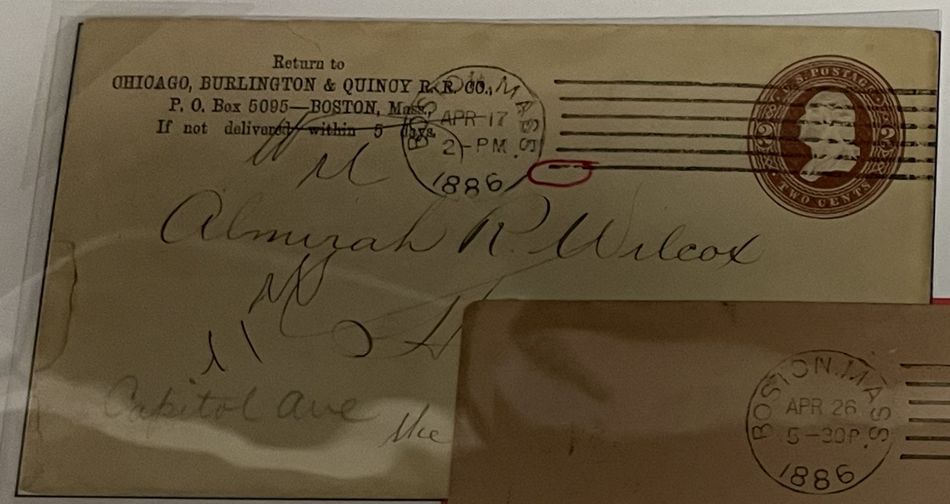
Floyd's Type 36 cancel, as used for third-class matter [his Type 40 is the same cancel with date and time, and, had the second part of his work survived, he would surely have recognized this as the precursor to Machine 1]. This cover is addressed to Floyd's father, F. C. Floyd, publisher of the South Boston Inquirer. It bears F. G. Floyd's characteristic rulings on the cancel, used to differentiate dials and killer, as well as the Bartell's number of the postal stationery in the upper left hand corner

Much of the material for Floyd's studies came from his father's extensive local correspondence, received as editor of a Boston newspaper. He also obtained photostats of material from other early cover collectors. The progression of the number installation for machine 6 is shown with material known to have been in Floyd's collection.

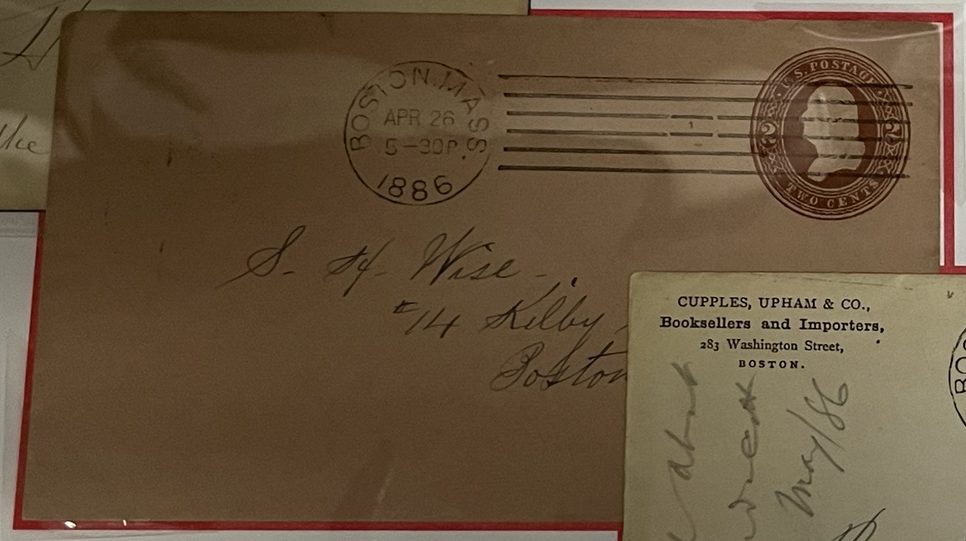
The cover with the un-drilled die on Machine 6 can be identified as Floyd's from his characteristic markings described on the previous page. The date of the cover is three days before the die disappeared for drilling. The photostat of the drilled die is inscribed on the reverse "Coll. Dr. H. K. Thompson | Boston Mass. | Photostat Sept. 10, 1935 | 44 " (Floyd's Type number). The numbered die is dated two days after installation. Small flaws, which apparently were caused by insertion of the number and later described by Reg Morris, have been circled in red.

1886: Numbering of Machines

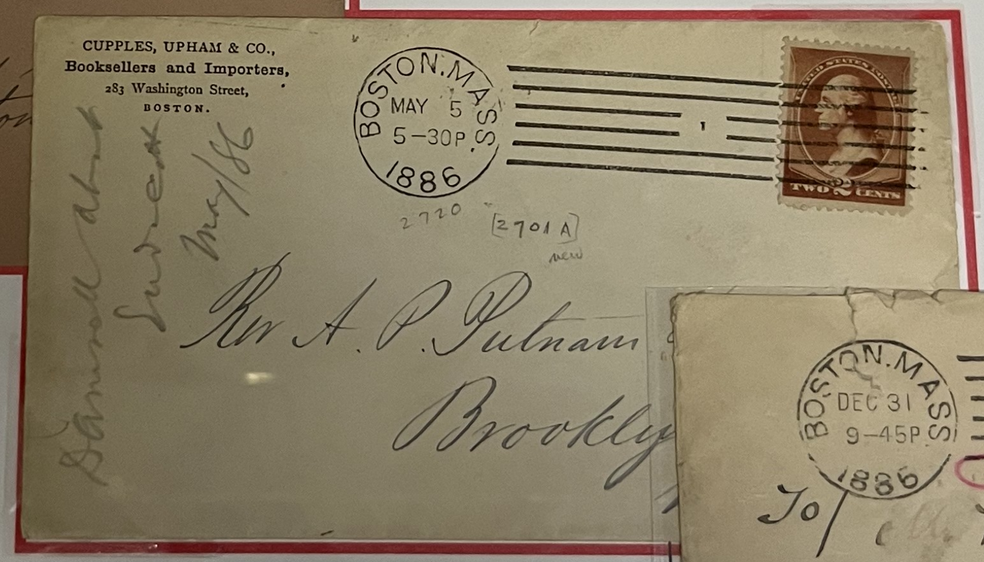
As the earliest post office with a significant number of machines, Boston was the first to have them numbered. This involved drilling the cancellation die, with a blank die space sometimes surviving for up to a few weeks before the number was inserted. Generally these three varieties exist for each of the seven machines used in 1886. Machines 1 and 2, however, display unique anomalies.



Machine 1 before drilling. Killer distinguished by saw-tooth damage to bottom bar. Seen to April 24.

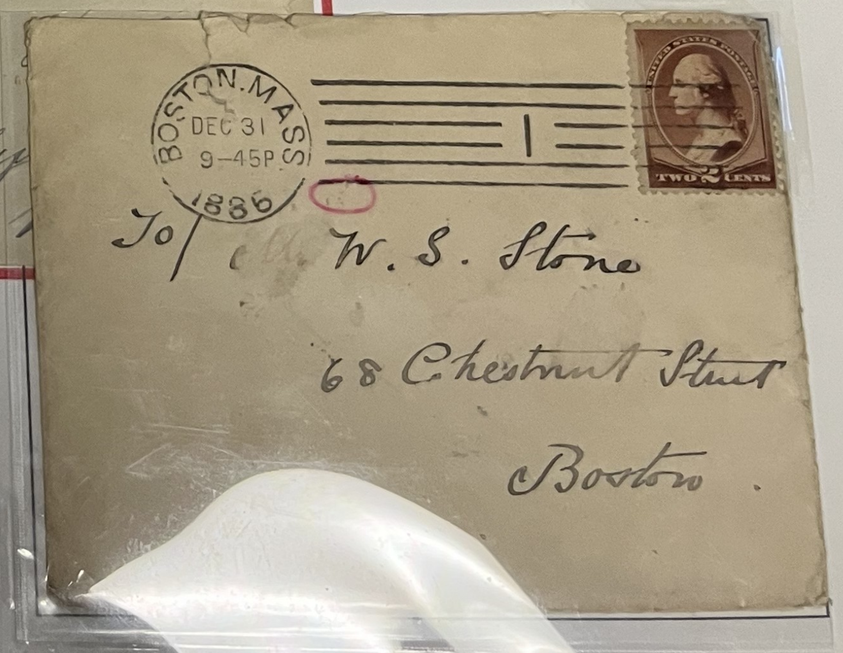


The same dial with a different drilled killer and tiny experimental number surrounded by lines. **Only known copy and not previously reported.**

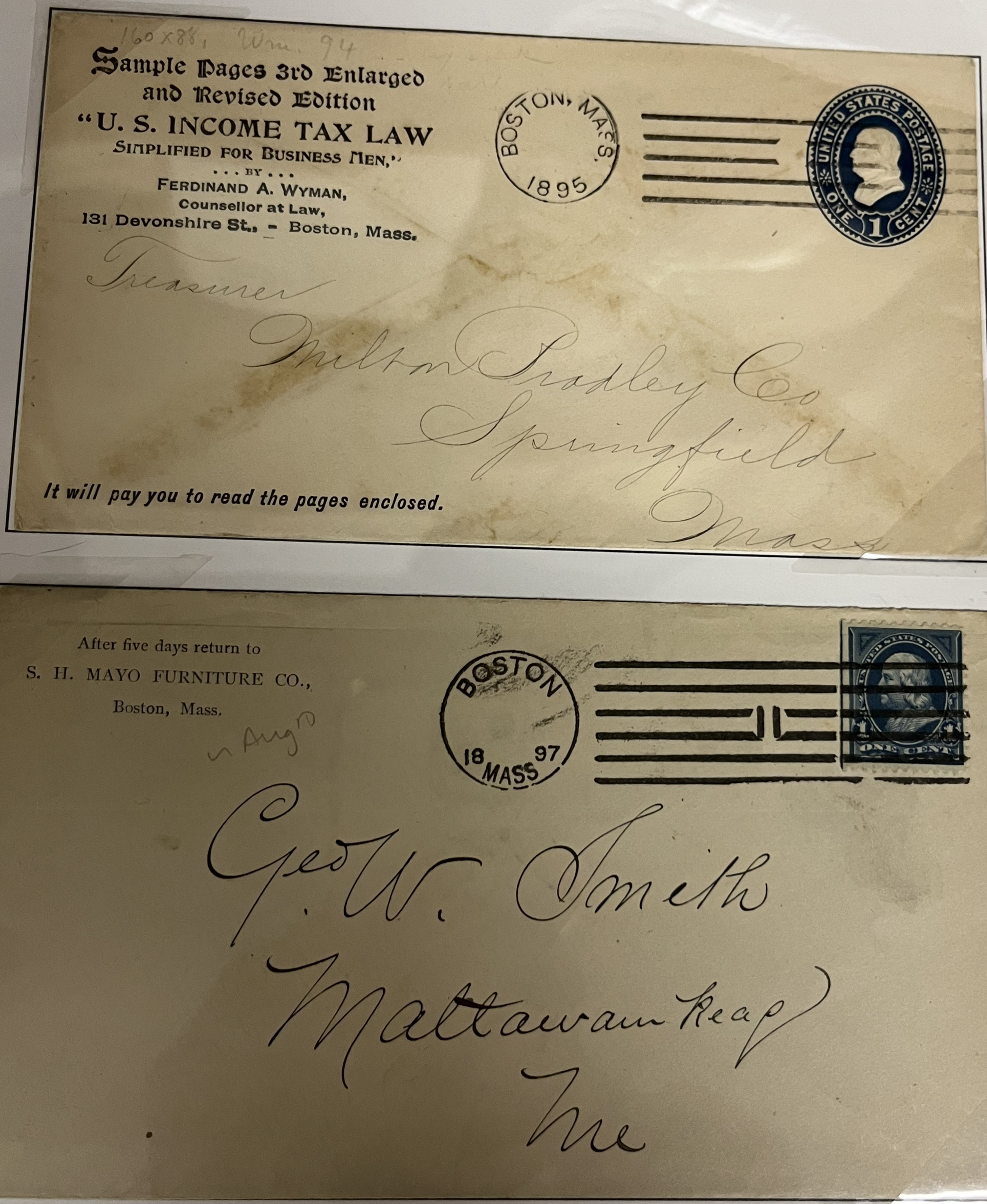


Same dial and killer, lacking lines around the number. **Latest of the five copies recorded.**

Below: Original saw-tooth killer with the accepted large number. In use from May 7 to the end of 1886

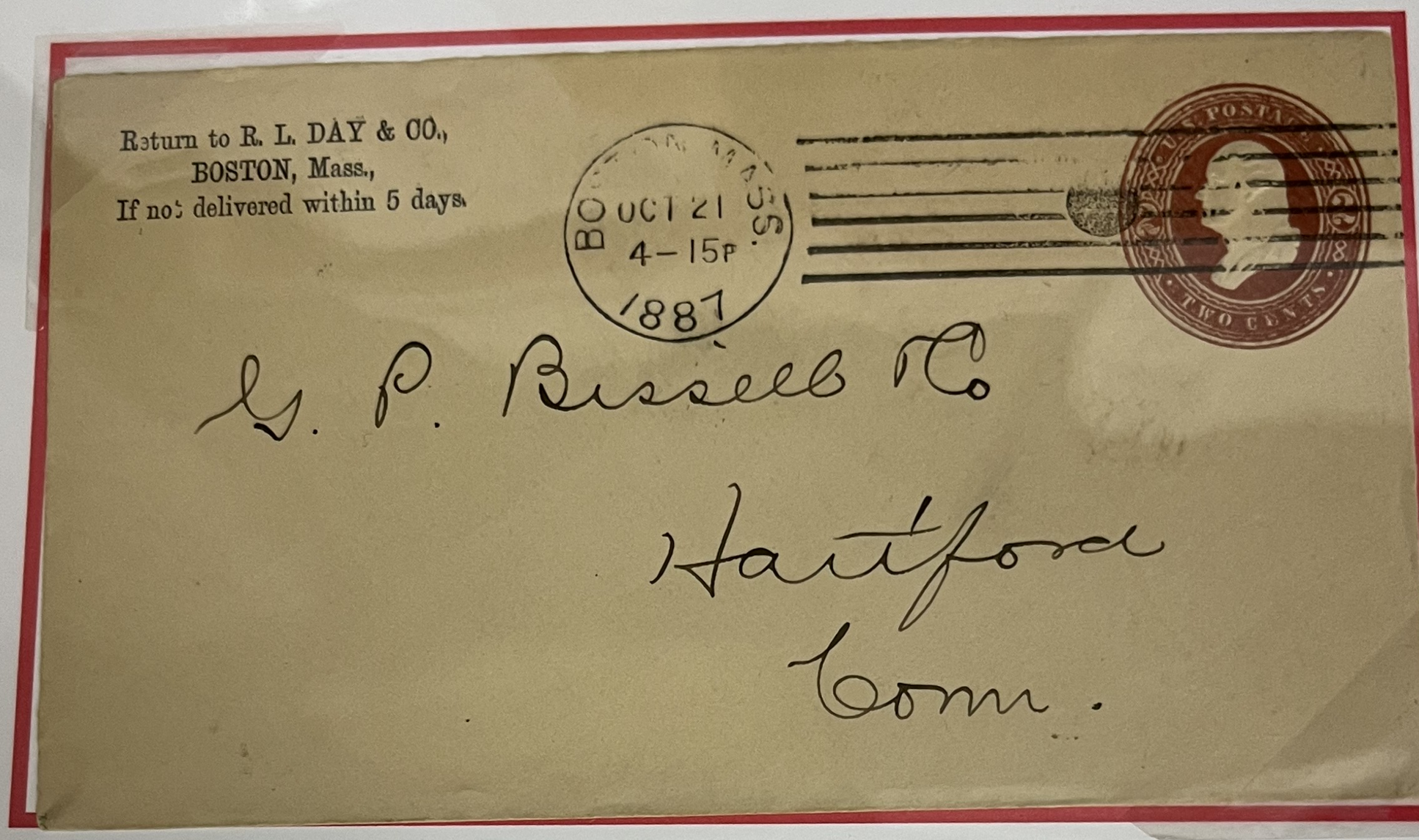


The machines with six-bar cancellers continued in use through 1897 until they were either replaced or fitted with flag dies. A few machines continued on as supplementary machines with numbers or letters removed from their die spaces. The majority of these late usages are on third-class mail.

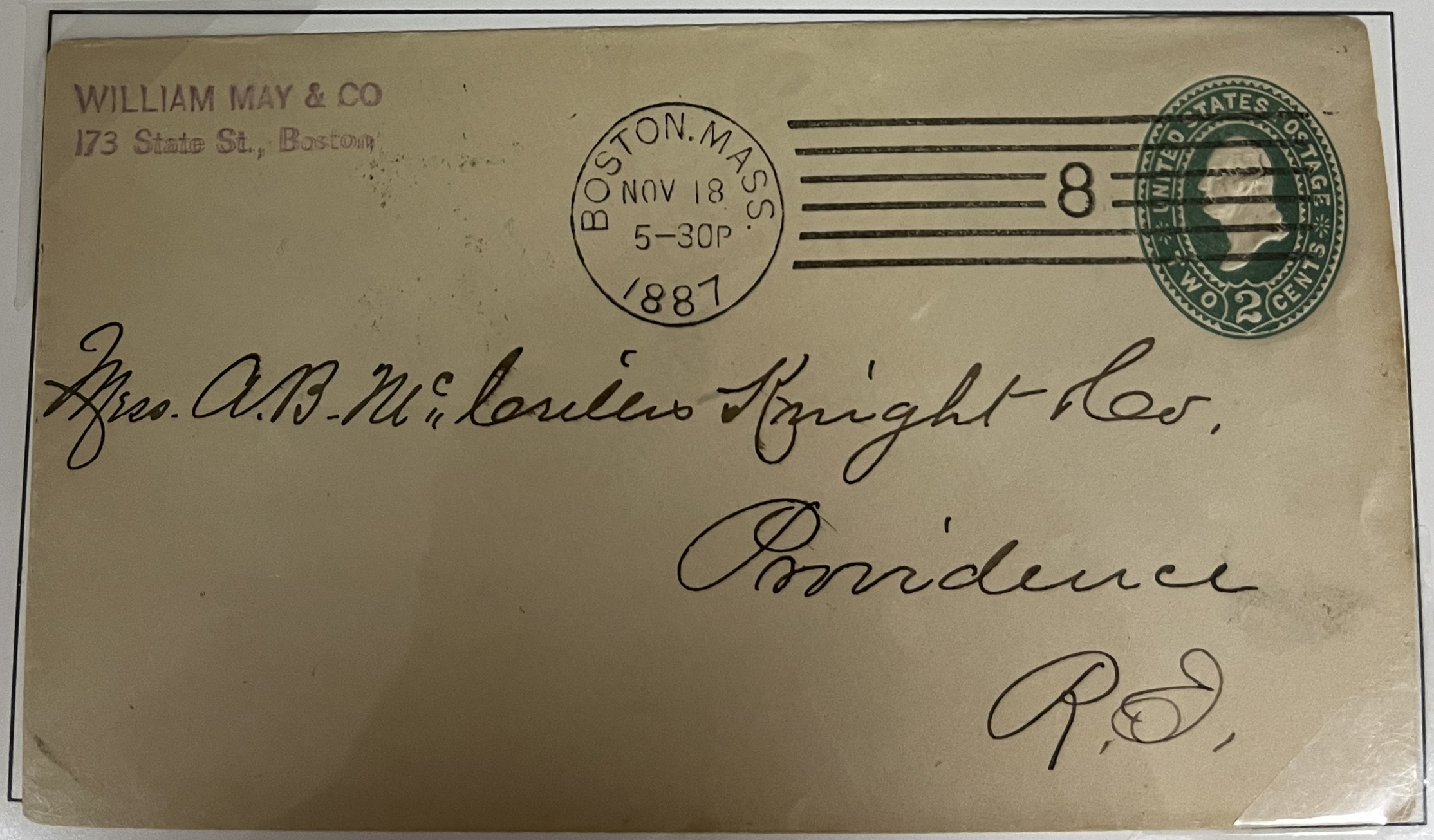


Machine 11 with a new type of dial, regularly seen with flag cancels at the time. Last six-bar machine to bear a number or letter (through 1897), apparently operating concurrently with Machine 11 using a flag cancellation.

From 1887 to 1889 there was very little innovation other than the addition of a few new machines. Their introduction, however, occasionally led to some ephemeral varieties.



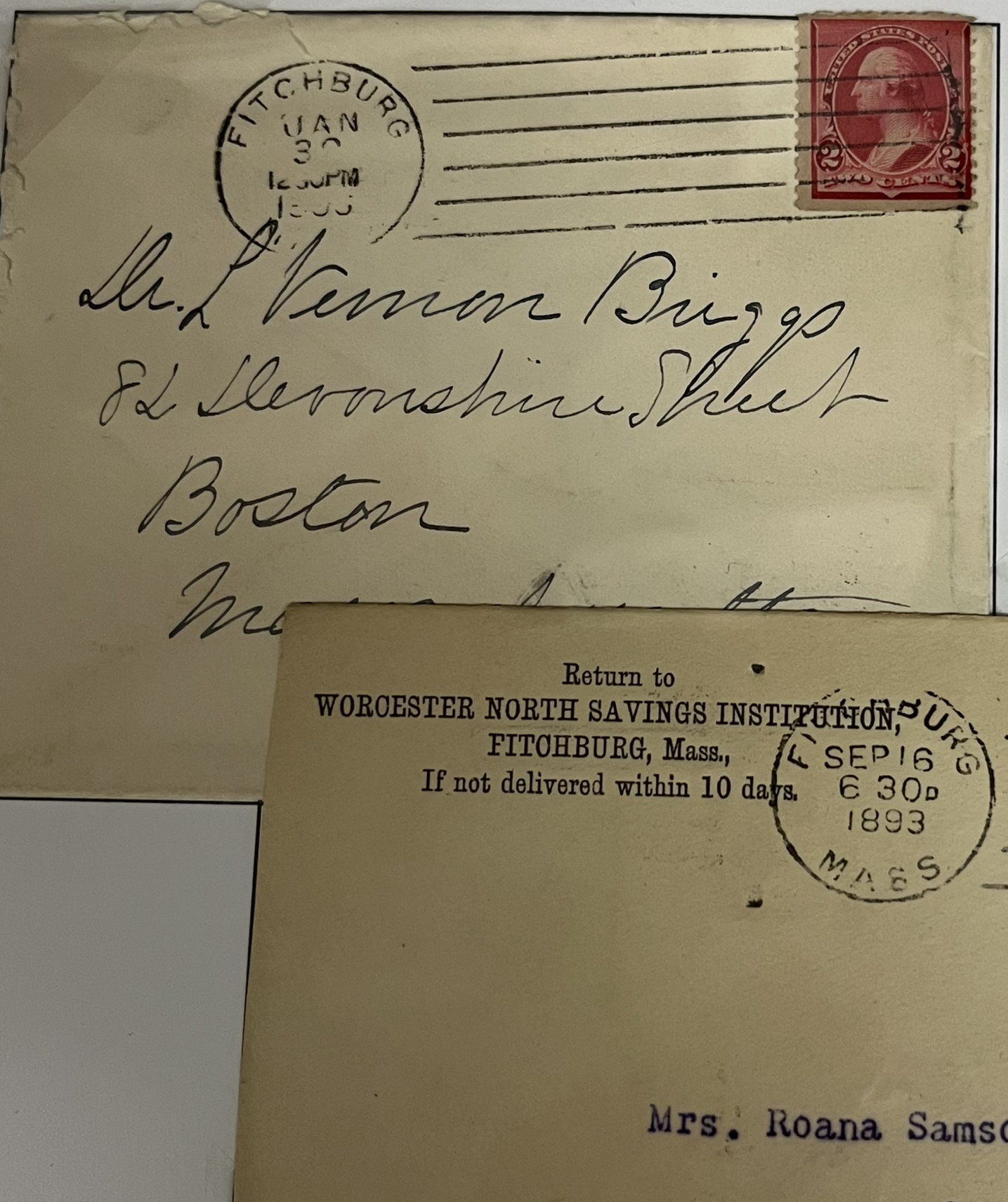
This 'black ball' variety anteceded the installation of an '8' in the die space. How the mark was made is not known. **The earliest of two recorded copies**



Installation of the 8 in the machine known from November 2, 1887

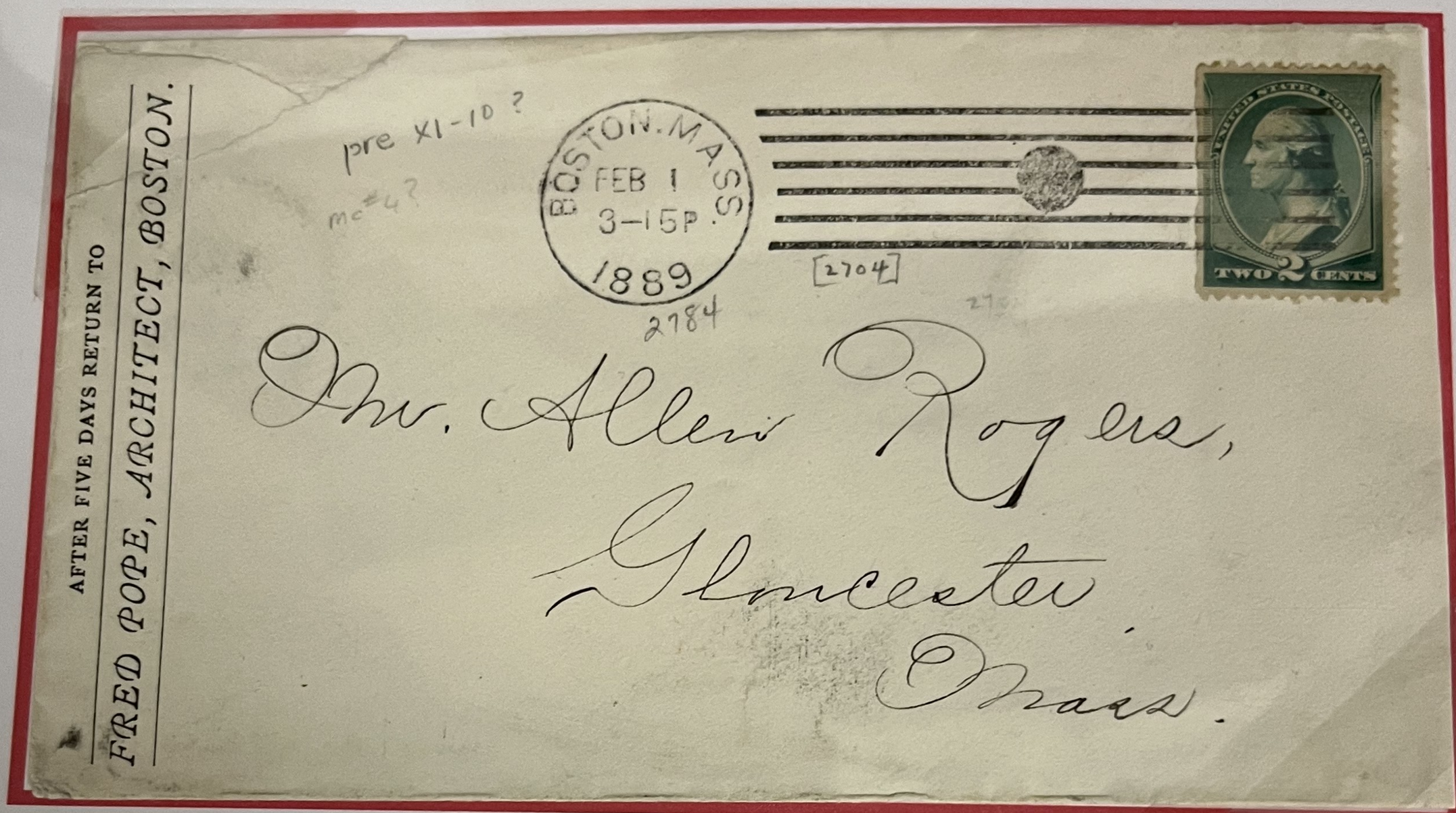
GEORGE E. BARNARD

George Ezra Barnard invented and developed a hand-powered cancelling machine. A resident of Fitchburg, Massachusetts, he first tested the machine there; and the prototype is known to have been in use by November 2, 1892. The American Postal Machines Company had been successful with their fast, electric-powered machines, but their use was confined to large-city electrified post offices. Recognizing the need for a small hand-powered machine, the American Postal Machines Company acquired the Barnard patents in 1894.

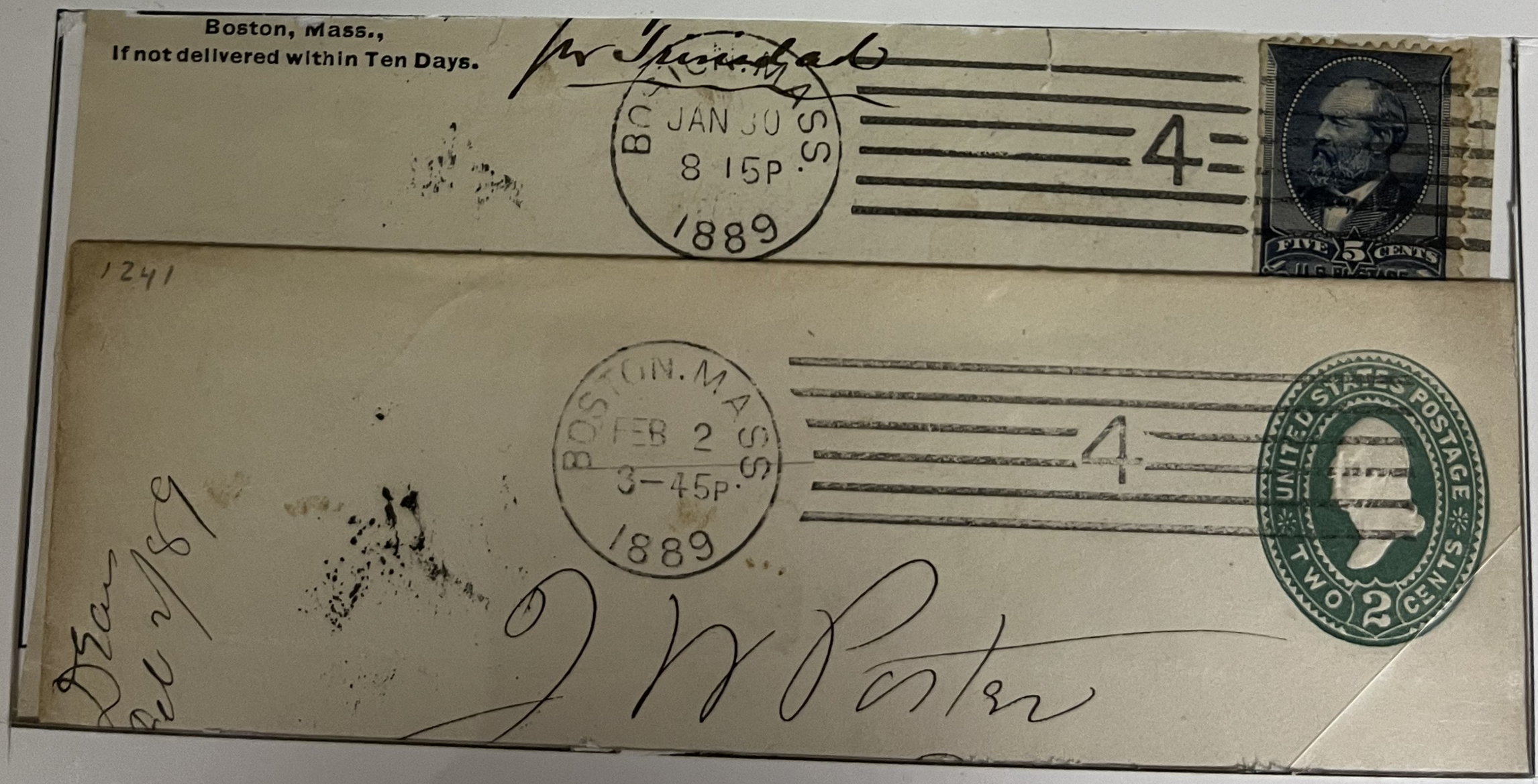


Cancellations from the first machine (at top) have been recorded from November 2, 1892 to January 30, 1893, **last recorded date of use.** These lack the two inked impressions left of the dial which, on the reworked machine (immediately above), pulled the cover forward

One other 'black ball' variety appeared when the killer on Machine 4 was changed in February 1889. The changeover was quick. The new killer has a distinctly deeper curve at the left end.



The new killer with 'black ball' dated February 1, 1889. **The only recorded copy.**

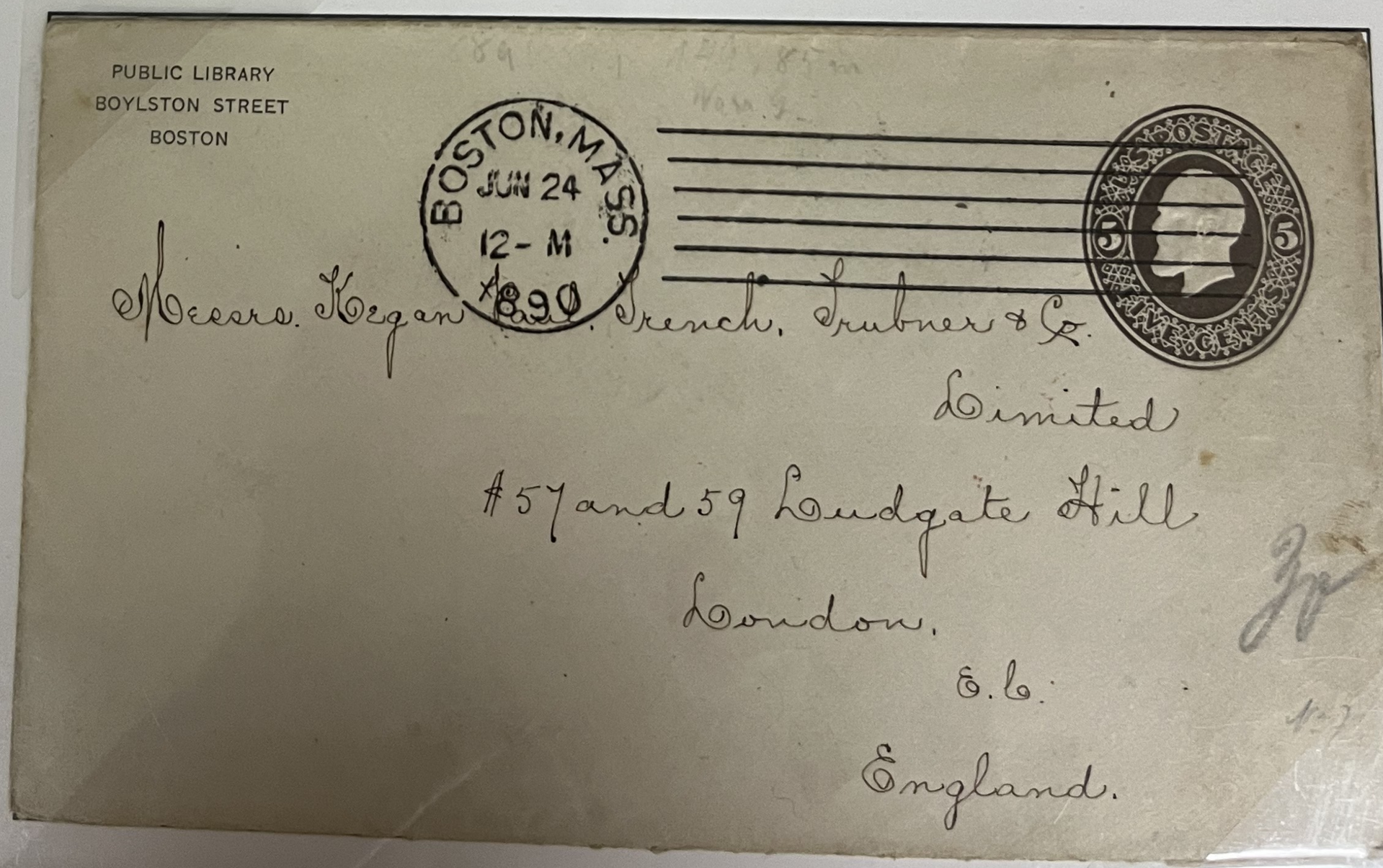


Only a two-day gap exists between the old killer and the new killer with its number inserted

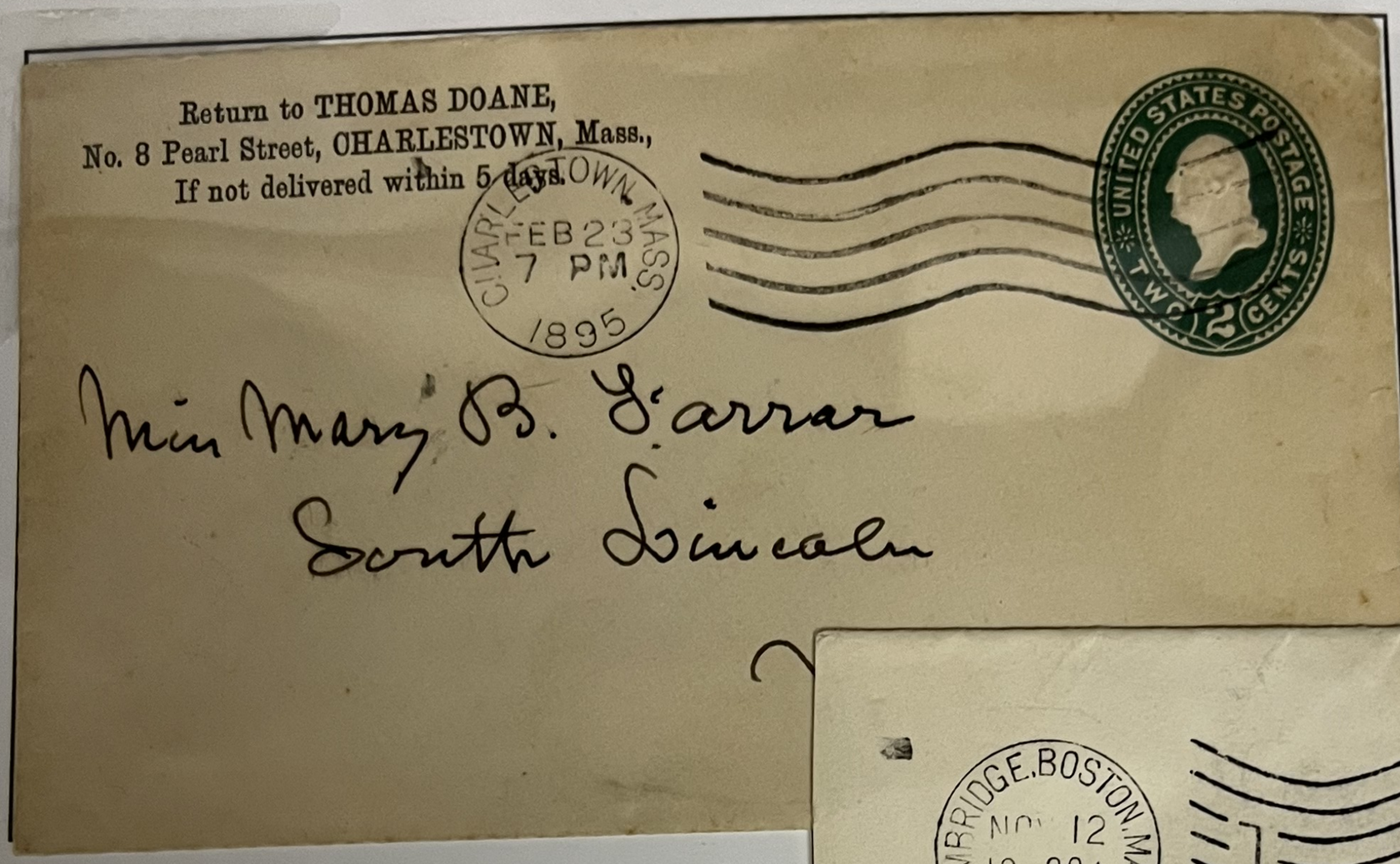
Facing competition for government contracts, a variety of different five- and six-bar cancellers were introduced beginning in 1890 and for various periods. All featured a smaller postmark dial. At the same time the first machines with a letter in the die space were introduced. The distinction in usage between the lettered and numbered machines has not been clearly established.

A five-bar killer and the first machine to have a lettered die space. Dated July 19, 1890 from the ad on the reverse.
Earliest recorded use for any lettered "American" machine and the only recorded copy of this type.
Die transferred to Machine 14 by July 21, and no other lettered machines in use before late September 1890.

Despite 'modernization' of dials and killers in 1890, a six-bar no-die-space flag (a type abandoned four years earlier) was put in service that year. It saw relatively limited use, possibly as a back-up. In this period, machine-cancelled mail to foreign destinations is not common, since the machines tended to handle bulk mailings.



Before the end of 1894 machines developed by the American Postal Machines Company using Barnard patents had been introduced in Fitchburg and two Boston stations.



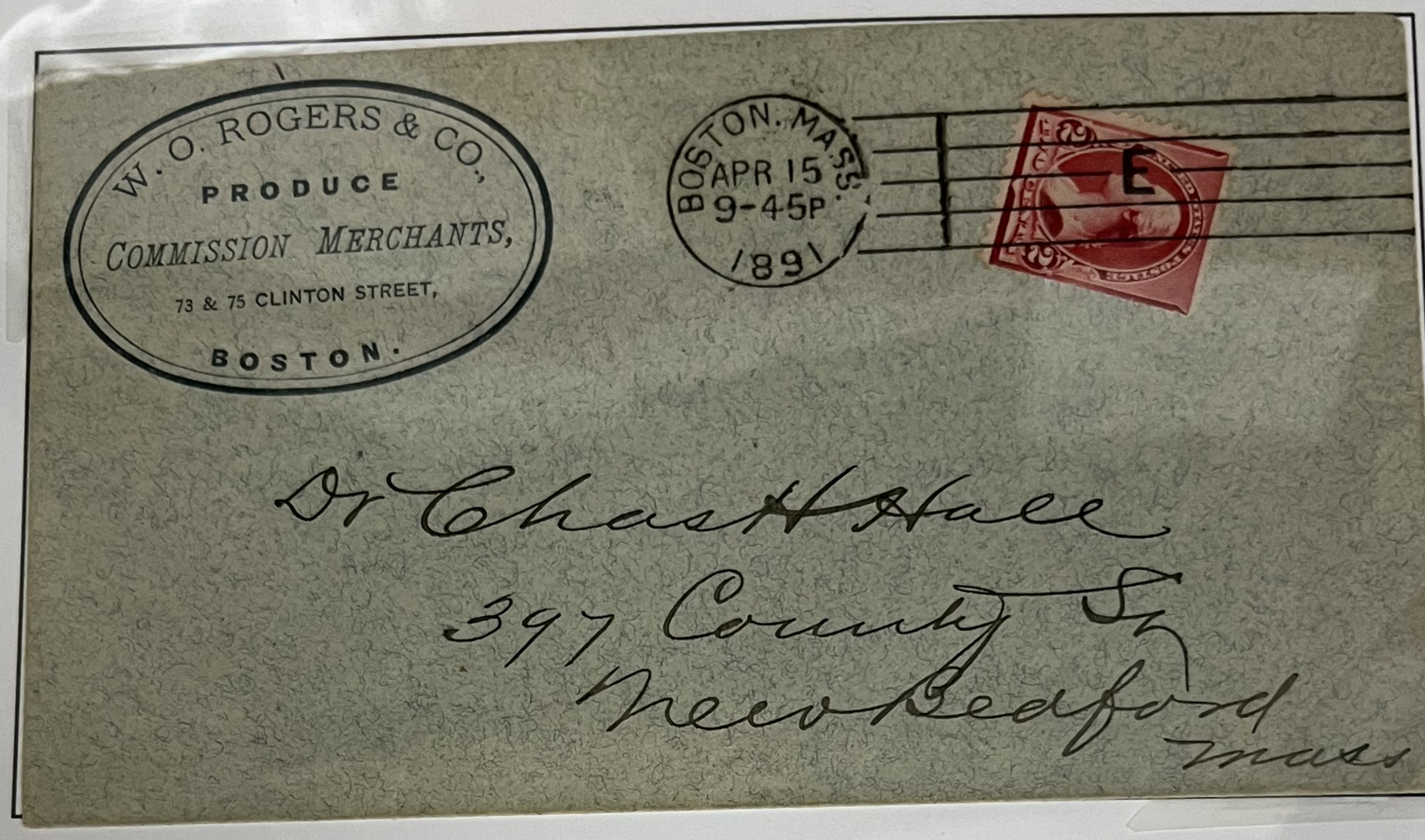
Charlestown Station received a unique wavy-line cancel with five lines by June 19, 1894

Cambridge Station got its American-Barnard machine by October 20, 1894

Fitchburg retained its wavy-line cancel through most of 1897, long after flag cancels had been installed on all other American-Barnard machines

Two varieties of five-bar killers were used in 1890: one with a separation between the bars and the dial and one without. Switching of dies between machines and changes of killers produced a number of varieties on most machines—many of them very short-lived.

Three of the four five-bar varieties from Machine 5 in 1890. First, in use October 18 to November 26. Second, same killer-different dial [*note positions of 'SS' in MASS' to second and third bars in killer*] known from December 6-8 **(one of two reported copies)**. Third, same dial-different killer, kno[illegible] from December 26-29



Five-bar type with vertical line, introduced in 1891. Used on five machines in Boston.
Also used in Philadelphia and Washington, D.C.

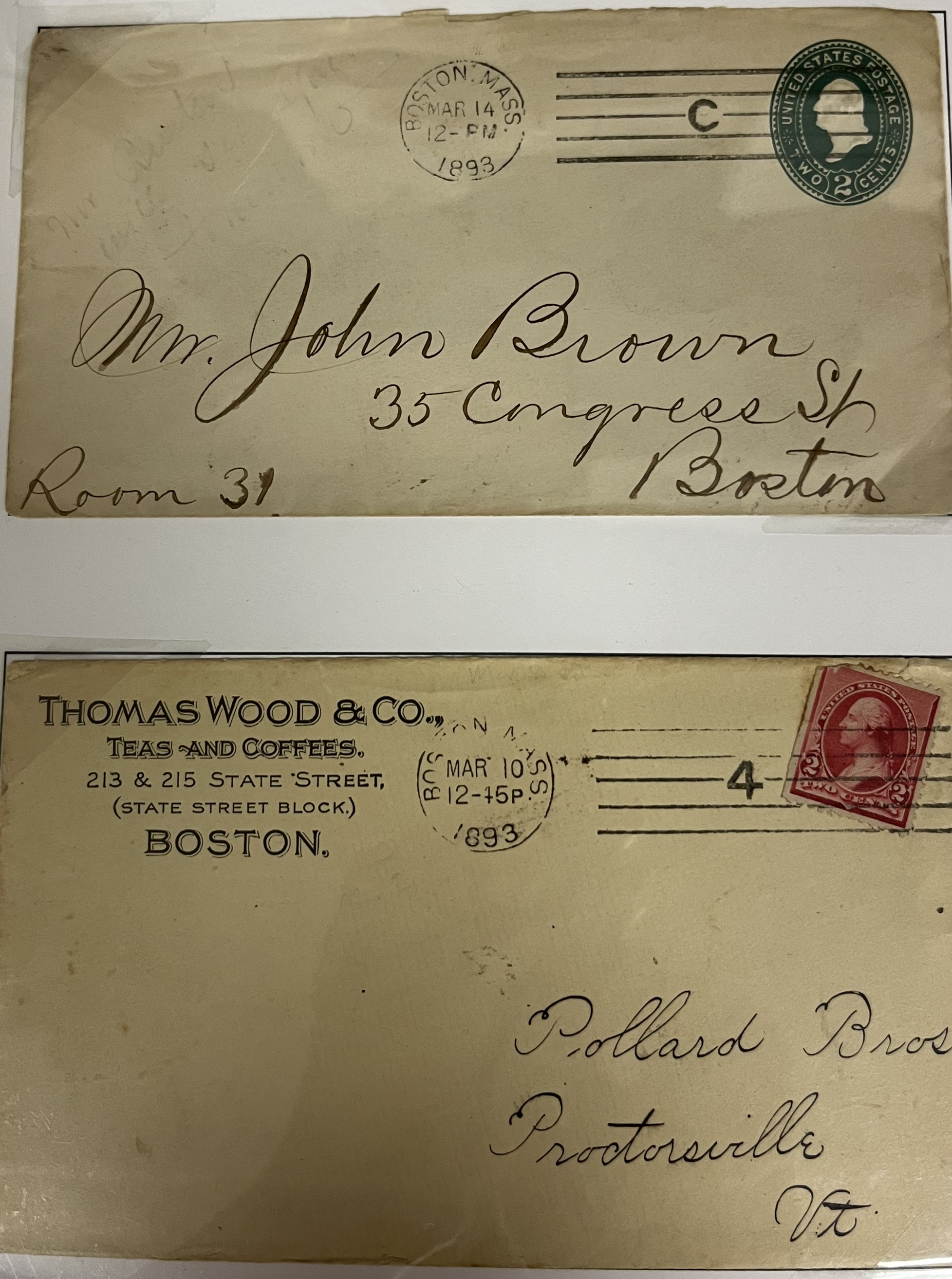
Variation with the bars cut short. Used only on machine H for seven months
beginning in August 1892

Two Boston stations used flags with the thirteen stars in an oval arrangement for several months. The ovate flags were utilized in the Boston Main Office until as late as 1909.

Ovate flag at Charlestown Station (Station G). Middle of 1895 through April 1896

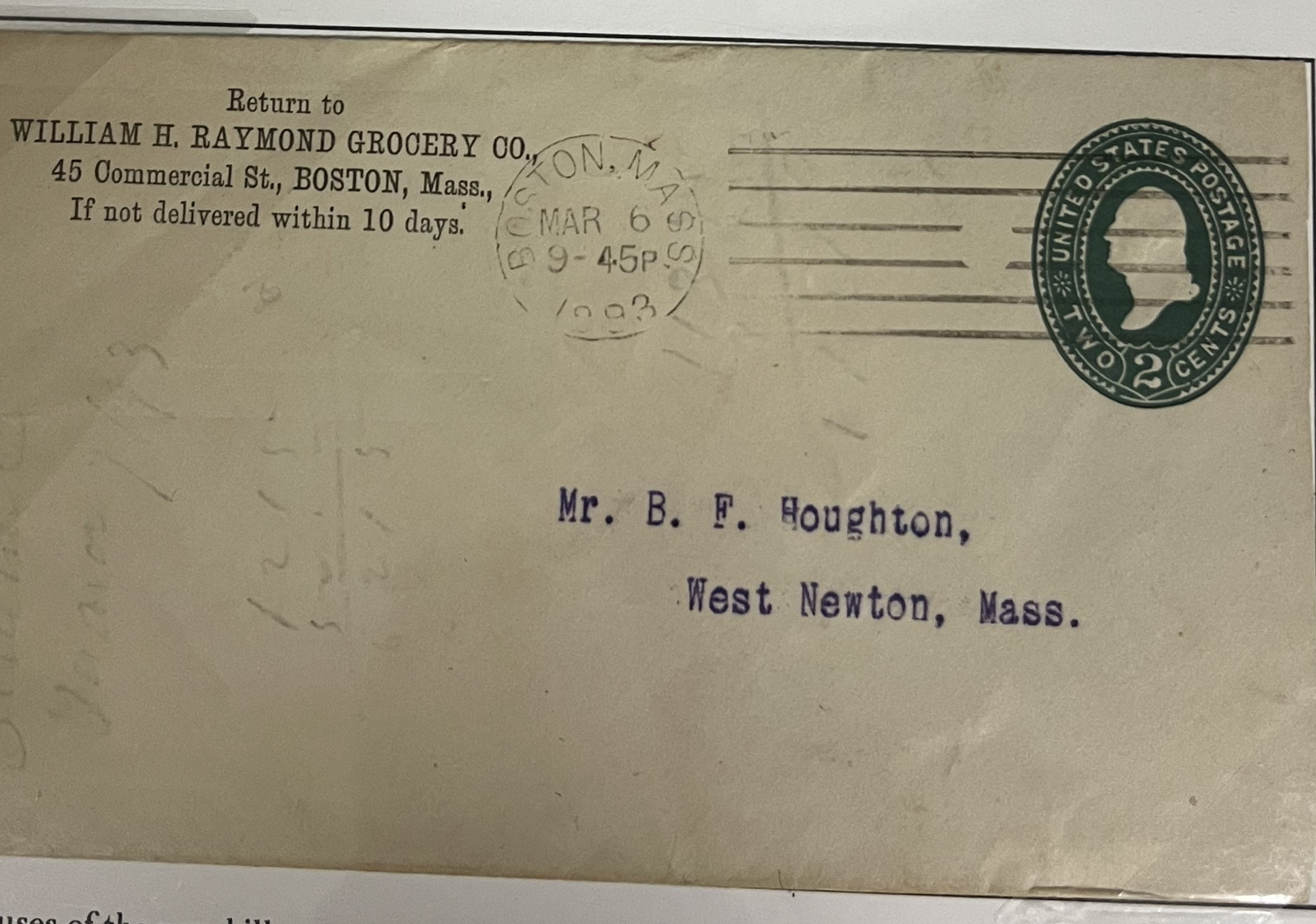
Ovate flag at South Boston Station (Station V). Late 1896 to August 1897.
Shorter overall length of flag typical of many American-Barnard machines

The final type of five-bar killer was installed on two numbered and four lettered machines in Boston, generally for from two to three months in early 1893. Two varieties appear to exist. Both have bars cut straight and well away from the dial, but one shows distinctly heavier top and bottom bars.



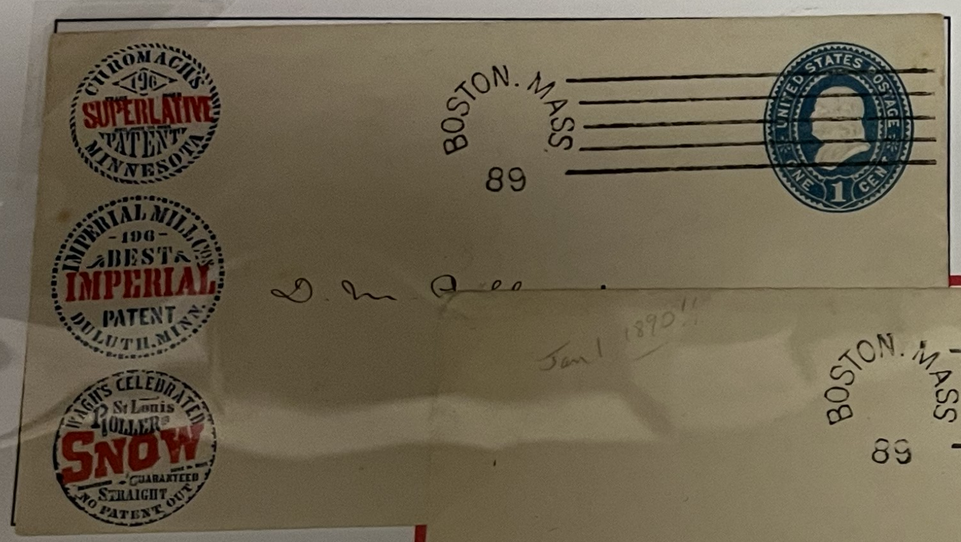
American Postal Machines Company **1893 Widely Used Cancellation**

A six-bar killer was reintroduced in early 1893 and became the most widely used American bar cancel. It was installed on all fourteen numbered and eight lettered machines in Boston. The design was also used in several Boston stations, on numerous machines in Chicago and Philadelphia, and in more than a dozen other cities.

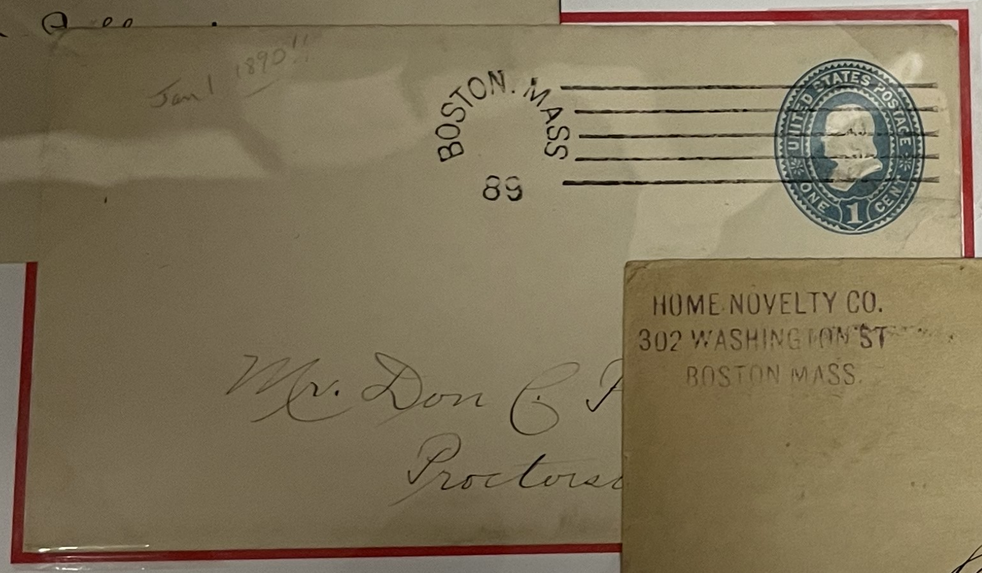


Early uses of the new killer were with blank die spaces. Cover dated March 6, 1893, more than two weeks earlier than any previously recorded

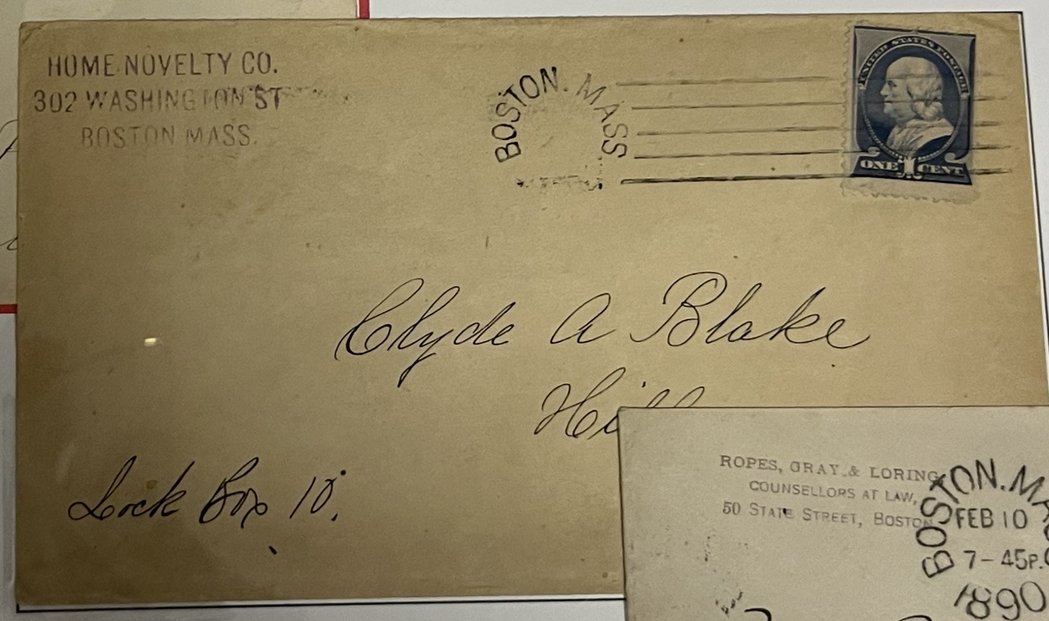
The three other Boston stations which received American-Barnard flags in January 1895 were: East Boston (Station L), Somerville (Station U) and South Boston (Station V). All of these machines were transferred to other locations in 1896: from East Boston and Somerville to other Boston stations, and from South Boston to Station B of Washington, D.C.



Enclosure dated December 12, 1889



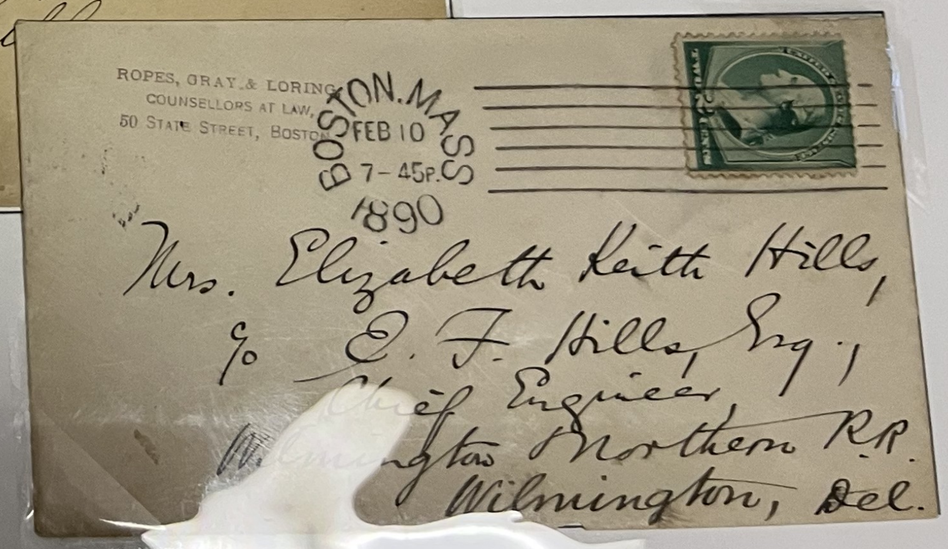
Enclosure dated January 1, 1890. **The only recorded cover with an 1889 cancel likely used in 1890**



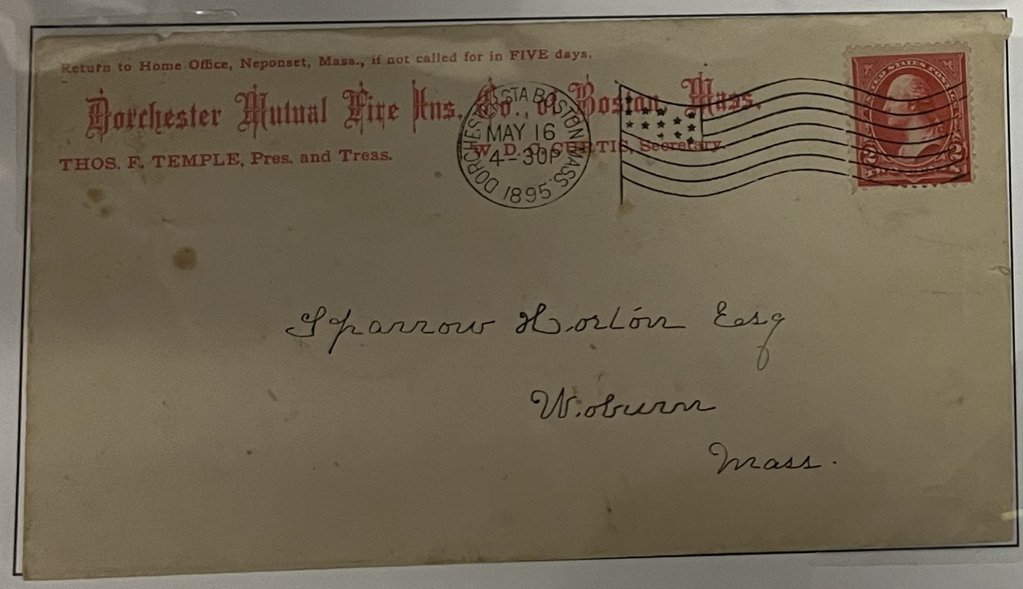
Showing remnants of erased 1889 with a receiving stamp dated January 15, 1890. Apparent use from January 6 to 18. Three of the surviving copies appear to be datable

In the summer of 1889 a completely different dial was introduced, possibly on a newly designed machine, and used only on third-class mail. The cancel was also used in early 1890, first with an erroneous date and then with the date chiseled out, before being replaced for a brief period with a similar, properly dated cancel. Attractive as these cancels were, they did not survive and were used nowhere else.

Below: Replacement for the altered 1889 die with larger type and used on first-class mail. Known from January 24 to February 13



The Dorchester Station (Station K) was among four stations that received an American-Barnard machine in January 1895. Before the end of February 1898, when these machines were replaced, the Dorchester Station featured five different combinations of postmarking dials and flag dies–more than any other Boston station.

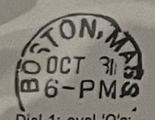


An early flag type without a halyard. Dorchester did not receive a wavy line cancel.

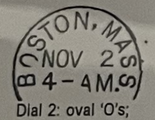
Progression from a flag with halyard, used to the end of 1895; to the same with Station K in the dial, used in early 1896; to a no-halyard flag with Station K dial, used through the end of 1897; to a redundant Dorchester Station in both dial and flag, used only a few weeks in early 1898

Variant Dials of the First Flag

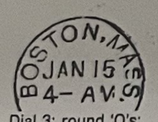
Generally a flag die remained with a single machine throughout its life. Dies for dials, which had to be regularly removed, were often inter-changed in offices with several machines. Five different dials have been associated with the earliest flag die, the first of which was apparently used only from October 31 to midday November 1, 1894. Differences in the shapes of some letters, position of the comma, and rim damage distinguish the variant dials.



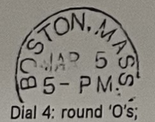
Dial 1: oval 'O's; damage above 'M'; period close to 'S'



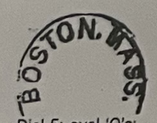
Dial 2: oval 'O's; top loop of 'B' small; period farther from 'S'



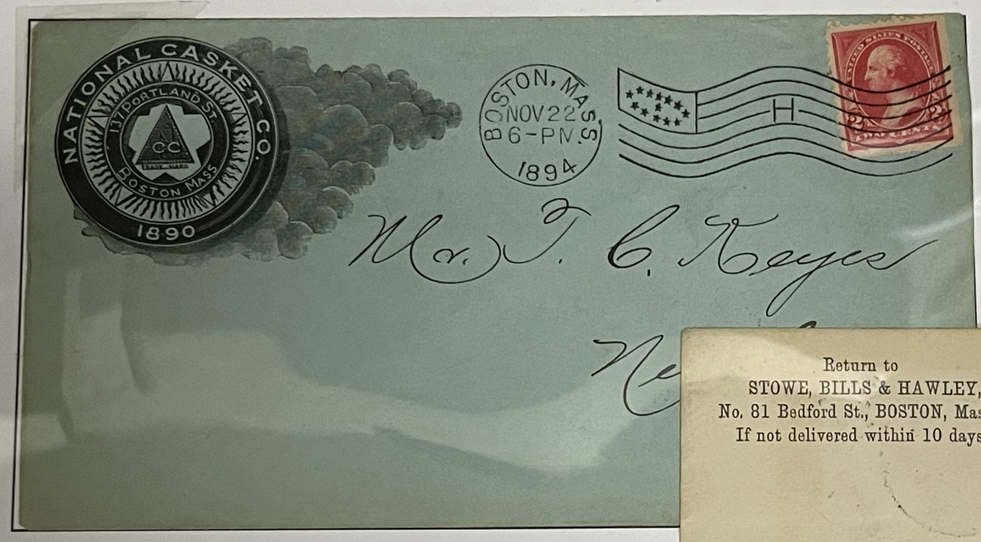
Dial 3: round 'O's; comma midway between 'N' and 'M'



Dial 4: round 'O's; second 'O' close to 'N'; comma nearer to 'N'

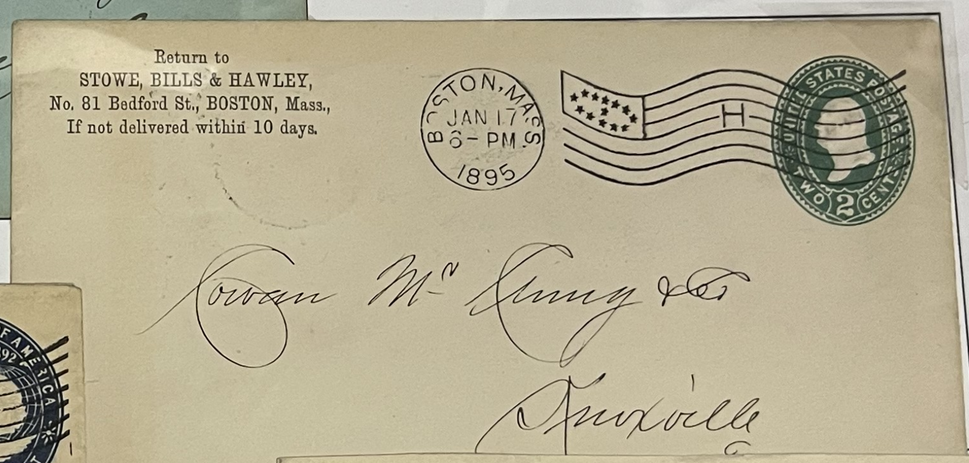


Dial 5; oval 'O's; second 'O' far from 'N'; double rim line above 'MA'

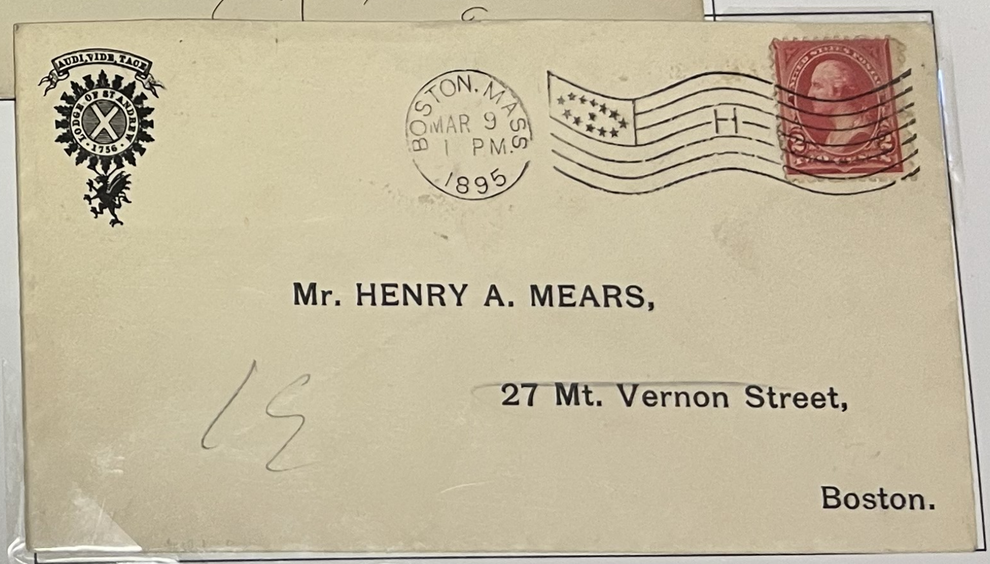


Dial 2 (left), used November 1 to December 31, 1894

Dial 3 (below), used January to late February 1895



Dial 5, used April through July 1895. Seen exclusively on third class mail, making dating difficult. Accidental impression of bar die dates to April 1895. Machine B had a flag die before the end of April



Dial 4, used late February through March 1895

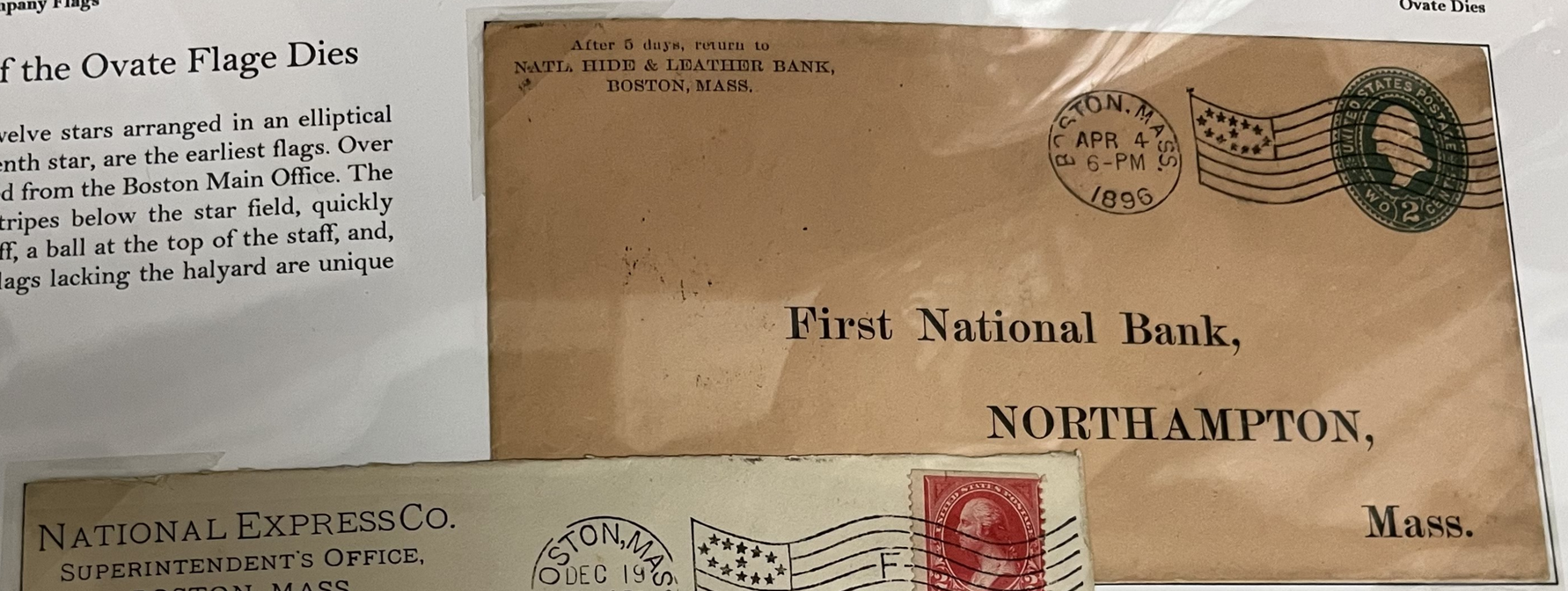
American Postal Machines Company Flags

The first dies with complete flags, including halyards, appeared in early October 1895 on hand-operated American-Bernard machines. But the first such dies made for the high-speed electric-powered Boston machines were not installed until October 23, 1895. At that time six machines were fitted with these ovate dies (3, 4, 5, 7, 8 and 9). For an unknown reason the dies on 5,7, 8 and 9 were withdrawn and replaced with new dies before the end of October. The dies from 5 and 7 were placed back in service a month or two later with 10 and 12 in their diespaces. The dies from 8 and 9 never reappeared.

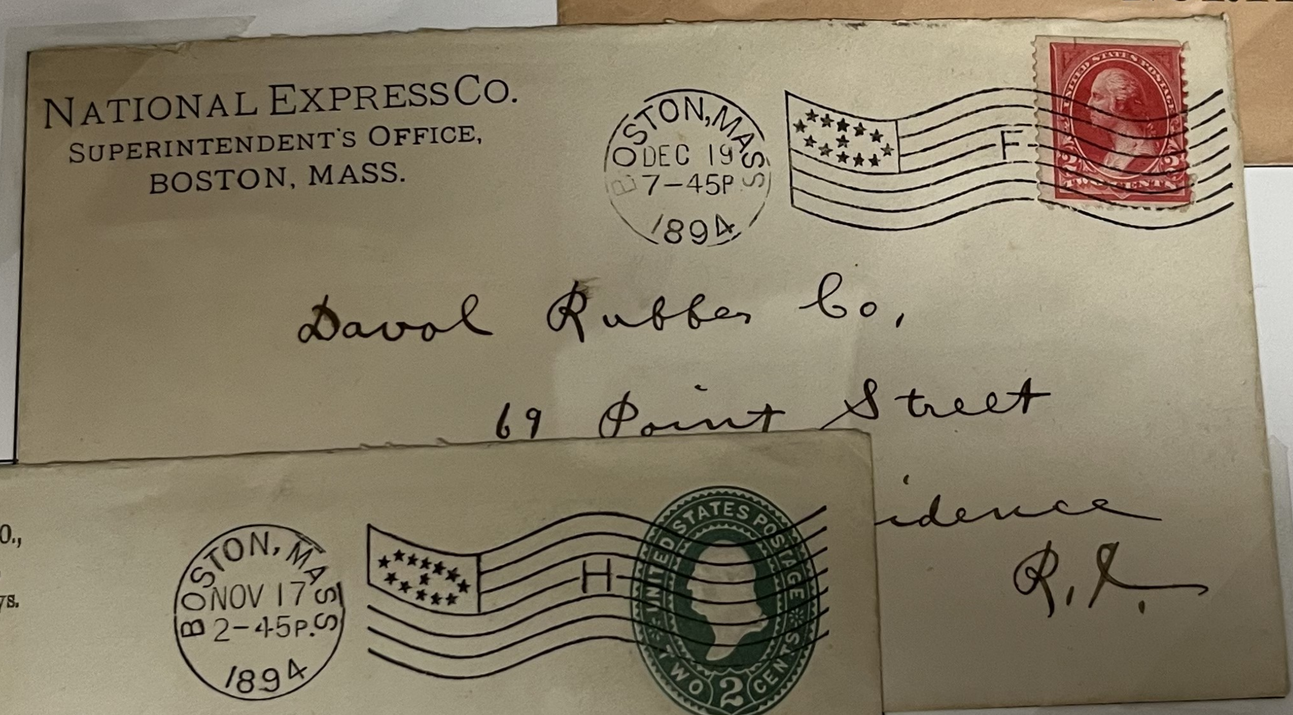
Die 7 (above, Oct 29, 1895); replaced (left, Oct 31, 1895); reappeared (below Feb 26, 1896)

Development of the Ovate Flage Dies

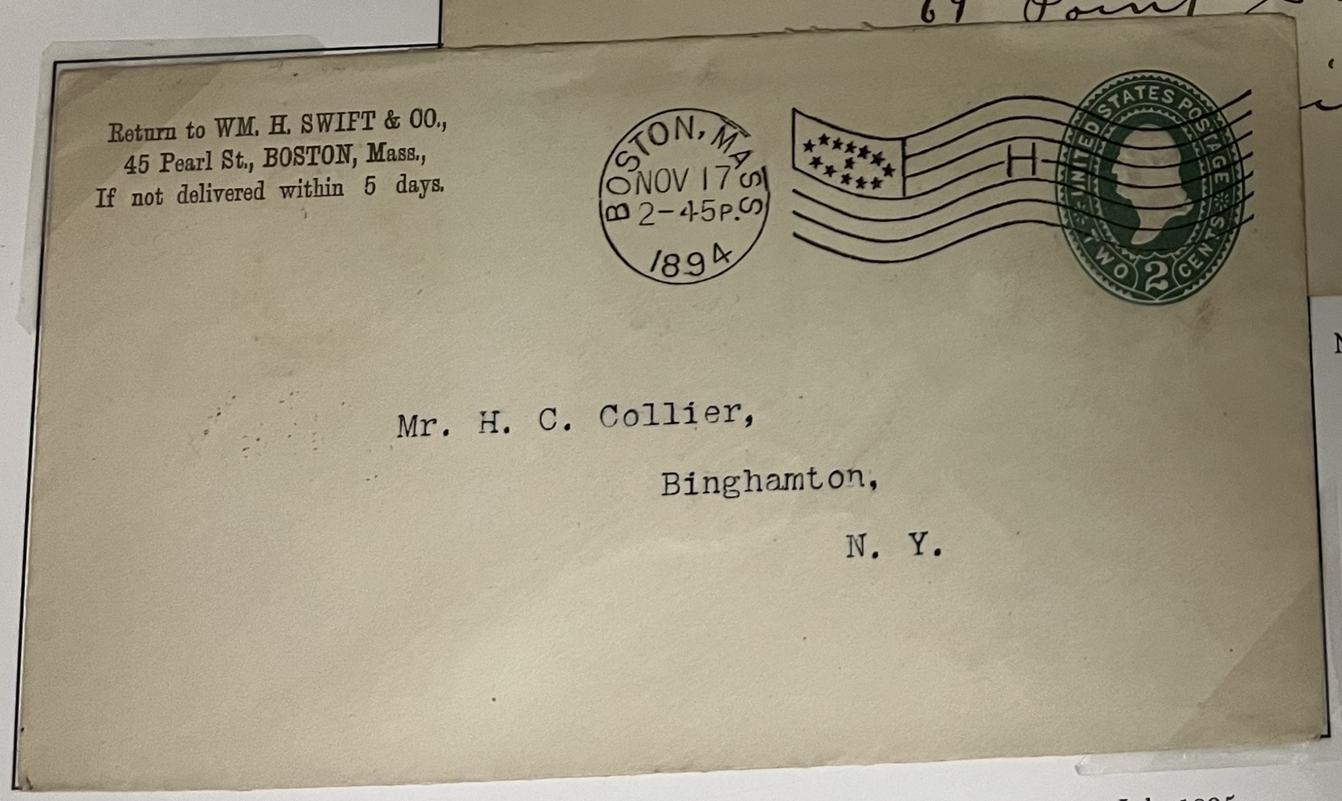
The 'ovate' flags, with twelve stars arranged in an elliptical pattern around the thirteenth star, are the earliest flags. Over sixty varieties are recorded from the Boston Main Office. The initial form, with open stripes below the star field, quickly acquired a solid end, a staff, a ball at the top of the staff, and, finally, a halyard. Ovate flags lacking the halyard are unique to Boston.



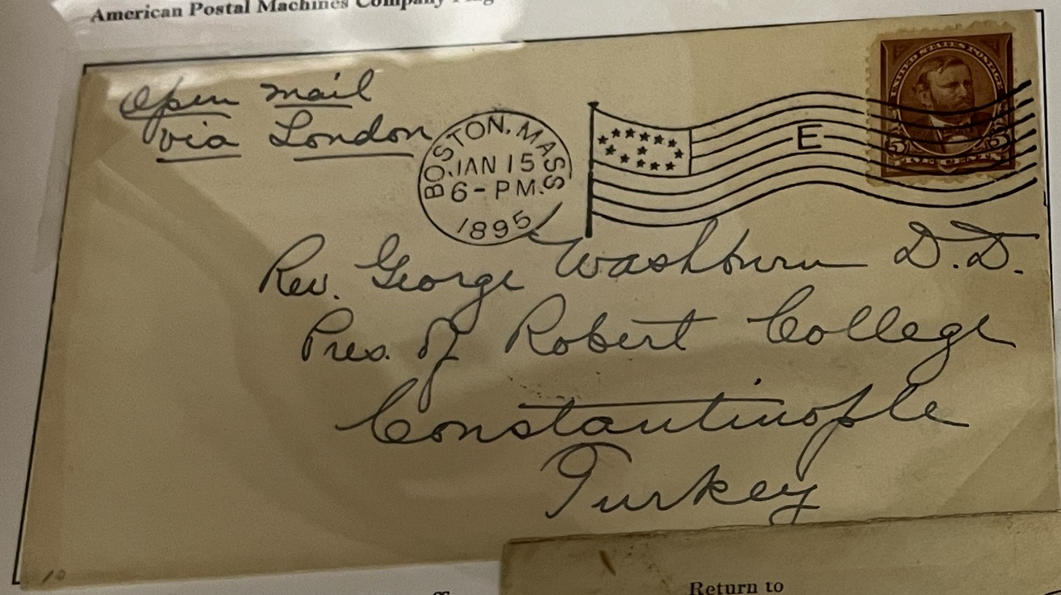
Same die with a ball atop the staff; diespace blank. *In use:* April 1 to 4, 1896



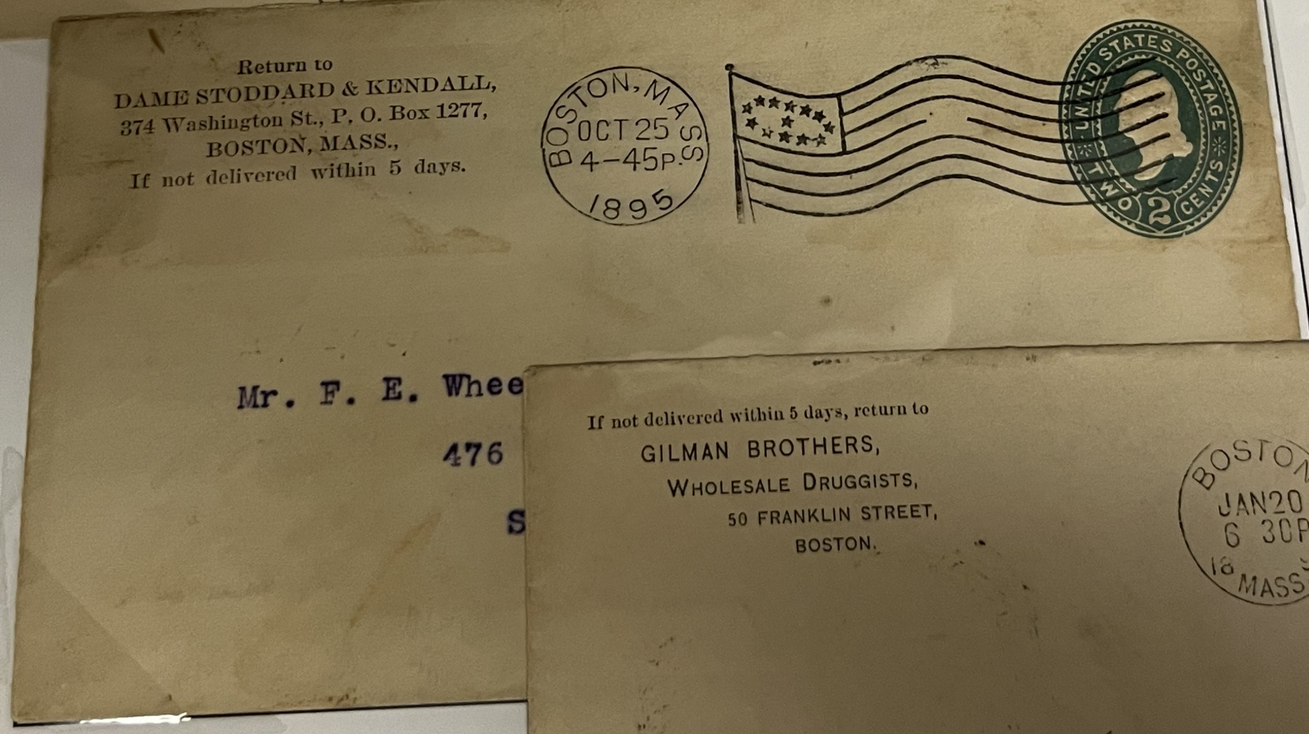
New die on machine F with solid left end. *In use:* 1894–1895



First die with open stripes at left used only on machine H. *In use:* October 1894 to July 1895

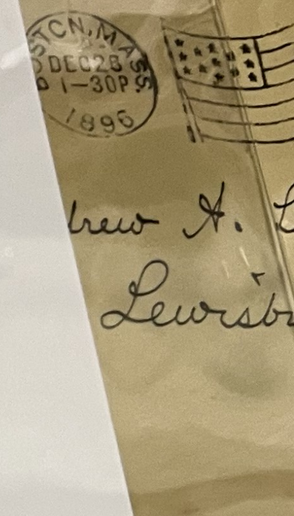


New die on machine E with full staff.
In use: November 24, 1894 to 1895



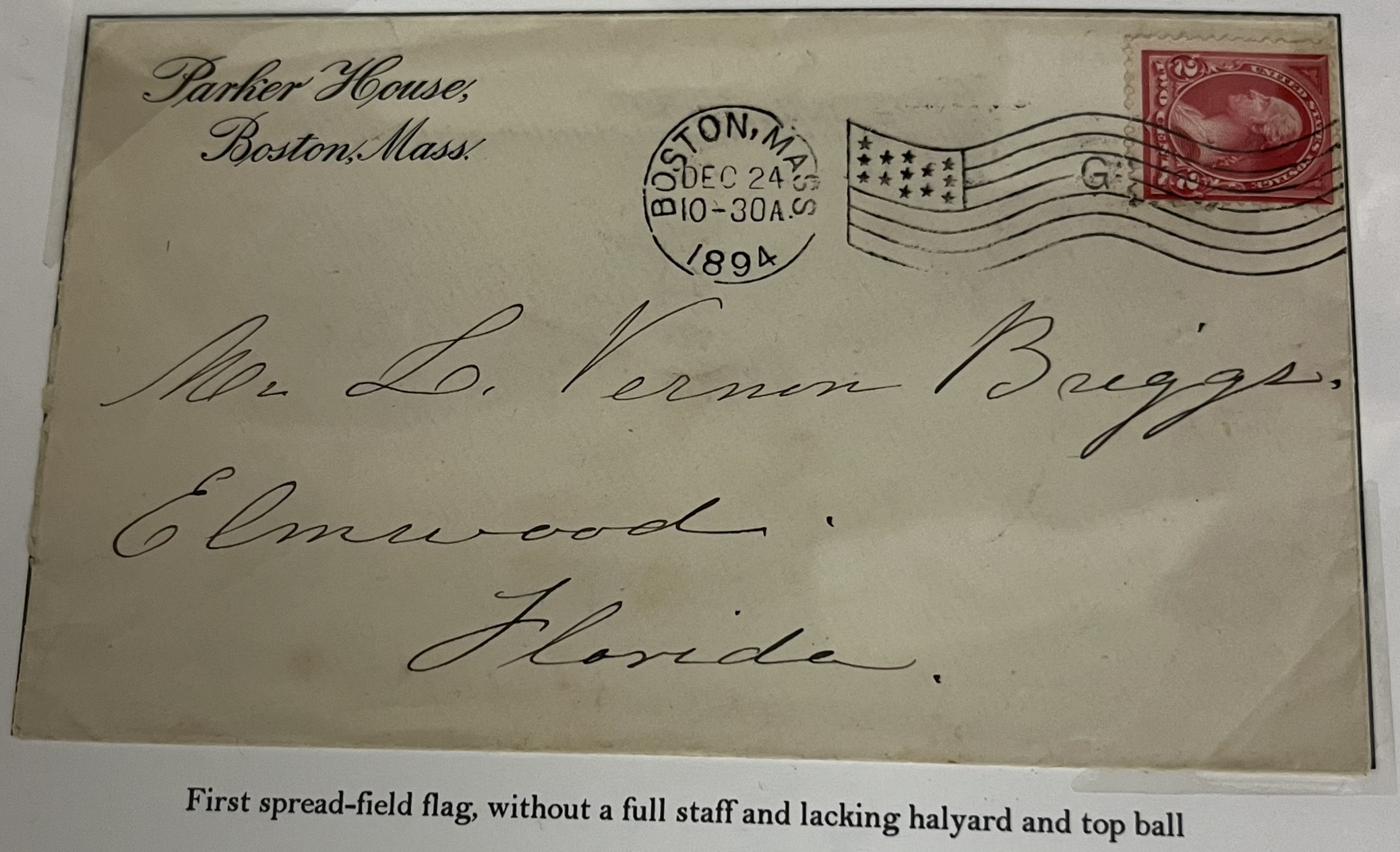
Earliest Boston die with halyard.
Blank diespace of machine 3. *In use:*
October 23-26, 1895

Postmarked Jan 15, 1895 to Constantinople, Turkey; receiving mark on reverse of British Post-Office, Constantinople, Ja 28, 1895.



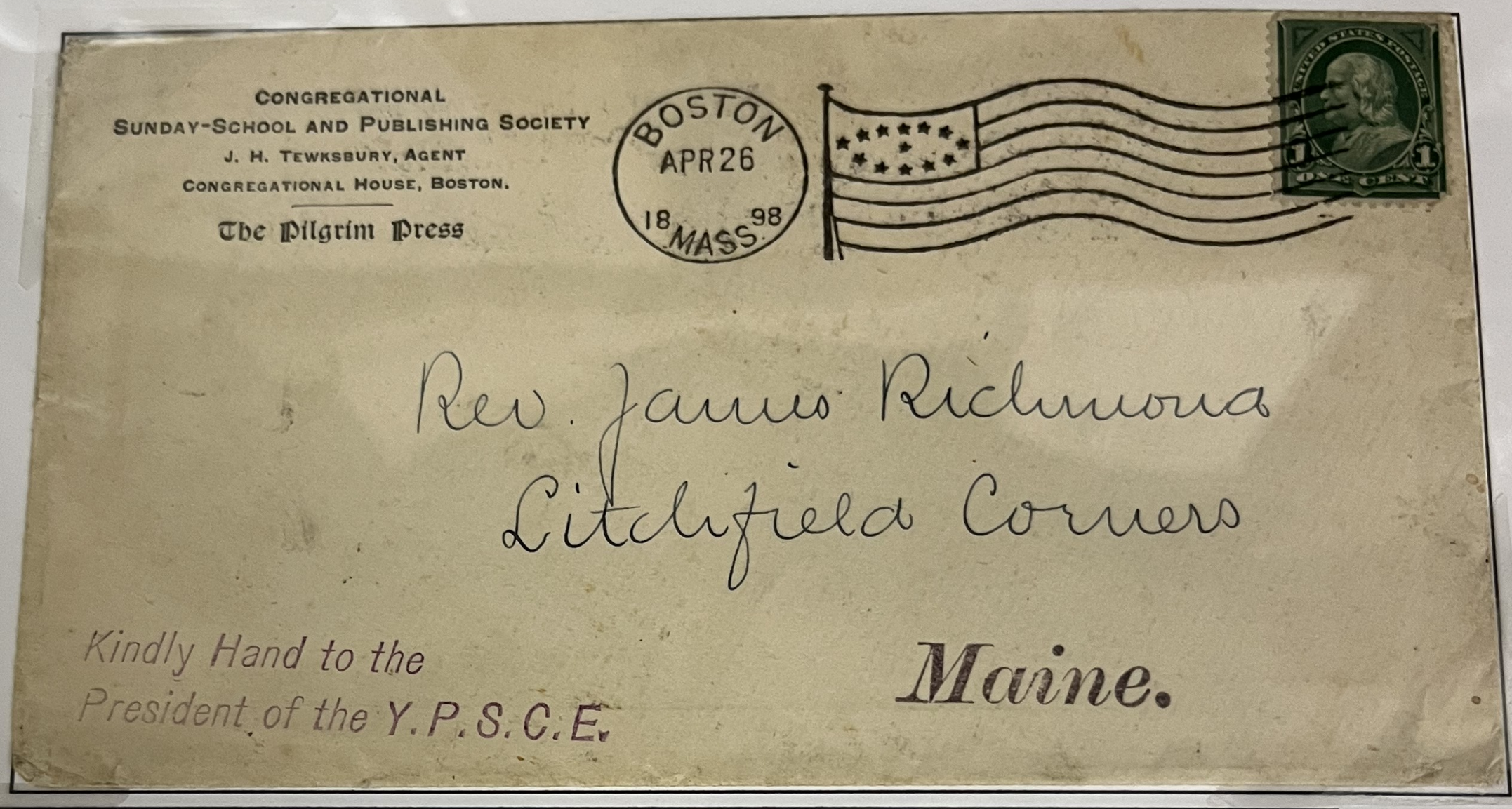
The Spread-Field Flag: The Dominant Style

Less than a month after the introduction of the ovate flag a new type appeared, with the thirteen stars arranged in alternating columns of three and two. These spread-field-type flags became the most common type. Used first in Boston and a short time later in Washington, D.C. and Chicago, these were the only cities to have flag cancels in 1894. The first machine to display the new type of flag was machine G in late November 1894.



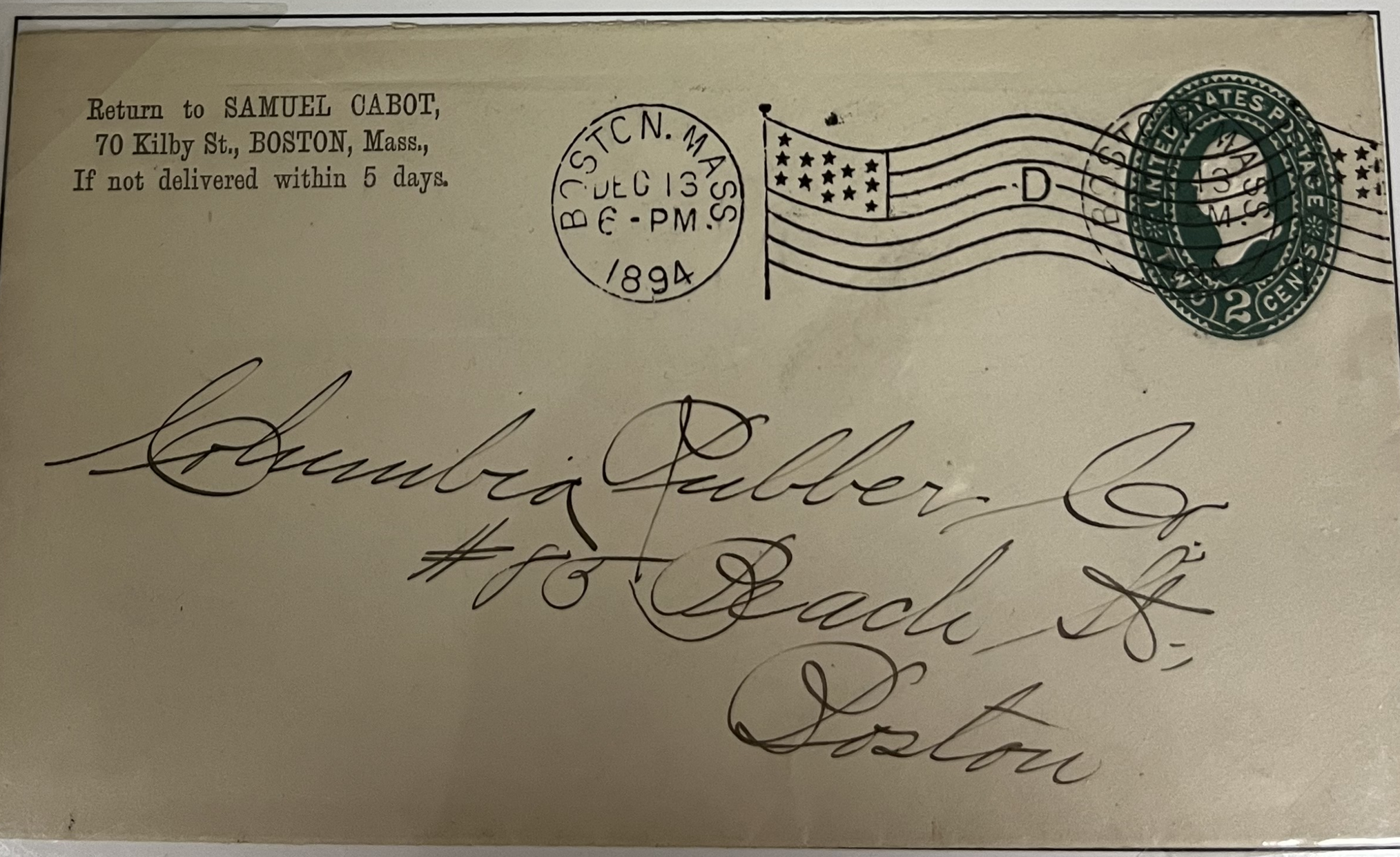
First spread-field flag, without a full staff and lacking halyard and top ball

Cancellation dies used in major cities such as Boston, Chicago and New York, generally used letters or numbers to identify individual machines. Only one ovate no-diespace flag is recorded in Boston. A candidate for a second such die is not what it appears.



Top cover: the recorded Boston no-diespace. *In use:* February to July 1898. Bottom cover: desipte a long-time collector's pencilled assertion new the bottom of the cover, a fabrication. The flag is from machine 9, which here did not print well and was altered. Early flag collectors made such "improvements", usually for aesthetics rather than deception.

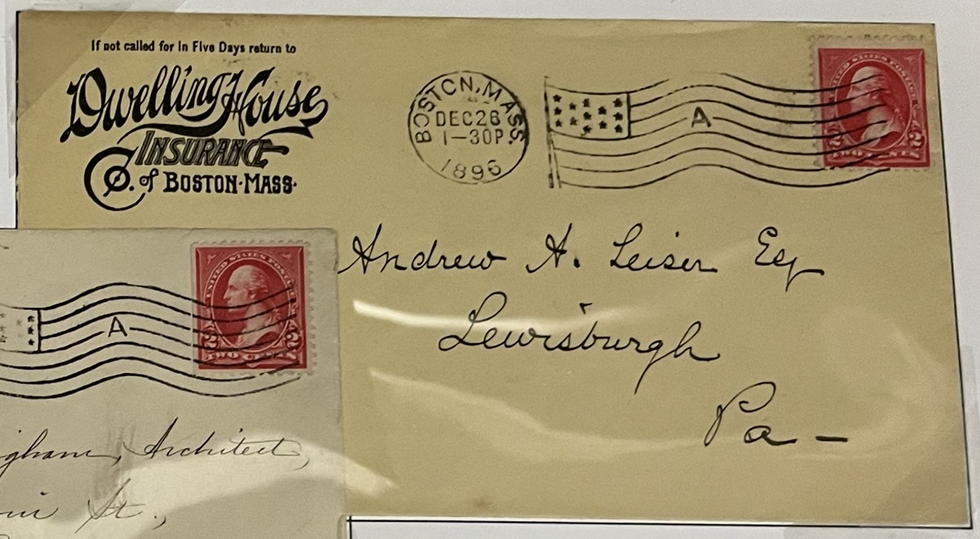
The other two spread-field flags which were used in 1894 were on machines C and D. Appearing a few days later than the flag on machine G (November 30 for C, and December 4 for D), both had a full staff with a ball at the top.



The Flags of 1896

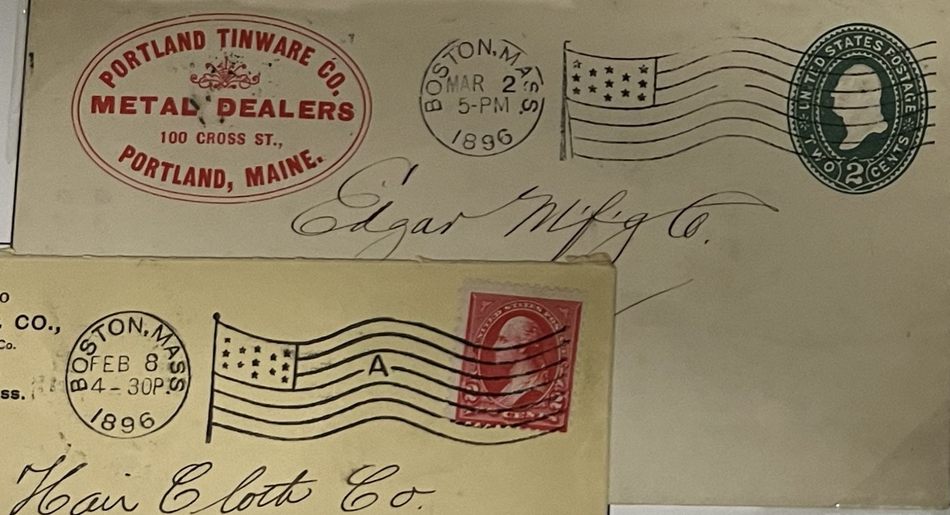
Beginning in 1896 the machines in the Boston Main Office began to receive the new spread-field flag with a halyard. The lettered machines were converted from flags without halyards. The numbered machines previously had American six-bar cancellers. Six machines received the new flags before the end of 1896. Machine A was the first to be changed over, but apparently the ability to return to the old style was retained. Machine F and the four numbered machines received new dies in the last several weeks of the year.

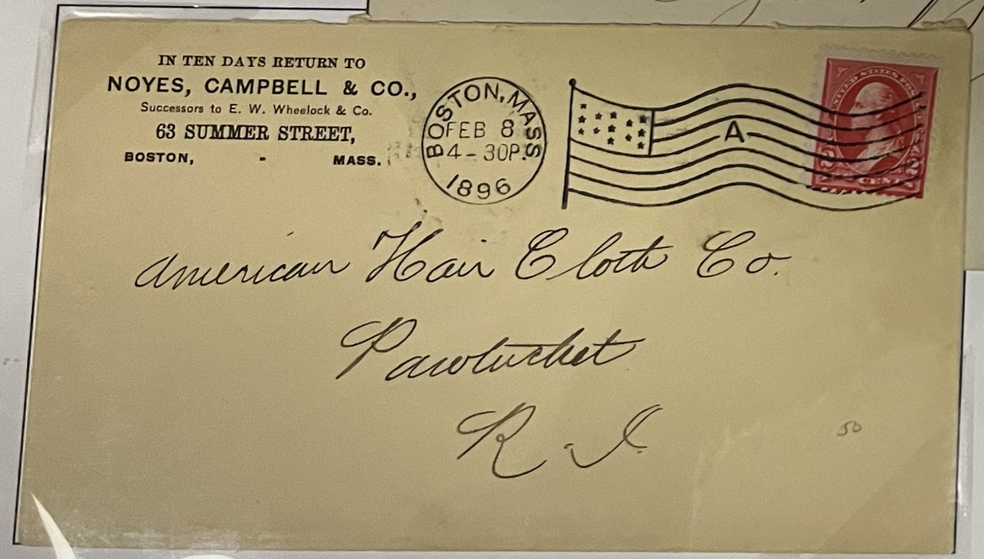
The same flag die (right) with halyard and with an A inserted in the diespace is not known before December 8 and was in use to the end of 1896



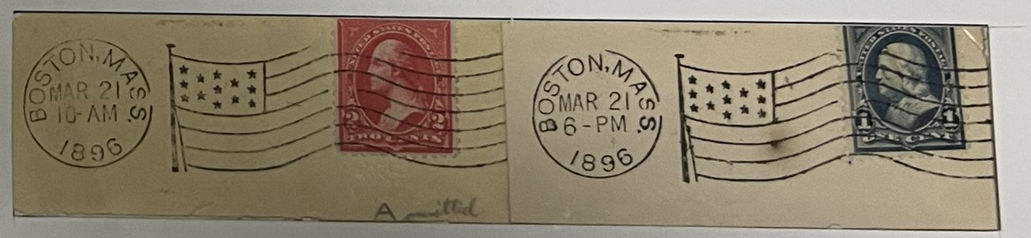
The old flag (right) reappeared in late March and possibly continued in use to the end of 1896. This copy March 21, 3:30 pm

The flag (right) with a halyard but without a letter in the diespace appeared on machine A about February 27 and apparently remained in use for less than a month





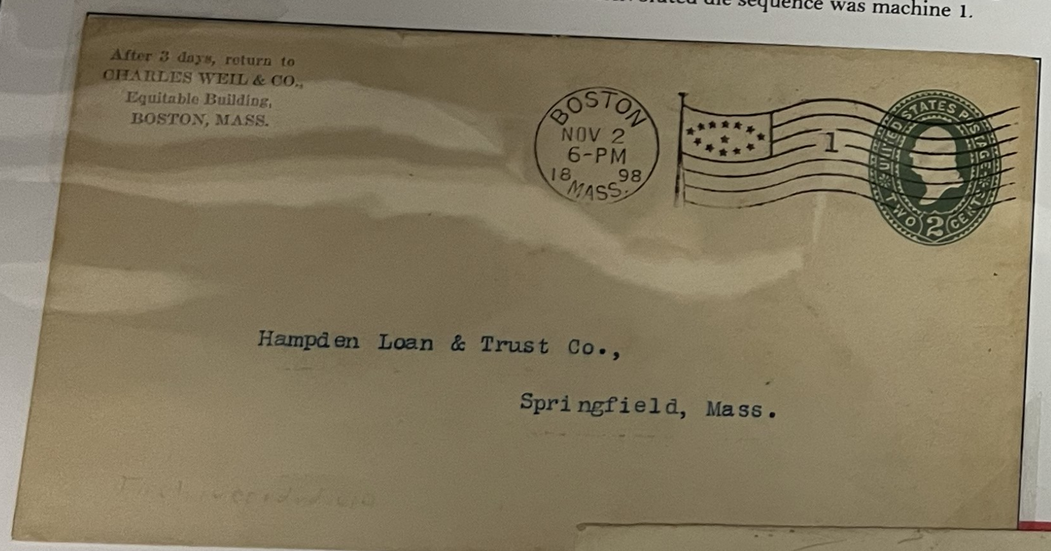
[illegible] the halyard-less flag before the introduction of the new flag



The two copies of the new flag die (above) with a blank diespace are both dated March 21, 1896, the same day as the example of the old-style flag shown just above them. The times of day—10 am and 6 pm—bracket the time on the old-style flag cover. This is unlikely unless the two dies were on different machines operating simultaneously. The old-style flag was apparently the only machine at station A from April to early December 1896. In December there are also (less dramatic) overlaps between the old and new dies, the latter now with an A filling the diespace. **No such overlap has previously been reported in Boston.**

Letters and Numbers, Ovate and Spread-Field

Flags with letters in the diespaces lasted only to the end of the 19th century in Boston. Flags with numbers in the diespaces existed both in ovate and spread-field forms. The last ovate flags were gone by 1909, but until that time they had co-existed with the spread-field flags in the numbered machines. Of the 13 machine numbers used in Boston, nine began with the earlier ovate flag dies subsequently changing to the spread-field dies. Four numbered machines began with spread-field flags but included ovates in their chronology. Flag dies were largely hand-made, and minor differences distinguish the dies of the same type. The machine with the most convoluted die sequence was machine 1.



The sole ovate flag die on machine 1, appearing at irregular intervals for relatively short periods

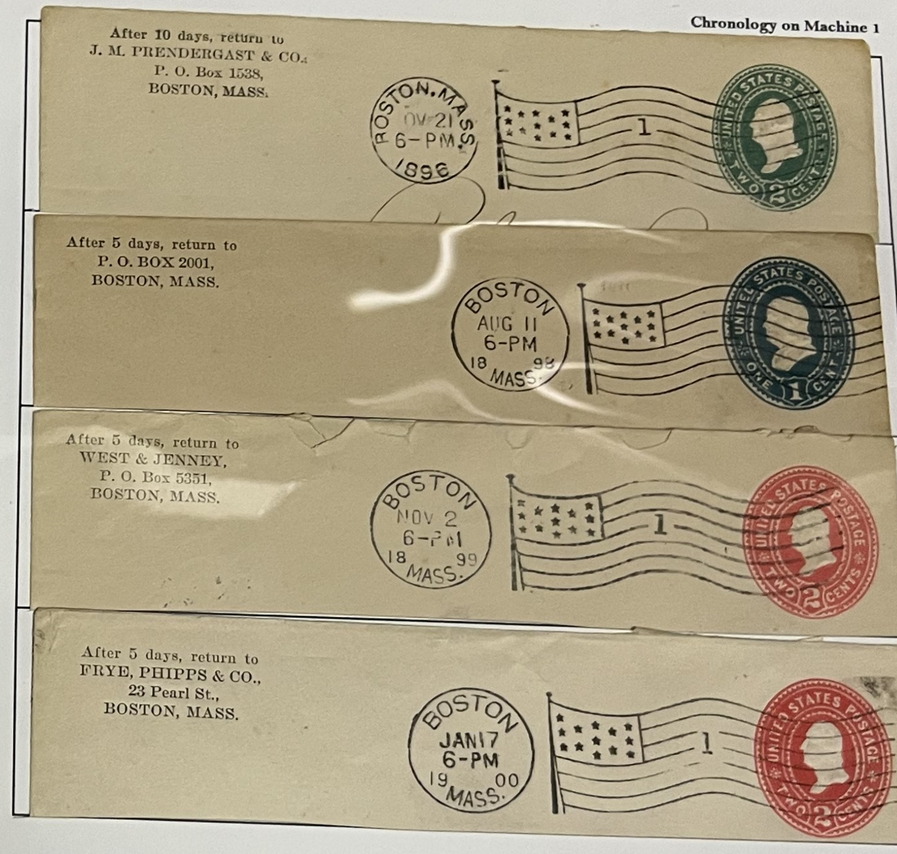
Two of the flags in the machine 1 sequence (spread-field #3 and #4) are each known in single copies. **This is the only recorded copy of #4** *Halyard meets staff below star field*

Spread-field flag #1
Halyard: meets staff at star #3. Flag top: meets staff well below ball Stars: star #4 almost even with star #6.

Spread-fieldflag #2
Halyard: meets staff between stars #2 and #3. Flag top: less curved, meets staff far below ball. Stars: #4 and # 5 closer together than in other dies.

Spread-field flag #5
Halyard: meets staff at bottom of star field. Flag top sharp curve, meets staff just below ball. Stars: Greater space between columns 4 and 5 than other dies.

Spread-field flag #6
Halyard: meets staff at star #3 Flag top: meets staff just below ball. Stars: distinct slope to right of column 1.

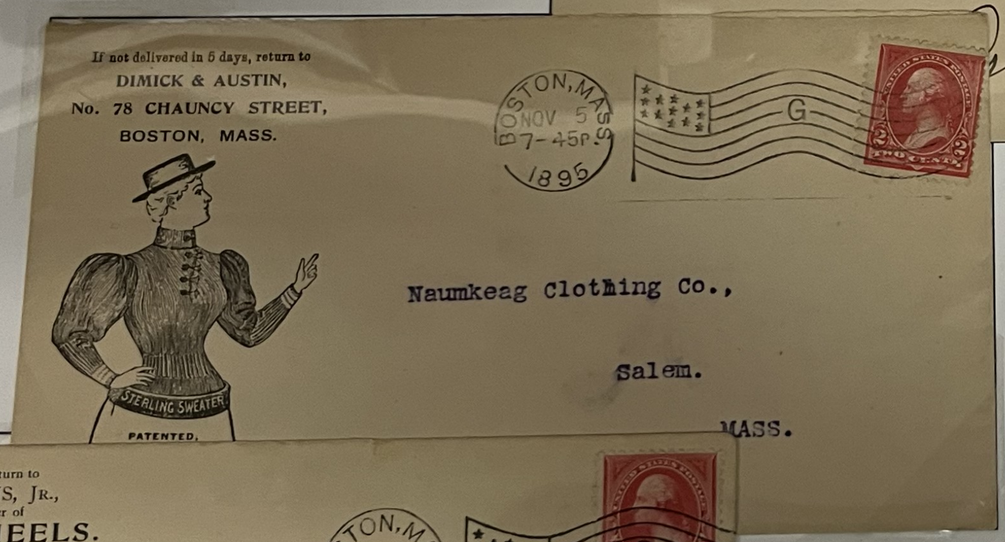


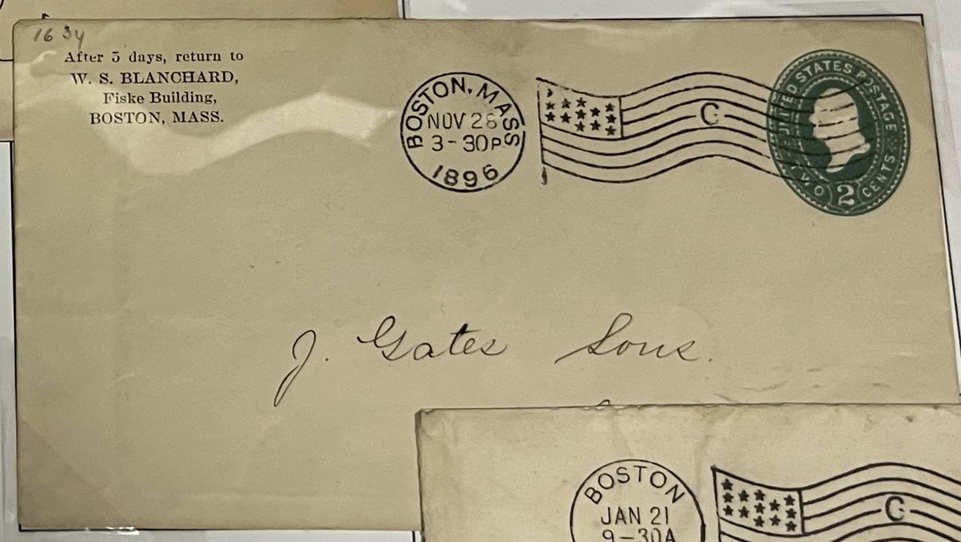
Chronology on Machine 1

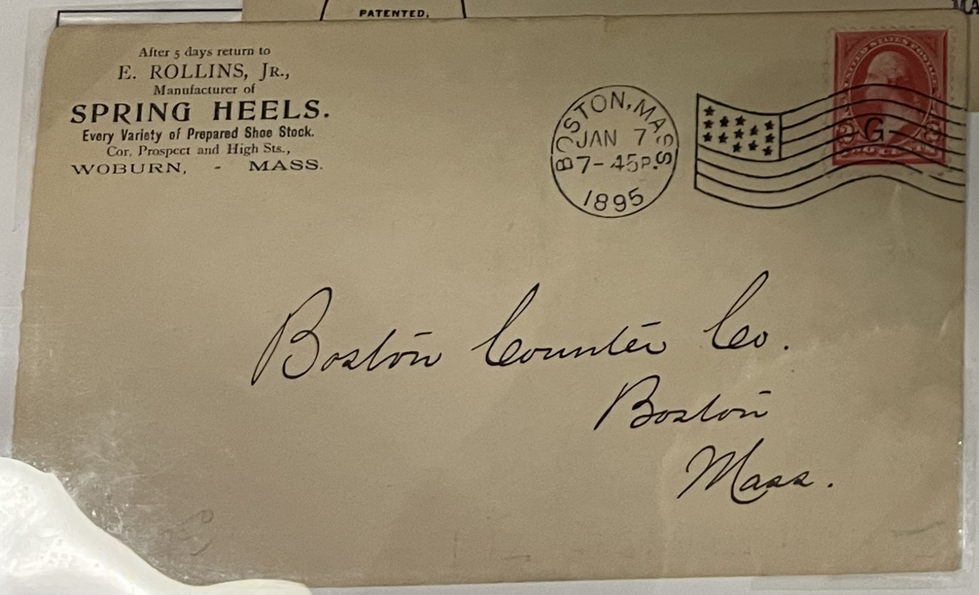
Flag and Dial type	Earliest seen	Latest seen	Flag and Dial type	Earliest seen	Latest seen
Spread-field #1; D dial	10/19/1896	12/23/1896	Ovate #1; B dial	11/2/1898	12/8/1898
Spread-field #1; B dial	1/11/1897	12/7/1897	Spread-field #4; B dial	1/11/1899	1/11/1899
Spread-field #1; D dial	1/7/1898	1/15/1898	Ovate #1; B dial	2/15/1899	2/23/1899
Spread-field #2; D dial	2/2/1898	3/25/1898	Spread-field #2; Dial B	4/30/189	4/30/1899
Ovate #1; B dial	4/12/1898	4/12/1898	Spread-field #5; B dial	10/24/1898	11/2/1899
Spread-field #2; B dial	4/21/1898	4/21/1898	Spread-field #6, blank diespace;B dial	12/6/1899	12/6/1899
Spread-field #3, D dial	7/2/1898	7/2/1898	Spread-field #6; 1 in diespace; dial B	12/13/1899	1/24/1900
Spread-field #2; B dial	7/5/1898	10/10/1898	An International machine followed		

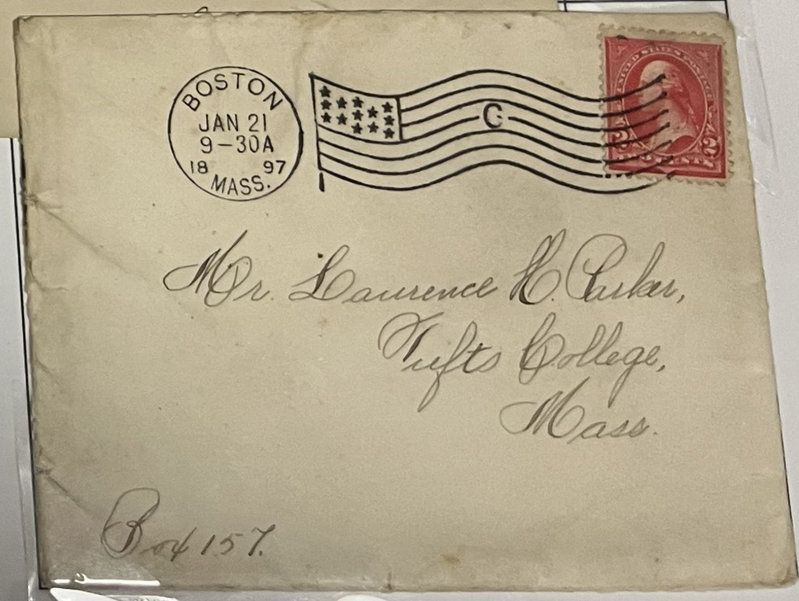
Changing a Flag Die

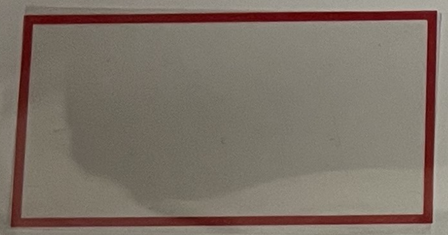
The first flag die with a spread field literally led a tortured life. It moved in 1895 with no change beyond a new dial, but early in that year a staff was added to the flag die, while the dial deteriorated toward year end. In 1896 it received another new dial, but in November its G was altered to a sort-of C. In 1897 the new Type B dial was substituted for the old Type D, and shortly thereafter the die went out of service.





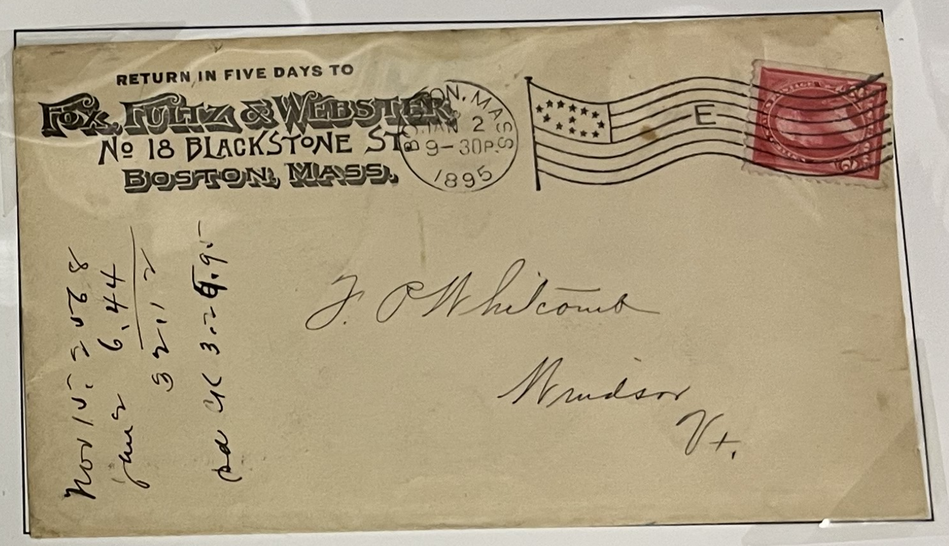




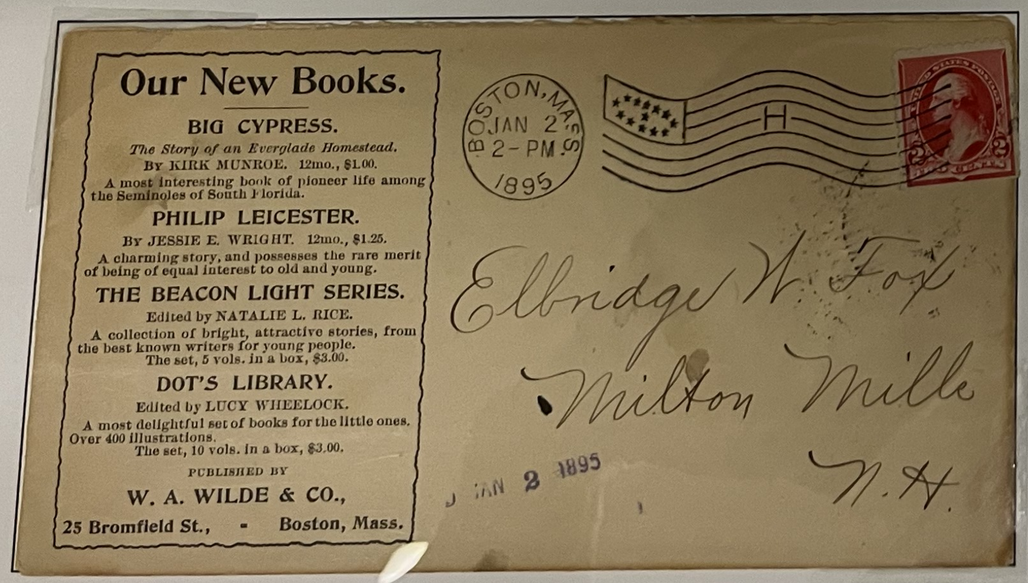


...and the winner was?

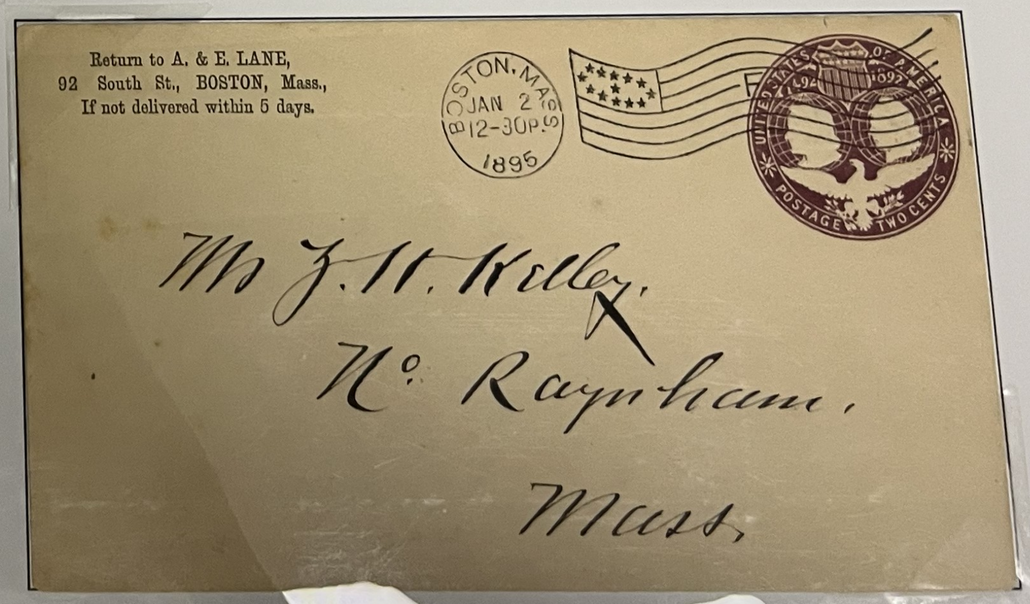
The test of the Eagle & Thunderbolts was run against another American machine, presumed to have been a flag. Of the six flag machines in use at that time, five are known with January 2, 1895 cancellations. The machines on which the new die was placed and its 'opponent' have yet to be identified. The dial with the Eagle & Thunderbolts has not yet been matched; so it may have been installed on a new machine. Additional January 2 covers may yet yield answers.



Only recorded example from machine E on this date. Shortly after the test.



Cover from machine H immediately before the test period

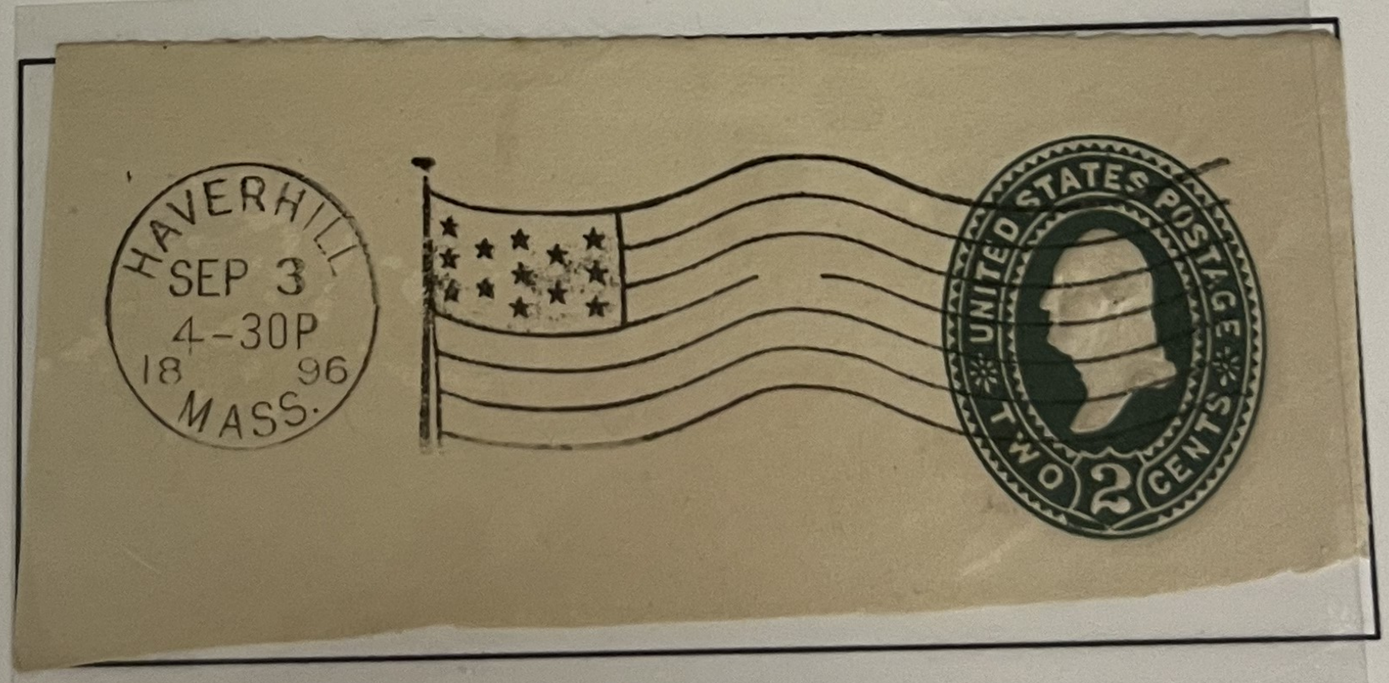


Cover from machine F shortly before the test period

The Changing of the Dials

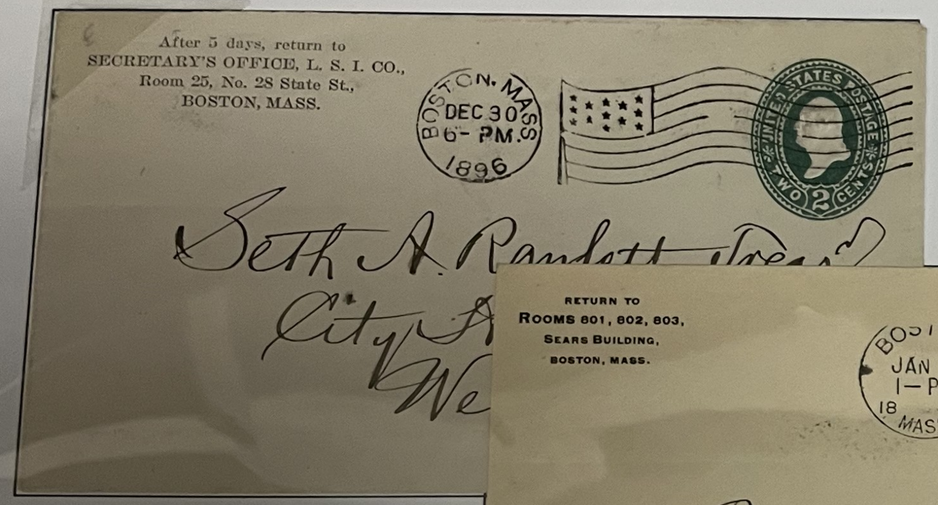
The curved-year dials (Type D) were doomed to extinction; in 1896 a new dial with a split year (Type B) was introduced. These began to be installed in the late summer of 1896 on machines going to new locations. Since American dials in this period had a year date built in, cities with existing machines generally received the new type of dial for use on January 1, 1897. Among the few dozen machines receiving the Type B dials in 1896, Haverhill and Salem, Massachusetts, have the earliest recorded usages: August 24.

Haverhill cancel with Type B dial, used for about a week

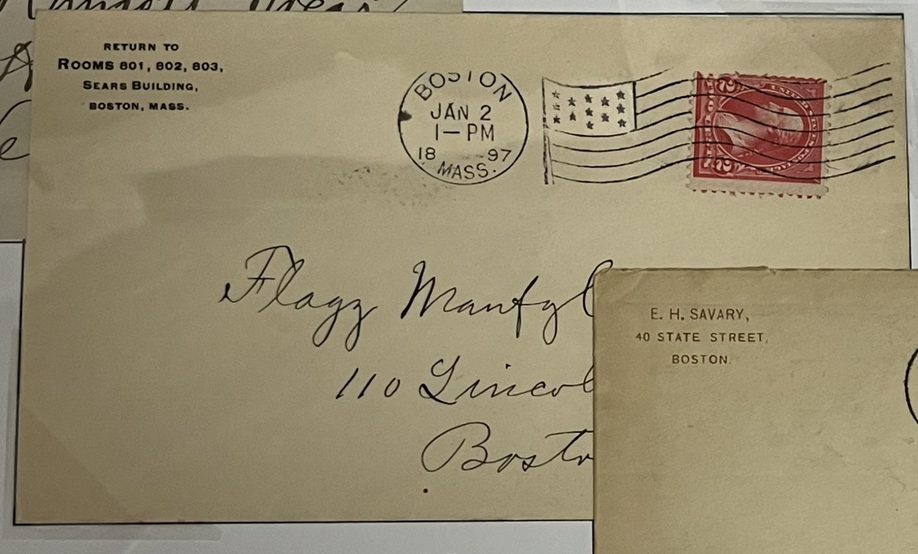


New machine with different flag die installed about September 1
with the same Type B dial

Four covers showing the progression of a single flag die on machine F during the course of a year, from the Type D dial in 1896 back to a Type D dial in 1897. Since Boston had many machines in use, dials were often moved from one machine to another, possibly during cleaning operations.

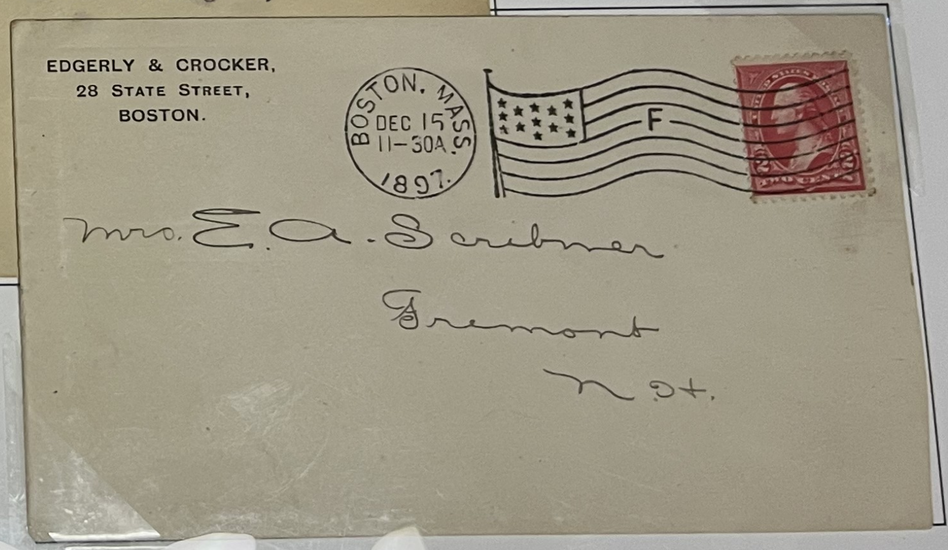


Type D dial at the end of 1896



Type B dial January 2, 1897, with blank diespace for a few days

Same dial and die with its letter inserted

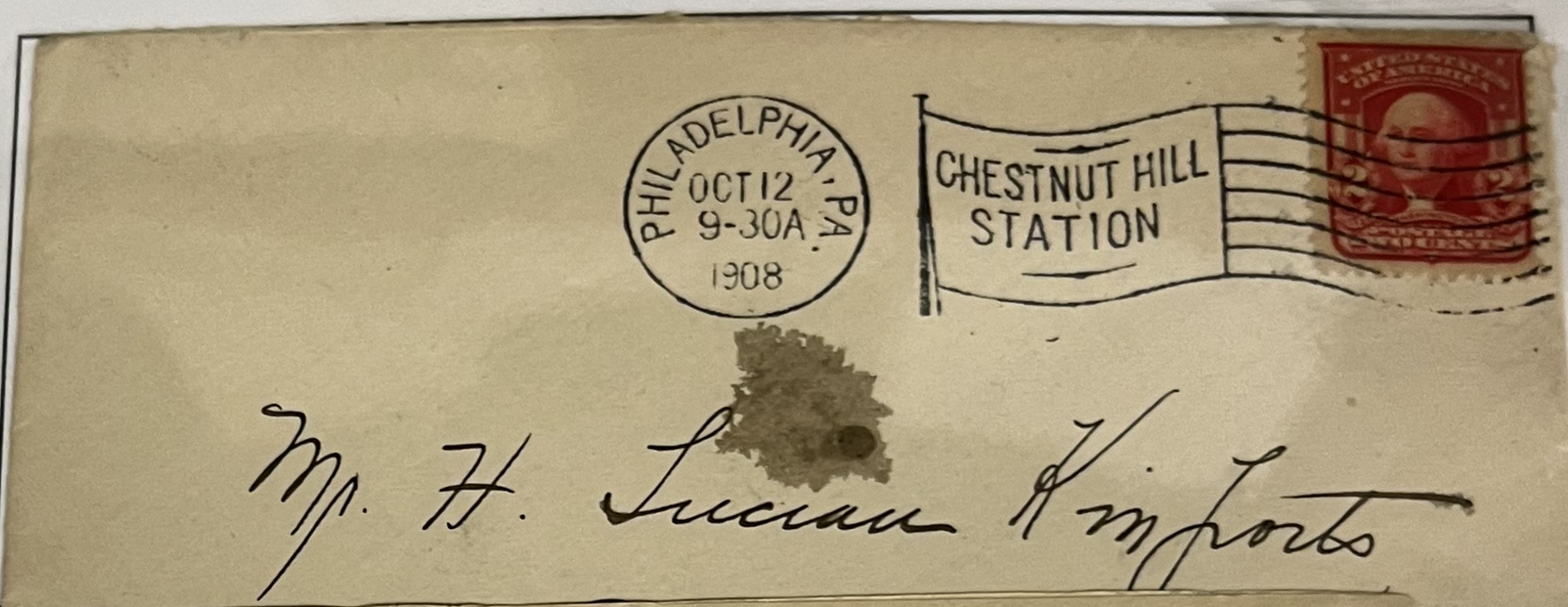


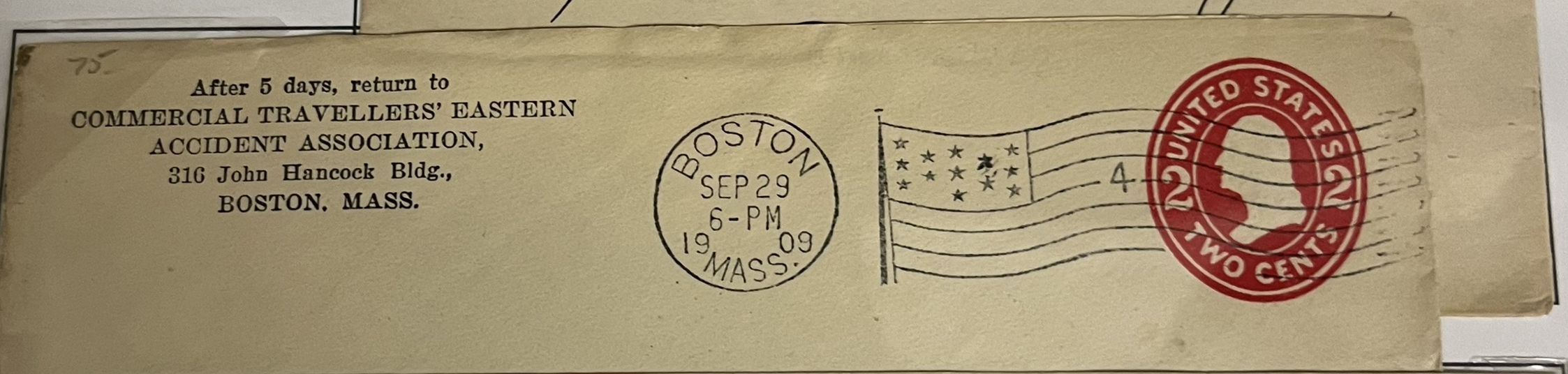
A return [illegible] Type D dial at the end of 1897

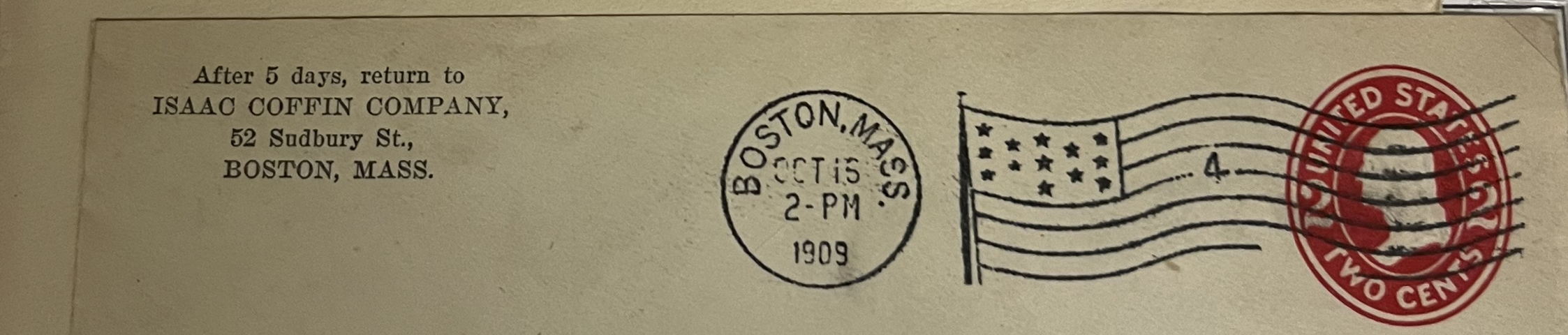
The Dial for the Twentieth Century

Another new dial, with the year date in a single unit (Type A), was similarly introduced. About 60 machines around the country received the new, and ultimately most prevalent, dial in 1908. A few may have been supplied as early as July, but most were installed toward the end of the year. As with the Type B dial, the Boston Main Office machines did not receive any Type A dials until 1909, and only one (machine 4) was changed from Type B to Type A in 1909.

A 1908 installation of Type A dial in Philadelphia (right); Boston machine 4 transition (below)







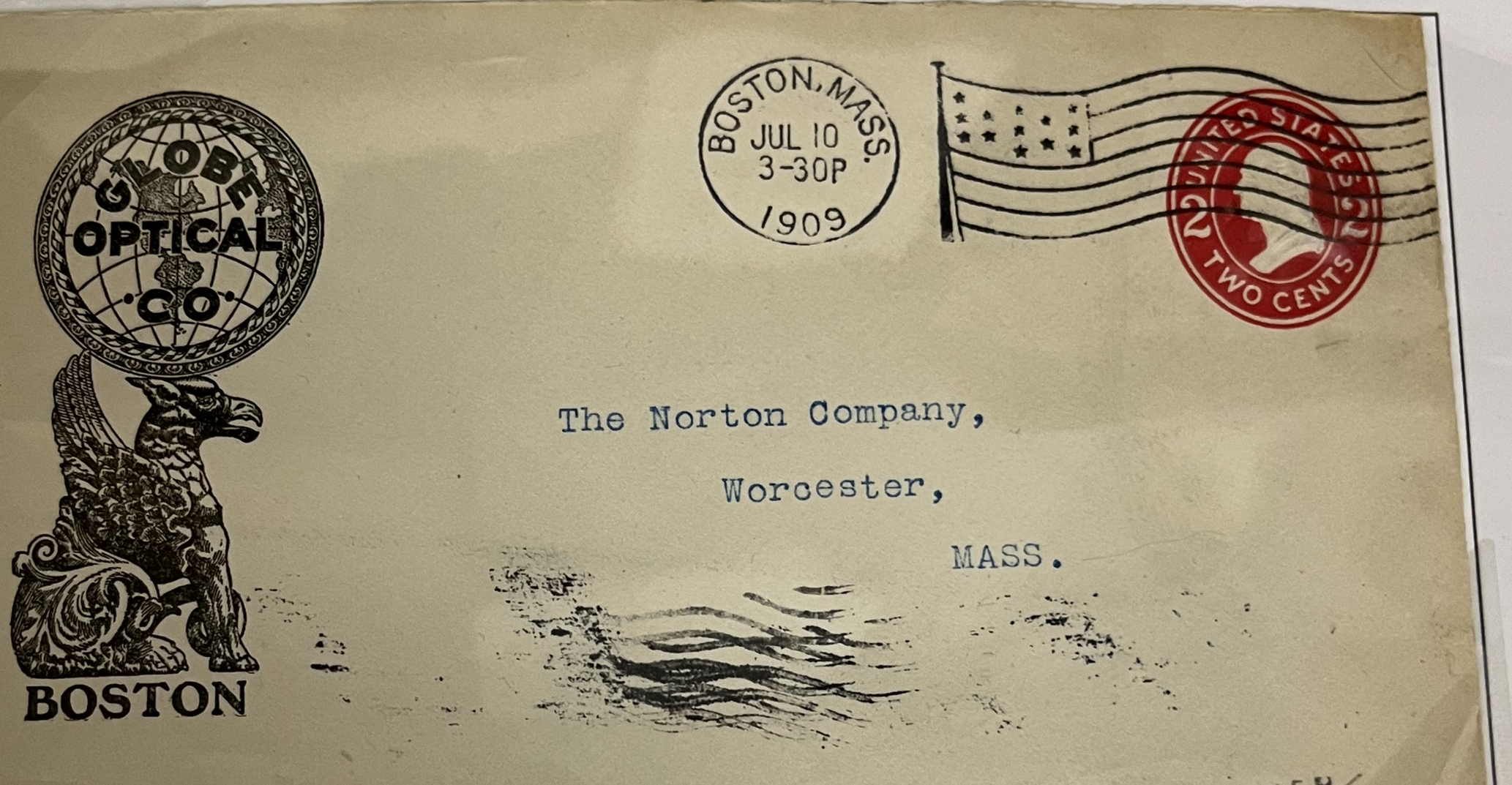
Roberts Iron Works Company,

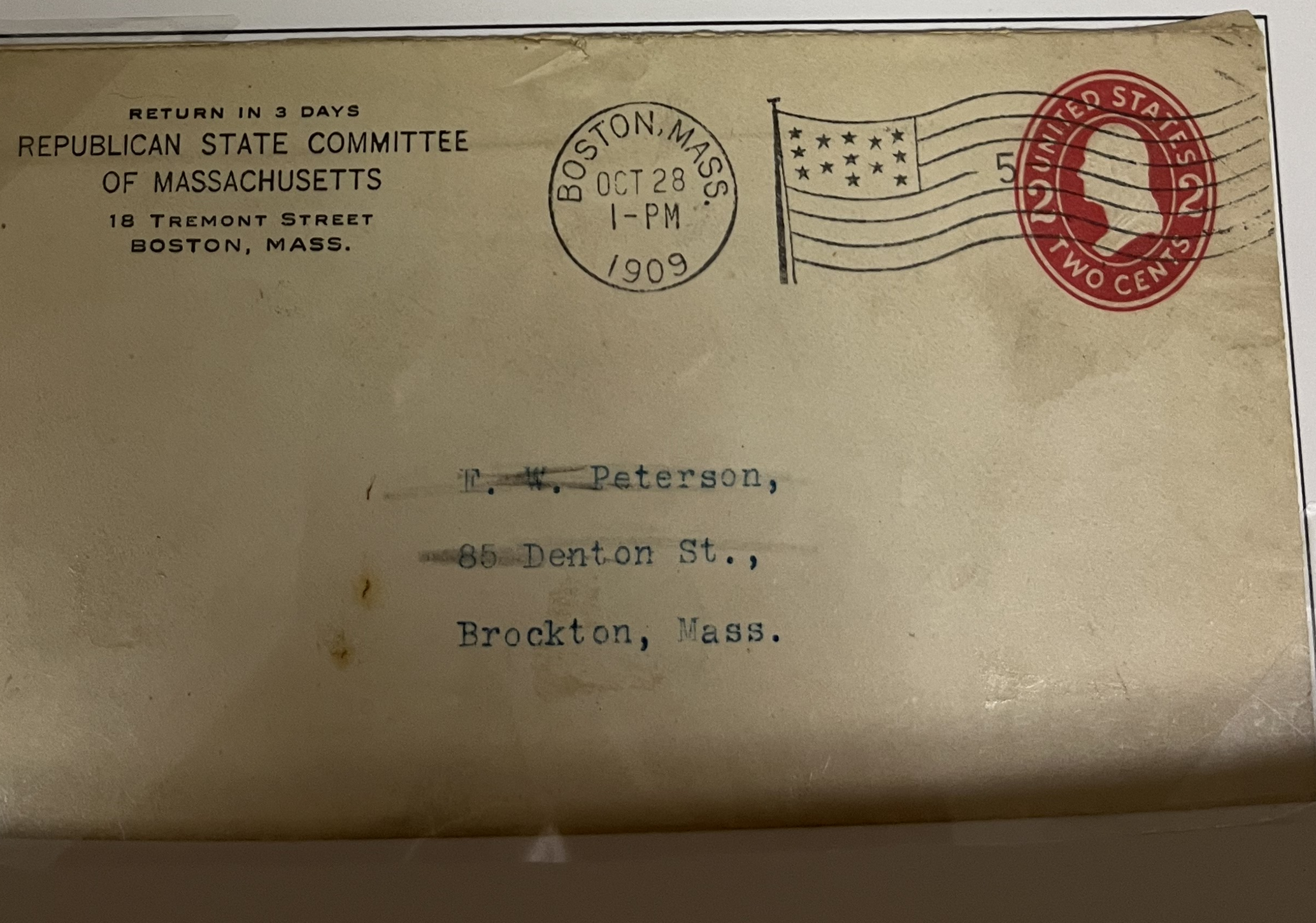
Cambridgeport,

Mass.

A Throwback

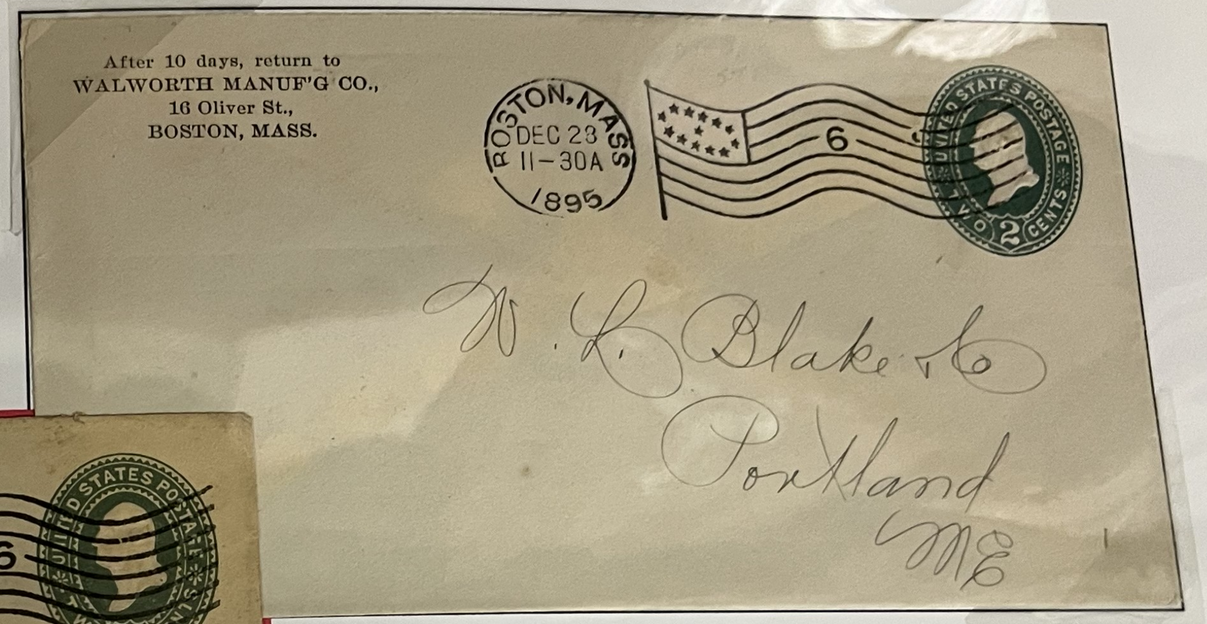
Boston, which had led in the introduction of machines, fell behind the times in the twentieth century. It retained the locally-produced flag machines longer than any other major city and even used the only Type D dial produced in the twentieth century. It appeared on a no-diespace flag in July 1909 and was later transferred to machine 5.

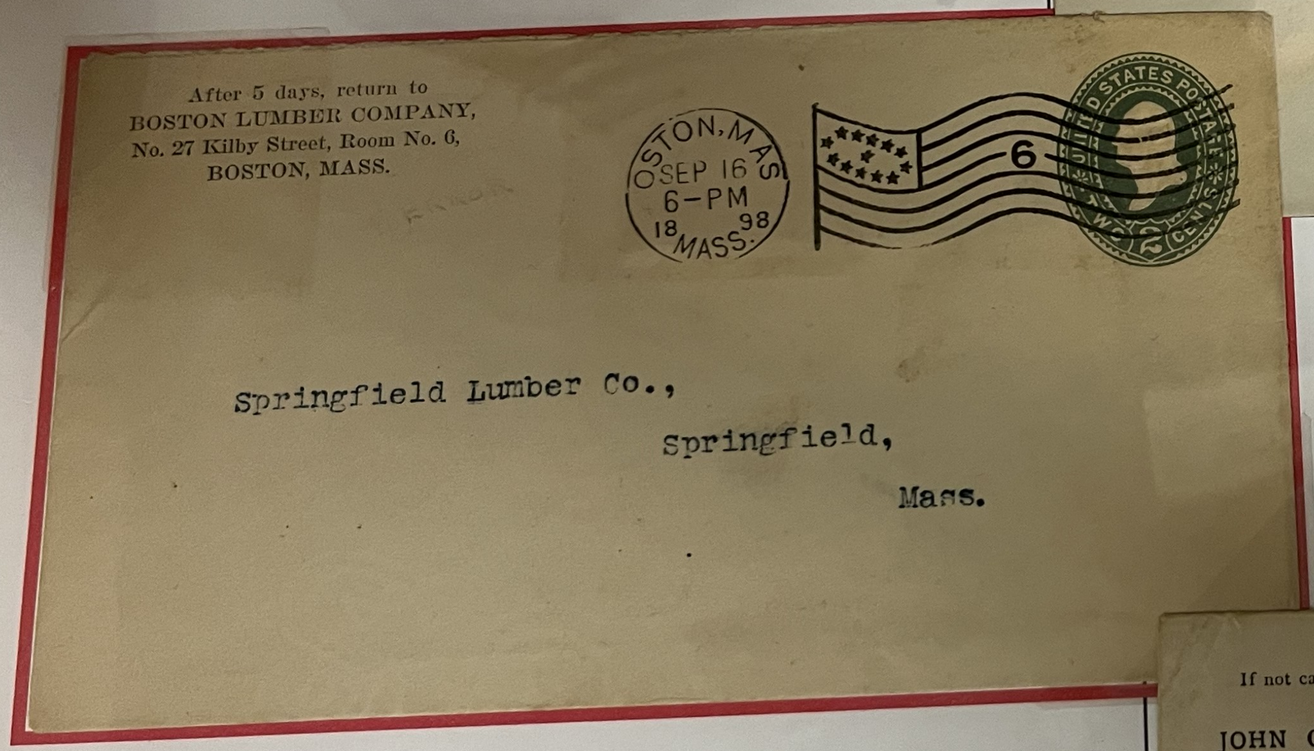




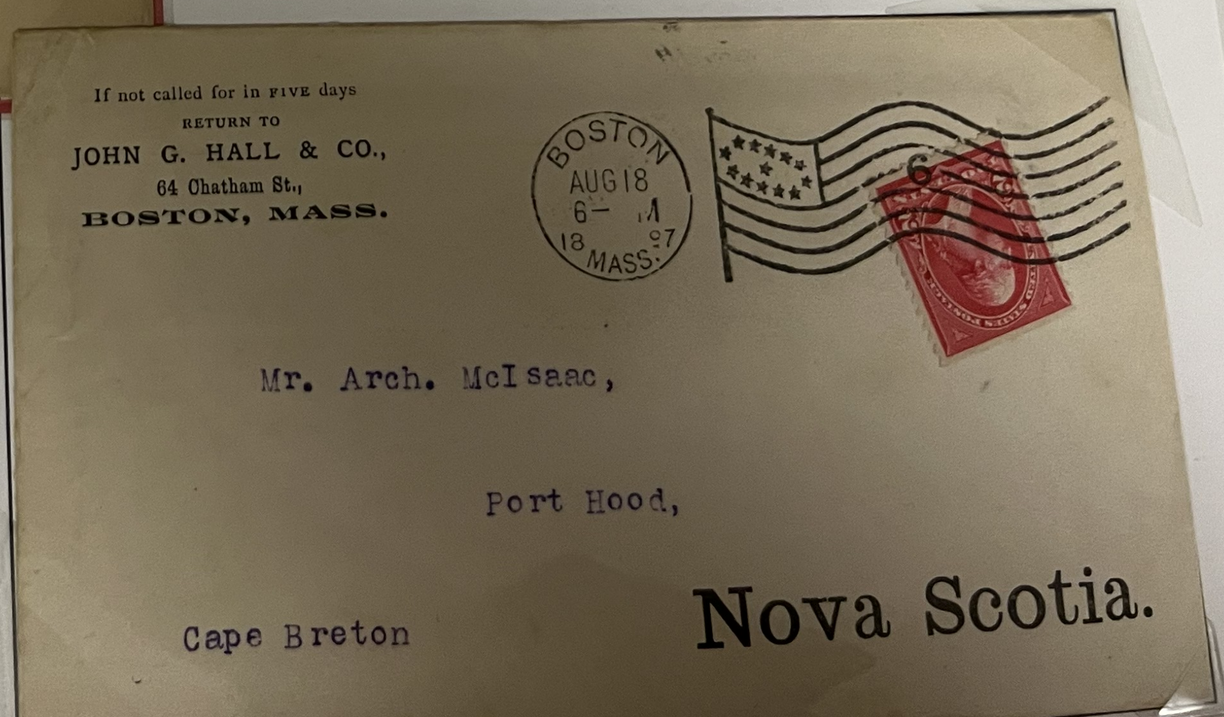
Mismatched Dial Pairing Errors

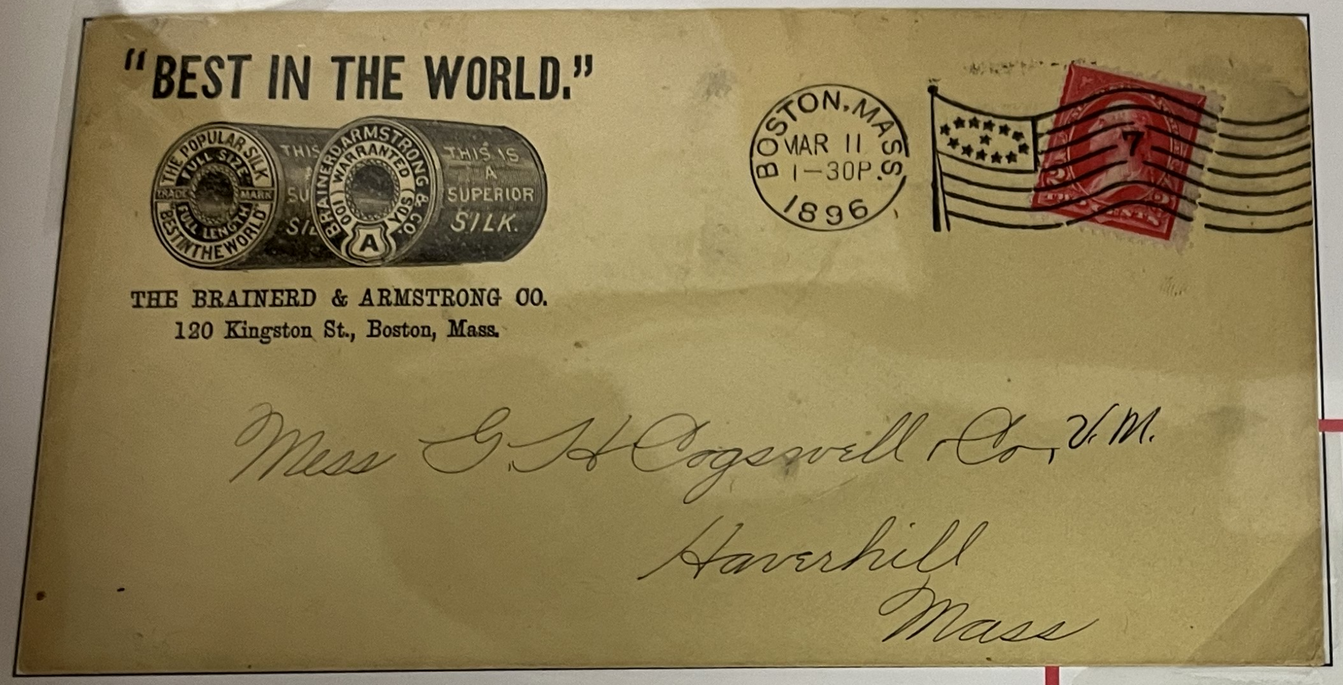
American postmark dials manufactured prior to 1905 were made in two parts. On rare occasions the top and bottom halves of different dial types were paired. The resulting errors were obvious enough to make it surprising that, for as long as several weeks, they could go undiscovered or tolerated.



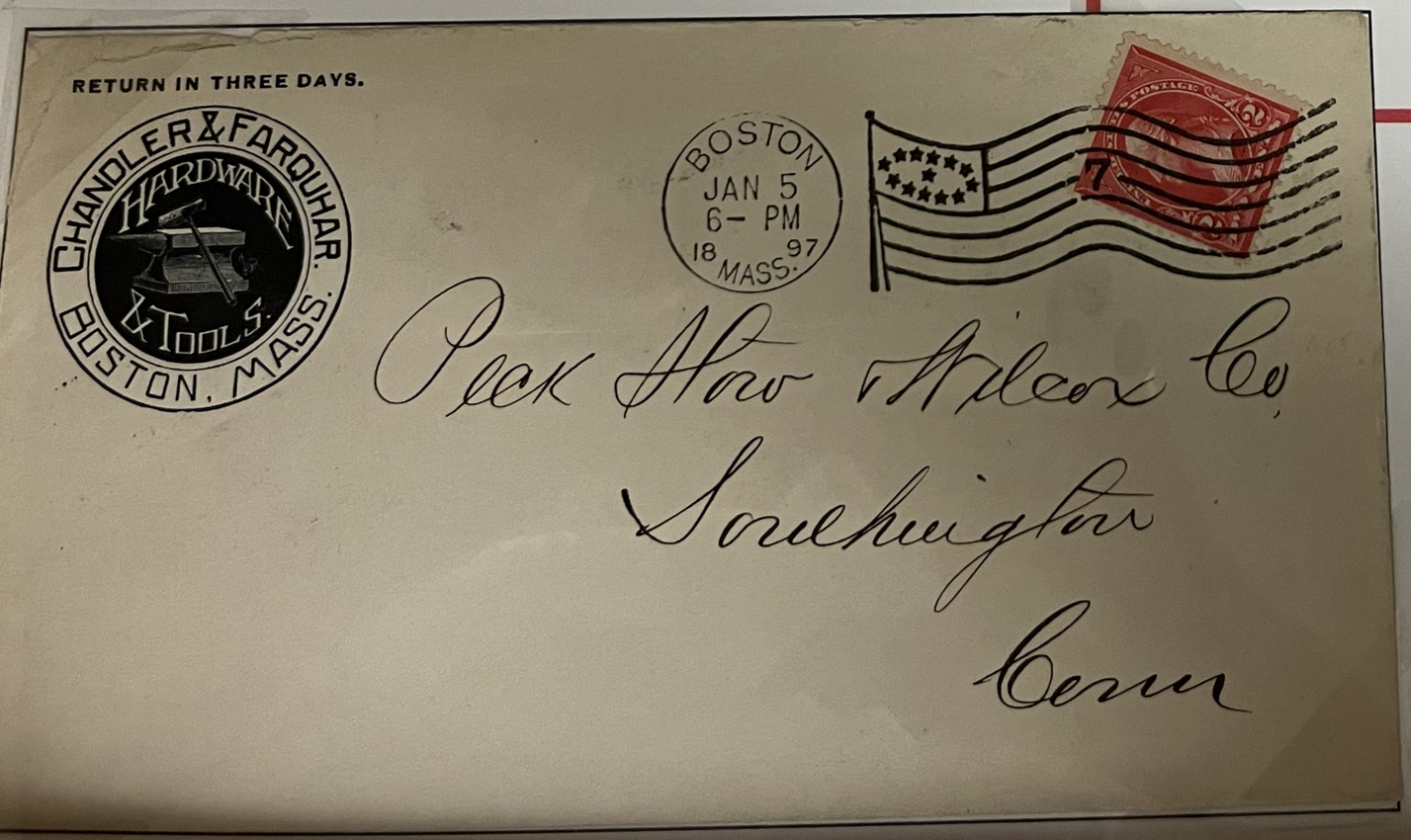


Three covers from machine 6 with same flag die. Type D (above) and Type B (below) dials used intermittently in 1898. Mis-matching error (left) drops **B** in **BOSTON**, **S** in **MASS** and duplicates **MASS** in the base





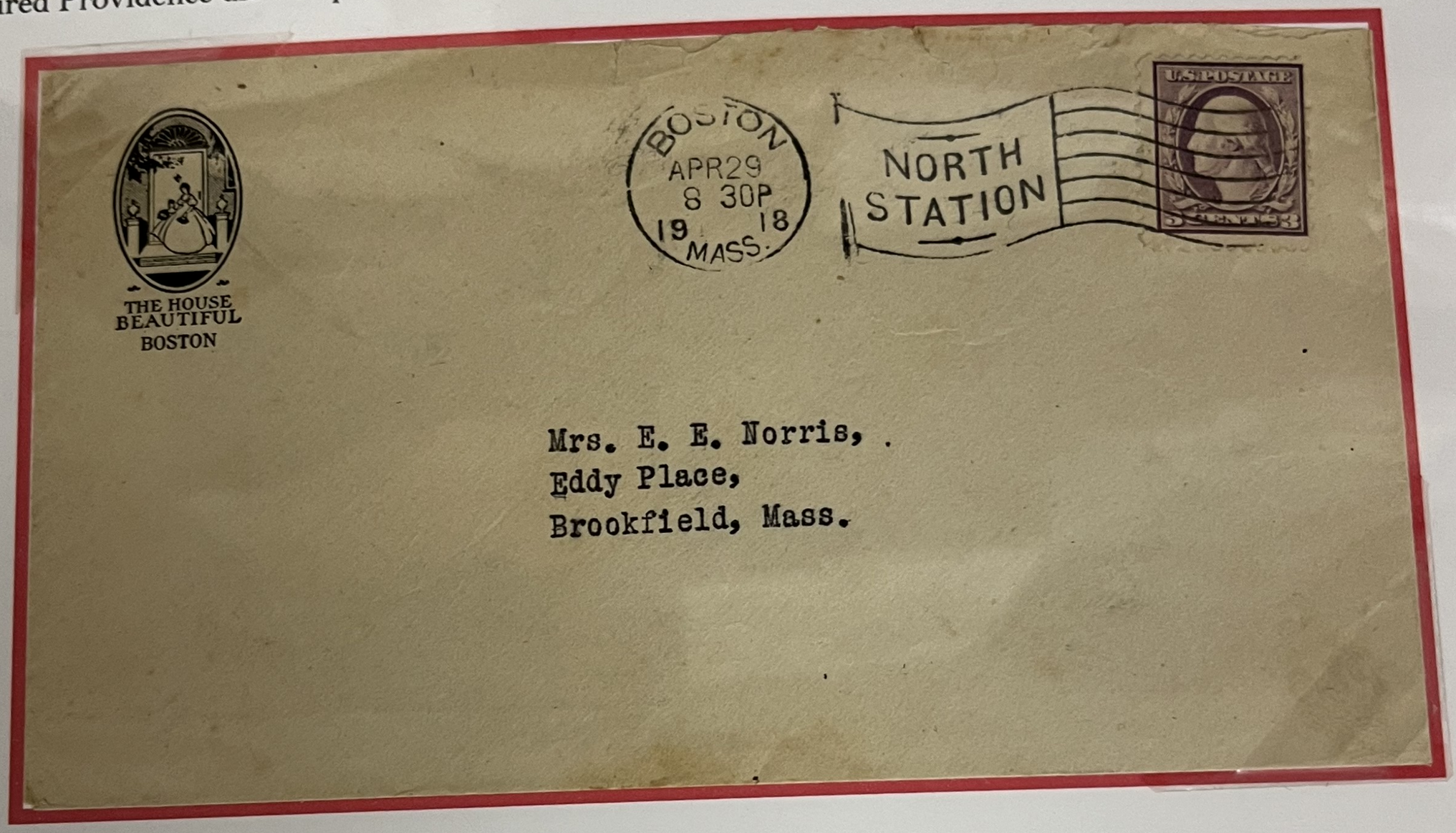
An identical error occurred on machine 7 a few weeks earlier. The problem was corrected almost immediately; the error is known for only a few days in September 1898. Type D dials had not been used on this machine since 1896.

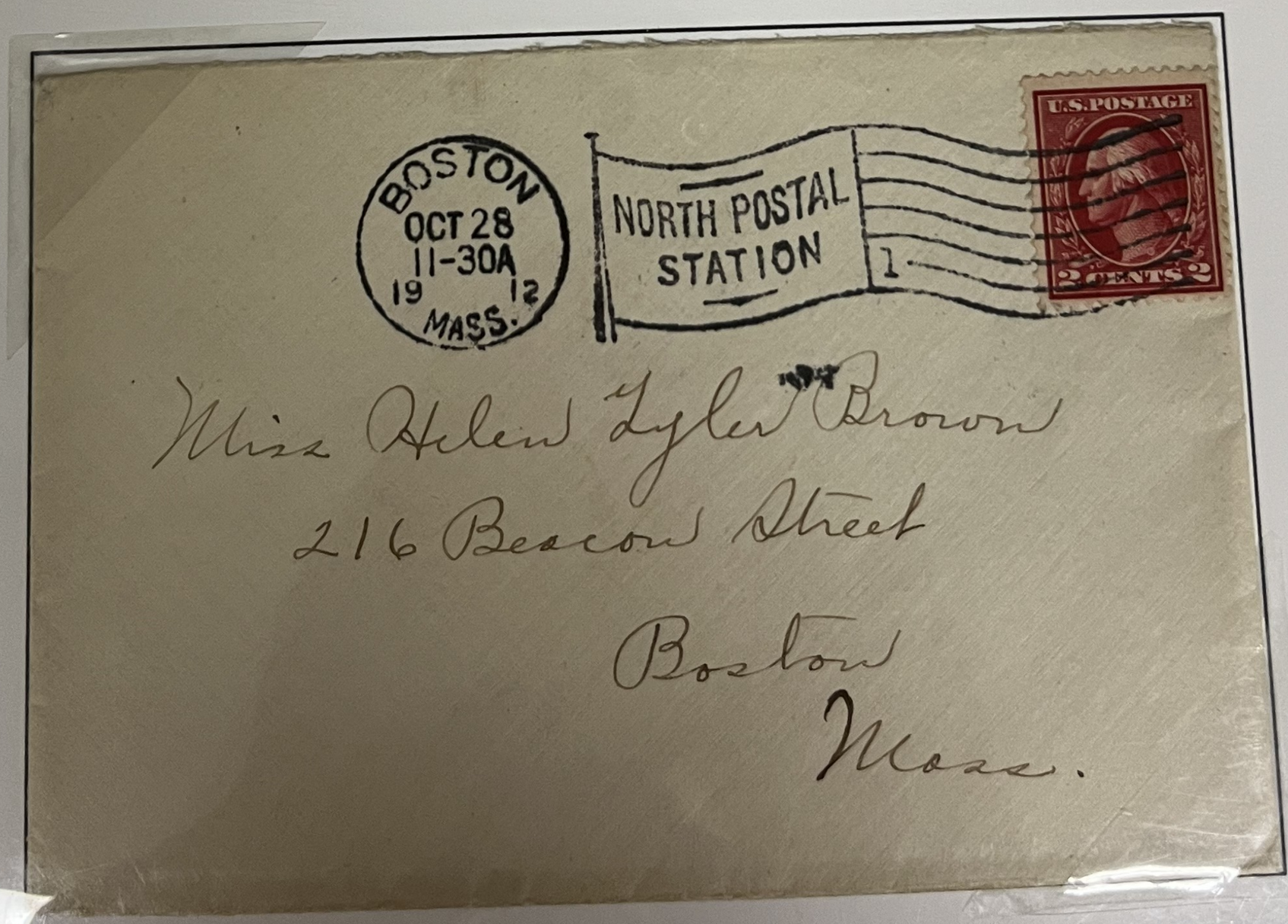


A Boston station error first reported in the latest edition of the *Flag Cancel Encyclopedia* (2008) had an unusually long life of nine months and was simply not recognized as an error by either postal workers or philatelists until recently. The top half of the dial is from an Imperial dial previously used in the Boston Main Office, and the only distinction is a wider spacing of the letters in **BOSTON**.

Error or Expedience?

Boston's "North Postal Station" used a flag die labeled "North Station" in late 1917 and early 1918. While classified as an "error," it may have been intentional. The flag die had been used in Providence, Rhode Island's North Station until 1913. North Postal Station had several machines operating in 1917, and the retired Providence die was probably a handy replacement for a worn North Postal Station die.

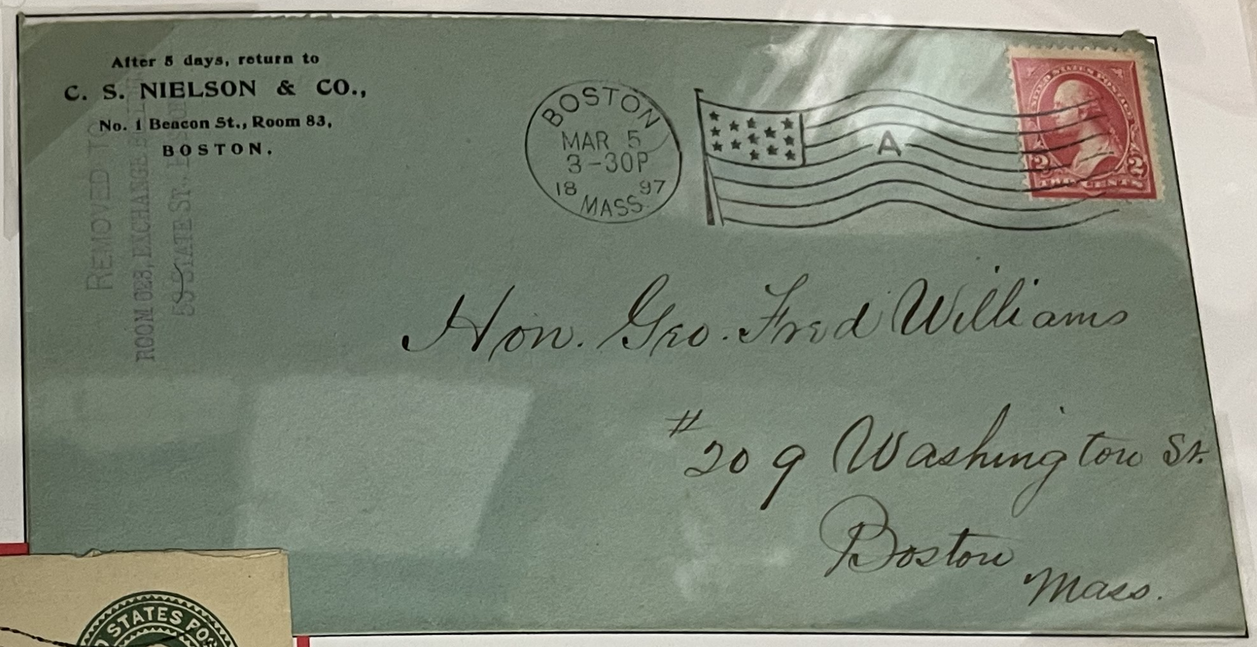


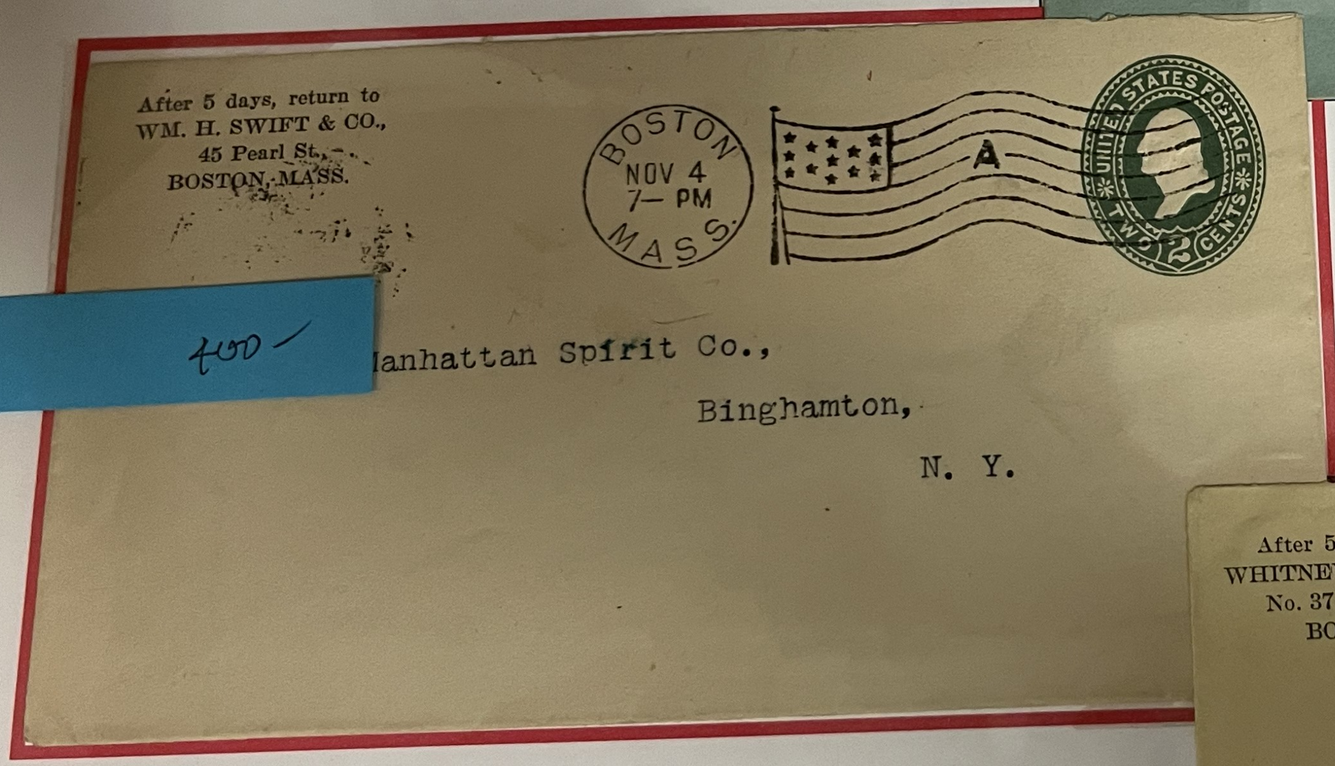


Flag taken out of service in 1917 and probably replaced by the error flag

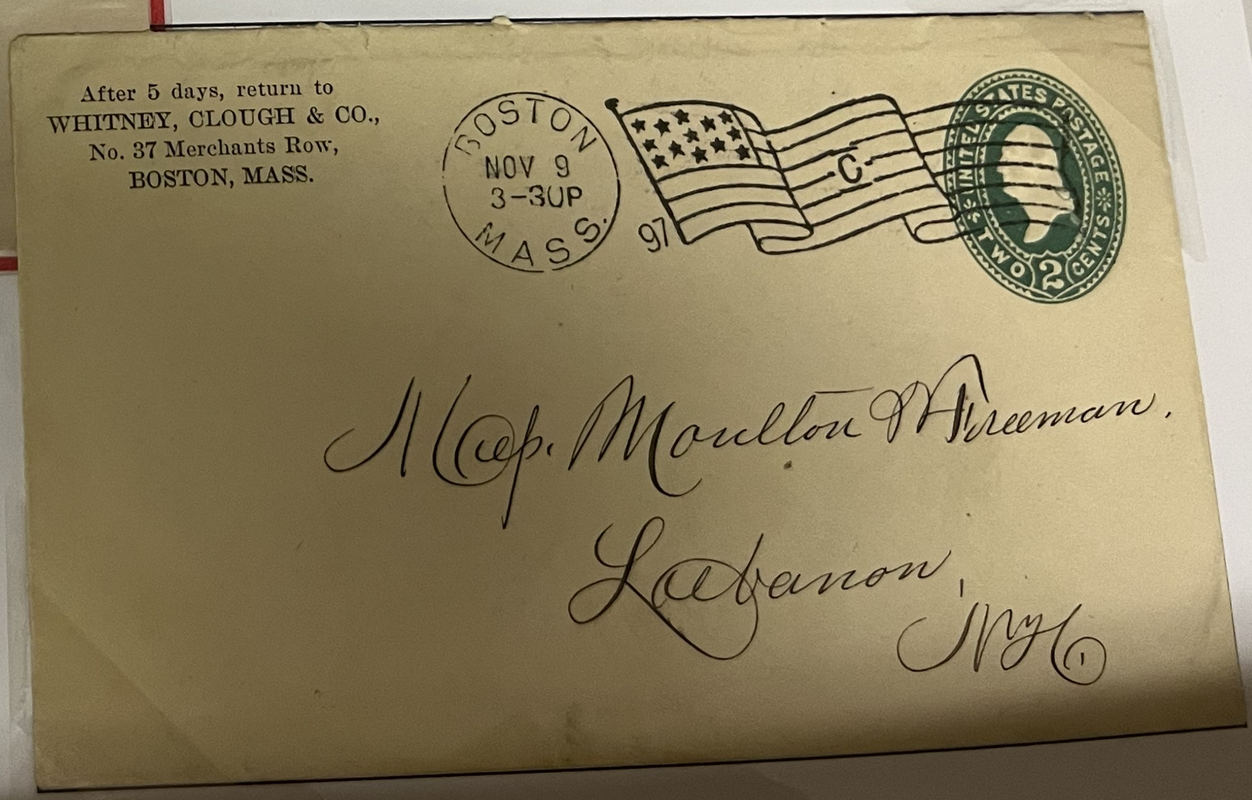
A Misplaced Dial

A different type of error was created here, with a dial intended for use with the involute flags erroneously placed on a spread-field flag die, producing a cancellation without a year date. *In use:* November 2-6, 1897.



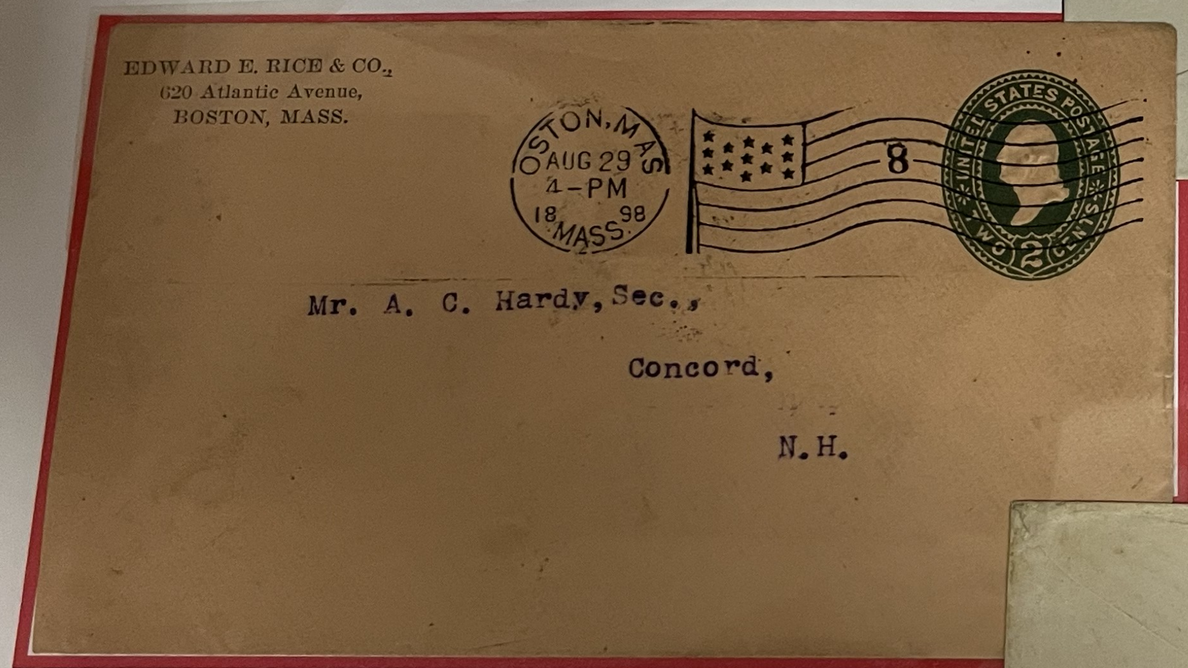


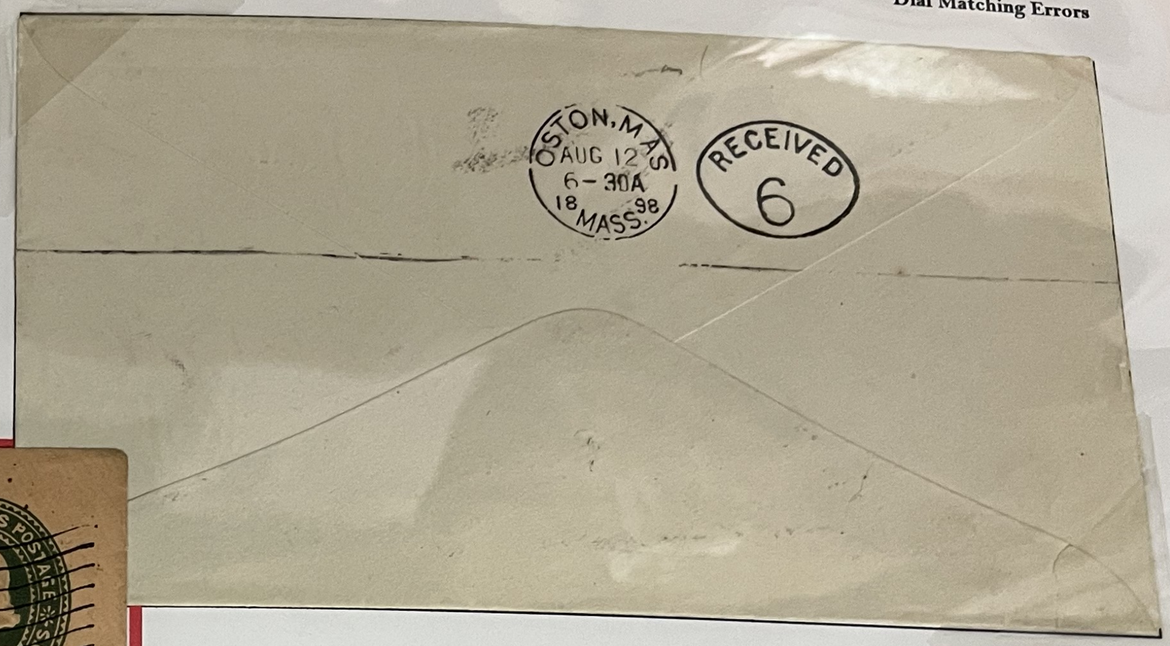
Flag die on machine A with Type B dial (above) before and after the error. Misplaced dial error (left). Same dial (below) the day it was restored to its involute flag



Errors in Boston with Spread-Field Flags

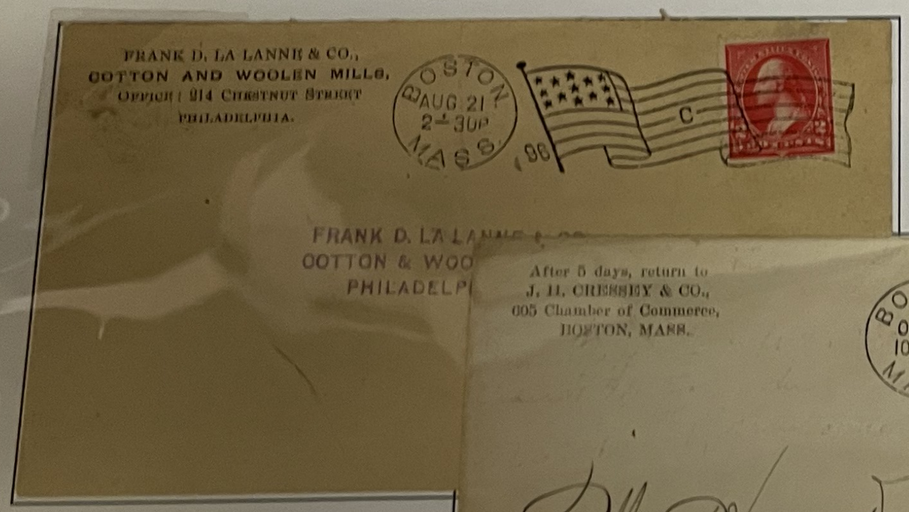
Only one mis-matched dial error was made among the spread-field flags. The error on machine 8 is identical with those on machines 6 and 7. In this case the erroneous dial had been used with an American receiving mark before being installed on machine 8.



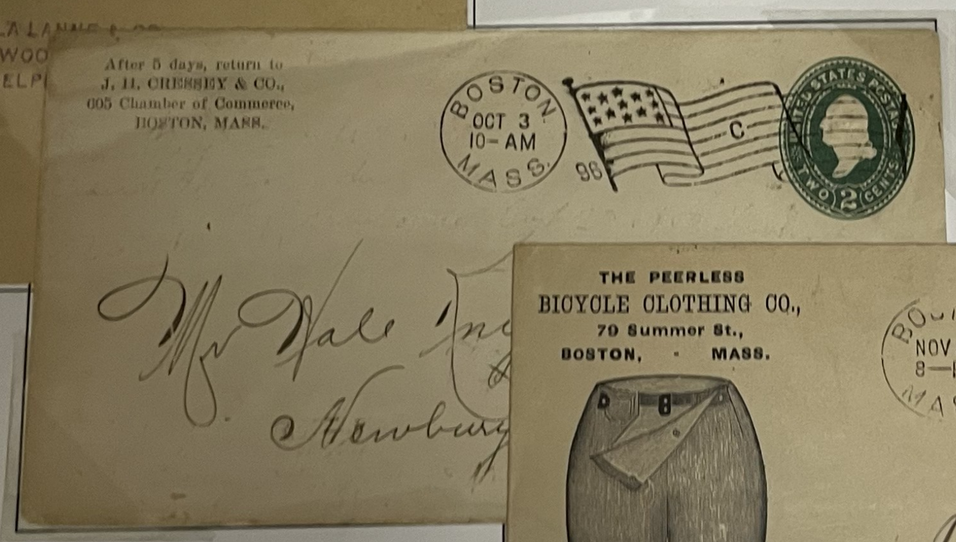


Erroneous dial (above) used with receiving mark, *In use:* several weeks prior to August 20, 1898. Error dial with flag (left), *In use:* August 20 to early September, 1898. Cover showing the error flag used as a transit mark and with the previously erroneous receiving mark now corrected (below)

From 1896 into early 1897 the same flag die was used with the Imperial year-less dial. Four different dials are distinguished by the presence or absence of a comma after the city name and the shape of the letters in **BOSTON**.

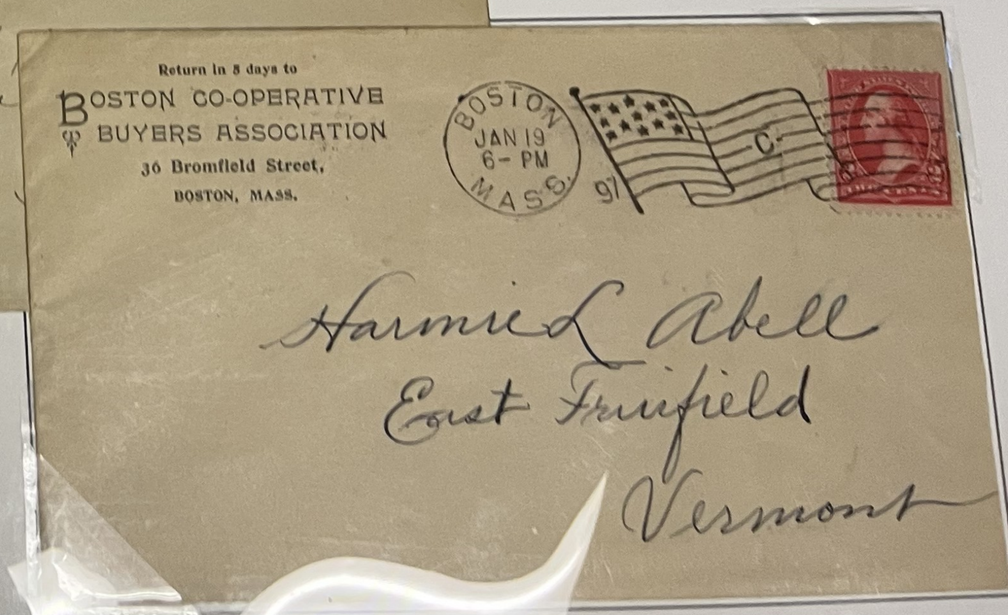


First dial, comma and similar-size loops in **B**.
In use: July 15 to September 2, 1896



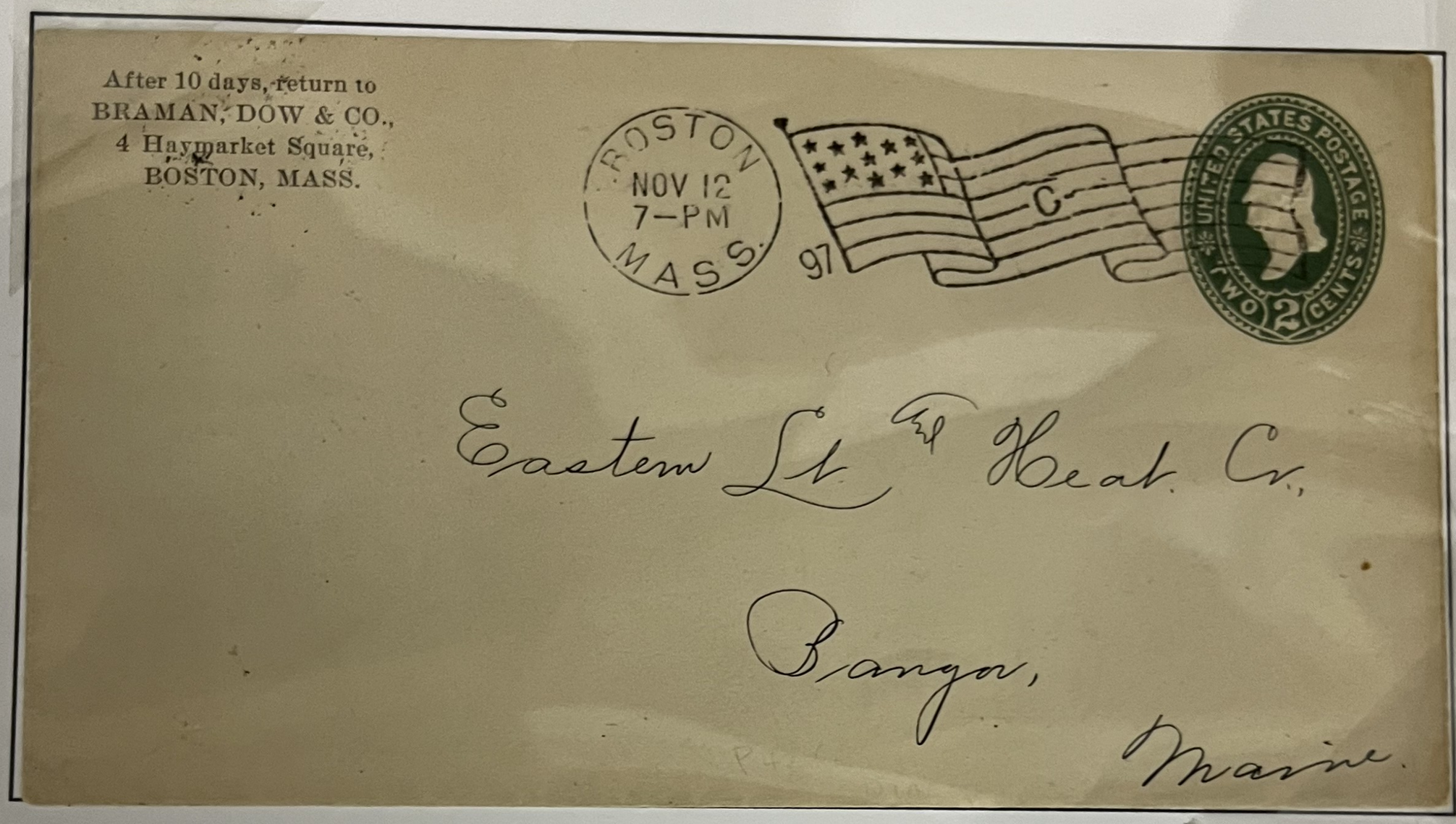
Second dial, comma and smaller top loop in **B**
In use: September 2 to early October, 1896

Third dial, no comma and wide **B**. *In use:*
October 7 to December 22, 1896

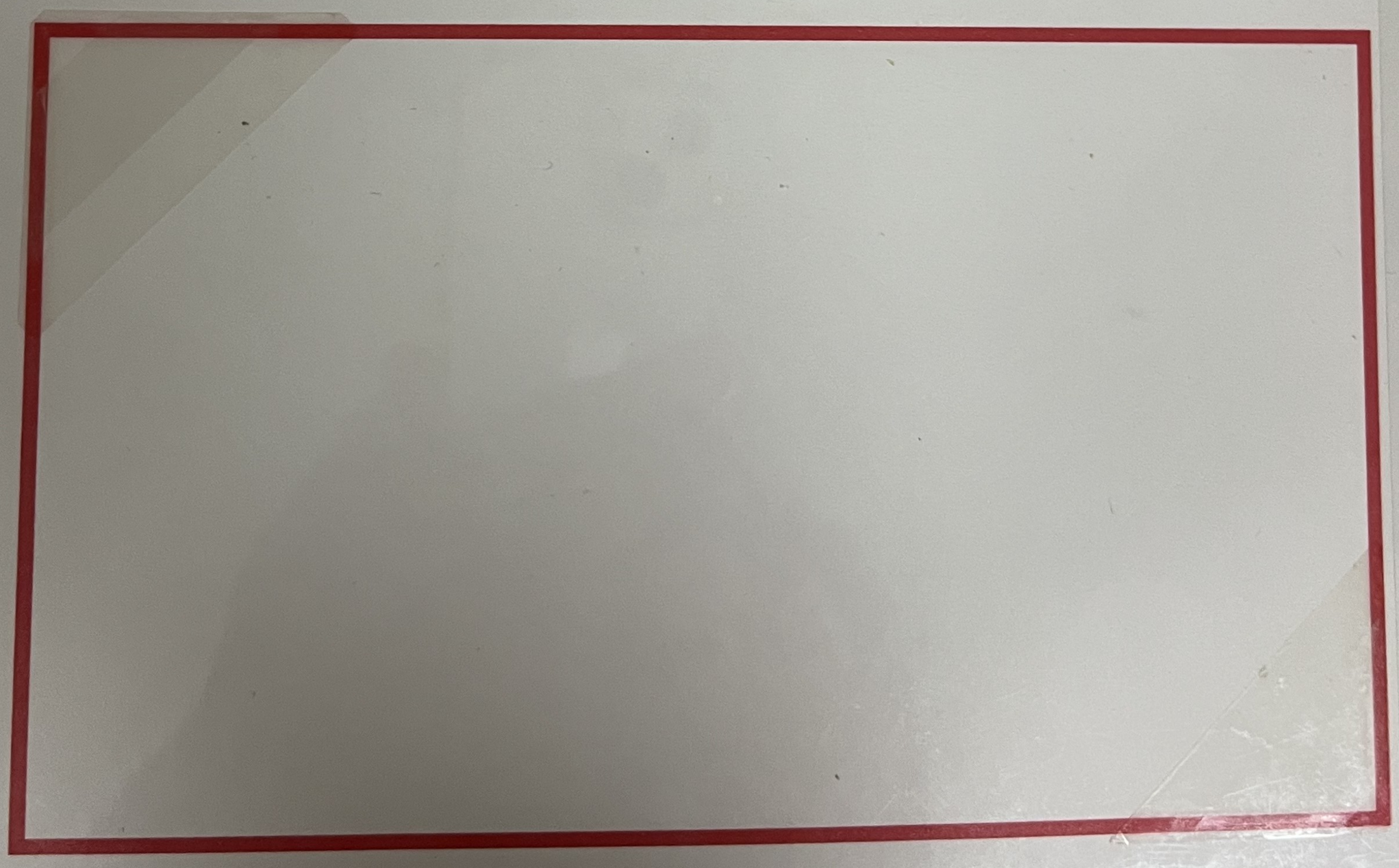


Four[illegible] no comma and narrower le[illegible] *In use:* January 1 to February 14, 189[illegible]

About February 15, 1897, the bottom of the staff was removed, creating a different 'type' of flag die.



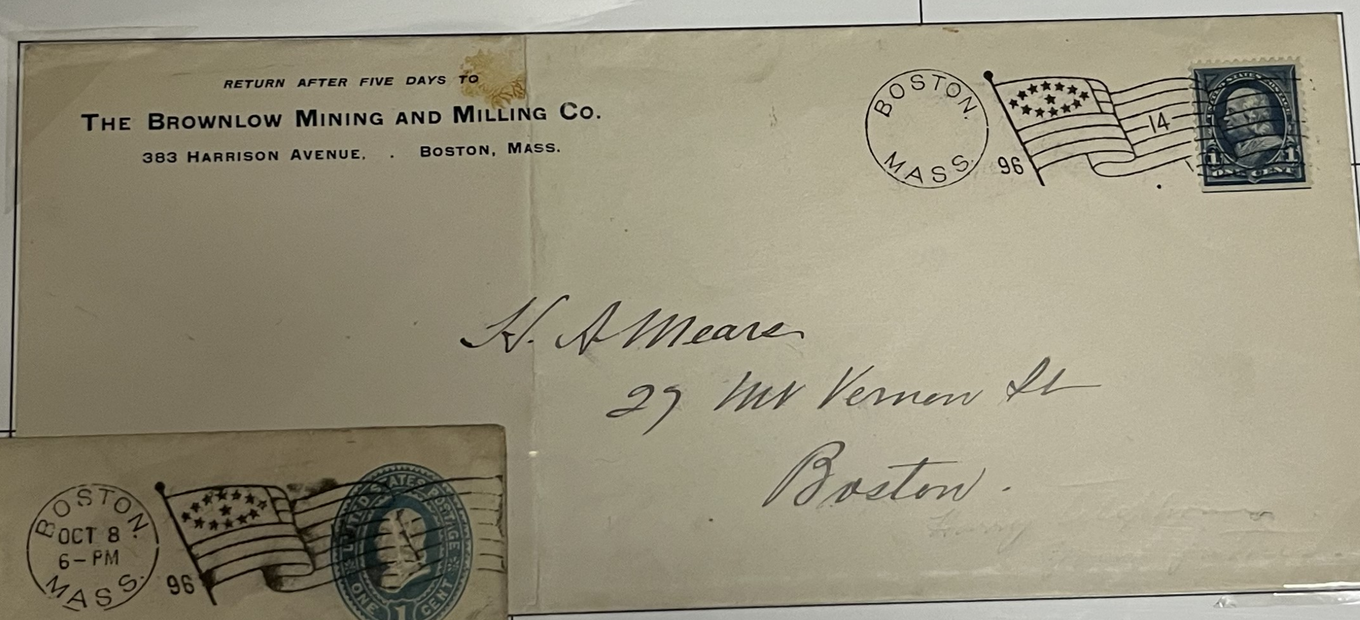
Altered die with fourth Imperial dial. *In use:* February 15 to end of 1897



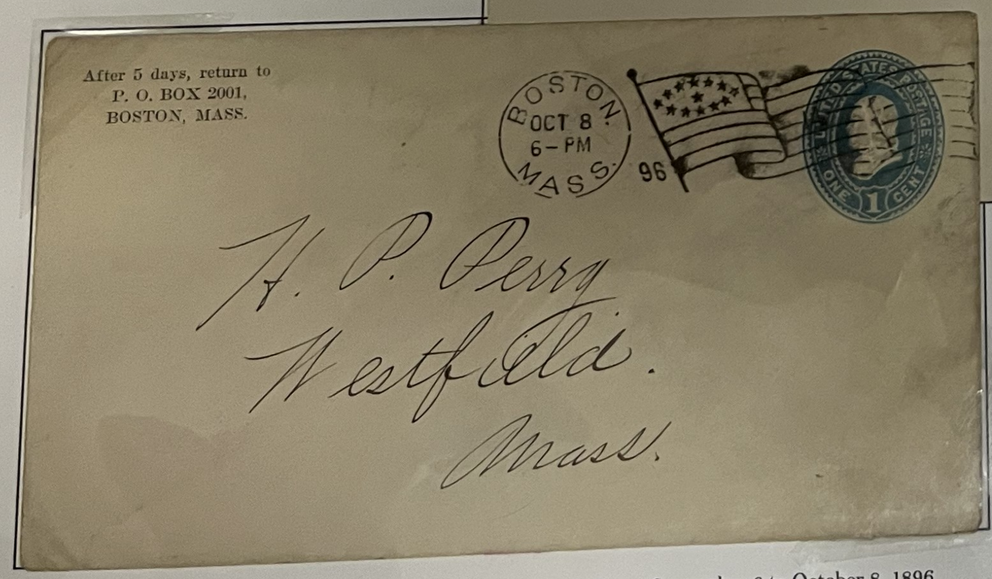
Companion to error on Machine A (previous frame), yielding double year dates.
In use: November 2 to 8, 1897

The Ovate-Involute Flag

The second Imperial flag die installed featured a combination of the involute flag and the ovate star arrangement, usually called "ovate-involutes." The first three of the four Imperial dials were used with this die.



14 replaced with a **C** using third Imperial dial.
In use: December 26 to 31, 1896



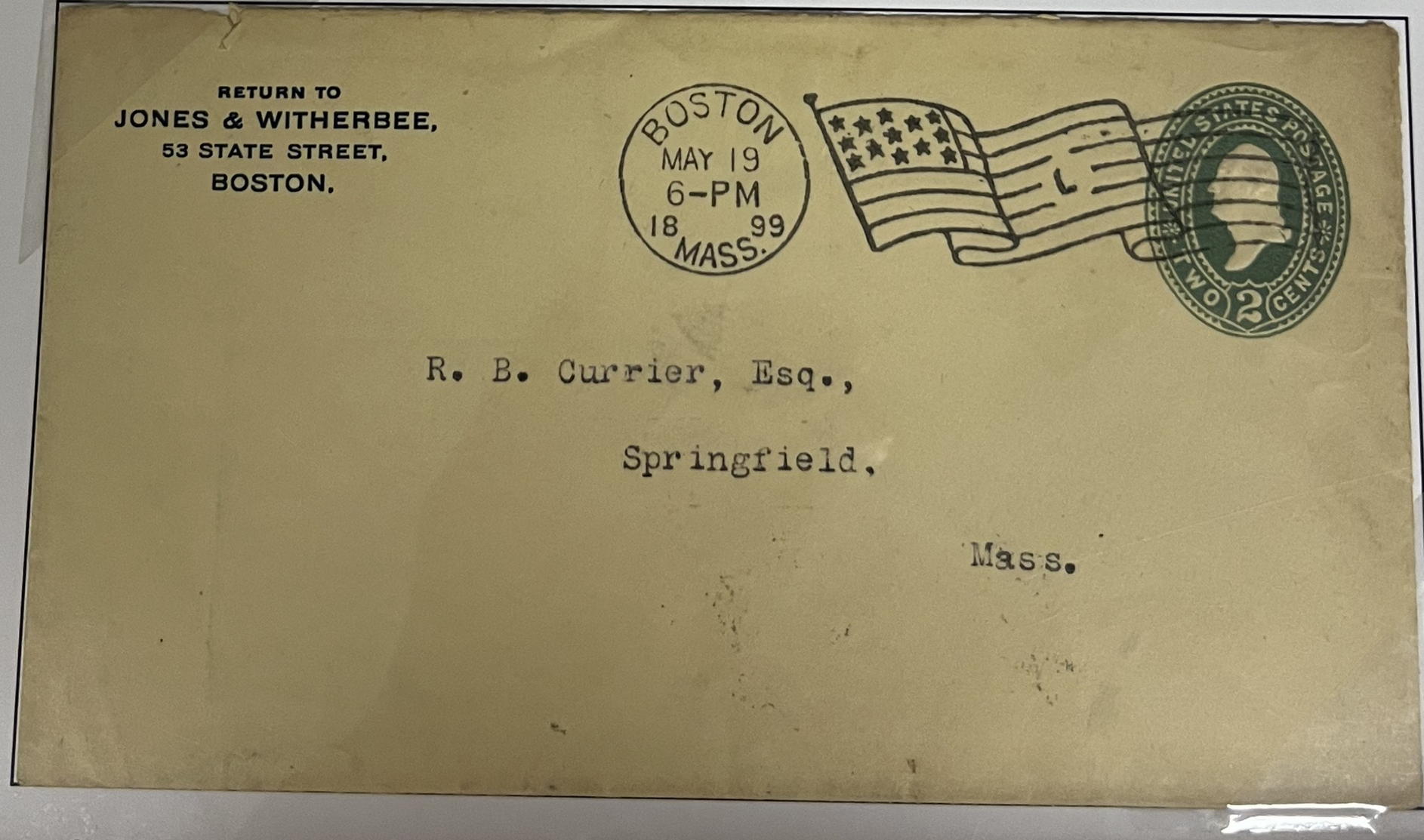
14 in the diespace and paired with the first Imperial dial. *In use:* September 2 to October 8, 1896

Same die with second Imperial dial. *In use:* October 13 to December 14, 1896

The fin
thereaf

At the beginning of 1898 the year date, which had been an integral part of the flag die, was removed.

Imperial flag die with an American Type B dial for the year date.
In use: January 1, 1898, to March 8, 1899



On March 9, 1899 the C was changed to an L by crude re-engraving. *In use:* to September 11, 1900

The final four varieties of the ovate-involute flag die have a smaller C inserted in the diespace. The machine thereafter was used almost exclusively for third class mail and bulk postal cards.

Bulk postal card quoting feed prices; first Imperial dial. *In use:* May 24 to July 27, 1897

Third class usage. 97 removed from flag die; American Type B dial. *In use:* July 27, 1897, to September, 1899, except for brief periods with the two error dials

Of the few first class usages which exist, the enclosure from the one shown here suggests that this cover was part of a large commercial mailing, even though first class postage was paid.

HARVARD GRADUATES' MAGAZINE.

VE RI TAS

6 Beacon Street,
Boston, Oct. 1, 1897.

Dear Si
I re
scription
Harvard
and to r
Rem
money o
GRADU
except b
Ple
thereby
and you
subscrip

After 5 days, return to
HARVARD GRADUATES' MAGAZINE.
6 Beacon Street,
BOSTON, MASS.

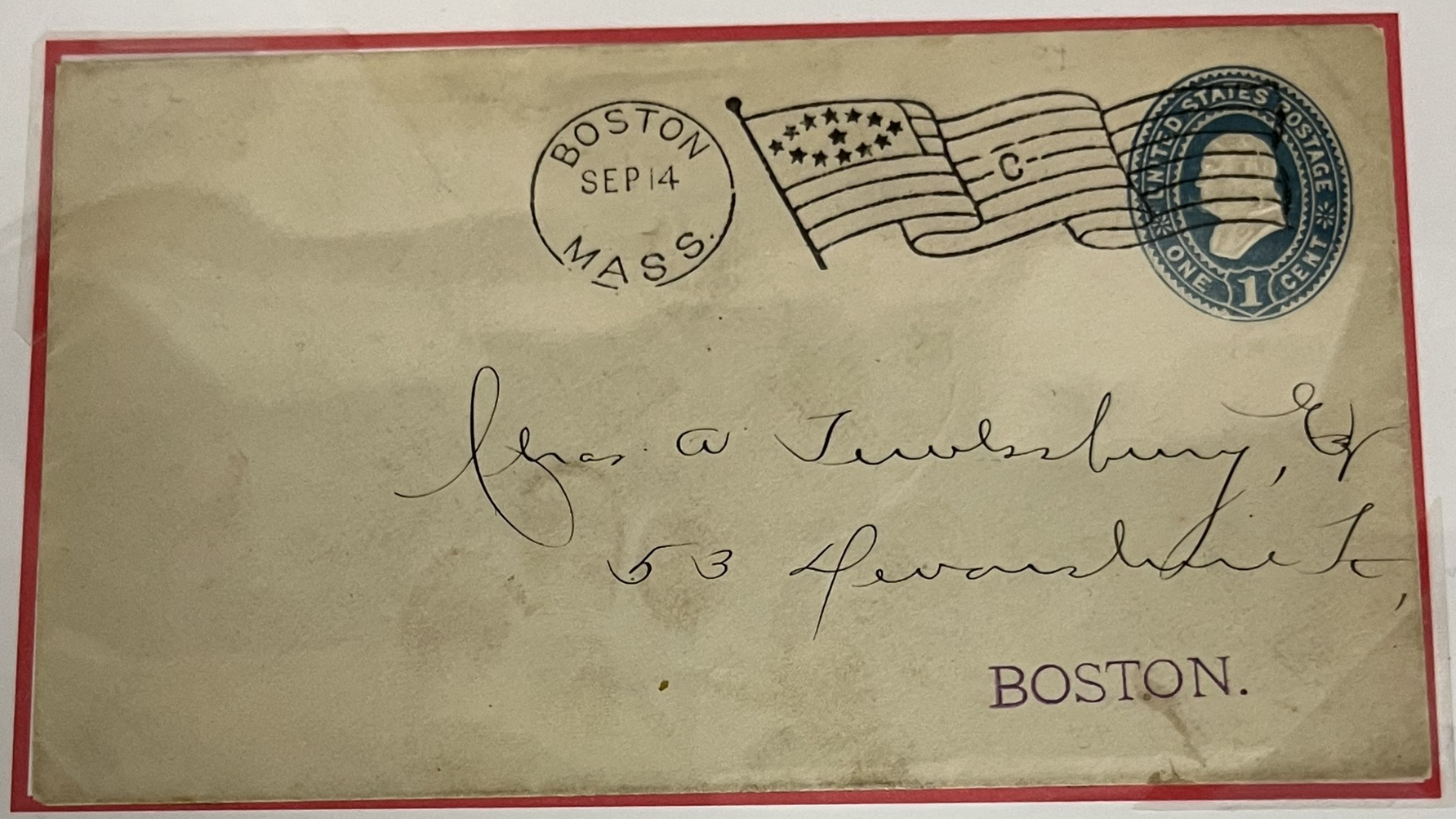
BOSTON OCT 8 9-PM 18 MASS.

UNITED STATES POSTAGE TWO 2 CENTS

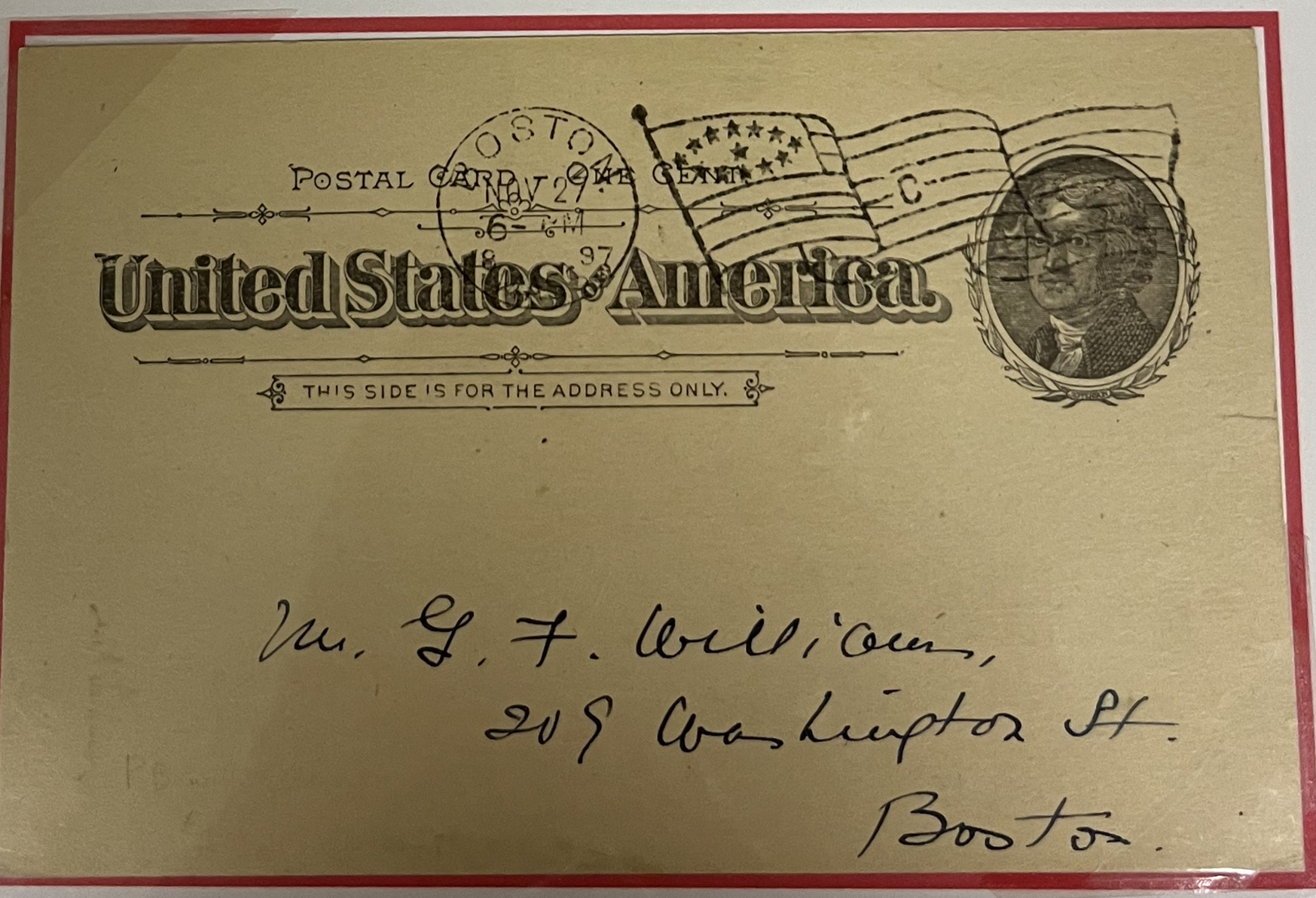
Mr. Thatcher Gladding
c/o Theta Delta Chi
Box VI. Cotter.
Box 17.
Cambridge,
Mass.

Business Manager.

As with other flag dies, mixing the top and bottom halves of different types of dials produced errors.



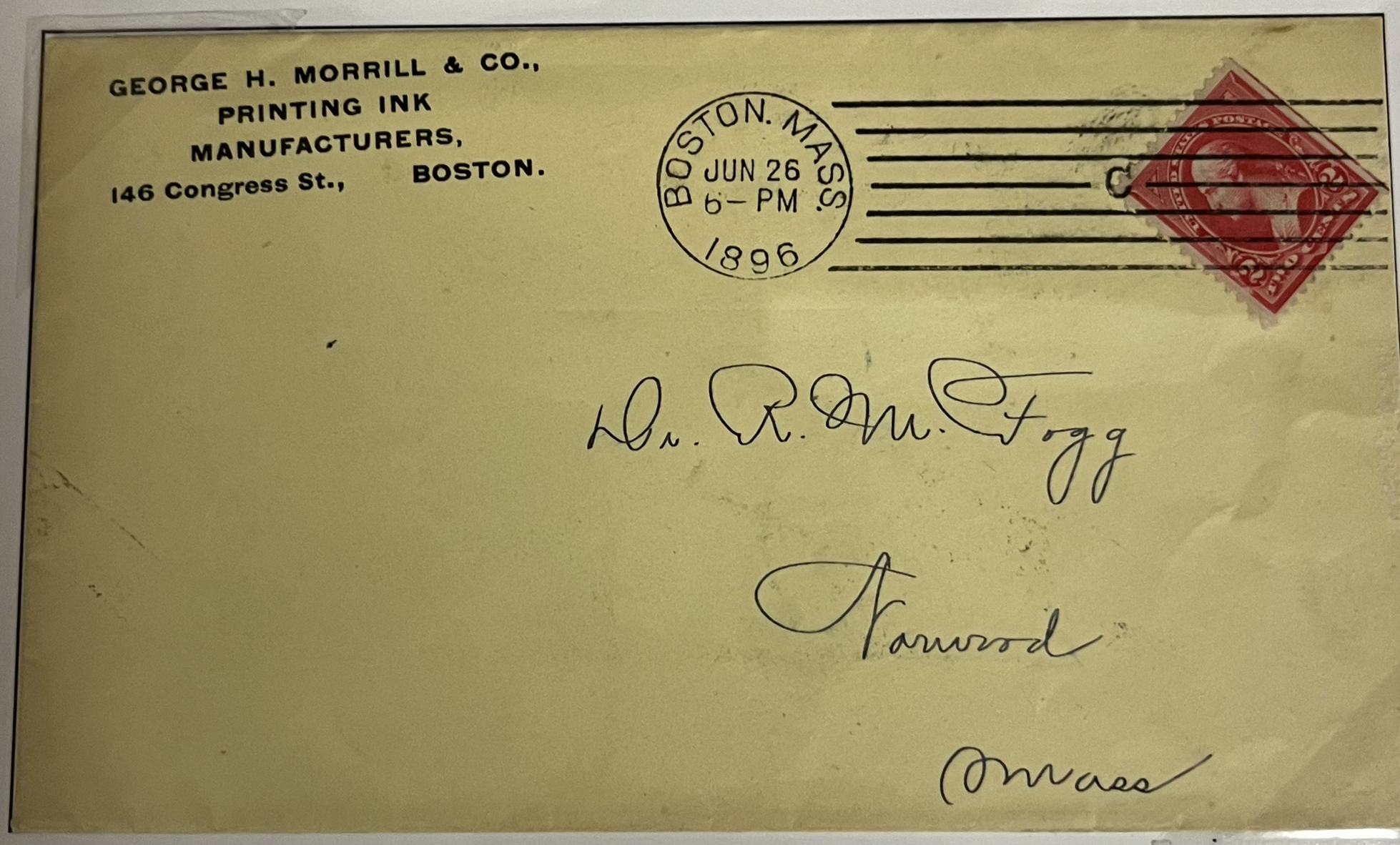
Top half of American Type B dial with bottom half of Imperial dial. Error lacks the year date.
In use: August 19 to September 14, 1897. **Latest recorded date of use**



Top half of Imperial dial with bottom half of American Type B dial. No data omitted or duplicated, but regarded as an error. *In use:* November 11 to December 31, 1897

Imperial Test Cancels

For about six weeks prior to introducing their involute flags, the Imperial company ran tets with a seven-bar canceller. The existence of these cancels suggests that three as-yet-unidentified cancels are also Imperial products.



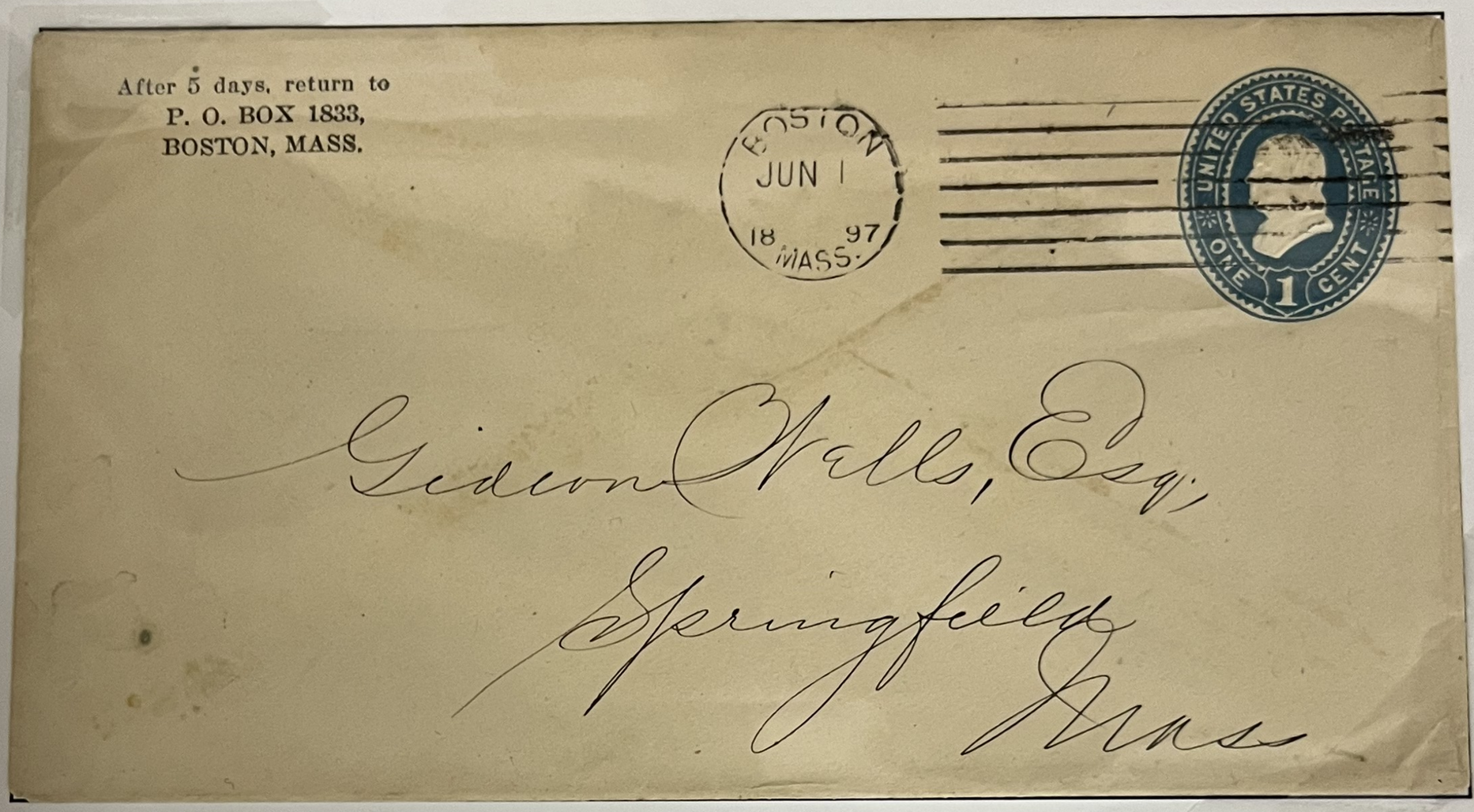
Imperial test cancel. *In use:* May 25 to July 8, 1896

Imperial or Not?

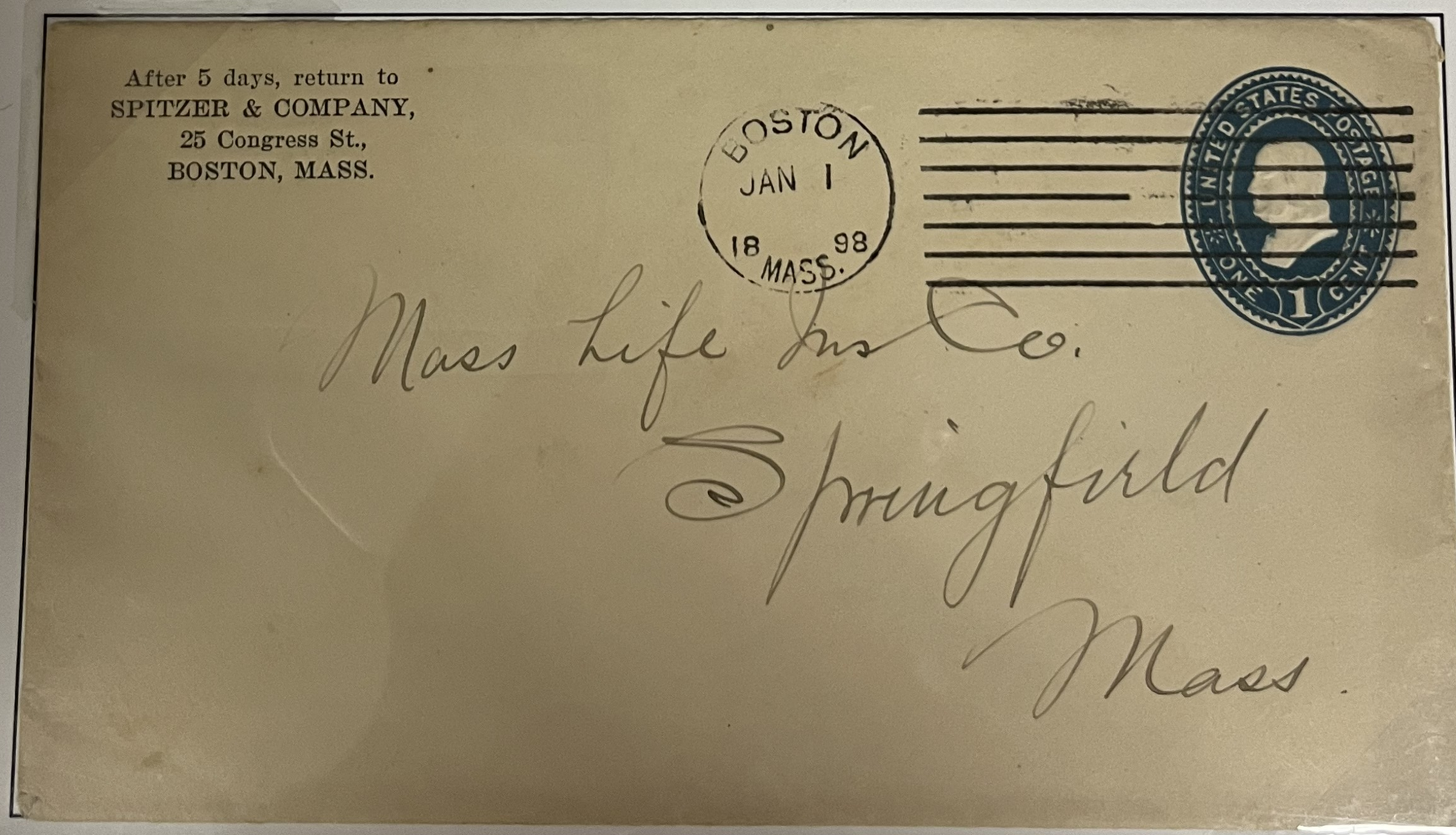
Three varieties of a seven-bar canceller are known from Boston in a very few copies with dates ranging from 1896 to 1898. Only two examples are known on first class mail, making precise dating difficult. The seven-bar cancellers are found with three different American dials: a Type D in 1896, and two different Type B dials in 1897 and 1898. While the use of American dials would seem strong evidence that the cancels are products of the American Postal Machines Company, that company never used a seven-bar design. The Imperial seven-bar test canceller leads some to believe that these are Imperial machines, which are known to have accepted American dials. For the time being, the parentage of these cancels is best regarded as undetermined.

The few known copies of the unattributed cancel from 1896 are all third class usages.
. Even an approximate usage period is unestablished

Only two of the varieties with an American Type B dial are known with first class usages. The third class usages, however, are not infrequently seen with a month and day in the dial and only the time of day being omitted.



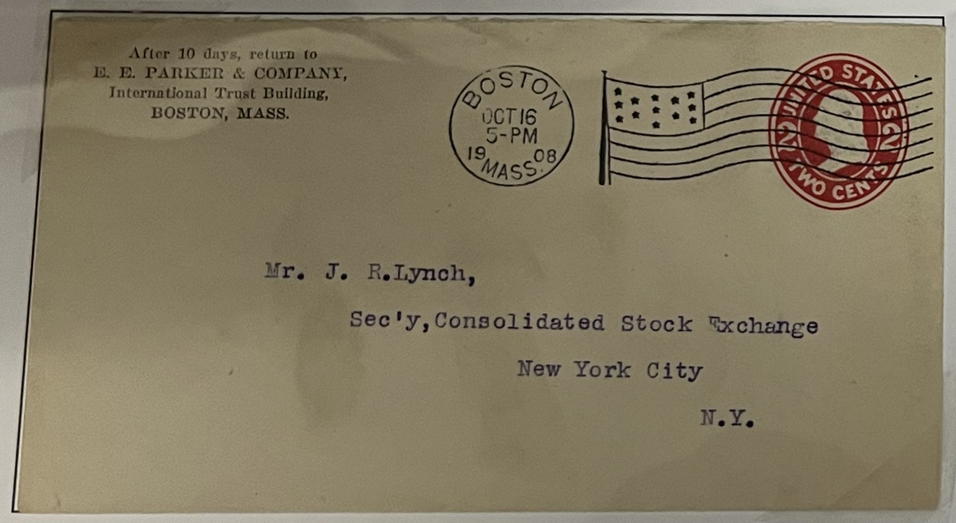
1897 dates known from several months during the year. Probably intermittent all year



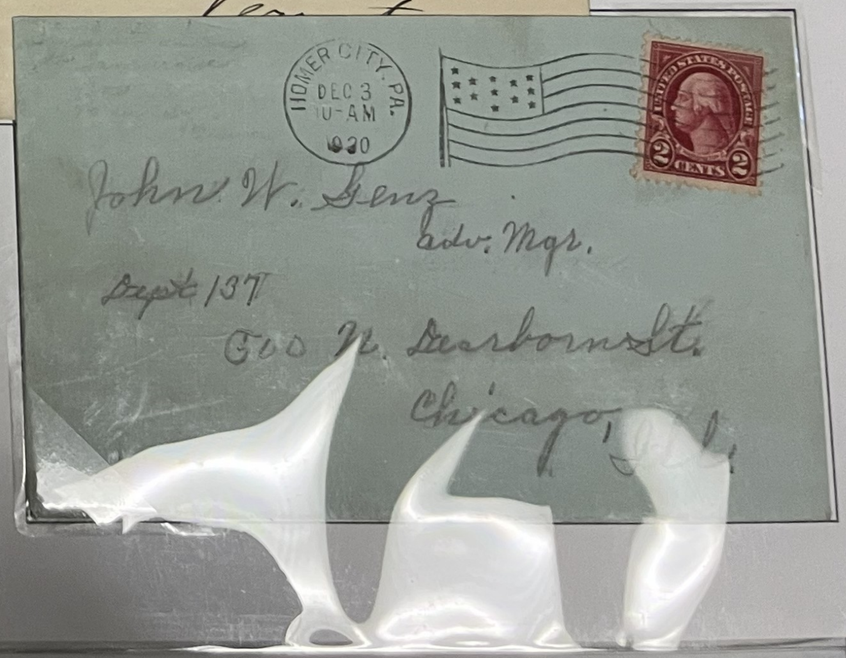
1898 variety **earliest date of use**. Latest recorded use January 14, 1898

The Movements of a Machine

A brief use of a no-diespace flag in Boston was usually followed by life in a succession of smaller post offices. This flag die was in constant use for twenty-seven years. Its very distinctive pattern of stars makes identification of later uses much easier than usual.



October 16, 1908, **latest documented use in Boston**. *In use:* portions of September and October 1908

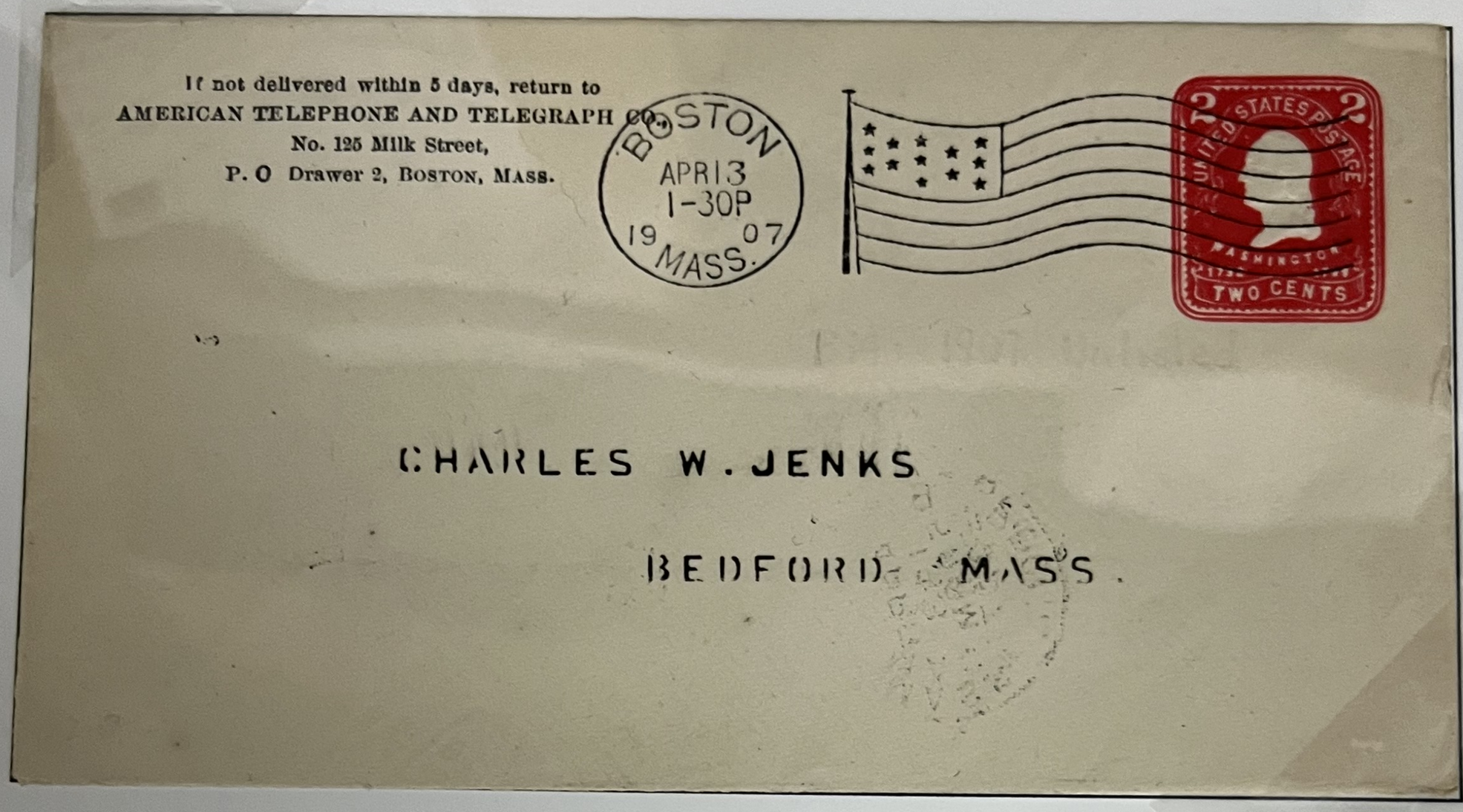


Transferred (top) to Chautauqua, New York (1909 to 1921). Then (middle) to Woodstock, Vermont (1921-1926). Finally (bottom(to Homer City, Pennsylvania (1926 to 1935)

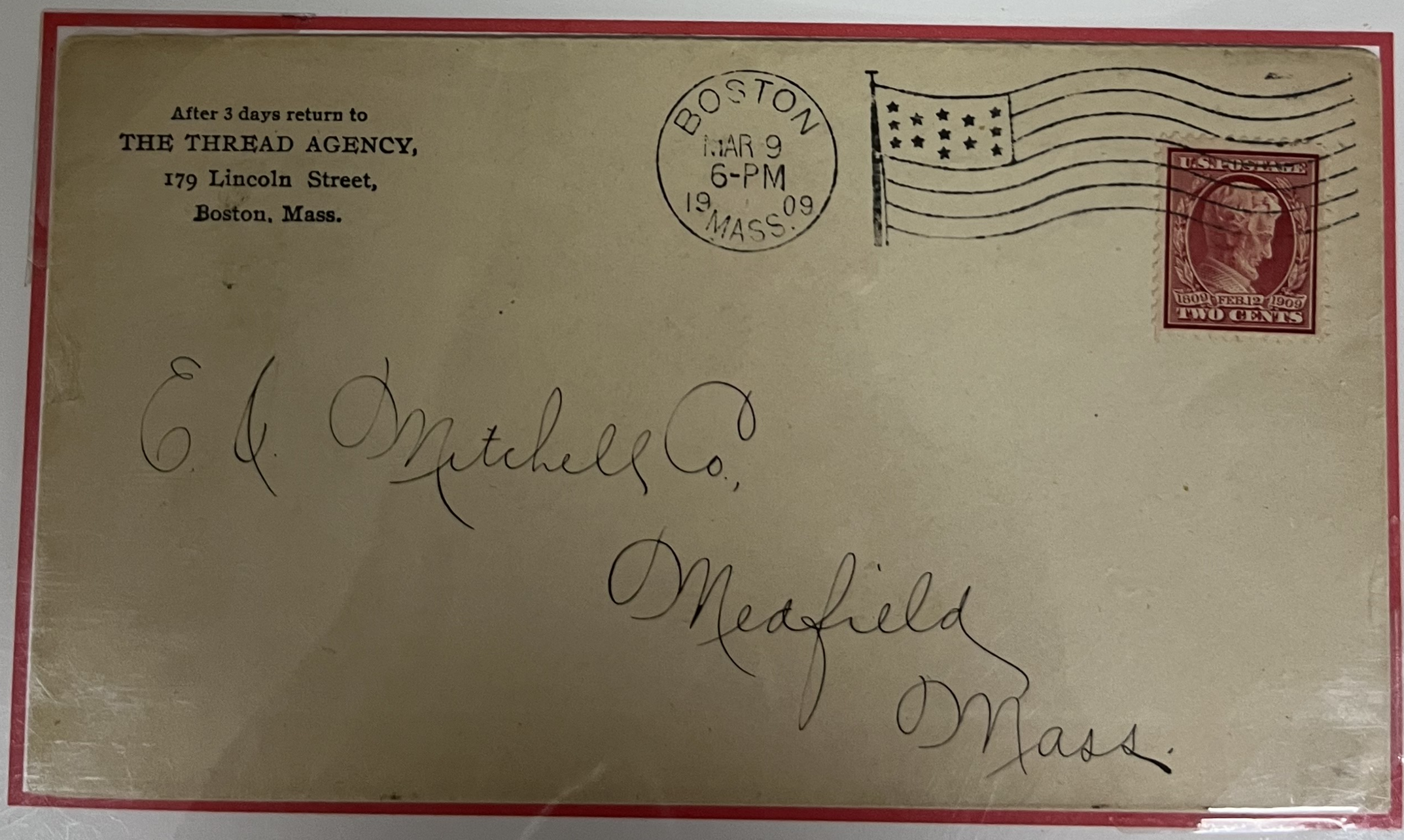
THE AMERICAN COMPANY'S BOSTON TESTS

As a rule the machines provided by the American Postal Machines Company to the Boston Main Office carried a die space for a number or letter. From 1905 to 1920, however, a number of machines without a die space were used in Boston. Most usages were brief—some only days—but a few were on hand for months or even years. Thirty-three such varieties have been identified, and, in view of the rarity of most of them, more may yet be discovered. These machines were probably being tested on live mail before going to smaller offices, and most can be traced to other locations after their brief appearances in Boston. The only other city with a similar record was Washington, D.C., where official testing was clearly involved.

The earliest Boston no-diespace flag recorded. **The discovery copy** (1973). One other identically-dated copy since found. Machine in Macomb, Illinois by October 5, 1905



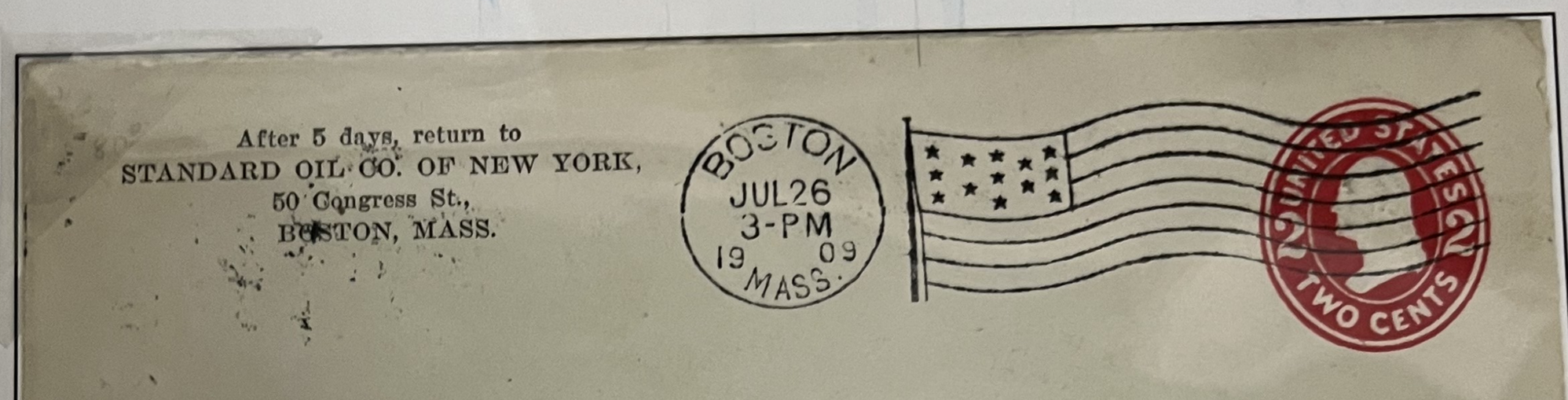
Labeled as Boston's earliest no-diespace flag when found in 1971. In Winnetka, Illinois later in 1907.
Two copies known, both with the same date



Most recently discovered Boston no-diespace flag, first reported in 1991. **No other copy known**

The Summer of 1909

Eight different no-diespace flag dies yielding nine varieties appeared in July and August of 1909, and many of these saw usages over several weeks. The explanation for this unmatched activity is unknown.

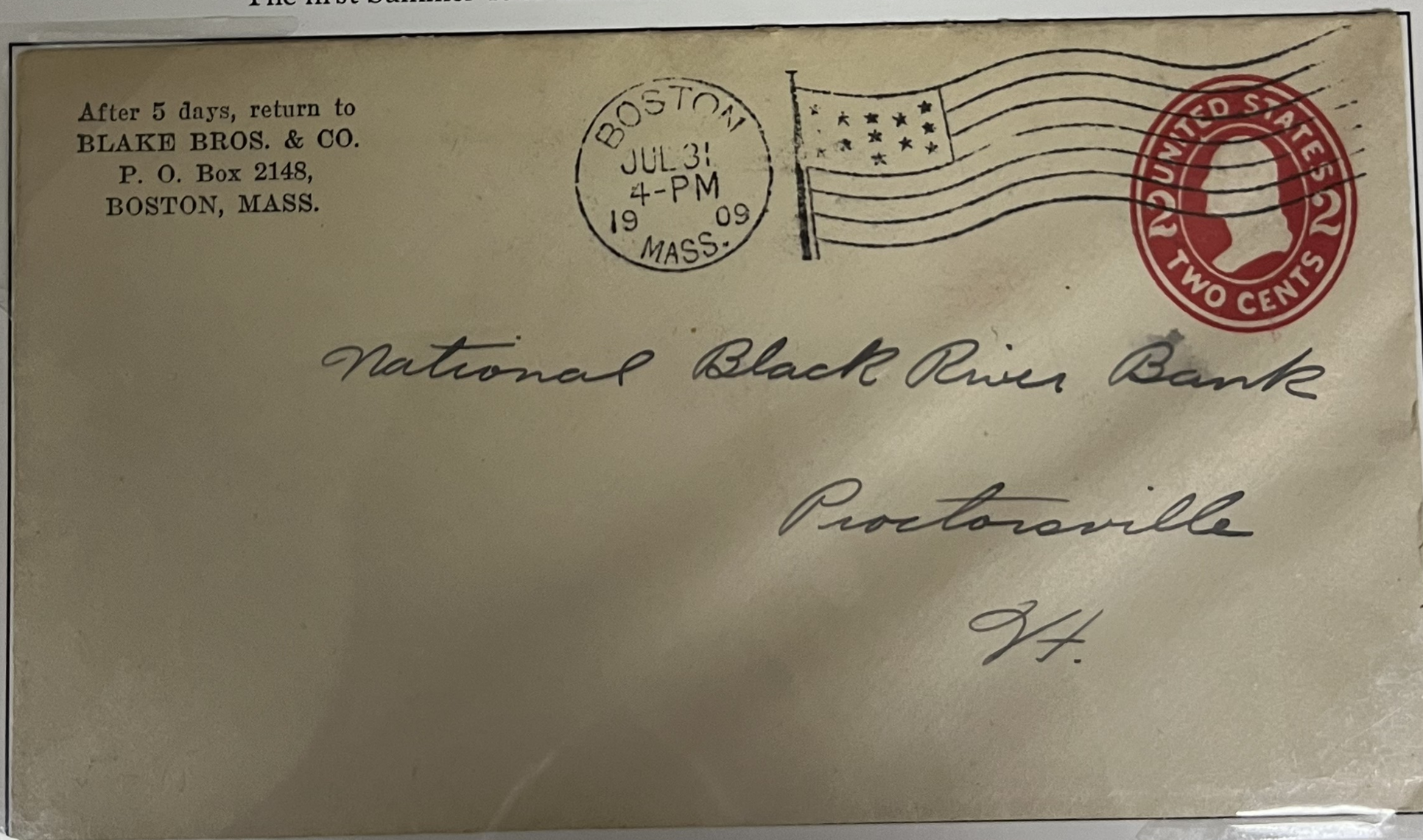


Norton Co

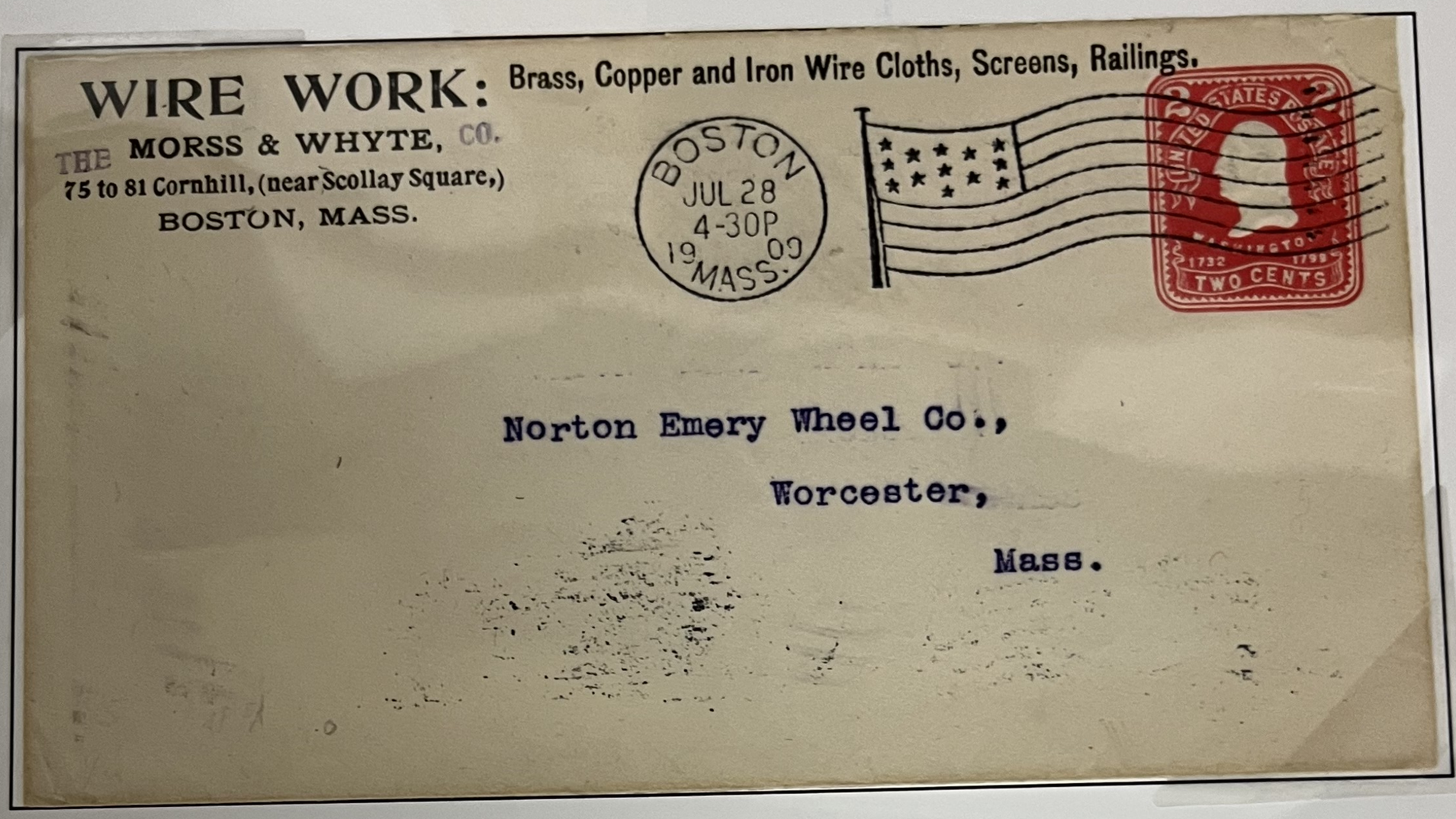
Worcester

Mass

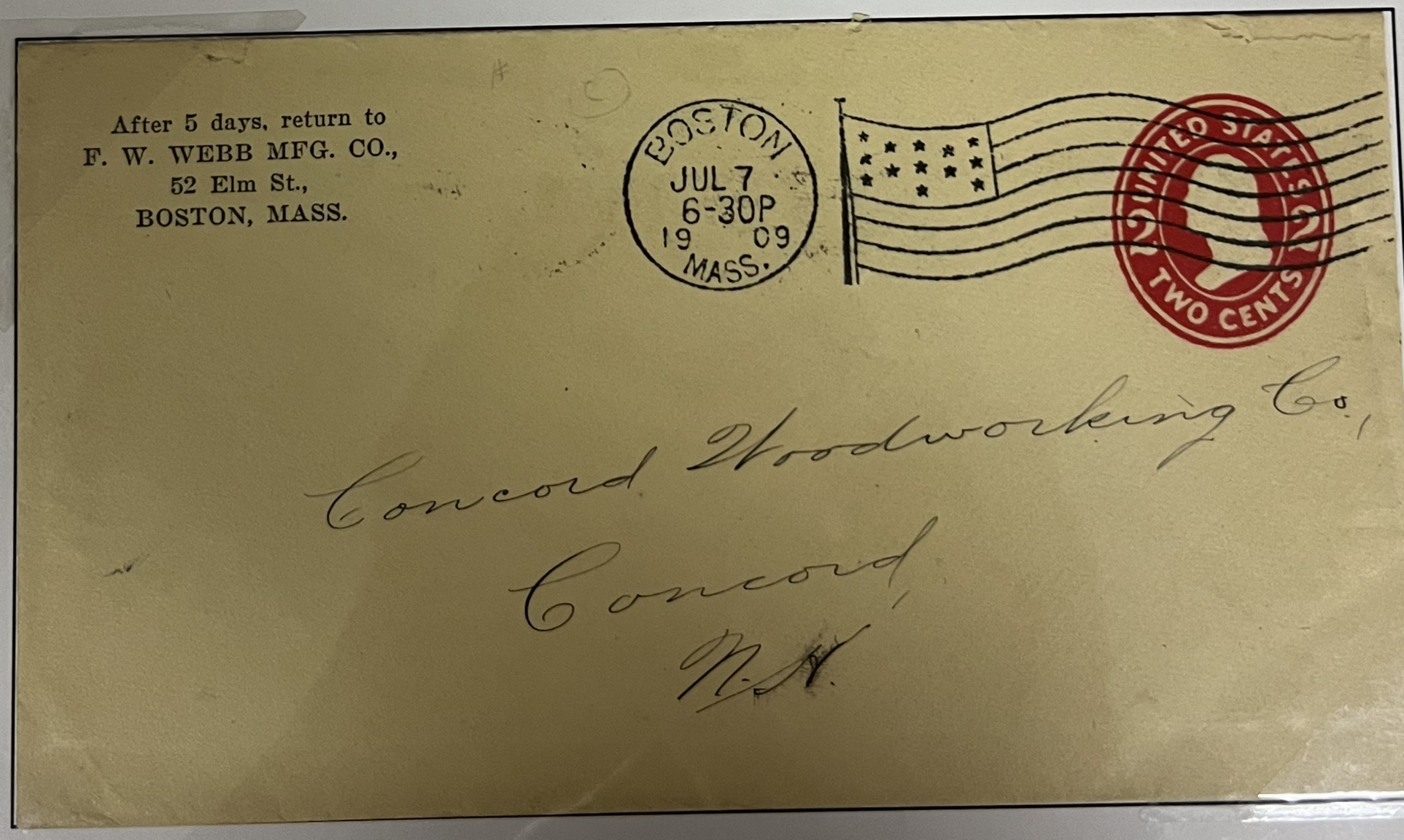
The first Summer 1909 machine. *In use:* About July 3 to August 2, 1909



July 31, 1909. Two other copies in early July recorded.

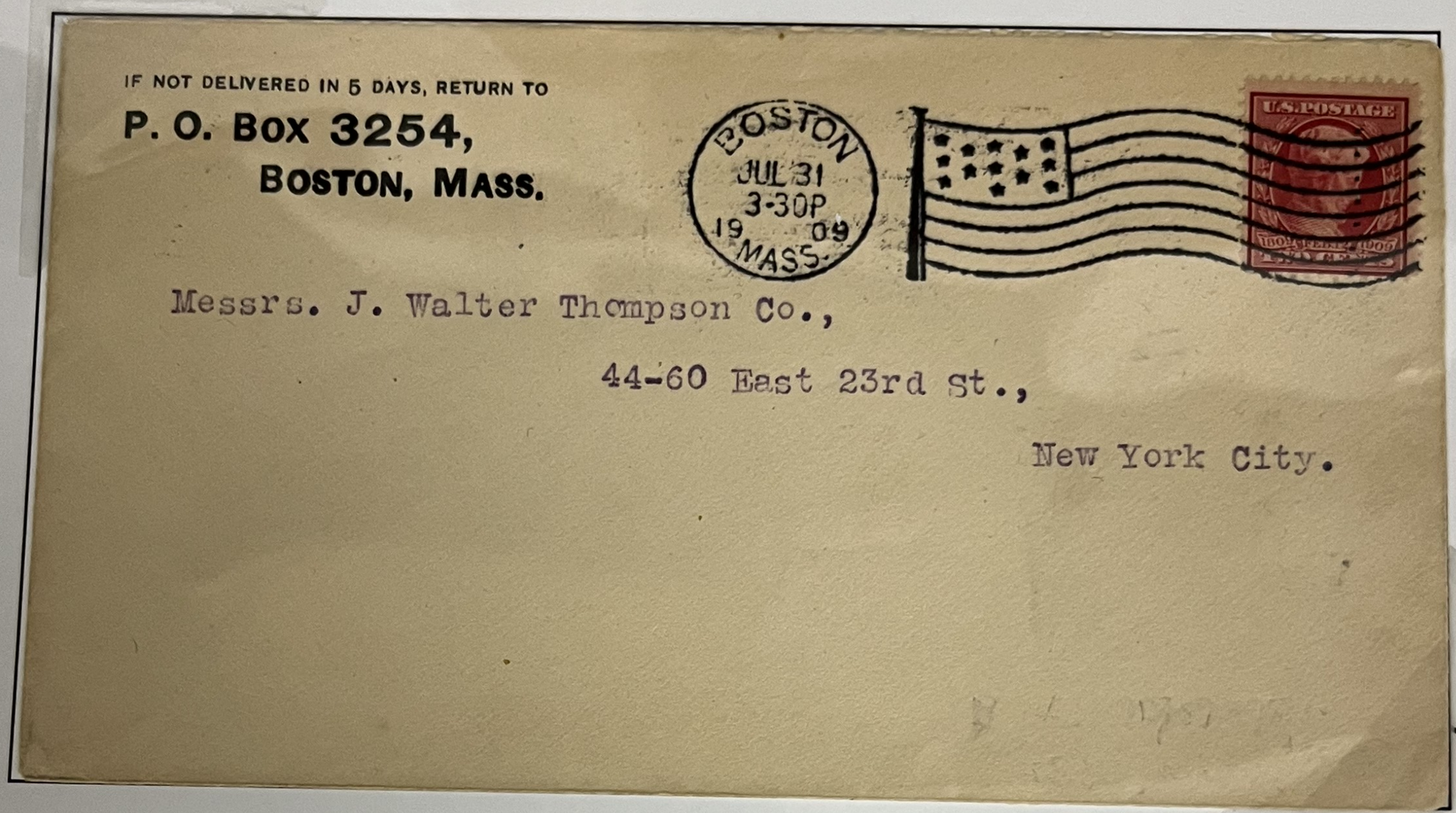


In use: About July 3 to August 24, 1909

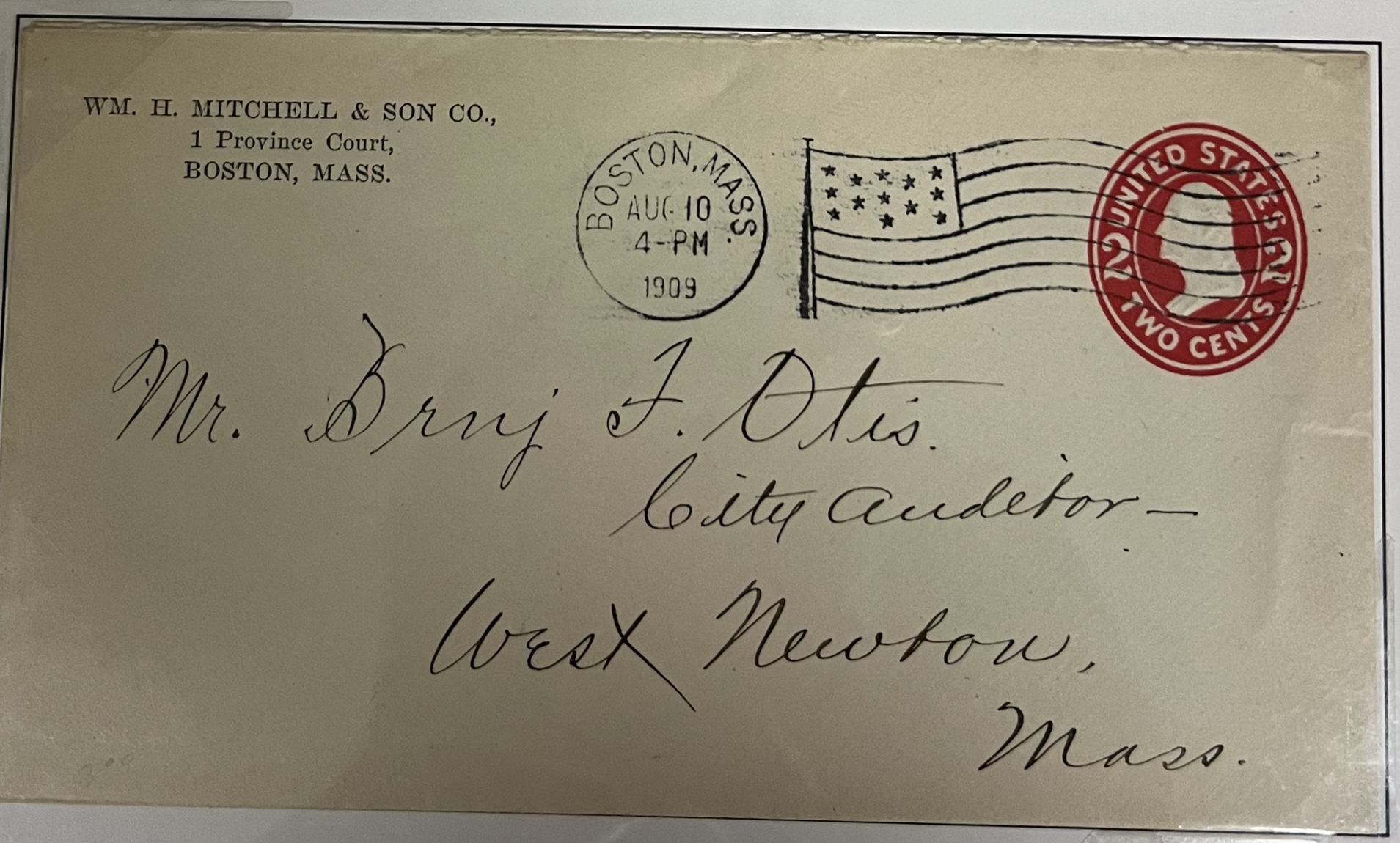


In use: About July 7 to August 21, 1909. In Nashua, New Hampshire before the end of 1909

This no-diespace flag die from the Summer of 1909 has been found with two different types of dials.

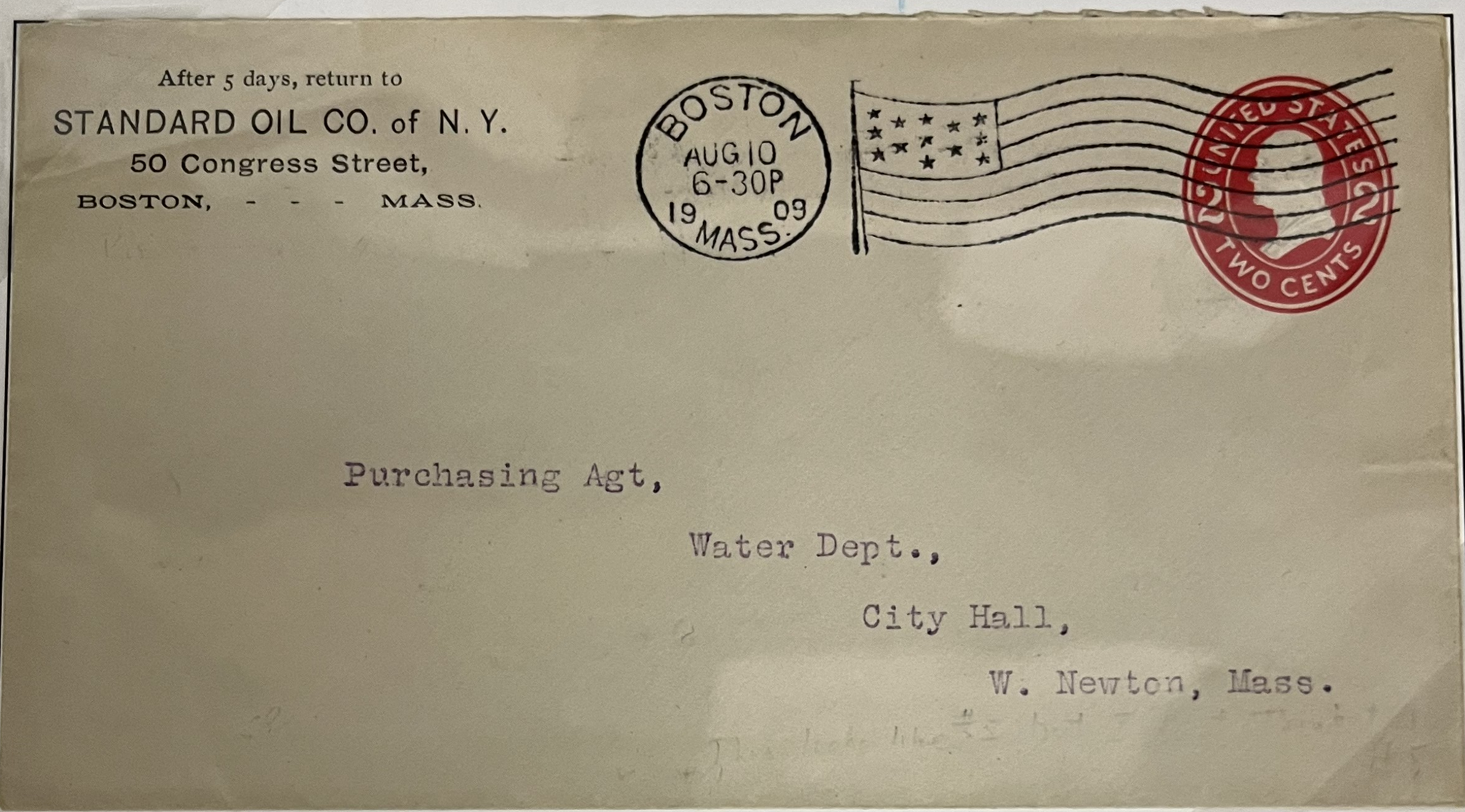


With split-year Type B dial. July 31, 1909 the only date known

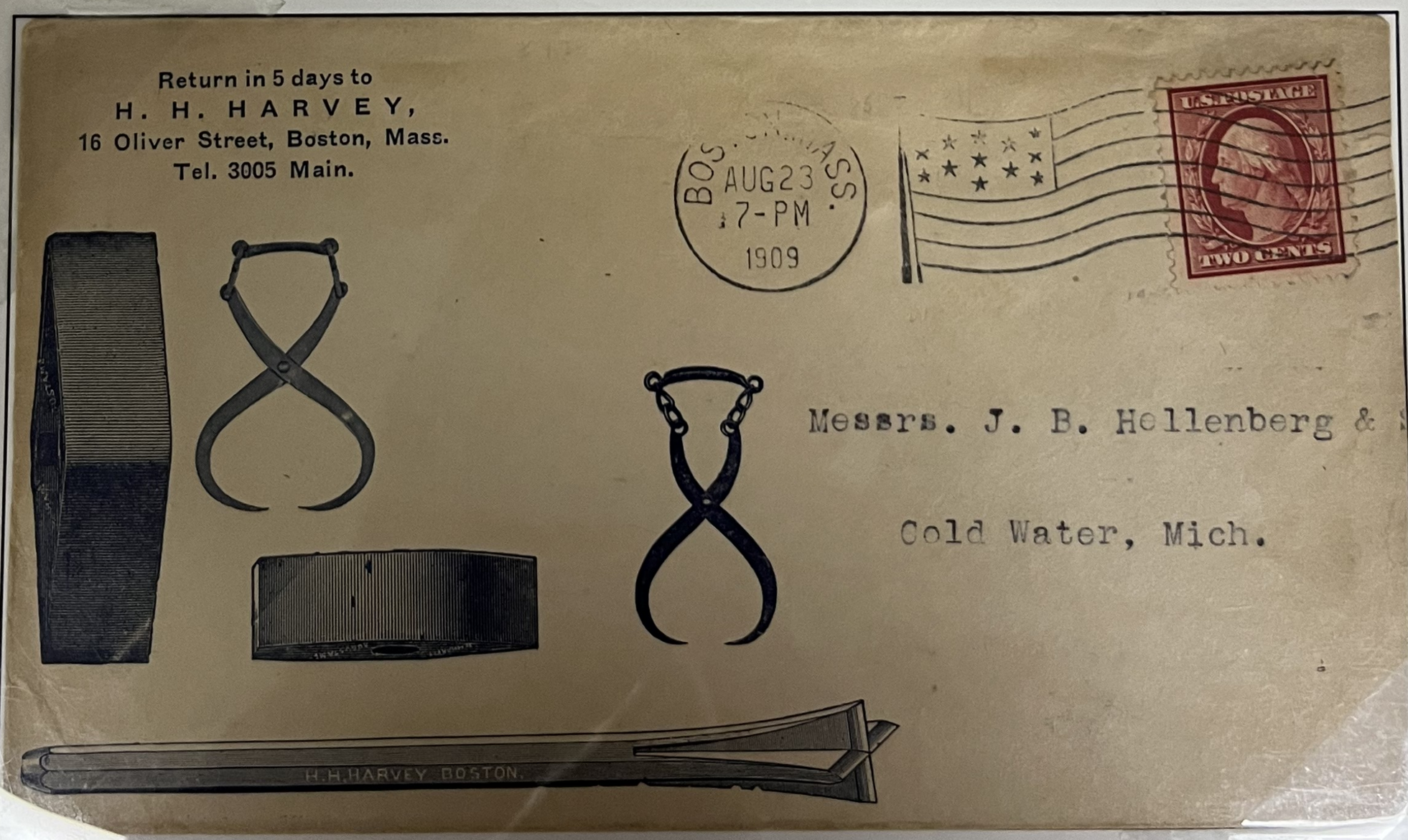


With Type A dial. *In use:* About August 6 to 26, 1909

Final two Summer 1909 flags. The ninth variety, used with a Type D dial, is shown earlier as "a throwback."



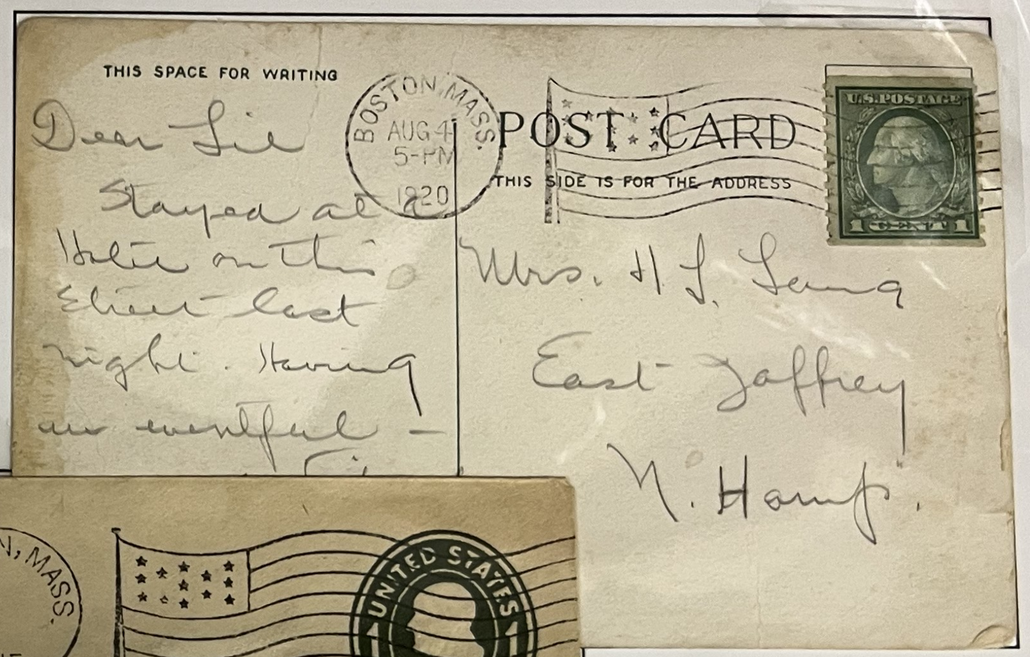
In use: About July 26 to August 19, 1909. In Pierre, South Dakota early 1910



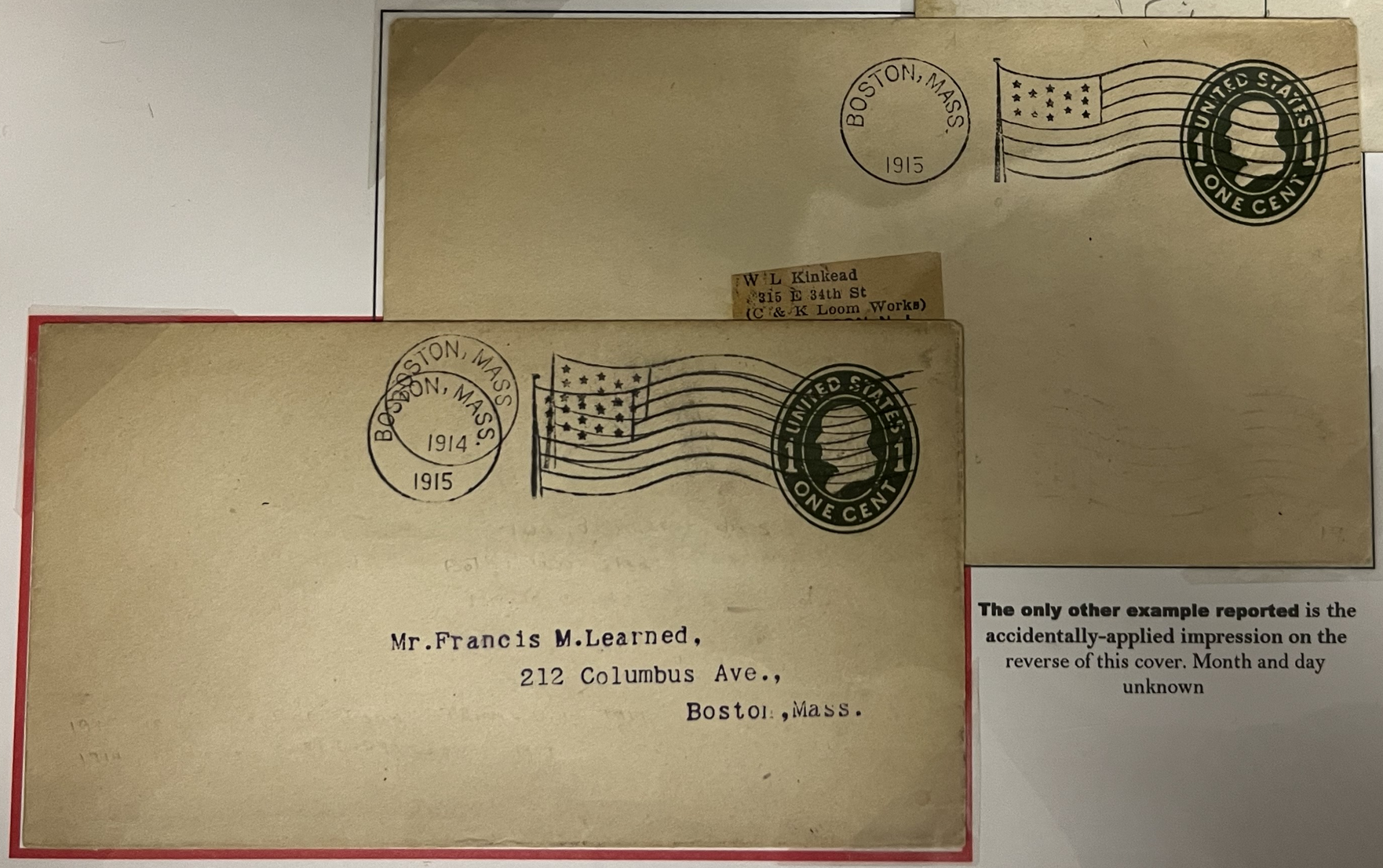
In use: About August 11 to 27, 1909

The Final Few

With no recent design innovations and no Post Office orders for machines after 1917, the no-diespace flags found in Boston from the end of 1914 to 1920 are unlikely to have been there for testing. Of the nine machines from this period, these four saw extremely brief usage.



Final Boston no-diespace flag.
Three copies reported, all dated August 4, 1920

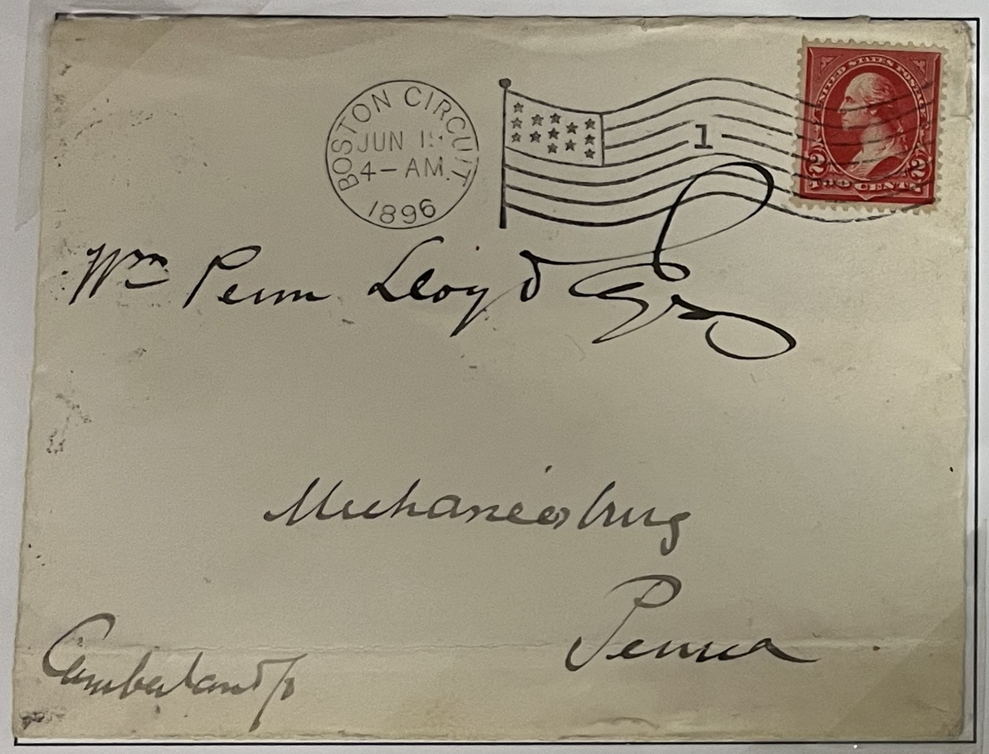


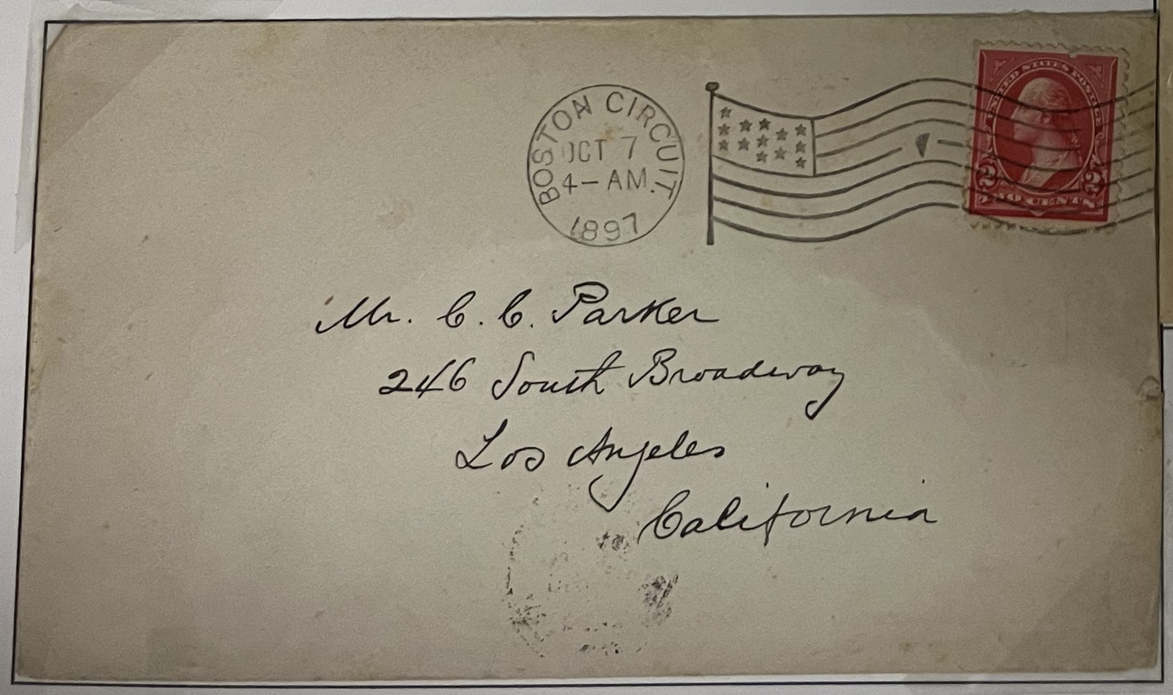
The only other example reported is the accidentally-applied impression on the reverse of this cover. Month and day unknown

First reported in 1975, imprints of **two different flag machines on the same cover and no other Boston copy of either die reported since**. Presumed to be December 1914 and January 1915. The 1914 die went to Fort Dodge, Iowa; the 1915 die went to Saratoga Springs, New York

BOSTON STREET RAILWAY POST OFFICES

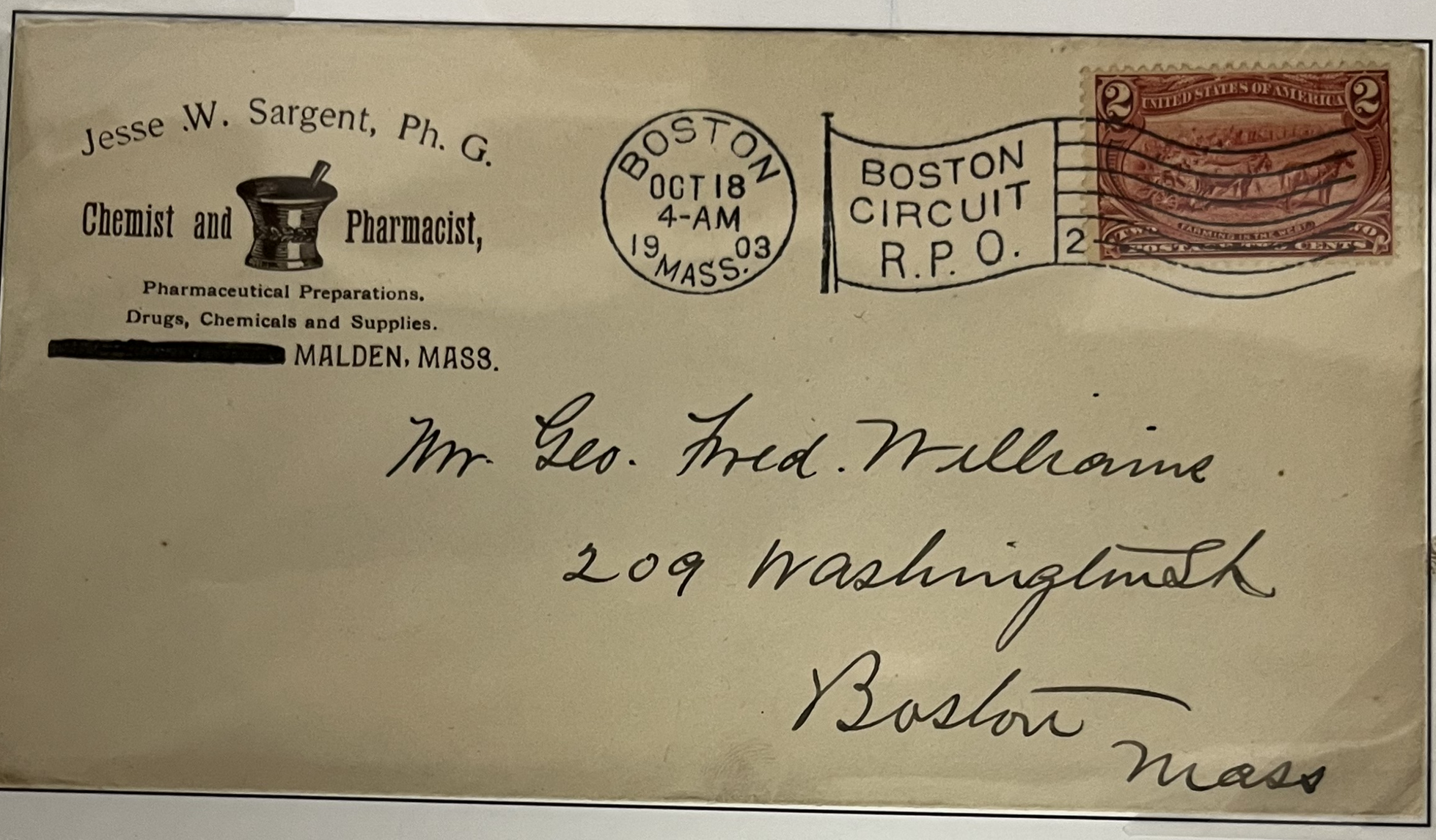
After successful experiments in St. Louis, Boston was among the first to inaugurate street railway mail service using converted street cars that were essentially small scale railway mail cars. The Boston Circuit R.P.O. began in June 1895 with two routes, each of 20 to 25 miles. In October 1895 the Boston Circuit became the first to install a cancelling machine on a car.



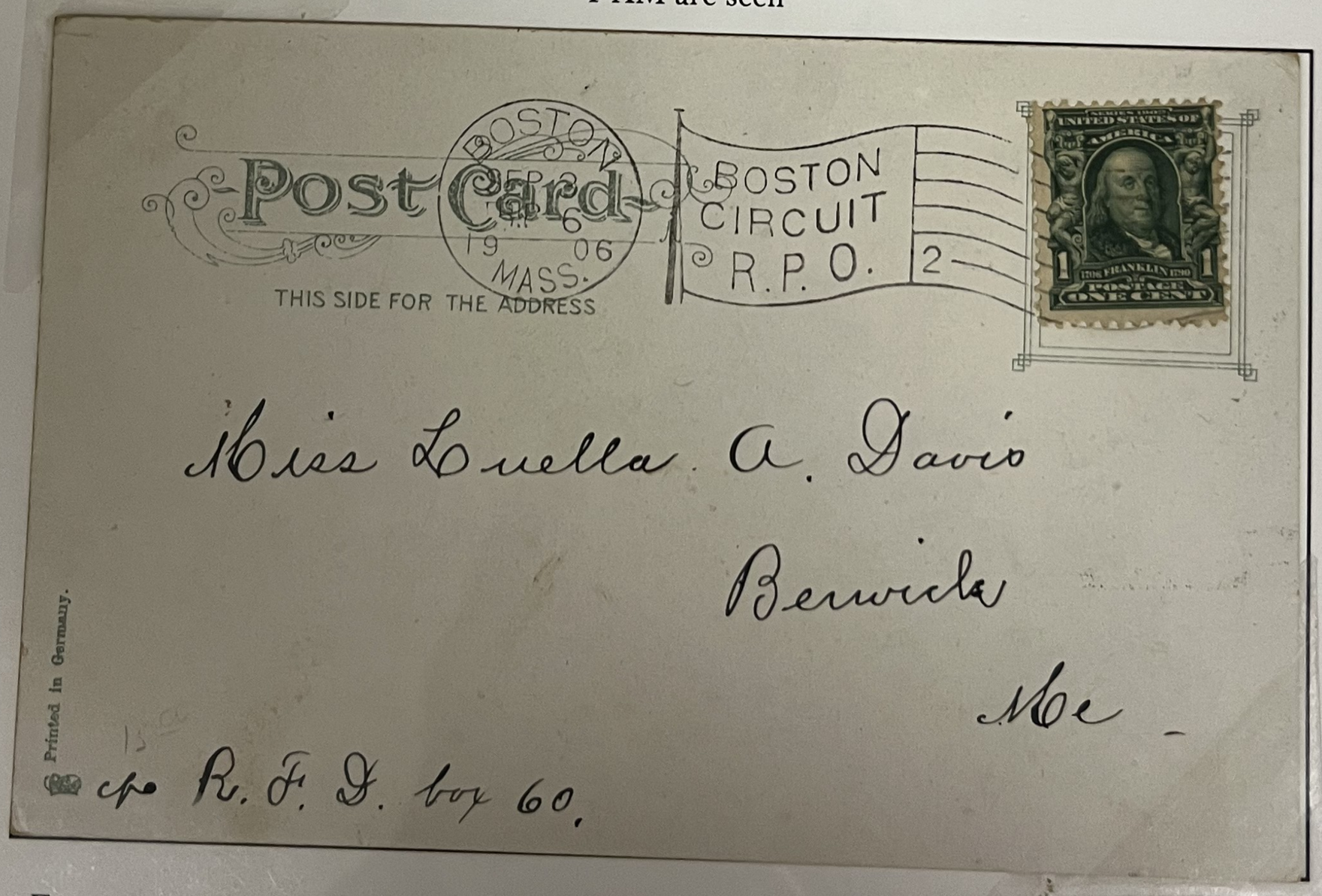


The first street car machine cancel (top left) was in use from October 14, 1895 to mid-September 1896. At that point (bottom left) a triangle was inserted in the diespace in lieu of '1' and was used through 1897. Beginning in 1898 two different dies with text in the flag were used: the first (top right) from 1898 to 1912 and the second (bottom right) from 1912 to 1915, when the service was discontinued

From late 1902 to 1913 the Boston Circuit had a cancel with a '2' in the die space. A photograph of the interior of a postal street car provides evidence that at least one car had two cancelling machines on board, suggesting that the '2' did not designate a second car or the second of the two Circuit routes.



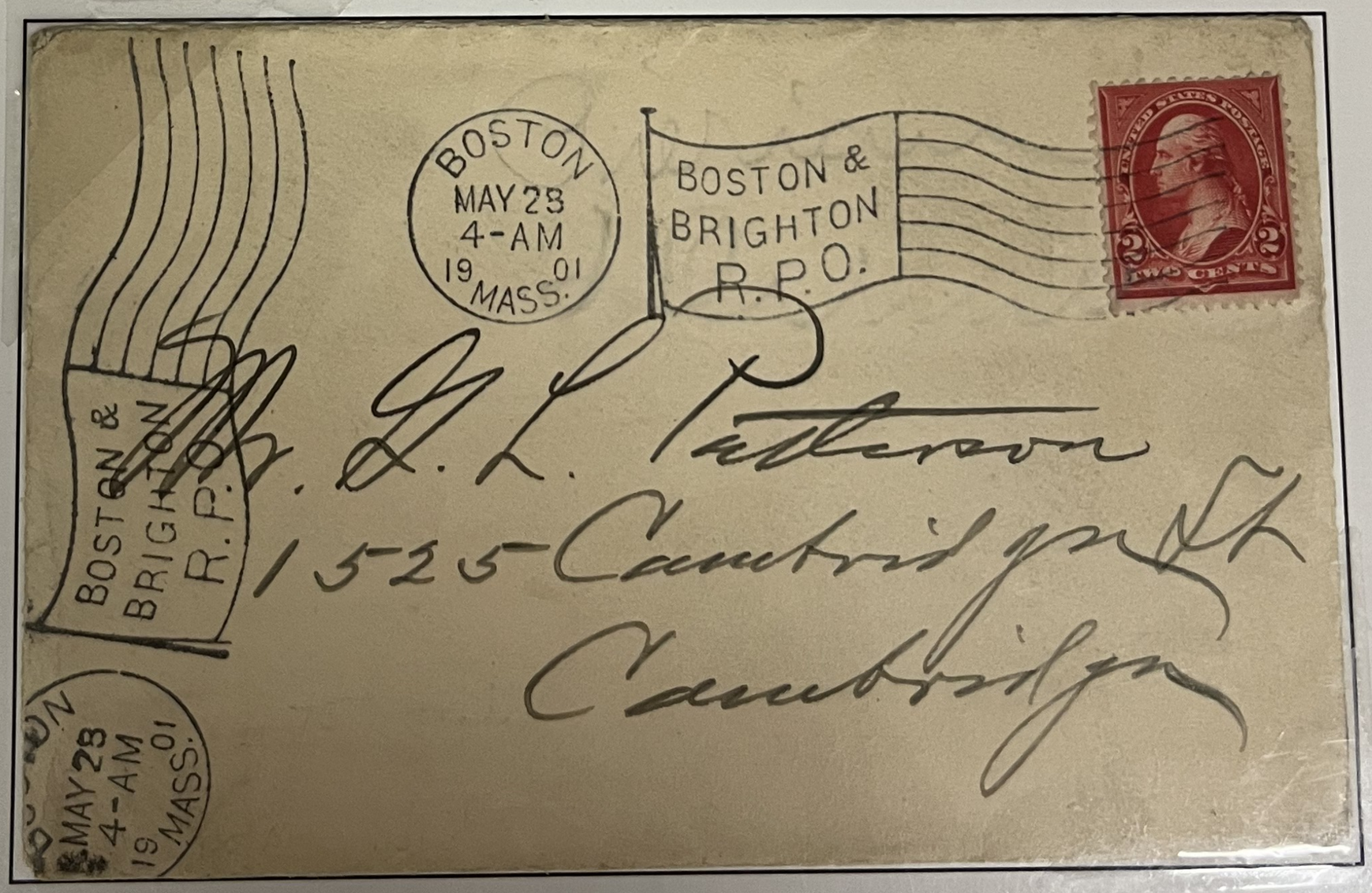
Although the dial shows a time of 4-AM such times were for the start of the trip. Times of 10-PM and 2- and 4-AM are seen



From August 18 to September 10, 1906, the dial indicated the TRIP number rather than the time. This copy: September 3 and TRIP 6

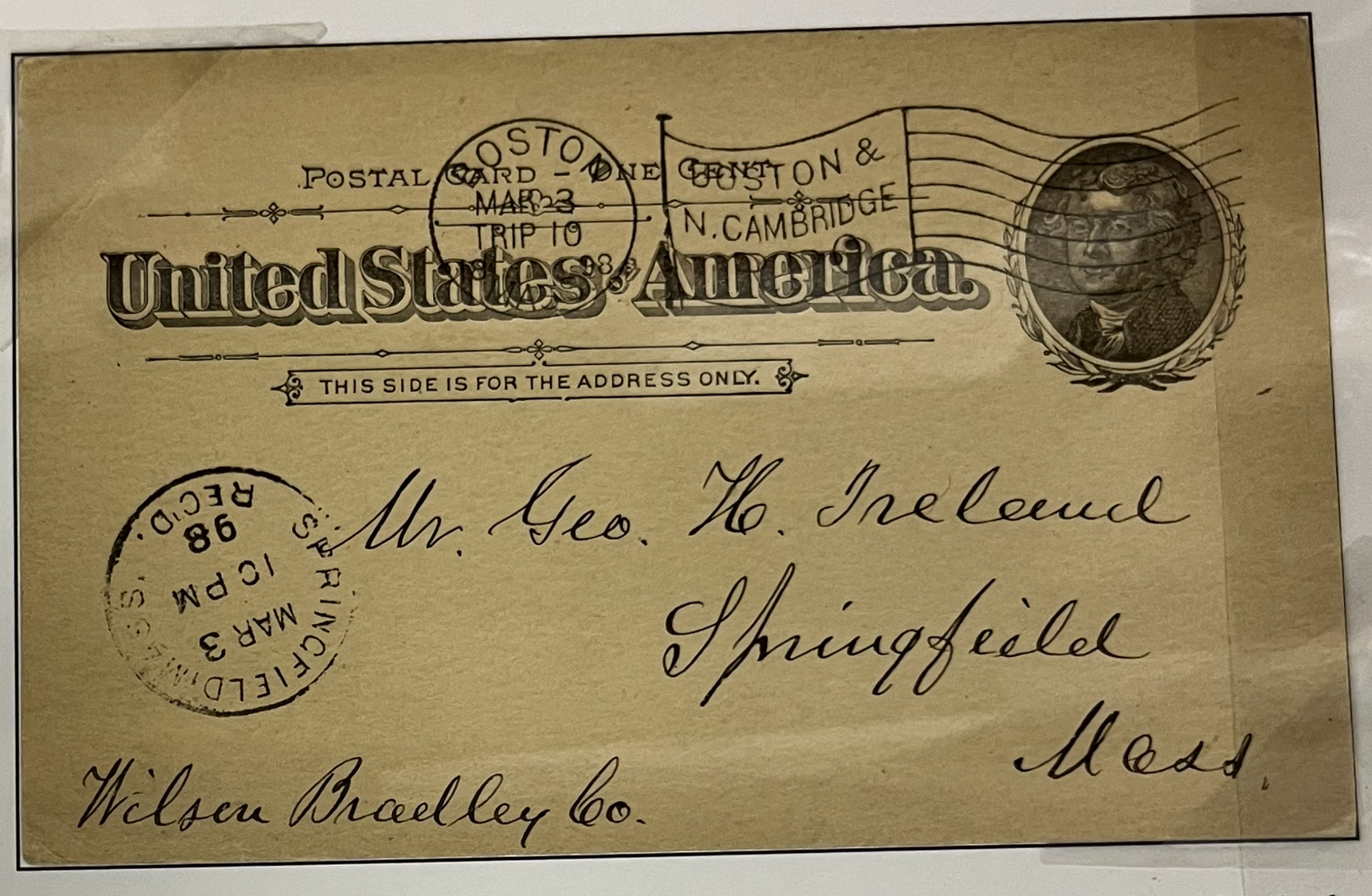
Boston had six other postal street car routes, all but one of which are now known to have briefly had flag machine cancels. Of these, the machine cancel with the longest life was that of the Boston & Brighton R.P.O. which was used from December 1898 to June 1907.

The Brighton line also used both time and trip numbers in its dials, but, unlike the Boston Circuit, TRIP was more common. *In use:* 1898–1907



Cancels with the TIME designation in the dial are known on a single day in December 1899 and irregularly from May 28 to June 7, 1901. **Five examples reported**

Each of the other four postal street car routes from which machine cancels are known apparently had the machines for less than a year in 1897 and1898, although the lines were in operation from 1895 to 1915.



Cancels of the Boston & North Cambridge line have been seen with Trips 8, 10 and 12 in the dial. *In use:* November 1897 to November 1898

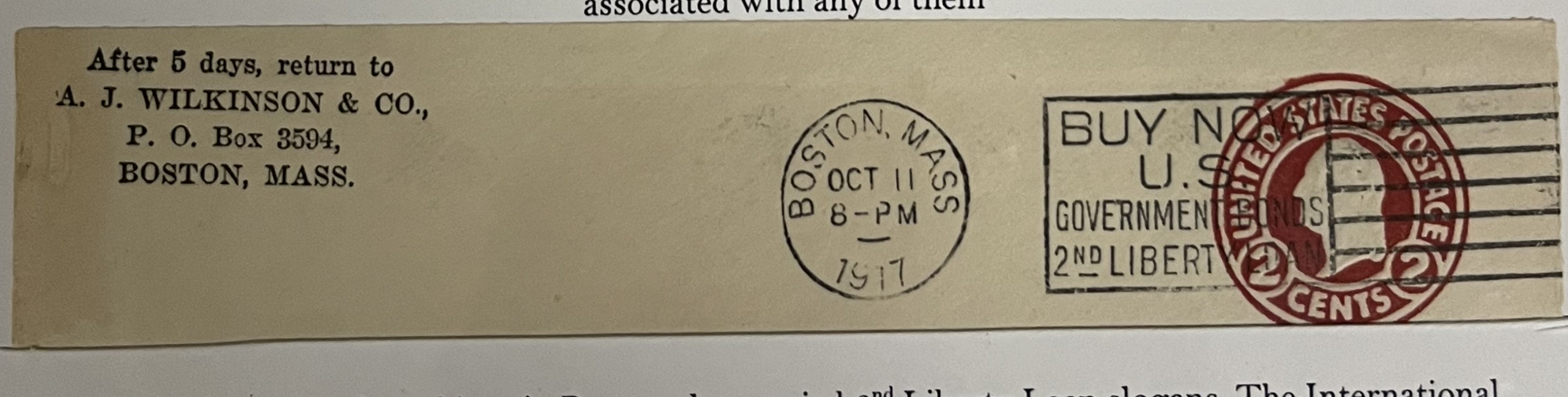
Cancels of the Boston & Somerville line have only been seen with Trip 16 in the dial. *In use:* mid-February to mid-November 1898. **Four examples reported**

American Postal Machines Company

THE COUNT DOWN WITH SLOGANS

9 **October 1, 1917** Boston was the last major city with flag machines, but at the beginning of World War I it had only nine machines in regular service—fewer than half of those in use at the turn of the century. On October 1, 1917, all of the remaining flag machines—four with Type A dials and five with Type B dials—were fitted with dies promoting the 2nd Liberty Loan Drive. When the slogans were removed at the end of October, only eight machines remained. The WWI slogans provide a graphic image of the decline of the machines developed in Boston in the nineteenth century.

2nd Liberty Loan die "9". Discovered in 1990. **Four copies recorded from October 2 to 17, 1917**
The die numbers for all of the slogans, shown in quotes, are arbitrary, since no machine number has yet been associated with any of them



Two International machines in Boston also carried 2nd Liberty Loan slogans. The International slogan was used in 22 cities; the American flag slogan was used only in Boston.

October 31, 1917 **8**

American Postal Machines Company

8 December 1, 1917

Beginning on December 1, 1917, the same eight machines—four with Type A dials and four with Type B dials—were fitted with "Food Will Win the War" dies. Between December 1917 and February 1918 three of the four Type B dial machines were eliminated.

(Top) Die "2": one of the four slogans with Type A dials. (Above) Die "6": one of the three slogans with Type B dials that did not survive this run of the "Food Will Win the War" promotion. The relative scarcity of the B dials compared with the A dials would suggest that the former were not in constant use

April 4, 1918 5

American Postal Machines Company

4

May 6, 1918

When the 3rd Liberty Loan drive concluded in early May 1918, the four Type A dial machines were refitted with the Food Will Win the War slogans which remained in place for another ten days. These machines then continued with flag dies numbered 3, 4, 5 and 6 into 1919. After December 27, only machine 3 remained.

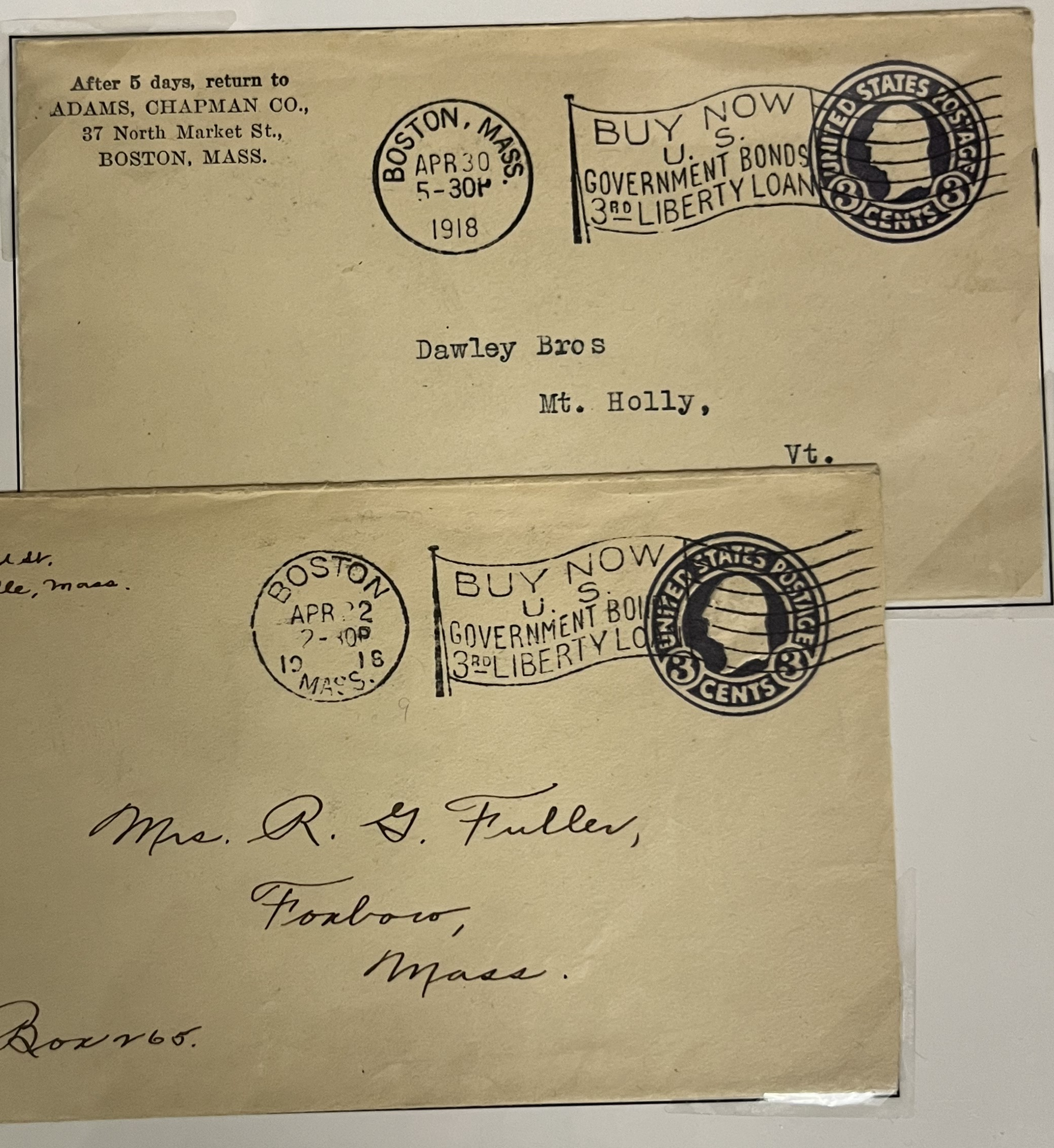
The latest recorded usage of any of the "Food" slogans (top). A post-slogan return of the flag dies (bottom). Machine 6 is using the same dial as the slogan above. The last recorded use of machine 6 is November 18, 1919

December 27, 1919

1

5 **April 6, 1918**

The 3rd Liberty Loan lasted from April 6 to May 5, 1918, and the five remaining machines with Food Will Win the War slogans were given 3rd Liberty Loan dies which had been made from routing out "2nd" and inserting "3rd" in dies used the previous October.



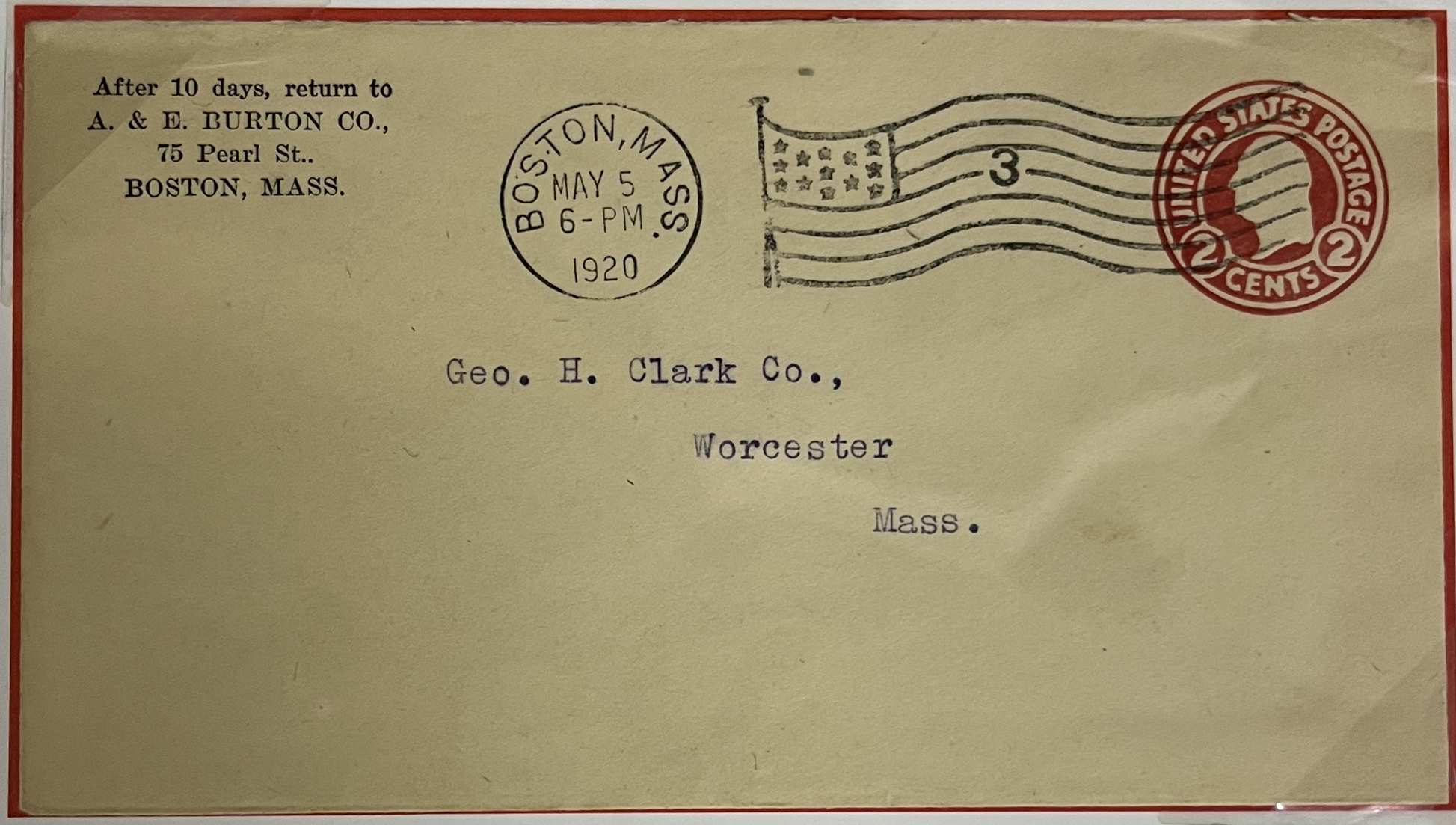
(Top) Die "4" of the Type A dials in its latest recorded use. (Above) Die "9": the only Type B dial slogan remaining. This was thought to have been a newly made die until the discovery of the same die with a 2nd Liberty Loan slogan (page 7). Even though die "9" was used until at least May 3, no Type B dial has been seen after May 6 when the Food Will Win the War dies were reinserted

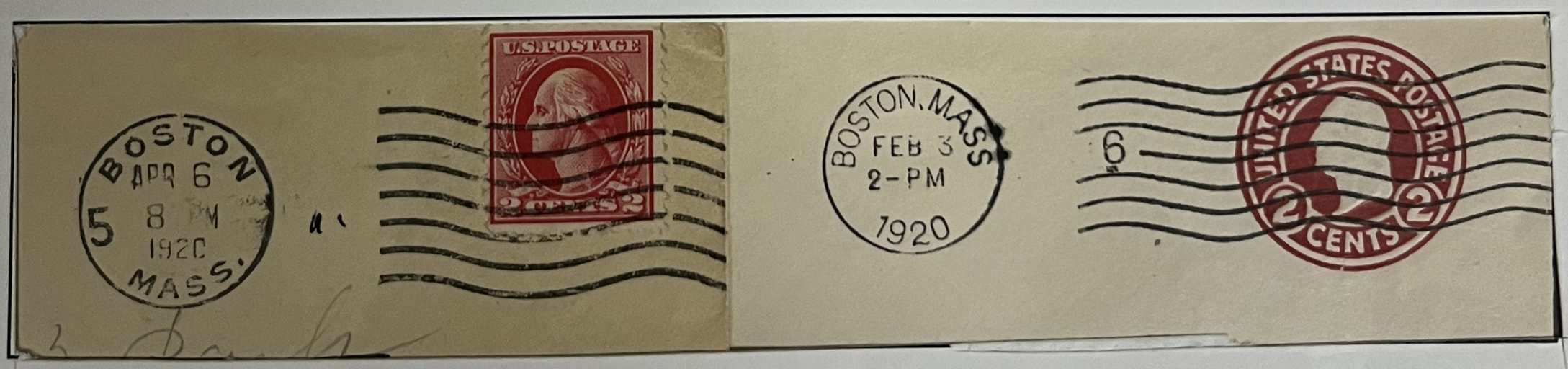
May 5, 1918 **4**

American Postal Machines Company

1 January 1, 1920

Although the literature cites flag machine 5 as lasting into 1920, no example has been seen after December 27, 1919. Machine 3 has long been credited with a final use of February 28, 1920, but the copy shown here extends that date by more than nine weeks. Such a long interval would suggest that the machine was very little used after 1919.





Universal machine 5 and International machine 6 (above) with dates earlier than the machine 3 flag (top) make it unlikely that flag machines 5 and 6 lasted as long as flag machine 3. The last recorded usage of flag machine 4 is in November 1919

May 6, 1920? 0