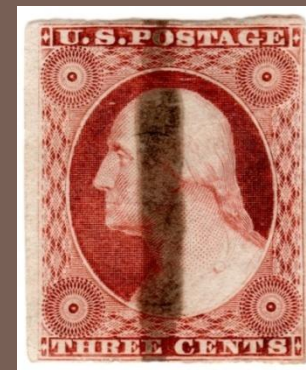
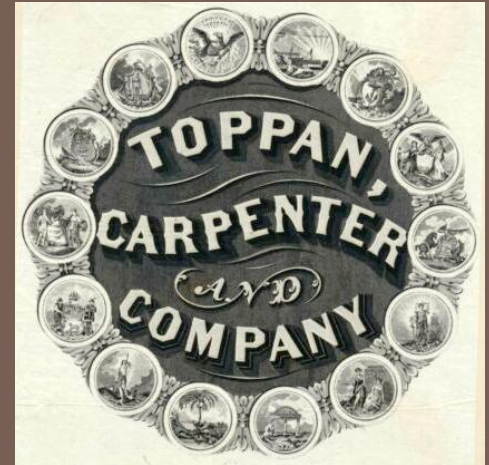


THE DEVELOPMENT OF PERFORATIONS ON U.S. POSTAGE STAMPS BY TOPPAN, CARPENTER, CASILEAR & COMPANY: 1855 – 1857



*BASED UPON THE SEMINAL RESEARCH
OF W. WILSON HULME, CURATOR, SI NPM

Overview

1. The Research by W. Wilson Hulme
2. Toppan, Carpenter, Casilear & Co. (TCC), and the Postal Act of 1851
3. Key Drivers leading to Exploring Perforations
4. “Brush Stroke” Special Printing of 1855 & Bemrose Experimentation
5. TCC Trials & Limited Release in Feb. 1857

The Research

Led by *W. Wilson Hulme*

3

- Pieced together the Era from a myriad of sources:
 - ▣ 3rd Asst. PMG Records, including:
 - Letter Books
 - Incoming letter files
 - Outgoing letter files
 - Travers Papers (original P.O. documents 1847-1910)
 - Original documents at the Smithsonian
 - Original documents at the National Archives
 - TCC Records (letter books, incoming & outgoing letter files) believed destroyed in fire 1873.

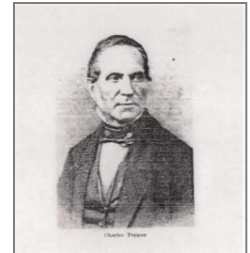


W. Wilson Hulme

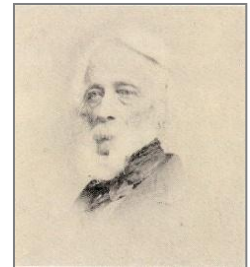
Toppan, Carpenter, Casilear & Co.

4

- In 1829, Charles Toppan founded his own engraving business in Philadelphia when he was 33 years old and specialized in Bank Notes and security printing.
- In 1837, he joined Draper, Toppan & Company.
- In 1843, Draper & Co. dissolved and it became Toppan, Carpenter & Co. with the joining of Samuel Carpenter.
- In 1850, designer and engraver John W. Casilear joined as a principle partner, at which point the company name was complete: Toppan, Carpenter, Casilear & Company (TCC).
 - ▣ Casilear left mid-1850's and became a famous landscape painter of the Hudson School.



Charles Toppan



Samuel Carpenter



John W. Casilear

The Act of 1851



5

- Congress passed the Act of March 3, 1851, titled “An Act to reduce and modify the Rates of Postage in the United States.”
- This Act was to encourage public use of the federal postal system, it established new, usually reduced, rates for more types of usages than any previous legislation and increased the postal distances per rate by up to ten times - for e.g., from three hundred to 3,000 miles.
 - ▣ A 1¢ rate for printed matter;
 - ▣ A new 3¢ rate to replace the earlier 5¢ and 10¢ rates for letters up to 3,000 miles;
 - ▣ 10¢, 12¢, and 30¢ rates and above for more complex usages.
- After a competitive bidding process in 1851, TCC won a 4 year contract with the U.S. Postal Service to print new stamps of varying denominations.
 - ▣ They turned this initial contract into a ten year business with little competitive bidding.
 - ▣ In 1858, TCC merged with a number of others (e.g. RWHE) to form the American Bank Note Company (ABNC), but continued to use its own name until 1861.

The Timeline



6

- **Catalysts** Mar. '55
- Investigative Phase Mar-Sep. '55
- Machine Ordered 21 Sep. '55
- Special Printing & Experimentation Oct. '55
- Construction Delays Oct. '55-Sep. '56
- Machine Trials Oct. '56
- Modification to 1851 Contract Nov. '56-Feb. '57
- Rollout Feb. – Jun. '57
- 2nd Postage Stamp Contract Apr. –Jun. '57

The Key Drivers

As viewed in March 1855

7

- Use of stamps anticipated to increase significantly
- Existing methods for separation were inadequate
 - ▣ Scissors
 - ▣ Rulers and/or straight edges
 - ▣ Rouletting
 - ▣ Manual tearing



1850's H. Chapin U.S. Standard #15
Boxwood and Brass Rule Ruler



1850s Henry Sears & Co. Scissors



1855 Waterbury Roulette

- Perforated British stamps showing up in U.S.

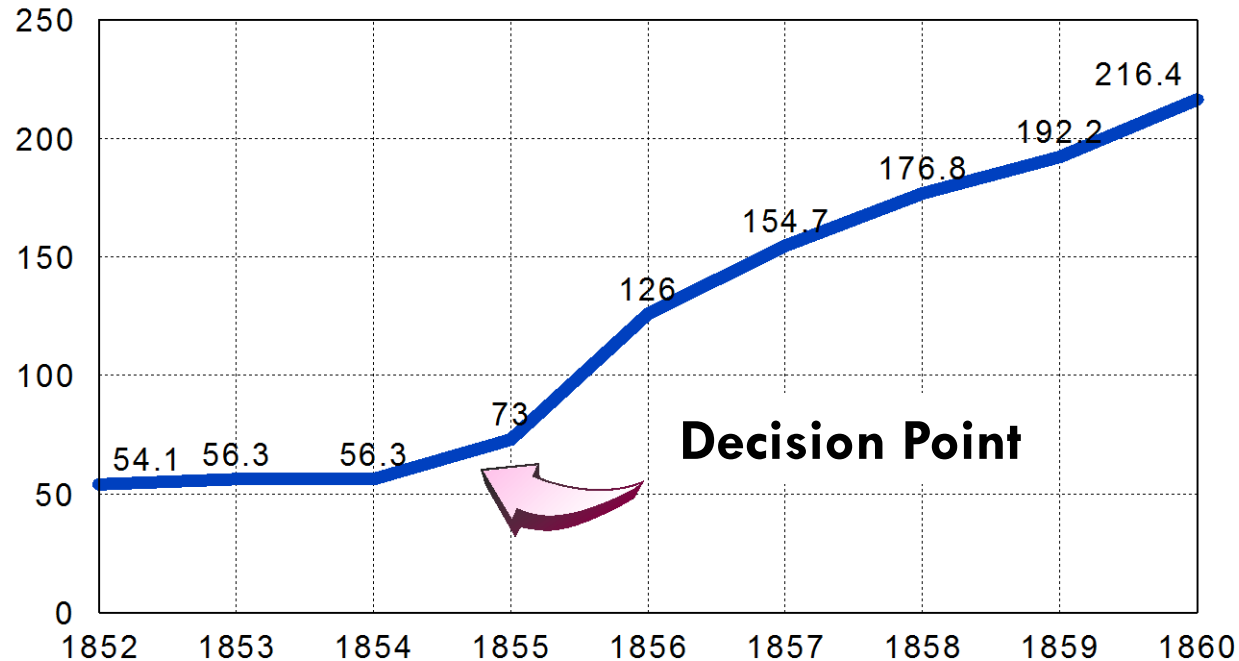
Use of Stamps Forecast to Increase

As viewed in March 1855

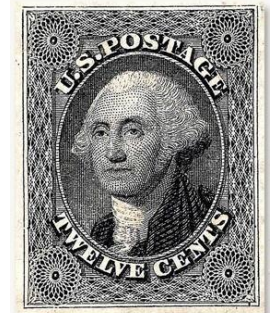
8

Annual Quantities of U.S. Postage Stamps Issued

Twelve Months Ending June 30 of Year Given



Source: Origin & Use of Postage Stamps, Stamped Envelopes &c. Report of A.D. Hazen, Third Assistant Postmaster General, for fiscal year ending June 30, 1878.



Note to U.S. PMG James Campbell from trusted friend reinforced the need to Act

9

Hon. James Campbell
Postmaster General U.S.

Philada.
61 South 6th
March 15, 1855

My dear Sir,

During my visit to England last year, I was struck while sending [letters] in London with the convenience of the English P.O. Stamps, which are pierced with small holes so as to enable the public to dispense with scissors, knife of any other implement other than the fingers in separating them from the Sheet. I enclose a set of four upon which the experiment may be tried. It is said, moreover, that the fringe which is formed by the small semi-circles secures a firmer adhesion to the paper. I do not know by what machine the holes are perforated but it must be a simple one such as American ingenuity would easily continue if the English invention is unacceptable.

I can hardly doubt that the introduction of the improvement would be generally acceptable and popular, and I should be very glad to see your name associated with it.

Very Truly
Your friend and Servt.
Horace Binney, Jr.

NOTE: Campbell answered informally 16 Mar. '55

The Timeline



- Catalysts Mar. '55
- **Investigative Phase** Mar-Sep. '55
- Machine Ordered 21 Sep. '55
- Special Printing & Experimentation Oct. '55
- Construction Delays Oct. '55-Sep. '56
- Machine Trials Oct. '56
- Modification to 1851 Contract Nov. '56-Feb. '57
- Rollout Feb. – Jun. '57
- 2nd Postage Stamp Contract Apr. –Jun. '57

U.S.P.O.D. immediately forwarded Binney's letter to Toppan, Carpenter

11

**Messrs. Toppan, Carpenter, Casilear & Co.
Philadelphia, Pa.**

**Post Office Department
Finance Office March 16, 1855**

Gentlemen:

We have frequently been urged of late to adopt the English plan of perforating their stamps so as to render them separable without cutting, and I send you four penny stamps, just received from Horace Binney, Jr. Esq. It is claimed for this plan that they can be separated with the fingers, and that the jagged edges render them more adhesive. As prepayment of all inland letters after the 1st proximo, will bring our stamps such more into use, and as the Postmaster General desires as much practicable to promote the public convenience, he wishes you to look into the matter with the view of adopting the plan of perforating at an early day. Do you know the English process and what it costs? Can we get the requisite machinery here, and what with the process cost us per thousand? You will see that it is done after the stamps are gummed.

**I am very respectfully,
J. Marron
Third Asst. P.M. Gen'l.**

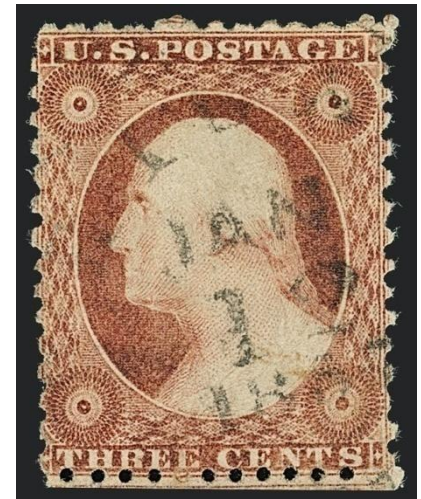


1854 Penny Red, C6 Plate 20 "BJ"
P14 Crown Wmk. Perf 14, Unused

Toppan, Carpenter took steps and quickly identified the Bemrose machine

12

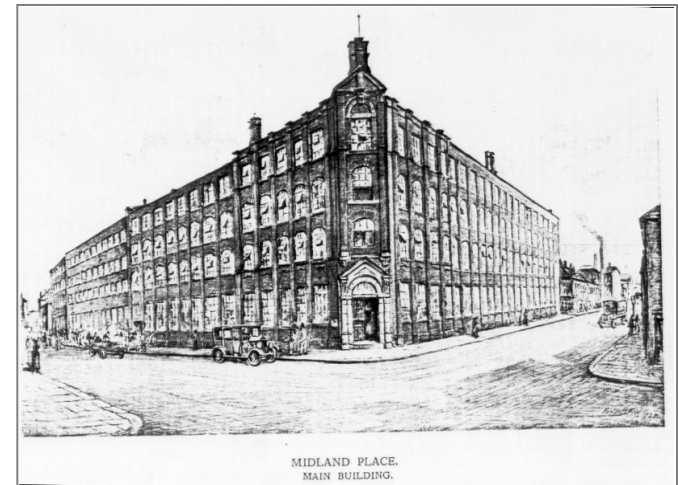
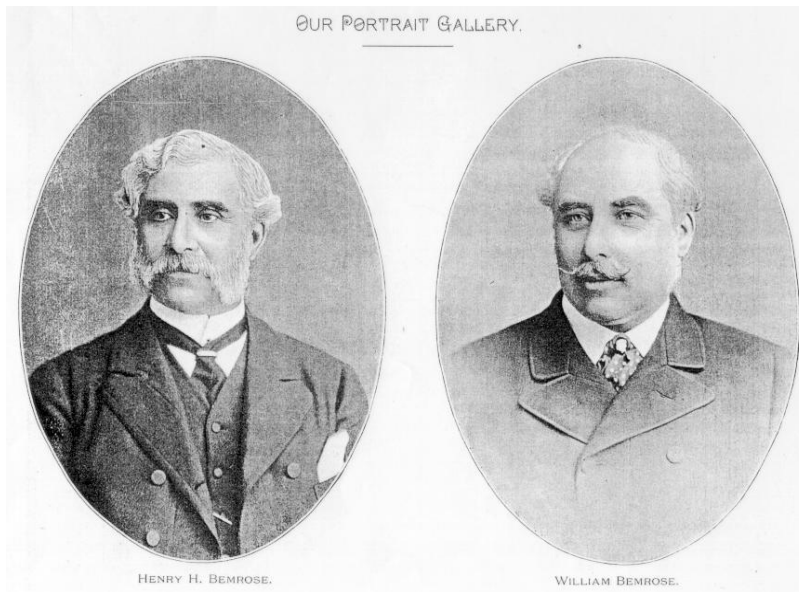
- Requested help from U.S. Commissioner of Patents
- Wrote Perkins Bacon in England for Advice & Counsel
- Entertained offers & ideas from U.S. entrepreneurs (e.g., R.K. Swift & E.W. Hadley, Chicago)
- Carpenter's son-in-law sent to England to investigate the Bemrose process (Apr. '55)
- Carpenter's partner W.C. Smillie went to Derby, England Aug. '55



"Chicago" Perforated 12.5
58L3 JAN 12 1857

The Inventors – Henry & William Bemrose

13



Midland Place, early 1900's



Midland Place, early 1990's

- ❑ Printers, Publishers, and Stationers from Derby, England
- ❑ Patented the Rotary Perforating Machine that Toppan, Carpenter used to perforate U.S. Stamps

The Timeline



14

- Catalysts Mar. '55
- Investigative Phase Mar-Sep. '55
- **Machine Ordered** 21 Sep. '55
- Special Printing & Experimentation Oct. '55
- Construction Delays Oct. '55-Sep. '56
- Machine Trials Oct. '56
- Modification to 1851 Contract Nov. '56-Feb. '57
- Rollout Feb. – Jun. '57
- 2nd Postage Stamp Contract Apr. –Jun. '57

TCC Order Rouletting Machine from Bemrose

Ordered "slitter" and Smillie asked for set of perforating wheels of character used on English stamps if available, 21 Sept. '55

15

Sept
New York, Sept. 21st 1855
Paid 2.50 for RR 3
Chas. O. Condit

Dear Sir,
I should be pleased in addressing you were I
knew this intercourse so pleasantly begun with you by the States in England
last, to visit as a trial, one of your perforating or slitting machines.
The order would have been forwarded some time ago, if the firm had
not thought it desirable to see one previously, although I suppose I had
imprudently, well talked up the claims of your machine to make that un-
necessary.
We had some orders for at that time, but the order of the firm was
having enjoyed the opp^t I did, of seeing the thing itself, deem it
in the whole unwise to order but one.
Will you therefore give immediate attention to it, and endeavor
to properly giving it all the additional strength you can, a few
hundredths for the reason that we may want to use a heavier paper
than that you were using when I saw you. If you know
that the machine will perforate, as I suspected you say, an
ordinary size to that in use on the English stamps, then you
will please make a duplicate of wheels or punches - one of the
characters you use when I was present, and the other of the char-
acter of the English P. O. stamps, and in number corresponding the
impression of stamps left with you.

The earliest day in your power, and I shall be thankful
you to do every thing possible to expedite it, that the time
already lost may be redeemed. One reason that suggests
itself of importance to yourself is that, as there is a firm
here who has written us on the subject, you will undoubtedly
derive advantage by being in advance.
Will you please do us the favor of acknowledging
the part of this future mail, that we may know you are
progressing, & if you desire to know any thing further of
the responsibility of the firm, please address has been
in London.
When you write you had received the exact
cost of the machine, and we will arrange to remit -
Say also when you can look it for it.
Yours most perfectly
Tappan & Bemrose Co.
Kindest Regards

Sept 21 1855
Tappan & Bemrose Co.
+
Letter to M. Bemrose
order of P. O. stamps
Sept 21 1855

The Timeline



16

- Catalysts Mar. '55
- Investigative Phase Mar-Sep. '55
- Machine Ordered 21 Sep. '55
- **Special Printing & Experimentation** **Oct. '55**
- Construction Delays Oct. '55-Sep. '56
- Machine Trials Oct. '56
- Modification to 1851 Contract Nov. '56-Feb. '57
- Rollout Feb. – Jun. '57
- 2nd Postage Stamp Contract Apr. –Jun. '57

THE SPECIAL PRINTING OF 1855

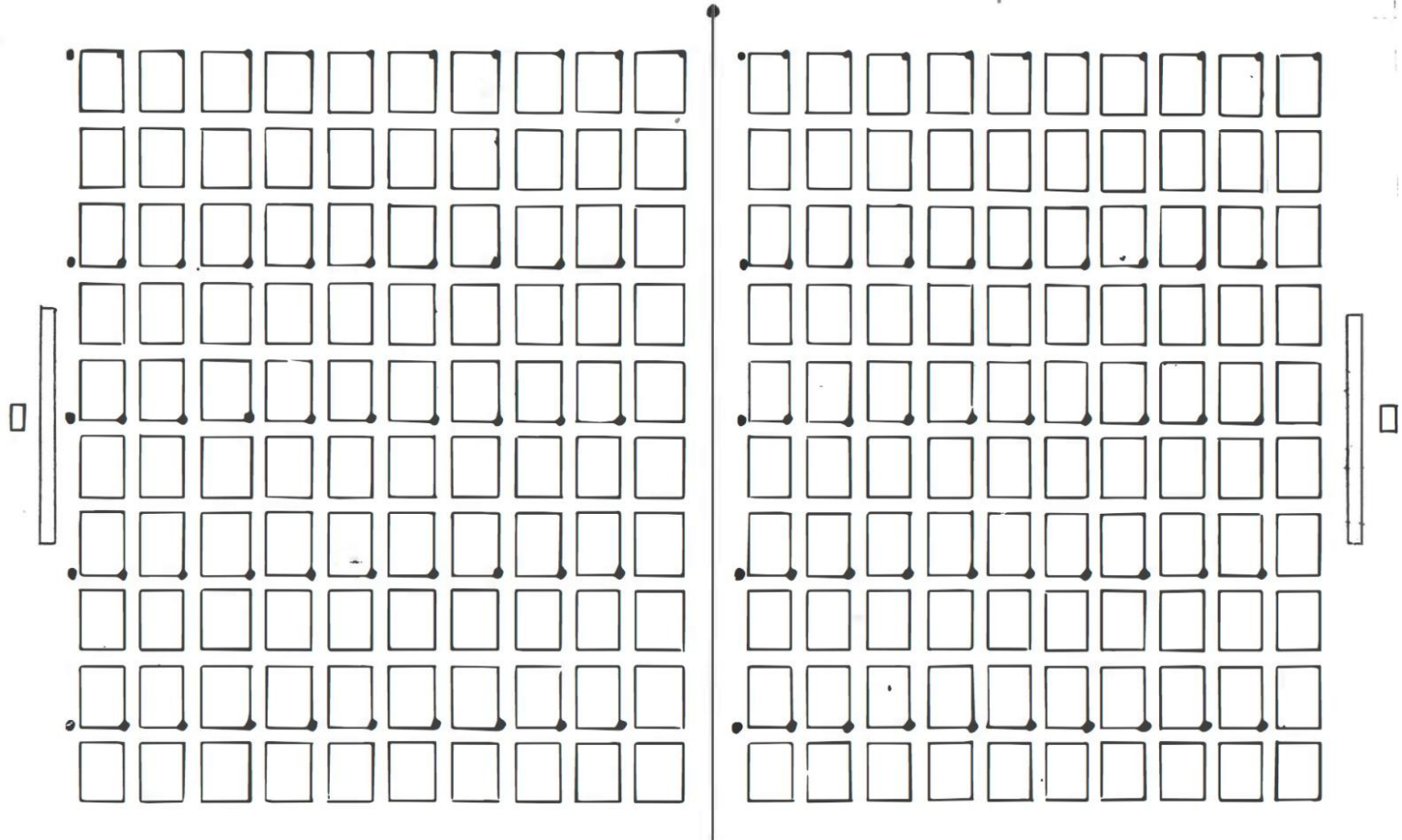
THE “BRUSH STROKE” PLATE PROOFS OF THE 3¢ 1851 ISSUE



The 200 Subject Plate Layout

2 Panes of 100, with TCC Imprint, Plate Number, and Centerline

18



What Happened in 1855 after TCC Ordered Rouletting Machine from Bemrose?

19

- TCC printed two sheets of 200 stamps (400 in total).
- Folded separately to ~3x4 inches, placed in same letter.
- Mailed 3 October 1855 to Perkins, Bacon in England.
- Arrived in London on 15 October 1855. One sheet was forwarded to Bemrose in Derby, England.
- Bemrose used the sheet to ensure proper adjustment of the cylinder and rouletting wheels to fit stamp layout.
- Note: TCC did not provide sheets for the purpose of proving the machine could work on U.S. stamps, they were already convinced.

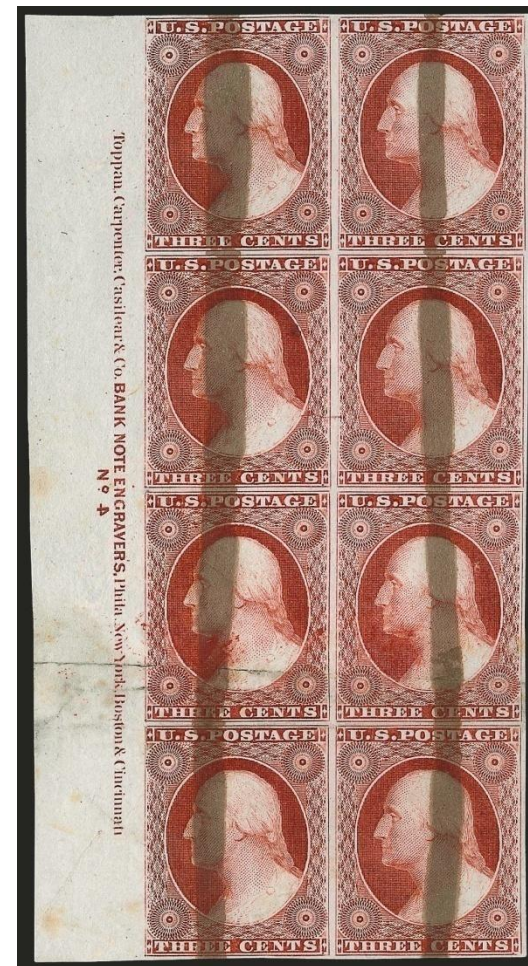
The Special Printing of 1855

20



7-8, 17-18L4

- Scott #11P3
- Obliterated by black, brush-applied ink
- All Items from Plate 4
- 2 sheets of 200
- On ungummed, proof (not India) paper
- Brownish carmine shade



31-32, 41-42, 51-52, 61-62L4

1855 Letter from Perkins, Bacon to Bemrose

Discusses TCC panes and shrinkage

21

London No. 69 Fleet Street

16th October 1855

Gentlemen,

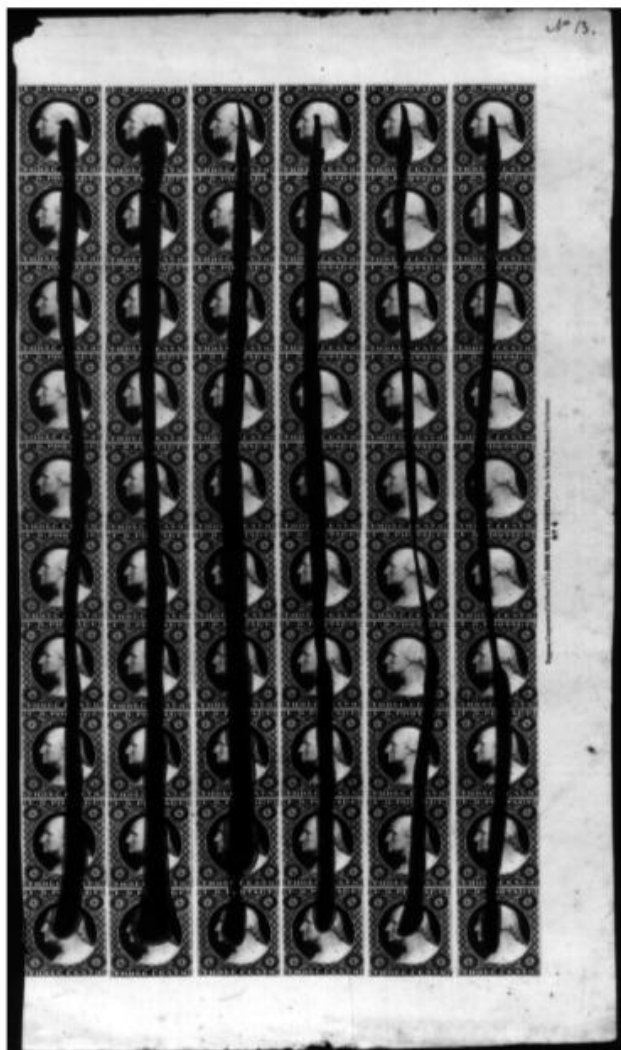
...Messrs. T.C. & Co. are right as to the size of the heads being alike in the English & American stamps & they are right also as the number of 20 heads one way but those 20 are not placed at all the same as to distance between each stamp....

We have examined the subject of Shrinkage of the paper by gumming & although the American paper is less tough & consequently may shrink less than the English... the differences... must be trifling..., so that you may act upon this information or wait for a gummed sheet from the United States whichever you think best.

Perkins, Bacon

The Right Perkins, Bacon Pane: *Prior to its 1953 Breakup*

22



All of the proofs were cancelled with black ink brush strokes to prevent use as postage



There is a "No 13." in upper right corner

1855 Letter from Bemrose to Perkins, Bacon

Bemrose have TCC panes & requested gummed

23

Derby, Oct. 17, 1855

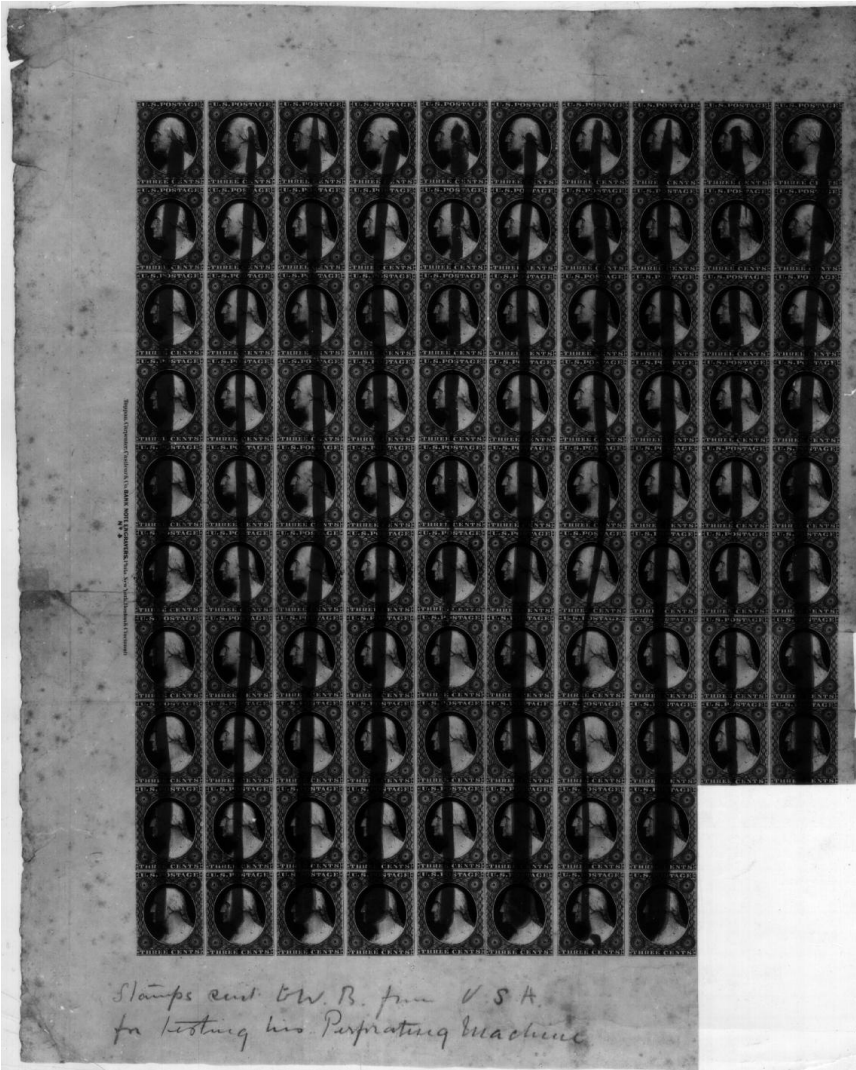
Messrs. Perkins Bacon & Co.
Gentlemen,

...We have Messrs. Toppan's in hand, & have written them for a gummed sheet that we may adjust as nearly as possible....

Wm. Bemrose & Sons

The Left Bemrose Pane: *Prior to its 1962 Breakup*

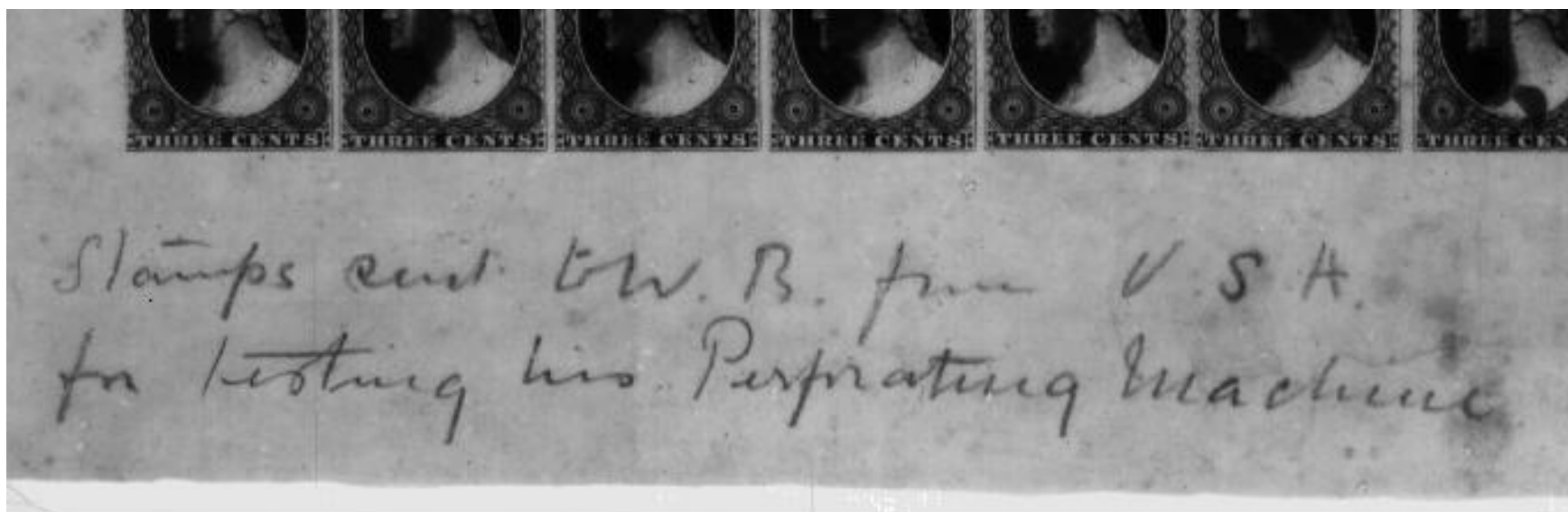
24



**All of the proofs
were cancelled
with black ink
brush strokes to
prevent use as
postage**

Lower Left Corner of Left Bemrose Pane

25

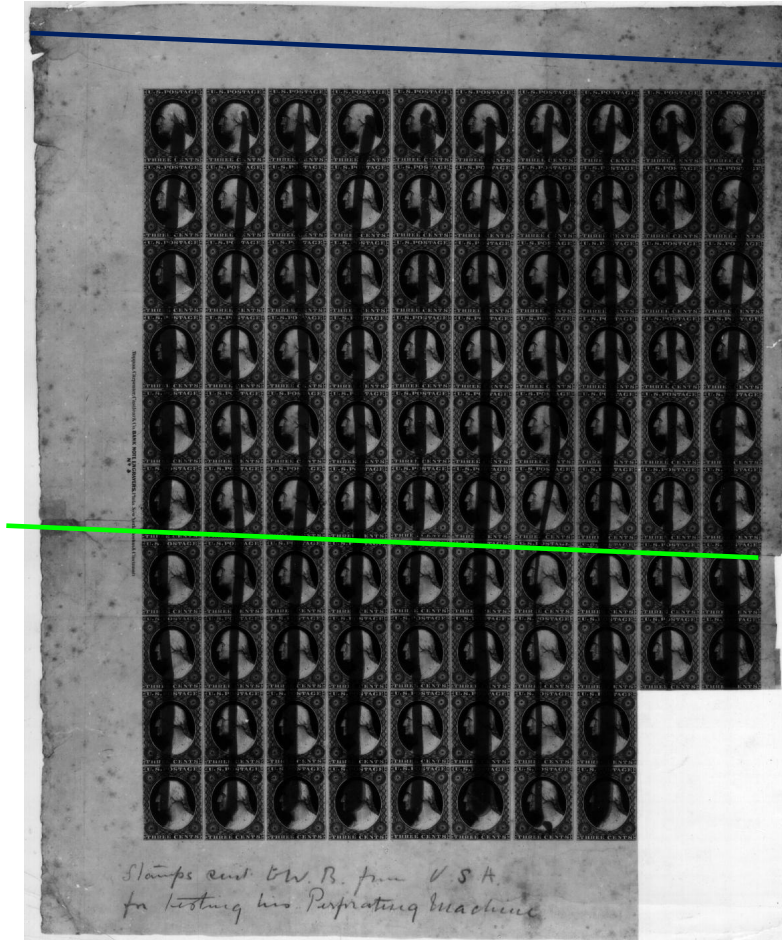


***“Stamps sent to W.B. from U.S.A.
for testing his Perforating Machine”***

The Left Bemrose Pane: Lines of Rouletting

Wilson Hulme discovered a second line across middle of pane.

26



Previously Reported



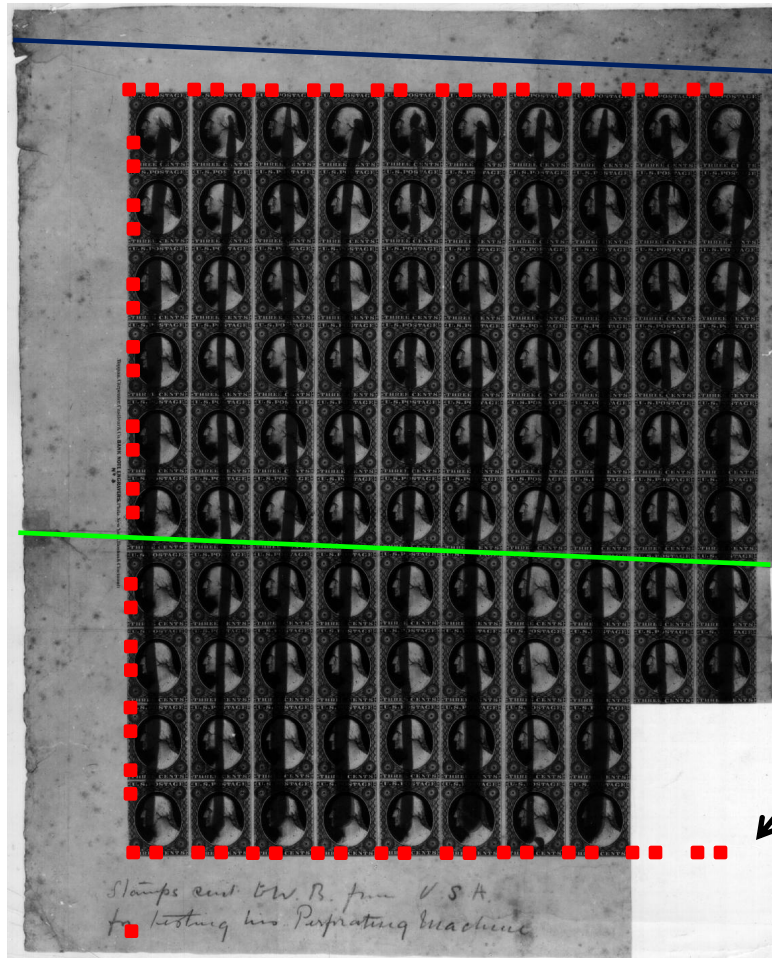
Previously Unreported



The Left Bemrose Pane: Pin Holes

Hulme discovered previously unreported pin holes on outer edge stamps.

27



Previously unreported pin-holes on outer edge stamps (depicted as red squares)



Summary of Special Printing Phase

28

- Two sheets of 200 stamps (400 in total) were folded separately to ~3x4 inches, placed in same letter, and mailed 3 Oct. 1855 to Perkins Bacon in England.
- Arrived in London on 15 Oct. 1855. One sheet forwarded to Bemrose in Derby, England, where they ensured proper adjustment of cylinder & rouletting wheels to fit stamp layout.
- Two horizontal lines of rouletting were produced on the Bemrose Panes, as well as pin holes on outer edge stamps.
- Subsequent testing showed rouletting would not work. The machine was converted into a perforator.

The Timeline



- Catalysts Mar. '55
- Investigative Phase Mar-Sep. '55
- Machine Ordered 21 Sep. '55
- Special Printing & Experimentation Oct. '55
- **Construction Delays** Oct. '55-Sep. '56
- Machine Trials Oct. '56
- Modification to 1851 Contract Nov. '56- Feb. '57
- Rollout Feb. – Jun. '57
- 2nd Postage Stamp Contract Apr. –Jun. '57

Numerous Delays in Obtaining Machinery

Not all due to Bemrose & Sons

30

- Machine ordered by TCC 21 Sept. '55 (date of letter) and sailed 26 Sept. '55 if by Steamer *Africa*.
- Order received Bemrose, if by Steamer *Africa*, est. 6 Oct. '55
 - ▣ Anticipated U.S. arrival 6 Dec. '55 (based on 15 Nov. '55 completion & shipping allowance)
- Many delays experienced by Bemrose due to complexity of making machine work (in Perkins-Bacon correspondence)
- Shipped to N.Y. 22 Mar. '56 per Steamer *Asia*; arrived 4 Apr. '56
- Issues over Customs Duties 12 Apr. '56 – 7 Jul. '56;
- Machine released to TCC, est. 8 Jul. '56
- Repairs and trials on machine mid-Jul. '56 – Oct. '56

Total Time Order to Machine Ready = 13 mo.; Total Time Order to Stamps in Use = 17 mo.

The Timeline



31

- Catalysts Mar. '55
- Investigative Phase Mar-Sep. '55
- Machine Ordered 21 Sep. '55
- Special Printing & Experimentation Oct. '55
- Construction Delays Oct. '55-Sep. '56
- **Machine Trials** Oct. '56
- Modification to 1851 Contract Nov. '56-Feb. '57
- Rollout Feb. – Jun. '57
- 2nd Postage Stamp Contract Apr. – Jun. '57

Extensive Trials Conducted

Needed to determine ongoing cost of operation

32

- Per letter dated 22 Oct. '56 machine can punch or slit 180 sheets of 100 stamps per hour
- “The slitting wheels will last a long time. The punch wheels must be renewed every two months.”
- Cost estimates were provided. These estimates used to provide this service ‘at cost’ to the P.O.
- At this time, decision to perforate or roulette had not been made.



Bemrose-style Perforating Machine
(ca. 1861)

The Timeline



33

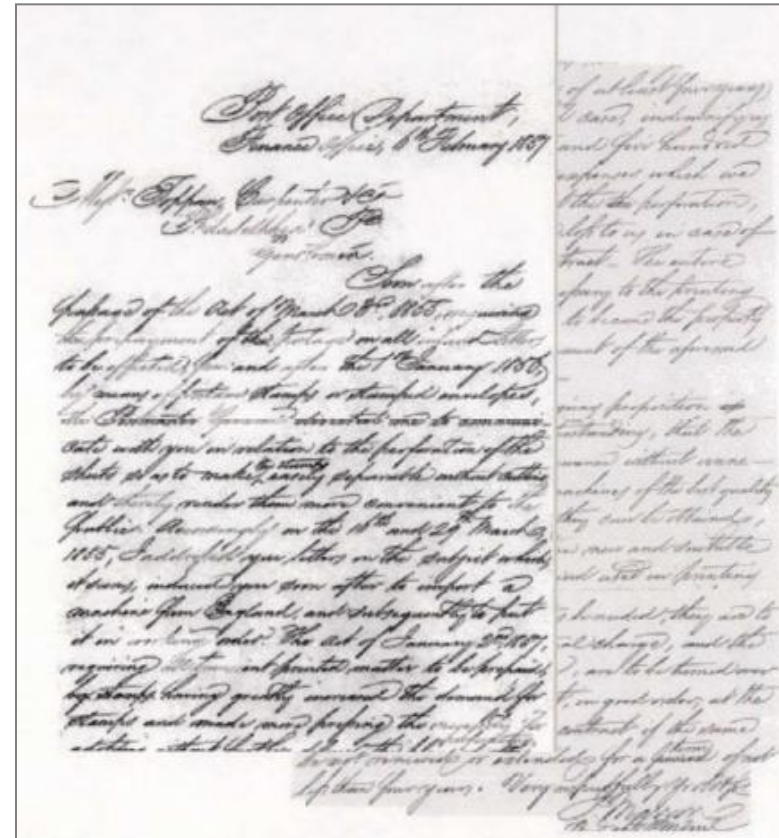
- Catalysts Mar. '55
- Investigative Phase Mar-Sep. '55
- Machine Ordered 21 Sep. '55
- Special Printing & Experimentation Oct. '55
- Construction Delays Oct. '55-Sep. '56
- Machine Trials Oct. '56
- **Modification to '51 Contract** Nov. '56-Feb. '57
- Rollout Feb. – Jun. '57
- 2nd Postage Stamp Contract Apr. –Jun. '57

Modification to 1851 Stamp Contract

Long missing, Hulme located, confirms 1863 letter often quoted from Luff

34

- Buchanan elected President and would replace Pierce after 3 Nov. '56 election
- TCC (S. Carpenter) realized entire investment at risk; submitted 3 proposals dated 4 Nov. '56 to perforate postage stamps for the Post Office 'at cost'
- TCC nervous, S. Carpenter provides frequent follow-ups
- On 3 Jan. '57, PMG Campbell decides to let succeeding administration decide the matter
- S. Carpenter convinces PMG Campbell to change his mind



“First Contract” Modifications Letter
From P.O.D to TCC, 6-9 Feb. 1857

The Timeline



35

- Catalysts Mar. '55
- Investigative Phase Mar-Sep. '55
- Machine Ordered 21 Sep. '55
- Special Printing & Experimentation Oct. '55
- Construction Delays Oct. '55-Sep. '56
- Machine Trials Oct. '56
- Modification to 1851 Contract Nov. '56-Feb. '57
- **Rollout** Feb. – Jun. '57
- **2nd Postage Stamp Contract** Apr. –Jun. '57

Provisions of Modifications & Rollout

36

- Provisions of Contract modification stipulated that TCC:
 - ▣ Shall perforate all stamps at 3¢/thousand
 - ▣ Shall commence without delay, using 3 machines & suitable plates
 - ▣ If contract not renewed for 4 years, government will indemnify TCC for \$9500 for equipment and plates
- Capacity was insufficient for U.S.-wide rollout
- Contract called for deliveries by end of month, only one machine was available, TCC needed three
- Carpenter worried about non-continuity of supply and that Campbell due to leave public office 5 Mar. '57

The Rollout of Perforated Stamps

37

- ACTIONS: proceeded with rollout, positioned with public as a “test”. Only 3¢ stamps were perforated during this period, two more machines were ordered.
- On 20 Feb. '57, TCC promised 500K perforated 3¢ stamps ready for delivery on 24 Feb. '57
- On 26 Feb. '57, the Stamp Agent was telegraphed to send parcels to certain offices
- On 27 Feb. '57, newspaper editorial in the *North American and United States Gazette* indicates “...90,000 ordered for New York and Philadelphia and 30,000 for New Orleans and cities South, West.”
- Earliest known use of officially perforated U.S. stamp 28 Feb. '57

Earliest Documented Uses

3 known: 2 NYC, 1 Philadelphia

38



★ #25 - 3¢ 1857. Tied by two strikes of **"New-York FEB 28 1857"** circular date stamp (CDS) with clear year date, on small cover to New Milford, Conn.



#25 - 3¢ 1857. Tied by single strike of **"New-York FEB 28"** (1857) circular date stamp (CDS) on small cover to Springfield, Mass.



#25 - 3¢ 1857, 35R7. Tied by single strike of **"Philadelphia Feb. 28"** (1857) circular date stamp (CDS) on small cover to Pughtown, Pa.

- ❑ Experimental period continued until Jun. 10, '57, when original six-year TCC contract expired.
- ❑ Contract renewed Apr. 8, '57, effective Jun. 10, after which all stamps perforated as mandated by new contract terms.

THANK YOU / QUESTIONS?

** DEDICATED TO W. WILSON HULME, WHOSE SEMINAL RESEARCH ON THE BRUSH STROKES THIS PRESENTATION IS BASED ON; AS WELL AS THE DISCOVERY OF SEMINAL USPOD AND TCC DOCUMENTS; AND WHO MENTORED ME AND MANY OTHERS ON THE 3¢ 1851-57 ISSUE UP UNTIL HIS UNTIMELY PASSING IN 2007.*

** ANY ERROR AND/OR OMISSION IS THE PRESENTERS RESPONSIBILITY.*



Rediscovery of “Brush Stroke” Pair

67-68L4 from Bemrose Left Pane

Rediscovered Pair from the Left Bemrose Pane: *Plated as 67-68L4 with horizontal roulette line across top*

41

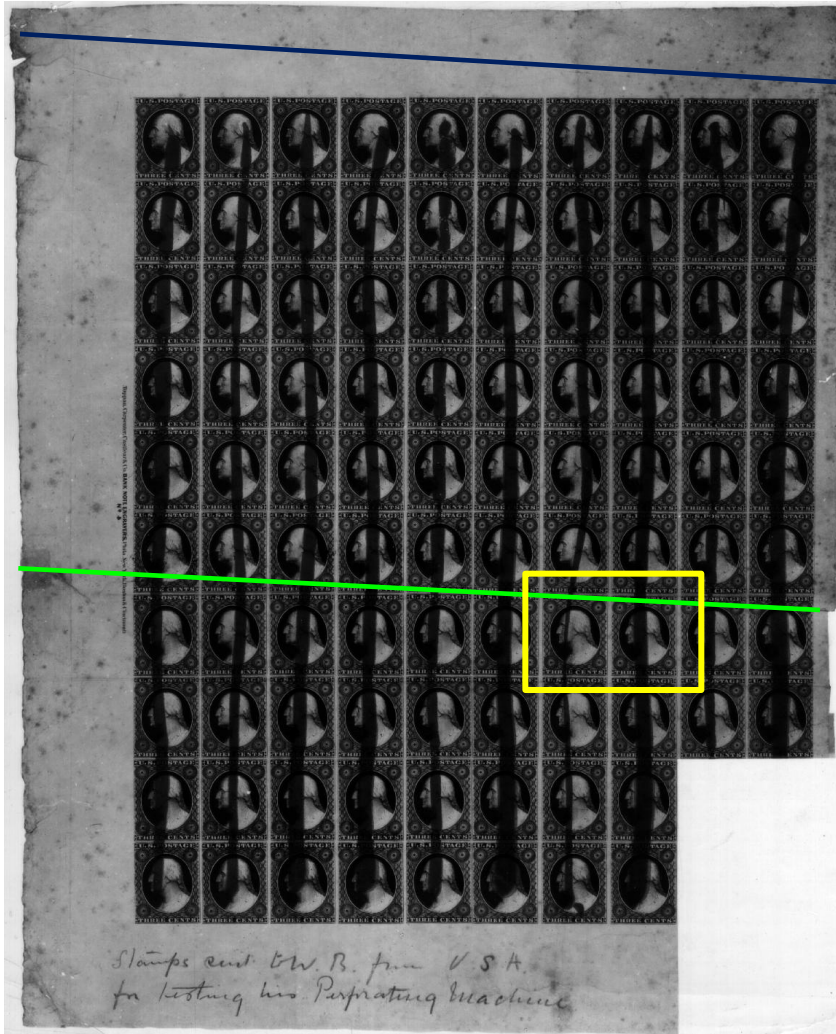


#11P3, 67-68L4, brush stroke pair, rouletted across top of both stamps.
Discovered & plated by Dr. Charles J. DiComo

The Left Bemrose Pane: Lines of Rouletting

Wilson Hulme discovered a second line across middle of pane.

42



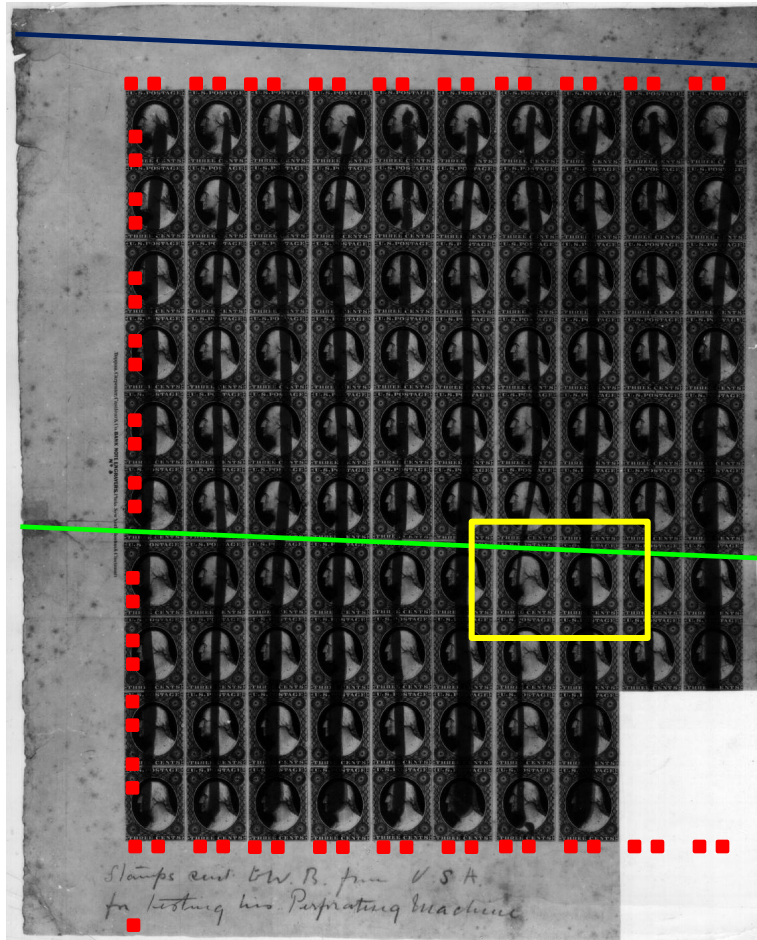
67-68L4 pair has horizontal line of rouletting across top of both stamps. Clearly seen on reverse below.



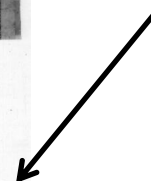
The Left Bemrose Pane: Pin Holes

Hulme discovered previously unreported pin holes on outer edge stamps.

43



**Previously
unreported
pin-holes on
outer edge
stamps
(depicted as
red squares)**



CURRENT STATE OF “BRUSH STROKE” PANES

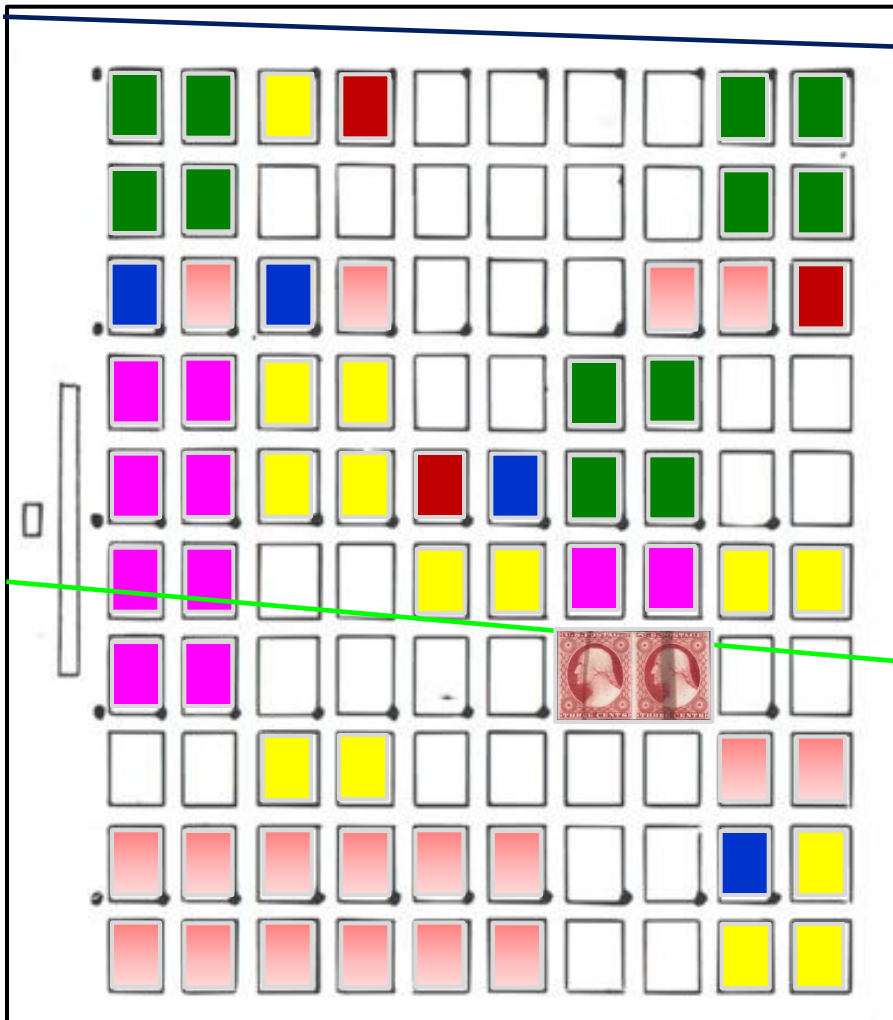
AS BEST AS CAN BE DETERMINED IN 2024



The Left Bemrose Pane:

As of 2008, W. Wilson Hulme's Reconstruction

45



**#11P3 – 3¢ Brownish Carmine
Brush Stroke on Proof paper,
Reconstructed left pane.**

Hulme Inventory in 2007:

- Bemrose Left Pane = 34
- Bemrose Right Pane = 9
- Perkins Left Pane = 100
- Perkins Right Pane = 29 (+2)

New Find Added: 67-68L4

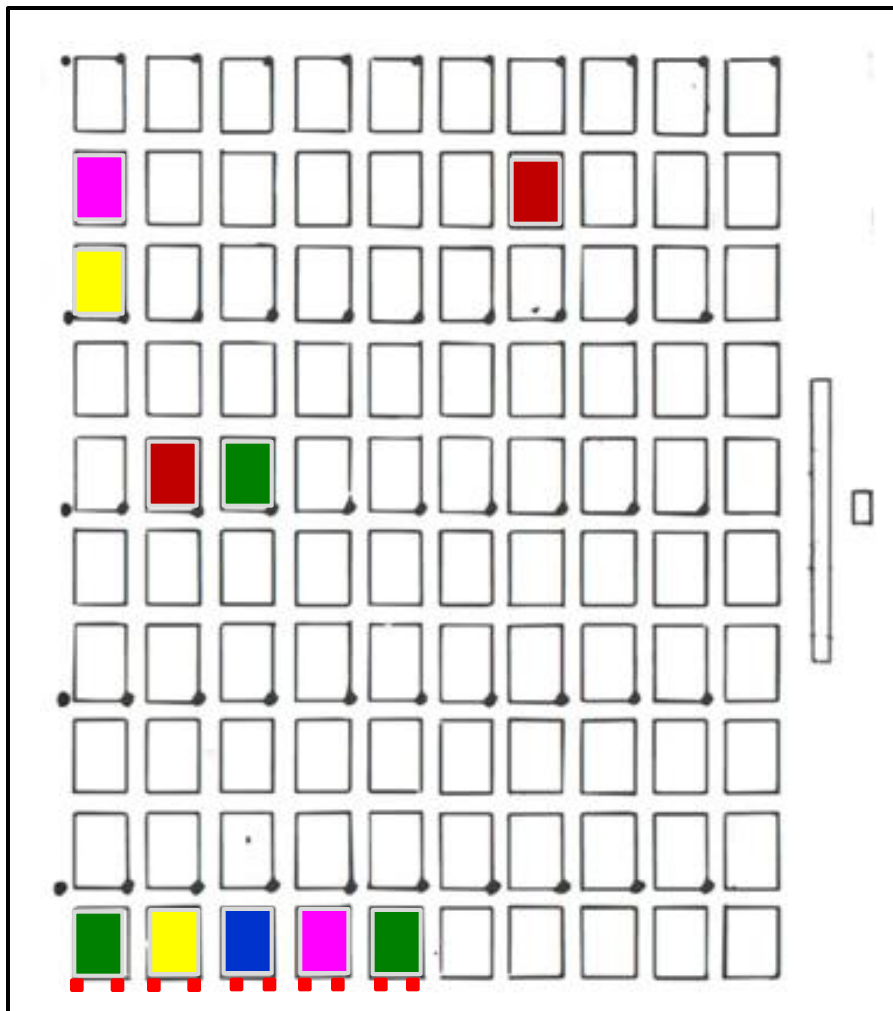
Siegel Sale 965, Lot 213, 2008

Ex. W. Wilson Hulme

The Right Bemrose Pane:

As of 2008, W. Wilson Hulme's Reconstruction

46



Pin-holes on all outer edges stamps (denoted by ■)

**#11P3 – 3¢ Brownish Carmine
Brush Stroke on Proof paper,
Reconstructed right pane.**

Hulme Inventory in 2007:

- Bemrose Left Pane = 34
- Bemrose Right Pane = 9
- Perkins Left Pane = 100
- Perkins Right Pane = 29 (+2)

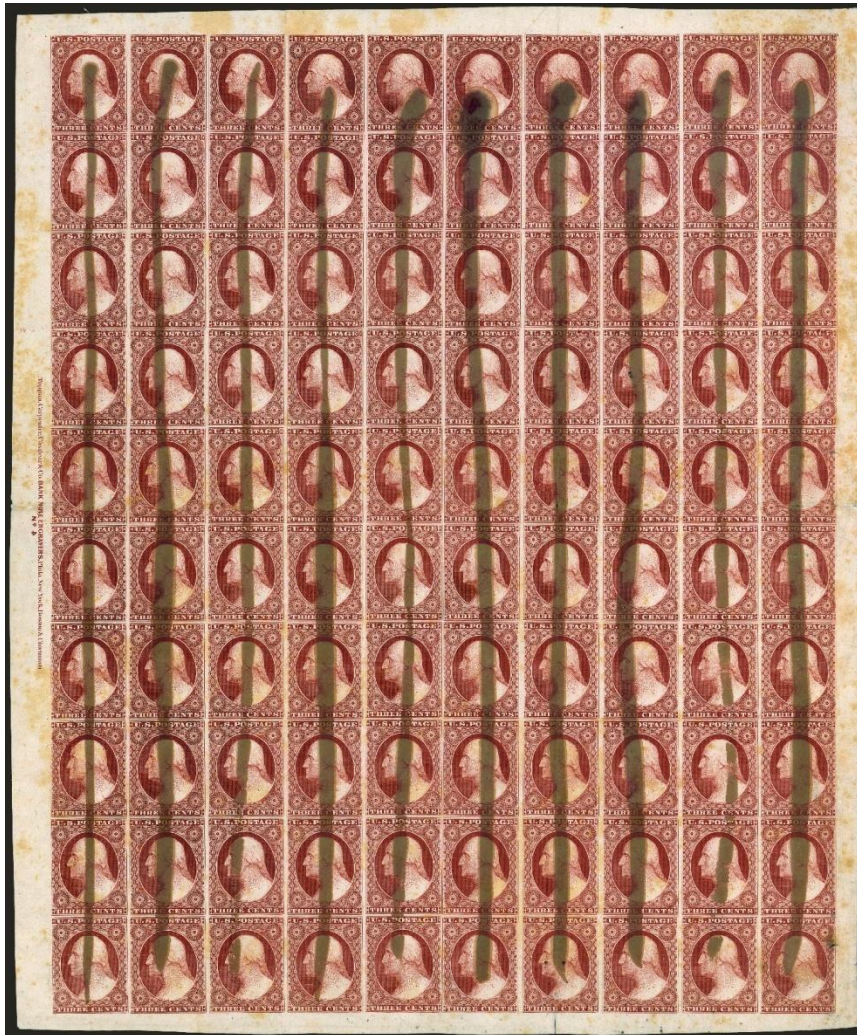
Siegel Sale 965, Lot 213, 2008

Ex. W. Wilson Hulme

The Left Perkins, Bacon Pane:

As of 2008, Sold Intact, ex. W. Wilson Hulme

47



**#11P3 – 3¢ Brownish Carmine
Brush Stroke on Proof paper,
complete left pane of 100 with
full Imprint and Plate No. 4
(reversed numeral).**

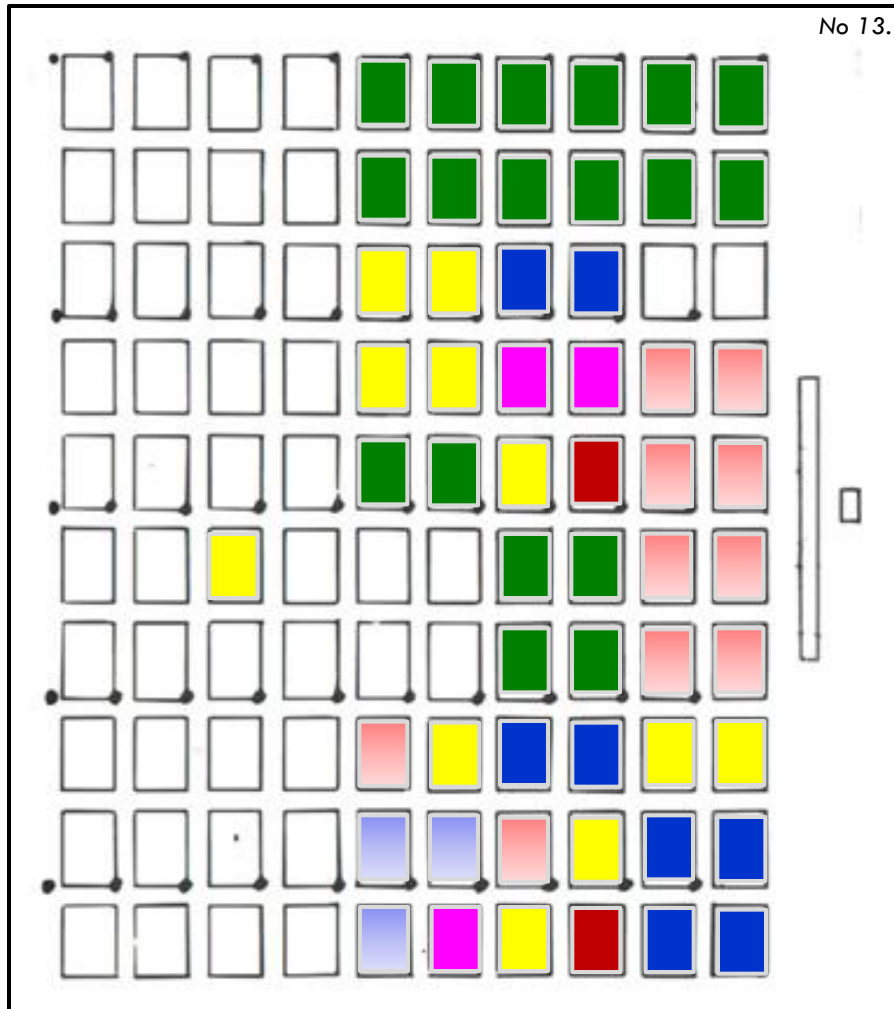
**Toppan Carpenter & Co. mailed
two sheets of 200 stamps to
Perkins, Bacon in 1854.**

***Siegel Sale 964, Lot 212, 2008
Ex. Earl of Crawford, Keightley &
W. Wilson Hulme***

The Right Perkins, Bacon Pane:

As of 2008, W. Wilson Hulme's Reconstruction

48



**#11P3 – 3¢ Brownish Carmine
Brush Stroke on Proof paper,
Reconstructed right pane.**

Hulme Inventory in 2007:

- Bemrose Left Pane = 34
- Bemrose Right Pane = 9
- Perkins Left Pane = 100
- Perkins Right Pane = 29 (+2)

Siegel Sale 965, Lot 213, 2008

Ex. W. Wilson Hulme

THANK YOU / QUESTIONS?

** DEDICATED TO W. WILSON HULME, WHOSE SEMINAL RESEARCH ON THE BRUSH STROKES THIS PRESENTATION IS BASED ON; AS WELL AS THE DISCOVERY OF SEMINAL USPOD AND TCC DOCUMENTS; AND WHO MENTORED ME AND MANY OTHERS ON THE 3¢ 1851-57 ISSUE UP UNTIL HIS UNTIMELY PASSING IN 2007.*

** ANY ERROR AND/OR OMISSION IS THE PRESENTERS RESPONSIBILITY.*

