## 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


1. The Research by W. Wilson Hulme
2. Toppan, Carpenter, Casilear \& Co., 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

$\square$ Pieced together the Era from a myriad of sources:
$\square 3^{\text {rd }}$ 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

W. Wilson Hulme
- Original documents at the National Archives
$\square$ TCC Records (letter books, incoming \& outgoing letter files) believed destroyed in fire 1873.


## Toppan, Carpenter, Casilear \& Co.

$\square$ 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.
$\square$ In 1837, he joined Draper, Toppan \& Company.
$\square$ In 1843, Draper \& Co. dissolved and it became Toppan, Carpenter \& Co. with the joining of Samuel Carpenter.
$\square$ 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).
$\square$ Casilear left mid-1850's and became a famous landscape painter of the Hudson School.


Samuel Carpenter


## The Act of 1851

$\square$ Congress passed the Act of March 3, 1851 , titled "An Act to reduce and modify the Rates of Postage in the United States."
$\square$ 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 $1 申$ rate for printed matter;
- A new $3 \phi$ rate to replace the earlier $5 \phi$ and $10 \phi$ rates for letters up to 3,000 miles;
- $10 \phi, 12 \phi$, and $30 \phi$ rates and above for more complex usages.
$\square$ 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

$\square$ Catalysts
$\square$ Investigative Phase
$\square$ Machine Ordered
$\square$ Special Printing \& Experimentation
$\square$ Construction Delays
$\square$ Machine Trials
$\square$ Modification to 1851 Contract
$\square$ Rollout
$\square 2^{\text {nd }}$ Postage Stamp Contract

Mar. '55
Mar-Sep. '55
21 Sep. '55
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## The Key Drivers

As viewed in March 1855
$\square$ Use of stamps anticipated to increase significantly
$\square$ Existing methods for separation were inadequate
$\square$ Scissors
$\square$ Rulers and/or straight edges
$\square$ Rouletting
$\square$ Manual tearing


1850's H. Chapin U.S. Standard \#15


1850s Henry Sears \& Co. Scissors


1855 Waterbury Roulette
$\square$ Perforated British stamps showing up in U.S.

## Use of Stamps Forecast to Increase

As viewed in March 1855

Annual Quantities of U.S. Postage Stamps Issued
Tw elve 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

Hon. James Campbell
Postmaster General U.S.

Philada.
61 South $6^{\text {th }}$
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 Sevt.
Horace Binney, Jr.
NOTE: Campbell answered informally 16 Mar. '55

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

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 Ist 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.

## Toppan, Carpenter took steps and quickly identified the Bemrose machine

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

"Chicago" Perforated 12.5
58L3 JAN 121857

## The Inventors - Henry \& William Bemrose

OUR PORTRAIT GALLERY

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


Midland Place, early 1900's


Midland Place, early 1990's

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## 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


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## THE SPECIAL PRINTING OF 1855

## THE "BRUSH STROKE" PLATE PROOFS OF

 THE 3申 1851 ISSUE

## The 200 Subject Plate Layout

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

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

$\square$ TCC printed two sheets of 200 stamps ( 400 in total).
$\square$ Folded separately to $\sim 3 \times 4$ inches, placed in same letter.
$\square$ Mailed 3 October 1855 to Perkins, Bacon in England.
$\square$ Arrived in London on 15 October 1855. One sheet was forwarded to Bemrose in Derby, England.
$\square$ 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



7-8, 17-18L4
$\square$ Scott \#11P3
$\square$ Obliterated by black, brush-applied ink
$\square$ All Items from Plate 4

- 2 sheets of 200
$\square$ On ungummed, proof (not India) paper
$\square$ Brownish carmine shade


## 1855 Letter from Perkins, Bacon to Bemrose

 Discusses TCC panes and shrinkage> London No. 69 Fleet Street $16^{\text {th }}$ 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 



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 

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: <br> Prior to its 1962 Breakup



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

## Lower Left Corner of Left Bemrose Pane


"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.


## The Left Bemrose Pane: Pin Holes

Hulme discovered previously unreported pin holes on outer edge stamps.


## Summary of Special Printing Phase

$\square$ Two sheets of 200 stamps ( 400 in total) were folded separately to $\sim 3 \times 4$ inches, placed in same letter, and mailed 3 Oct. 1855 to Perkins Bacon in England.
$\square$ 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.
$\square$ Two horizontal lines of rouletting were produced on the Bemrose Panes, as well as pin holes on outer edge stamps.
$\square$ Subsequent testing showed rouletting would not work. The machine was converted into a perforator.

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## Numerous Delays in Obtaining Machinery

$\square$ Machine ordered by TCC 21 Sept. '55 (date of letter) and sailed 26 Sept. '55 if by Steamer Africa.
$\square$ 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)
$\square$ Many delays experienced by Bemrose due to complexity of making machine work (in Perkins-Bacon correspondence)
$\square$ Shipped to N.Y. 22 Mar. '56 per Steamer Asia; arrived 4 Apr. '56
$\square$ Issues over Customs Duties 12 Apr. '56-7 Jul. '56;
$\square$ Machine released to TCC, est. 8 Jul. '56
$\square$ 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 $=17 \mathrm{mo}$.


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## Extensive Trials Conducted

## Needed to determine ongoing cost of operation

$\square$ Per letter dated 22 Oct. ‘56 machine can punch or slit 180 sheets of 100 stamps per hour
$\square$ "The slitting wheels will last a long time. The punch wheels must be renewed every two months."
$\square$ Cost estimates were provided. These estimates used to provide this service "at cost" to the P.O.
$\square$ At this time, decision to perforate


Bemrose-style Perforating Machine (ca. 1861) or roulette had not been made.

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## Modification to 1851 Stamp Contract

Long missing, Hulme located, confirms 1863 letter often quoted from Luff
$\square$ Buchanan elected President and would replace Pierce after 3 Nov. '56 election
$\square$ 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'
$\square$ TCC nervous, S. Carpenter provides frequent follow-ups
$\square$ On 3 Jan. '57, PMG Campbell decides to let succeeding administration decide the matter
$\square$ S. Carpenter convinces PMG Campbell to change his mind

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

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## Provisions of Modifications \& Rollout

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

## The Rollout of Perforated Stamps

$\square$ ACTIONS: proceeded with rollout, positioned with public as a "test". Only $3 \phi$ stamps were perforated during this period, two more machines were ordered.
$\square$ On 20 Feb. '57, TCC promised 500K perforated 3ф stamps ready for delivery on 24 Feb. '57
$\square$ On 26 Feb. '57, the Stamp Agent was telegraphed to send parcels to certain offices
$\square$ 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."
$\square$ Earliest known use of officially perforated U.S. stamp 28 Feb. '57

## Earliest Documented Uses

## 3 known: 2 NYC, 1 Philadelphia


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

\#25-3申 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.


## 40 <br> Supplemental

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
\#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.


## The Left Bemrose Pane: Pin Holes

Hulme discovered previously unreported pin holes on outer edge stamps.


## CURRENT STATE OF "BRUSH STROKE" PANES

AS BEST AS CAN BE DETERMINED IN 2023

## The Left Bemrose Pane:

 As of 2008, W. Wilson Hulme's Reconstruction

## \#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 21 3, 2008
Ex. W. Wilson Hulme

## The Right Bemrose Pane: As of 2008, W. Wilson Hulme's Reconstruction



> \#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 21 3, 2008
Ex. W. Wilson Hulme

## The Left Perkins, Bacon Pane: As of 2008, Sold Intact, ex. W. Wilson Hulme



> \#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



## \#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 21 3, 2008 Ex. W. Wilson Hulme

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