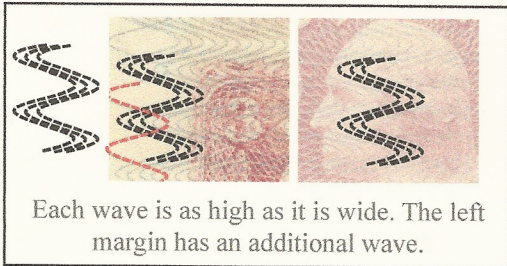


1864: The Gibson patent 41,118 – safety network overprints

Research: I propose a new description of the overprints (The Chronicle, 69:1). I prove that there are only three types, not four as catalogued

Type 1: wavelength 3.2 mm; amplitude 3.2 mm



Yellow brown
Overprint tan

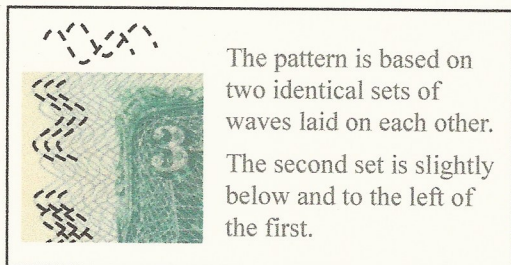


Rose-red
Overprint blue



Green
Overprint gray-tan

Type 2: wavelength 3.2 mm; amplitude 1.6 mm



Dark green
Overprint blue-green

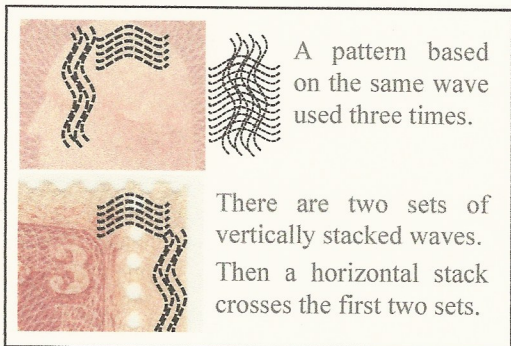


Blue
Overprint gray-tan



Rose-red
Overprint gray-blue

Type 3: wavelength 3.2 mm; amplitude 0.8 mm



Light red brown
Overprint pale brown



Rose red
Overprint gray-blue



Light yellow brown
Overprint pale brown

Patent description:

Patent 41,118 was for a lithographic overprint in fugitive ink that would wash off if a person tried to clean the cancel off a stamp. To quote: 'The impression of the stamp may be produced partly by indelible ink and partly by a fugitive ink... forming a **light network**, which will not obliterate...' the stamp.

From Gibson's letters patent dated January 5, 1864

* Hofmeyr, J., R. Drews and J. Lee (2017), 'Types of Safety Network Overprints on the 3c 1861 Essays', The Chronicle 69:1, February

The Gibson patent: rarities

Two recorded



On India. Overprinted 'ONE' in orange yellow.

This piece is a perfect fit for the top half of what was originally just one mini-sheet.

Only block of four recorded



This corner has been wiped with damp cotton wool.
The design is in fugitive ink.

Dull violet
Overprint gray-blue

It is Type 2

Scan of the top left stamp



1864: The Harmon patent 41,505 – safety network overprints

Research: the origin of these so-called ‘bedspring essays’ has long been a mystery. On this page I present evidence that they are based on Harmon’s patent of 1864.*



Black overprint



Red overprint



Blue overprint

Three recorded



Buffalo patent cancel (1863 – 1865).

Black overprint. No gum, as if used.

Fig. 3.



A scan from the patent shows the overprinted stamp

Fig. 4.



This scan shows the overprinted stamp with a cancel

Patent description:

‘Upon the face of the stamp... I impress rectangular or waved web lines so that the entire area of the stamp shall exhibit fine meshes...’ Harmon argued that the only way to prevent people from finding a solvent that could remove cancellations, was to print the fugitive network in the ink that was used for cancels.

From Harmon’s letters patent dated February 9, 1864

The other two used copies were cancelled in Buffalo and one in Washington. **Perhaps these essays went through the post?**

Essays of unknown origin: generally accepted as genuine – only one example of each is known

Hand drawn overprints. I place these here because of their use of the same colours as the ‘bedspring’ overprints.

Gummed, overprinted in red and black.



Gummed, faint black overprint



Gummed, blue overprint



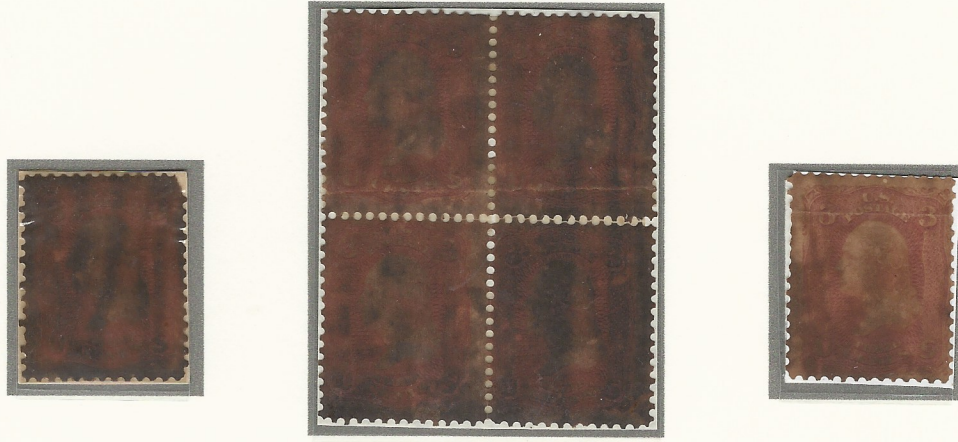
Gummed, outline in red, filling in mauve



* Hofmeyr and Lee (2016), The Chronicle 68:2, May

1865: The Francis patent 48,389 – the paper stains when wet

Treatment with **gallic acid** turns the paper a dirty brown



Gummed imperf imprint block of 12: **ferro-cyanide** would turn the paper blue



Patent description:

Patent 48,389 was for a paper that had chemicals embedded in it so that it would change color when wet. *‘What I claim is incorporating with or applying onto stamps... ingredients such as will chemically combine to produce a dark color or stain under the action of moisture...’*

From Francis's letters patent dated June 27, 1865

1866: MacDonough's patent 52,869 – fugitive ink based on glycerine and fish glue

Research: proves that these essays have been **incorrectly** described as 'Gibson starch coated' since Brazer (1941). They are in fact, based on MacDonough's patent for fugitive ink.*

Background: Mason (1911) grouped these essays with what Brazer and Scott erroneously called the 'Gibson patent coated paper' essays. As my research shows, however, Brazer and Scott are both wrong. Gibson never patented starch-coated stamps. These are neither Gibson nor Loewenberg starch-coated essays.

i). Essays wiped by cotton wool dipped in warm water



Dusky violet red



Dull dark yellow

The first stamp has been wiped 'down-up-down'. The second was wiped until it came clean.

Fugitive ink smudges to begin with. After a while, it can be cleaned off the paper.

ii). A comparison of the quality of the printing using high resolution scans



MacDonough patent fugitive ink



Loewenberg starch coated patent for comparison

Procedure:

- i. Wipe the printed surface with damp cotton wool. The ink smudges. This initial smudging is what proves a fugitive ink and differentiates these essays from essays printed on a coated surface.
- ii. Examine the printed surface under strong magnification. As the high resolution scans show, the MacDonough patent ink *bleeds after printing*. This is its defining characteristic.

Conclusion: starch coated paper wrinkles and the printed surface cracks. But the print quality is relatively good. When wiped, the ink comes away cleanly once the starch has been softened. MacDonough patent fugitive ink does not cause the paper to wrinkle, but the print quality is poor. When wiped, the ink smudges.

Instead of one set of 'Gibson starch coated essays', what we have in the catalogue listing is two sets of essays, one of which tests Loewenberg's patent 42,207; and one of which tests MacDonough's patent 52,869.

Patent description:

MacDonough's patent 52,869 was for an 'improvement in the manufacture of ink for printing postage stamps'. The idea was that the ink should be extremely soluble in all potential cleaning agents – water, alkalis, acids. To achieve this, MacDonough suggested '... the employment of glycerine ...' in the ink.

From MacDonough's letters patent dated February 27, 1866

* Hofmeyr and Lee (2016), The Chronicle 68:2, May

1866: MacDonough's patent 52,869 – fugitive ink based on glycerine and fish glue

Additional examples and shades: imperf and ungummed



Yellow



Dusky violet red



Dark yellow orange



Orange red



Light orange red



Light yellow orange



Yellow orange



Dark yellow orange

Dull olive yellow



Light yellow



Dark olive yellow

1866: The Wyckoff patent 53,723 – paper coated with oxide of zinc



The Wyckoff patent was known on the 1c Franklin of 1861

This is the discovery piece that proved its existence on the 3c Washington

e: PF; rose, perf 12, gummed

Research: here I prove that the N.B.N.C. also tested Wyckoff's patent with lithographic printing*

Background: In 2002, the Philatelic Foundation certified the above block as 'William Wyckoff patent fugitive ink'. In doing so, they added the 3c to the stamps known to have been tested with the Wyckoff patent.

What had not been known, was that the N.B.N.C. also tested the Wyckoff patent on surface printed stamps.



Dull pale blue



Dull yellow orange



Dull green



Dull orange red

Wiping with a damp cloth removes the ink without smudging

Procedure: wipe the bottom right corner of each stamp with a damp cloth. After a while, the ink comes away without smudging. These essays are therefore tests of coated paper, not fugitive ink. Magnification reveals that the printed surfaces are smooth, not cracked. The paper is therefore **not** starch coated.

Conclusion: there are only two patents for printing on a coated paper – Loewenberg's (starch coated) and Wyckoff's (oxide of zinc). Since these stamps don't show the characteristics of starch coated paper, they must be tests of Wyckoff's patent.

These essays therefore combine surface printing to cut costs with Wyckoff's patent to prevent reuse.

Note: Wyckoff was aware of Loewenberg's patent. His letters patent includes an extended critique of Loewenberg's patent, noting that '... the preparation of the material is exceedingly expensive, the sheets are apt to stick together or break in pieces...' etc.

Patent description:

Patent 53,723 was for a coated paper that would not suffer from the defects found with Loewenberg's starch coated paper. To quote: '... my invention consists in coating the side of the paper on which the printing is to be done with a surface of water-color pigment ...'. He suggests oxide of zinc (commonly known as 'Chinese white').

From Wyckoff's letters patent dated April 3, 1866

* Hofmeyr and Lee (2016), The Chronicle 68:2, May

* This block featured in The Chronicle (Vol 20, No 2, May 1977).

1866: The Wyckoff patent 53,723 – paper coated with oxide of zinc

Additional examples and shades: imperf and un gummed



Dull pale blue



Pinkish orange



Dull pinkish orange



Dull yellow orange

Darker green



Lighter green



Tab essays – possibly inspired by Bowlsby’s patent 51,782 (December 26, 1865)

Imperf
Gummed
Folds out



At most **three** relatively sound examples are known



Imperf
Gummed
Punched out ‘3’

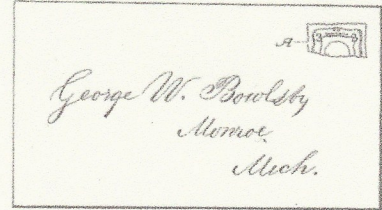


Fig 2.

Scan from Bowlsby’s patent. He uses the 3c to illustrate his idea

Patent description:

Patent 51,782 was for a stamp with a tab. The tab would be ungummed. The stamp would be cancelled by, to quote, ‘... tearing off a portion of it by the postmaster before it enters the mail.’

From Bowlsby’s letters patent dated December 26, 1865

1869: The Steel patent 86,952 – blotting paper on stamp paper

Soft white paper on stamp paper
Black, perf 12, gummed,



Experimentally cancelled

Corner turned over to show the two papers



Soft pink paper on stamp paper
Black, imperf, ungummed

Soft pink paper on stamp paper
Black, perf 12, gummed,



Experimentally cancelled

Patent description:

Patent 86,952 combined a hard paper for the back of the stamp to prevent the gum from showing through; with a blotting paper front. The blotting paper would absorb the cancel and disintegrate if attempts were made to remove it. To quote: ‘... I make my stamp with the face of blotting paper. (This) allows the... ink to penetrate through it...’.

From Steel’s letters patent dated February 16, 1869

Chapter 5: Additional Experiments

The latter half of the 1860's were characterized by numerous experiments to cut costs and prevent reuse or fraud. Some essays used the 1861 plates. Many involved surface printing based on rather crude impressions of the 1861 design. In this section I show:

- Tinted paper and fugitive ink essays circa 1865-8, using the 1861 plates
- Typographic and lithographic experiments to reduce costs - see the Macdonough-Zevelly letter of 1863
- The scarlet ink trial color experiments, signed and dated 1868 by MacDonough

Mason (1911) dates these experiments from 1865 onwards. Brazer (1941) dates them 'circa' 1867. MacDonough's signed scarlet essay is dated 1868.

1865 – 1868: imprint plate blocks from experiments using the 1861 3c plates



Blue on thin white wove paper
Imperf and ungummed

Rose on blue-tinted paper
Imperf, gummed



1865 – 1868: various papers and inks, imperf, ungummed



Scarlet on heavy yellow laid



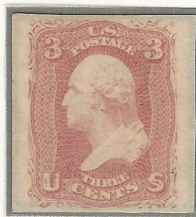
Rose on blue-tinted paper



Green on heavy yellow laid



Lilac on rose lilac



Rose on white wove



Black on white wove Experimental cancel



Brown on yellow brown



Red brown on yellow brown



Orange on green



Pale rose on white wove

Green on heavy green laid



Scarlet on light blue



Scarlet on pale blue green



Scarlet on pale green



Scarlet on very thin white wove

1865 – 1868: various papers and inks, perf 12 and gummed

i). *Shades of brown and fugitive ink on white wove*

e: PF

Brown on white wove
Water color ink



Green on white wove
Fugitive ink



Brown on white



Lake brown on white

e: PF



Purple brown on white



Dark red brown on white

ii). *Tinted paper, laid paper, earing variety*

e: PF

Green on white laid



Brown on lilac



Pale brown red on straw

e: PF



Dull orange on pale blue green



Scarlet on yellow



Scarlet on dark blue



Dull red on blue green



Scarlet on pale blue

e: PF

Green on white wove
'Earing' variety



Scan of the
'Earing' variety

1865 – 1868: water paper and gum experiment, perf 12, gummed



*Brown (1) on
white wove*



*Brown (2) on
white paper*

Imprint plate block – gum experiment: albino impression

Not much is known about this block. Early auction catalogues refer to it as ‘a gum experiment’.

Only known example of an albino imprint block



1865 – 1868: tinted, horizontally laid papers, perf 12, gummed



Scarlet and Brown
On yellow tinted laid paper

Scarlet and Brown
On white tinted laid paper



Brown and Scarlet
On salmon tinted laid paper

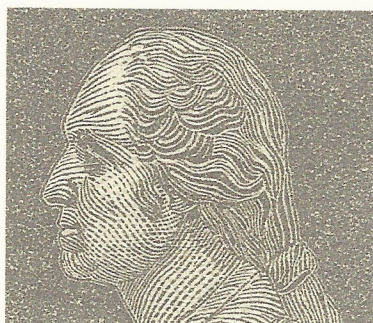
Brown and Scarlet
On green tinted laid paper



1865 – 1868: additional experiments with surface printing to cut costs

A comparison of Lithographic and Typographic printing

Lithographic
Fuzzy, detailed lines



Typographic
Simple, sharp lines



High resolution scans of vignettes

Plate block essays



Lithographic
On pale green wove,
green, ungummed



Typographic
On white wove, orange,
ungummed

Sketchy frame
Fuzzy image



Full frame
Sharp image



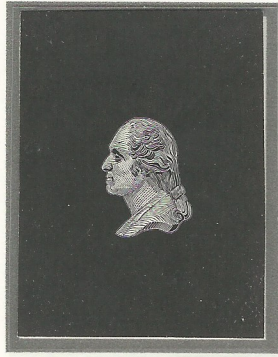
High resolution scans of top right corners

The 1863 letter from McDonough to Zevely makes it clear that the N.B.N.C. had begun to experiment with surface printing to cut costs as far back as 1863, but with 'unsatisfactory results'. Mason (1911) dates most essays to 1865. Brazer (1941) dates them to 1867. MacDonough's signed scarlet essays is dated 1868.

1865 – 1868: lithographically printed vignettes for surface printing experiments

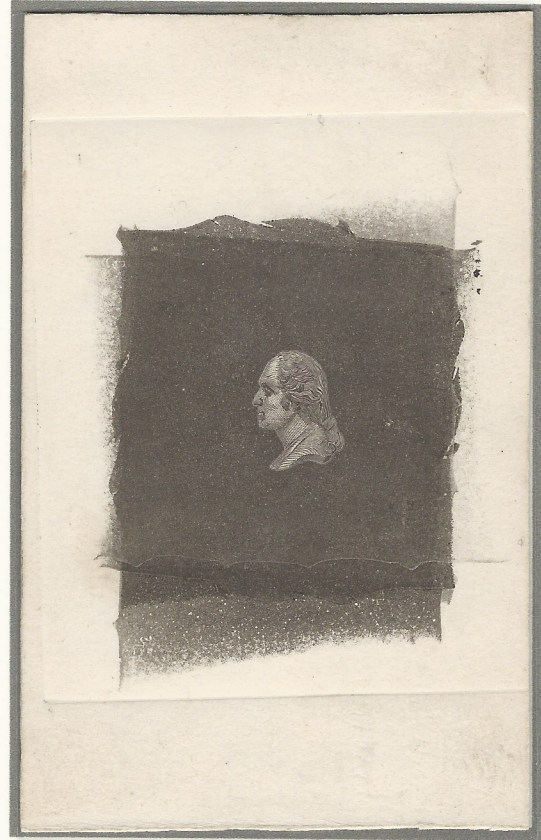
Black die on stiff thin card

Dots on face and neck



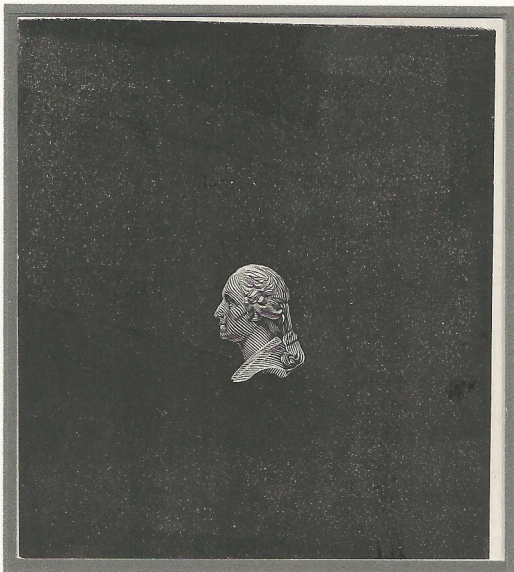
Black die on soft white card

Dots on face and neck, rough impression



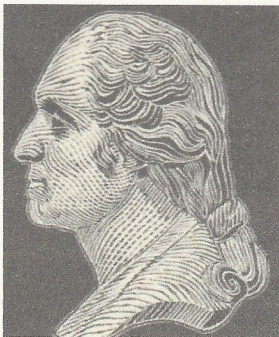
Black die on stiff thin card

Face lined



Scan of the vignette designs

Dots on face and neck



Thick lines



Scan of the design used for plate proofs

Lines and shading

