

## The Prevention of Reuse

Some essays are printed in reverse even though they're not testing a Loewenberg patent

This lithographically printed essay doesn't test a patent. But it's printed in reverse in the manner of the Loewenberg patents.



A complete sheet of **Black** on white wove

# The Prevention of Reuse

## Loewenberg patents 45,568 and 63,733: Starched linen and saccharine ink

On **February 28, 1865** Loewenberg patented an ‘... improved fabric for hats, bonnets, etc. ...’ (**Patent 45,568**). The big idea was that the fabric could be embossed with a design if first stiffened with starch.



It is hard to understand why these linen-printed essays were produced, unless they were a test of printing on Loewenberg’s ‘improved fabric’.

*Blue on linen*



*Green on thick white wove*

*Gummed, perf 12*



*Gray on thick white wove*

*Gummed, perf 12*

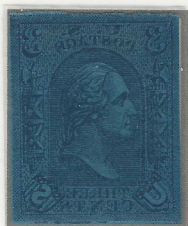
*Orange on white wove*

*Imperf  
Stained*



On **April 9, 1867** Loewenberg patented a fugitive ink made of ‘saccharine matter’ i.e. forms of sugar like honey or molasses (**Patent 63,733**). If these essays were based on that patent, their inks would glisten under light. They don’t. It’s therefore hard to know to why these are referred to as fugitive ink.

## Additional Loewenberg experiments: various papers



*Scarlet on blue wove  
Imperf, ungummed*



*Black on orange laid  
Imperf, ungummed*

*Under-inked orange on white glazed paper*

*Imperf, ungummed*

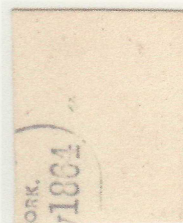
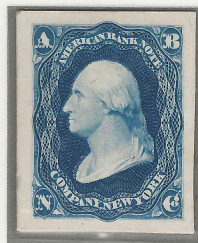


# The Prevention of Reuse

## Loewenberg discoveries and rarities

This **discovery copy** proves that the American Bank Note Co. also tested Loewenberg's patent 40,489

This is **the only copy known.**



A.B.N.C. essay on card.

An **1864** back-stamp proves the date.



*Die on India, signed by D.H. Craig*



*Pale tan on thick wove*

**Fugitive ink** essay, signed by Loewenberg

# The Prevention of Reuse

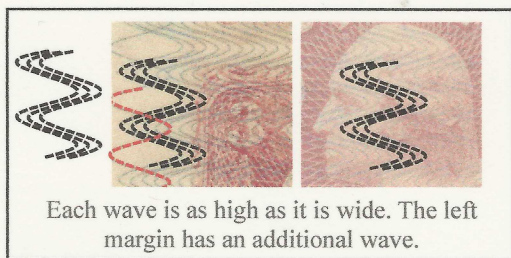
## The Gibson patent 41,118: Safety network overprints

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

**Research:** On this page I propose a new method for classifying the **Gibson** safety network overprints. My method supports the view that there are only three types; and not, as in the current catalogue, four.

### Type 1: wavelength 3.2 mm; amplitude 3.2 mm



Yellow brown  
Overprint tan

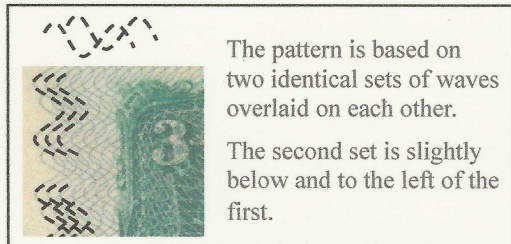


Rose-red  
Overprint blue



Green  
Overprint gray-tan

### Type 2: wavelength 3.2 mm; amplitude 1.6 mm



Dark green  
Overprint blue-green

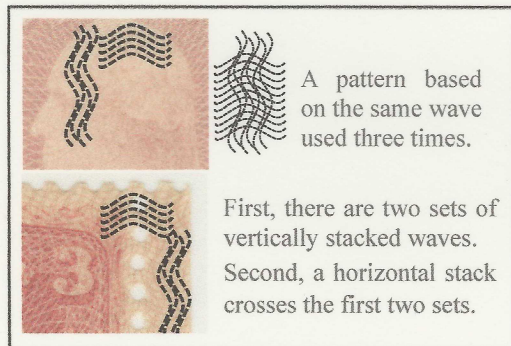


Blue  
Overprint gray-tan



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

# The Prevention of Reuse

## The Gibson patent: Rarities

### The only recorded block of 4



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

Gibson's original idea was that the overprint should be fugitive.

*Dull violet*

*Overprint gray-blue*

### It is Type 2



On India. Overprinted 'ONE' in orange yellow.



This is one of only two recorded pieces.

This piece is a perfect fit for the top half of what was originally just one mini-sheet. The bottom half is in the collection of Richard Drews.

## The Prevention of Reuse

### The Harmon patent 41,505: Safety network overprint

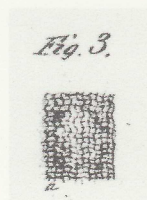
*'Upon the face of the stamp... I impress rectangular or waved web lines so that the entire area of the stamp shall exhibit fine meshes...'* Harmon argued that the only way to prevent people from finding a solvent that could remove cancellations, was to print the fugitive network in the ink that was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

*From Harmon's letters patent dated February 9, 1864*

**Research:** The origin of the so-called 'bedspring essays' has long been a mystery. On this page I present evidence that they may be based on **Harmon's patent** of 1864.



The 3c rose with full gum and overprinted in colours typically found in cancels of the time



*Fig. 3.* A scan from the patent shows the overprinted stamp



*Fig. 4.* This scan shows the overprinted stamp with a cancel

The resemblance of these illustrations to the Gibson SNO's, is striking. But, the Gibson SNO's don't use cancelling ink. There is at least one other copy of this essay cancelled in Buffalo; and also a copy cancelled in Washington (March 14, 1863). **Perhaps these essays went through the post?**

### Essays of unknown origin: generally accepted as genuine - **this is the only recorded set**

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



## The Prevention of Reuse

### The Francis patent 48,389: Paper stains when wet

**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*

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



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



## The Prevention of Reuse

### The MacDonough patent 52,869: Fugitive ink based on glycerine

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*

**Research:** The essays on this page are often described as starch-coated because of the poor printing quality. Close examination shows, however, that they are printed with a fugitive ink that leads to the poor quality.



*Dull yellow*



*Yellow brown*



*Orange red*

*Dusky violet red*

### Research: proof that the stamps have been printed with a fugitive ink rather than on a starch coating



*Dusky violet red*



*Dull yellow*

*Light Blue*

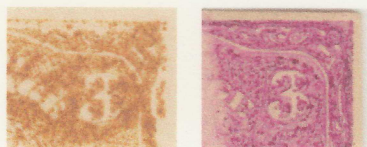


*Starch coated for comparison*

#### *i) Behaviour when wiped*

Wipe the stamp with a piece of cotton-wool dipped in warm water. The stamp on the left has been wiped down-up-down. It smudges. The stamp on the right was wiped in the same way. It smudged in the same way. Then it was wiped clean.

Starch-coated stamps don't smudge first when wiped. Instead, the ink comes away cleanly as the starch dissolves.



*Glycerine-based Ink*



*Starch-coated*

#### *ii) Comparative scans*

Comparative scans show that the quality of the fugitive ink images is much worse than that of the image printed on starch-coated paper. In addition, the fugitive ink glistens under light and 'runs' after printing.

Loewenberg patented a similar, saccharine based ink (**patent 63,733**). However, these essays are more likely to be based on MacDonough's patent for three reasons. First, MacDonough's patent preceded Loewenberg's by more than a year; second, MacDonough's ink was tested on the 1c Franklin; and third, MacDonough was the N.B.N.C.'s general manager.



# The Prevention of Reuse

## The Wyckoff patent 53,723: Coated paper

**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*


**Research:** The **Wyckoff patent** is known with intaglio printing on the 1c Franklin and 3c Washington. My research suggests that it was also tested on the 3c Washington lithographic essays.



e: PF; rose, perf 12, gummed\*


The discovery piece for the Wyckoff in the 3c. Bottom corner wiped to prove the patent.

In most catalogues, these essays are currently described as 'Lithographed plate on semitransparent white wove'.



Dull pale blue

Dull yellow orange



**Research**  
Wipe the stamp with damp cotton-wool dipped in warm water. Unlike essays printed with fugitive ink, the design **doesn't smudge**. It comes away cleanly (as with starch coated paper). However, the printed surface **doesn't show the cracking** that is typical of starch coated paper.



Dull pale blue



Dull yellow orange



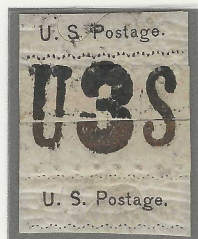
Green

Wyckoff was aware of Loewenberg's patent. He therefore included a critique of Loewenberg's patent in his application. His critique gives us a first-person insight into the problems that the N.B.N.C. had with Loewenberg's ideas: '*... The preparation of the material... is exceedingly expensive, the material receives the impression poorly, the sheets of stamps when printed are apt to stick together or break in pieces...*'.

# The Prevention of Reuse

**Tab essays:** Possibly inspired by Bowsby's patent 51,782 (December 26, 1865)

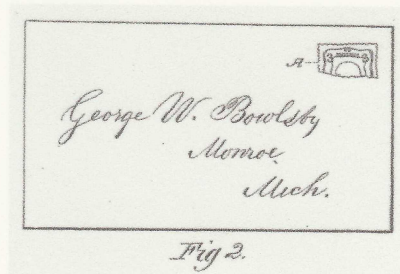
Imperf  
Gummed  
Folds out



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



Imperf  
Gummed  
Punched out '3'



Scan from Bowsby's patent. He uses the 3c to illustrate his idea

## The Steel patent 86,952: Blotting paper on stamp paper

**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*

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



## 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 1867 using the 1861 plates
- Columbia Head essays of the A.B.N.C.
- Typographic and lithographic experiments to reduce costs - alluded to in the Macdonough-Zevely letter of 1863
- Liberty Head essays including the Thorpe patent and die proofs signed by Jones and Ronaldson
- Scarlet ink trial color experiments, probably dating from 1868

**Imprint plate blocks** from experiments using the 1861 3c plates



*Blue on thin white wove paper  
Imperf and ungummed*



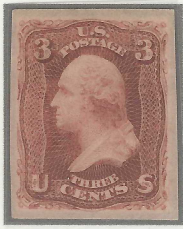
*Rose on blue-tinted paper  
Imperf, gummed*

## Additional Experiments

**Imperf on various papers:  
ungummed**



Black on white wove  
Experimental cancel



Lilac on rose  
lilac



Brown on yellow  
brown



Pale rose on  
white wove



Scarlet on heavy  
yellow laid



Green on heavy  
yellow laid



Orange on  
green



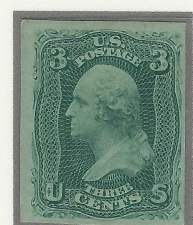
Scarlet on light  
blue



Scarlet on pale  
blue green



Scarlet on very thin  
white wove



Green on heavy  
green laid

**Perf 12 on various papers,  
some fugitive ink: gummed**



e: PF  
Green on white wove  
'Teardrop' error on ear



e: PF  
Brown on white wove  
Printed on water color



Lake brown on  
white wove



e: PF Brown (1)  
on white wove



Brown (2) on  
white paper



Scarlet on dark  
blue



e: PF Green on  
white laid



e: PF Dark red  
brown on lilac



Pale brown red  
on straw



Scarlet on  
yellow



Dull red on blue  
green



e: PF Dull orange on  
pale blue green



Scarlet on  
green

## Additional Experiments

**Blocks of Four:** perf 12, gummed



*Brown (1) on  
white wove*



*Brown (2) on  
white paper*

**Imprint plate block – gum experiment:** albino impression, perf 12, gummed



Uncatalogued

Not much is known about this block. Early auction catalogues refer to it as ‘a gum experiment’, but that is probably a guess. Non-imprint copies are known, suggesting that one pane of 200 may have been produced.

# Additional Experiments

Horizontally laid, tinted paper: perf 12, gummed

**Scarlet and Brown**  
Yellow horizontally laid paper



**Scarlet and Brown**  
White horizontally laid paper

## Additional Experiments

Horizontally laid, tinted paper: perf 12, gummed



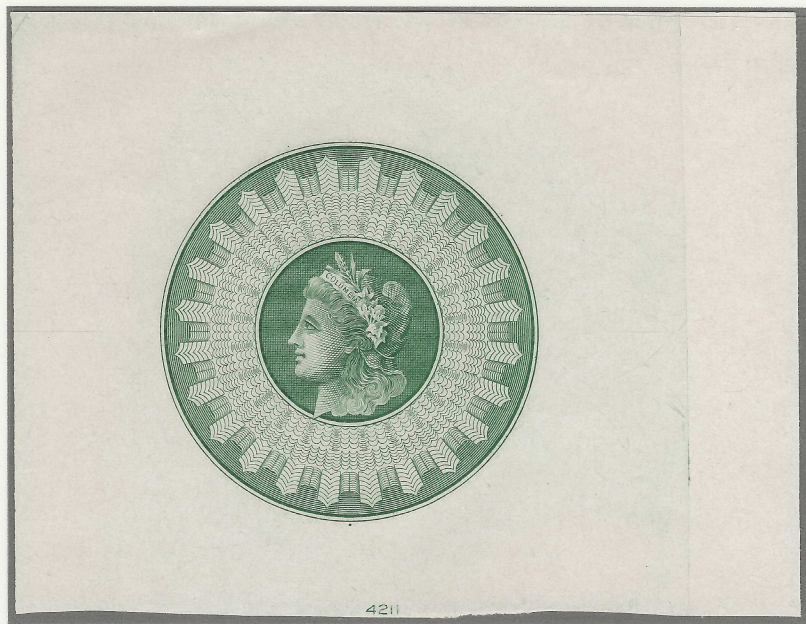
**Brown and Scarlet**  
Salmon horizontally laid paper

**Brown and Scarlet**  
Green horizontally laid paper



## Additional Experiments

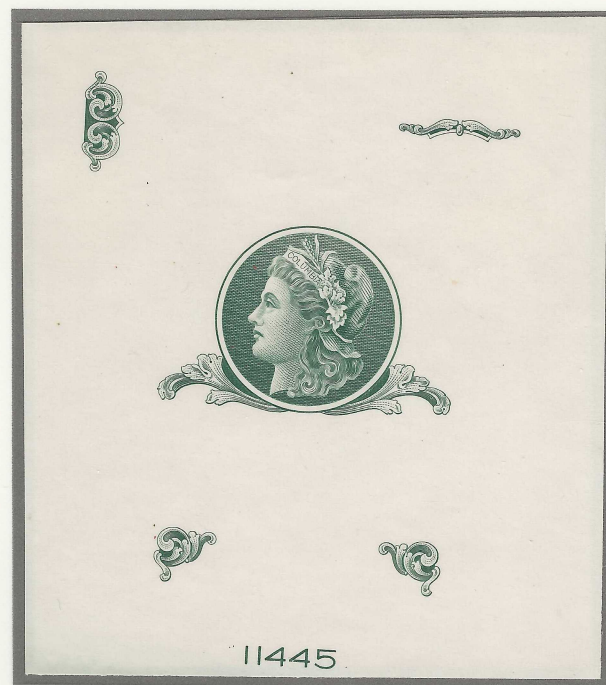
American Bank Note Company: various vignette dies on glazed paper



4211

11445

11447



Not very much is known about these experiments. They were produced at about the same time that the N.B.N.C. seems to have started experimenting with the Liberty Heads.