

# **U.S. Issues of 1861-68**

## **The Civil War and the stamps: a time of turmoil**

Revised

August 24, 2018

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Collectors Club of Chicago

For APS Testing

- At the start of the Civil War the Union felt that stamps in the possession of disloyal postmasters in the South might be shipped back to the North and sold at a discount to provide funds for the Confederate war effort.
- Bids were requested for stamps of a new design so the old stamps could be demonetized.
- A new, inexperienced firm, the National Bank Co., won the bid and scrambled to provide work samples and get into production. This notice went to postmasters announcing the exchange of old stamps for new ones.

**Post Office Department,**

*Finance Office, 1861.*

**Postmaster**

SIR :

You will receive herewith a supply of Postage Stamps, which, you will observe, are of a new style, differing both in design and in color from those hitherto used, and having the letters U. S. in the lower corners of each stamp, and its respective denomination indicated by figures as well as by letters.

You will immediately give public notice, through the newspapers and otherwise, that you are prepared to exchange stamps of the new style, for an equivalent amount of the old issue, during a period of six days from the date of the notice, and that the latter will not thereafter be received in payment of postage on letters sent from your office.

You will satisfy yourself, by personal inspection, that stamps offered in exchange, have not been used through the mails or otherwise ; and if, in any case, you have good grounds for suspecting that stamps presented to you for exchange were sent from any of the disloyal States, you will not receive them without due investigation.

Immediately after the expiration of the above period of six days, you will return to the Third Assistant Postmaster General all stamps of the old style in your possession, including such as you may obtain by exchange, placing them in a secure package, which *must be carefully registered in the manner prescribed by Chapter (39) of the Regulations of this Department.*

*Be careful also to write legibly the name of your office, as well as that of your county and State.*

A strict compliance with the foregoing instructions is absolutely necessary, that you may not fail to obtain credit for the amount of stamps returned.

Instead of sending the old stamps to the Department, you can, if convenient, exchange them for new ones at some city post-office, where large supplies are to be found.

It being impossible to supply all offices with new stamps at once, you will deliver letters received from Kentucky, Missouri, Illinois, Indiana, Ohio, Maryland and Pennsylvania, prepaid by stamps of the old issue, until November 1st ; those from other loyal States east of the Rocky Mountains, until the 1st of December ; and those from the States of California and Oregon, and from the Territories of New Mexico, Utah and Washington, until the 1st January, 1862.

I am, respectfully, your obedient servant,

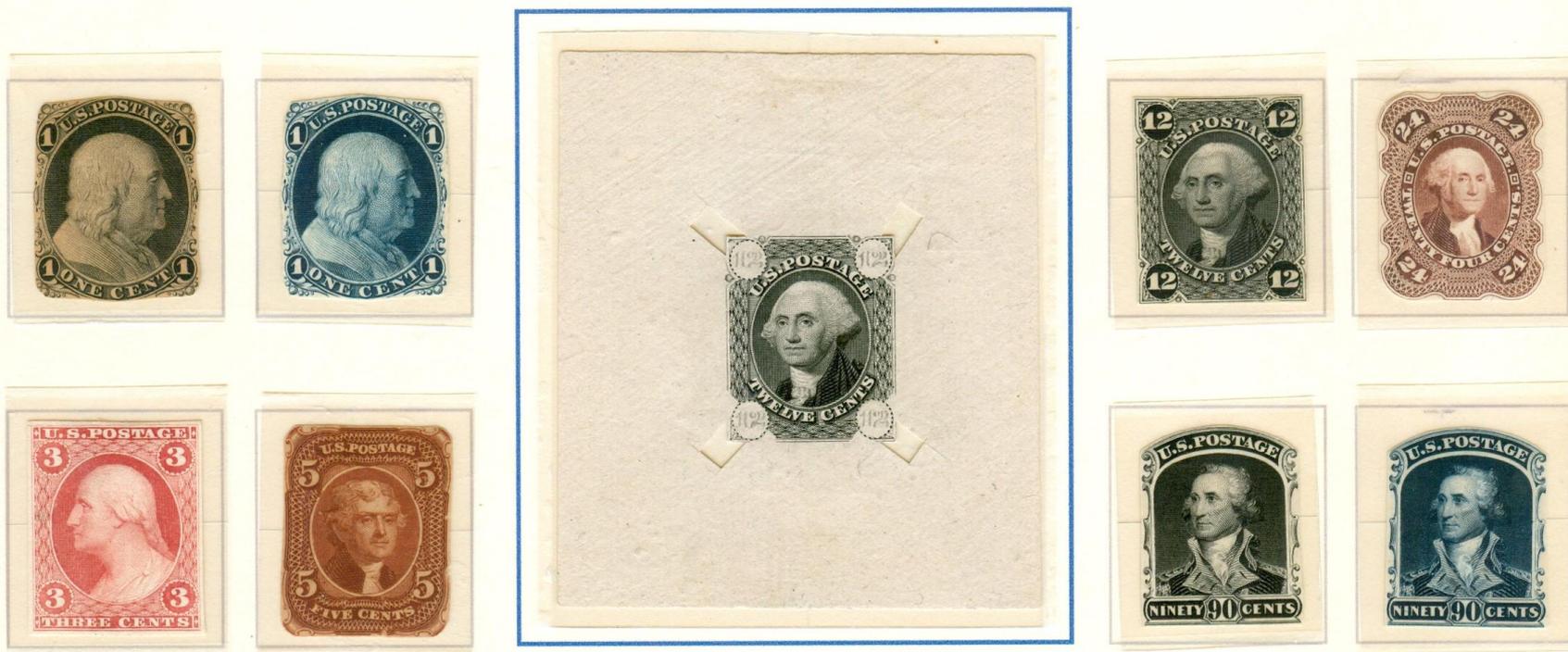
**A. N. ZEVELY,**

*Third Assistant P. M. General.*

The contract to print stamps was so large, it was difficult to stay in business after losing it. Toppan, Carpenter, Casilear & Co. modified their designs in an unsuccessful attempt to keep the contract.

### Forerunners: the Toppan, Carpenter & Co. Submissions - Contract Holders 1851 – 1861

Completed die essays modifying previous designs on 1861 proof paper, cut to shape as usual – an attempt to retain the stamp contract.

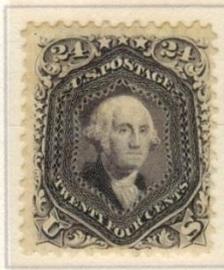
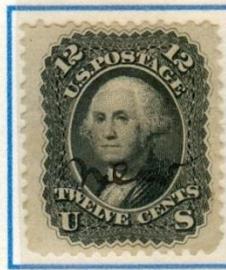
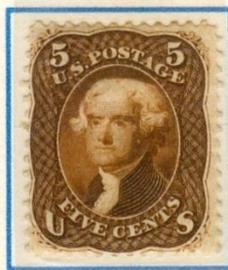


progressive die essay, cut out corners, numerals drawn in  
**only recorded example**

The 10 cent and 30 cent values were not modified for submission.

The National Banknote Company had to scramble to produce acceptable work samples once they had submitted a winning bid.

First Designs - "Premiere Gravures"



24 recorded e

35 recorded e

16 rec'd "new" e e

30 recorded e

22 recorded e

The Issued 1861 Stamps - Second Designs



2 cent and 15 cent designs were added in 1863 and 1866 respectively.

e

- The 3 cent design has the most complex history.
- To create the design they engraved a bust,
- Added framework,
- Added ornamentation to the framework and then added scrollwork.
- This was presented as a completed first design.
- It was modified by removing the scrollwork.
- More extensive scrollwork was added to the frame (discovery example).
- Corner ornaments were added to complete the approved die.

Archival Material

First Design Progressive Die Essays - 3 Cent

stage 2

no scrollwork or ornaments on 3's or U and S

stage 1  
head only



stage 3  
finished  
first design  
die essay



stage 4  
scrollwork is almost  
completely removed  
ornaments on 3's, U and S remain  
*only recorded working example*



stage 5  
additional frame  
ornamentation  
*discovery example*



stage 6  
completed large die  
trial color proof



- The final design was produced in several colors and for various purposes.
- Black was usually used to check engraving details.
- Production of a large die on glazed card is unusual.
- The issued rose color was likely contemporary.
- The scarlet is most likely from a later period.
- One large die proof of each denomination was embossed with the company seal and marked “Specimen” in manuscript.
- The final “SPECIMEN” overprint is from a salesman’s sample book.

Archival Material

Large Die Proofs - 3 Cent



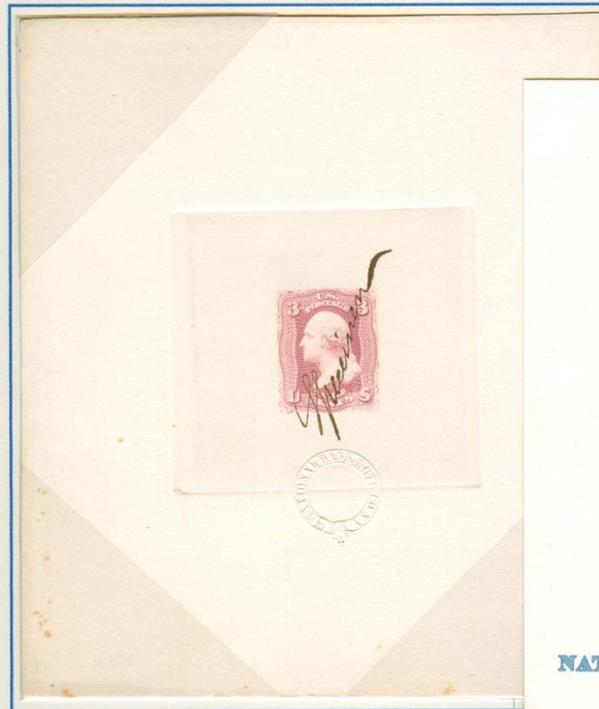
trial color large die on glazed card  
only recorded example



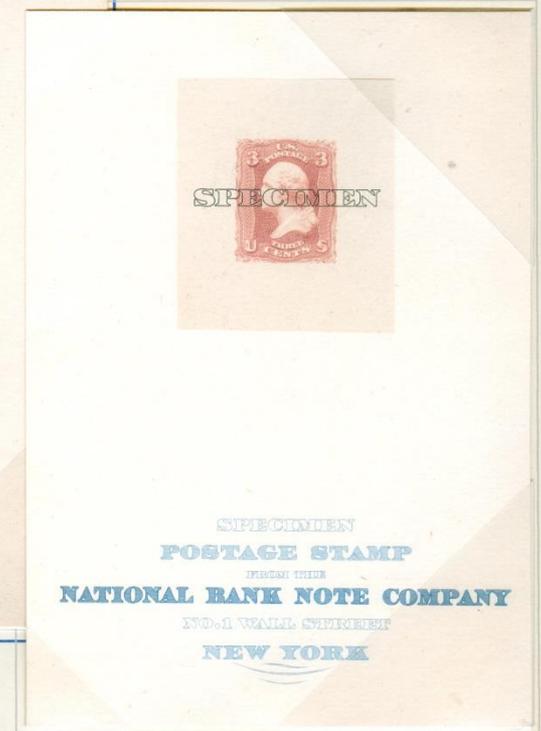
issued rose



scarlet trial color  
3 examples recorded



manuscript “Specimen”  
one of each denomination recorded  
National Bank Note Company embossing



SPECIMEN  
POSTAGE STAMP  
FROM THE  
NATIONAL BANK NOTE COMPANY  
170-1 WALL STREET  
NEW YORK

After approval of the dies, plates were prepared and proofs on India paper were printed. Proofs on card stock were produced between 1879 and 1894, in a series of 6 printings, for sale to collectors.

Archival Material

First Design Plate Proof Blocks on India Paper

Only 2 complete sets of blocks could be formed



indigo



ultramarine

1 cent ultramarine plate block is the only recorded example



Archival Material

India Proof Blocks of Issued Designs



lake

scarlet



- Stamps were overprinted “Specimen.” in sheets of 200. The twelve cent is faintly overprinted. Some have been lightened to pass as mint stamps.
- Control numbers were also produced, but based on centering, only a half pane of 50 of each value was produced.
- Based on the numbering sequence, they were produced before the fifteen cent value was issued, since an out of sequence number was applied to the 15 cent value when it was issued.

Archival Material

Specimen and Control Number Overprints

Specimen Type B



the 12 cent is always faint

“Specimen” Type A



The control numbers were prepared just prior to the issuance of the 15 cent value. **Only one half pane of each value was overprinted using bond coupon numbering machines.** Recent research shows that blocks of 40 of each denomination, sold in the auction of the Mandel holdings, are the source of most recorded examples. 41 examples of the 2 cent are recorded.

- A handful of imperforate samples were distributed, most with manuscript defacing. This is the only complete set recorded.
- In anticipation on the 1876 centennial celebrations, previously issued U.S. stamps were reproduced, reissued or reprinted in 1875 for sale to collectors. Most seem to have gone to dealers, with the lower values purchased in the greatest quantities.
- Small die proofs were printed for the 1915 Pan-Pacific Exposition. At most 5 sets are thought to survive.

Imperforate Varieties - the **Only Recorded Complete Set**



the manuscript defaced stamps have been called presentation copies - no supporting documentation is known - PFC 173128-173137

Reissues of 1875



1915 Pan-Pacific Exposition Small Die Proofs - **3 to 5 of each known**



most show usual toning of the wide mesh paper - 2 cent PFC 64559, 5 cent PFC 347557, 10 cent PFC 122234 - 5 cent & first 12 cent are Premiere Gravures

Plate proofs on card stock were also printed in 5 colors in 1881 for display at the Atlanta Cotton Exposition. Only one pane of 100 of each color was sent to the exhibition.

Epilogue: Post Issue Material

Trial Color Proofs on Thin Card

Produced from existing plates for the Atlanta Cotton Exposition in 1881



one pane of 100 of each value was printed

Epilogue: Post Issue Material

Trial Color Proofs on Thin Card

Produced from existing plates for the Atlanta Cotton Exposition in 1881



one sheet of 100 of each value was printed

- In 1903 President Roosevelt requested 85 presentation albums of small die proofs as gifts for various dignitaries.
- The Post Office tried to imitate the designs and colors of the 1<sup>st</sup> and 2<sup>nd</sup> designs. Note the 1866 date for the scarlet.
- Most of the albums have been broken into the individual pages which have been split so the cream colored interior of the page shows on the back.
- Proofs removed from the page have a whiter and tighter wove paper than do the 1915 small dies, which are toned.



- The Civil War placed a huge strain on the resources of the Union and the Confederacy.
- Need for hard currency to settle obligations, especially with foreign governments, drove coinage out of circulation.
- Merchants were hard pressed to make change and scrip was rarely acceptable out of the immediate area.
- John Gault patented the idea of encasing postage to be used as change.
- The Union followed suit with postage currency.

### Unused Issued Designs

### Used in Encased Postage

#### Efforts to Overcome Coinage Shortage Resulting From Depreciated Paper Currency

Encased postage - patented by John Gault, August 12, 1862 - merchant's ads on reverse



Ayer's  
Sarsaparilla

Norris  
News Books

Ayer's  
Sarsaparilla

Tremont  
House

Burnett's  
Extracts



Kirkpatrick  
& Gault



Kirkpatrick  
& Gault



Kirkpatrick  
& Gault



J.  
Gault

the 2 cent was never placed in service and use ceased prior to the issuance of the 15 cent

#### Postage currency - receivable for postage stamps - act approved July 17, 1862



- Unused examples of several colors of the issued designs are rare.
- The 3 cent pigeon blood pink and the 5 cent brown yellow are particularly rare.
- Only 3 examples of the black violet are recorded.
- The scratch under A of POSTAGE is a constant variety.

### Unused Issued Designs

### Major Shades and Imperf Varieties

200 subject plates, 2 panes of 100 (10x10), perf 12, vertical straightedges and dividing lines between panes



Imperf varieties - manuscript defaced stamps are called presentation copies - no production records known



The only recorded complete set. e

- The one cent came in several shades.
- Indigo is believed only to exist in the first designs.
- Ultramarine has been a subject of controversy since it does not match the essay shades nor the 3 cent 1869.
- Horizontally and vertically laid papers are known.

One Cent Value: EDU August 17, 1861



blue



pale blue



bright blue



dark blue



ultramarine



near indigo



dry printing



Ballston, NY  
skull & crossbones



Rockford, IL  
bluebird



preprinting  
paper crease



horizontally laid paper e



vertically laid  
paper



AUG 21, 1861 e



5 point star



straddle pane  
dividing line



radical  
perf shift



inking flaw



overall double  
transfer

- The one cent value is the only one known in a series of small die trial color proofs.
- The design was also used to produce envelope essays.
- The ultramarine on cover is really what used to be listed as deep ultramarine.

One Cent Value



Trial Color Proofs, Envelope Essays, Domestic Uses

small die trial color proofs – the mustard color is previously unrecorded – black is also recorded – the only recorded examples

1 cent envelope essays

3 of 5 recorded examples

all different color combinations



ultramarine  
1 cent unsealed  
circular rate e

3 cents per 1/2 oz.  
domestic rate via  
Overland Mail Co.

had been 10 cent rate prior  
to reduction for route



- The two cent, or Black Jack, is the most distinctive design.
- The Atherton shift is the most distinctive variety, but the position is not known.
- The Preston shift comes from position 81R and has a straight edge at left.

Two Cent Value: EDU July 1, 1863

Prepays new drop letter rate with carrier service



black



gray black



intense black



multiple paper creases



Preston shift - pos 81R  
always has straight edge at L



Atherton shift e



double perfs



e



radical  
perf shift



green



# The Two Major Shifts



Preston shift - pos 81R

always has straight edge at L



**Atherton shift**

*PFC 288477*

- The three cent comes in a bewildering variety of colors.
- No blocks of the pigeon blood pink are known. It is chemically the same as pink, just heavily inked.
- The lake shade, listed as a trial color, matches issued lakes.

Three Cent Value: EDU August 17, 1861



pink

no more than 5 blocks recorded e



rose plate block



rose pink



deep brown red



lake e



imperf lake e



issued lake  
per Roy White



pale brown rose



imperf rose



imperf rose lake e



imperf rose lake plate block

- In addition to the color variations, the printing varieties are greatest on the three cent: printed on both sides, laid paper, imperforate horizontally & with double impression.
- The scarlet was never issued and comes from late 1867 or early 1868.
- ie. JM Jan 31 1868

Three Cent Value: EDU August 17, 1861



pigeon blood pink e      pink      rose pink      rose      bright rose      rose red



double impression e      horizontally laid paper e      horizontally laid paper      stitch watermark      printed on both sides e

Unissued scarlet trial color proofs, obtained improperly by J. W. Scott and sold as issued stamps.



imperf approval of color      imperf scarlet e      unused scarlet e      canceled at Station D      canceled at main P.O.      pen stroke defacement e

To fill orders for canceled stamps, J. W. Scott mailed scarlets to himself from Station D, near his office. **One is recorded with the main P.O. cancel**, near an earlier office. All bear cancels of the 1878-80s period. Pen stroke defaced remainders were traded by the Post Office to C. F. Rothfuchs, a prominent Washington D.C. dealer, for help and stamps given to the Columbian Expo of 1893.



imperf horizontally

imperf horizontally

radical perf shift

pre-printing paper crease

- The three cent design was also used to produce envelope essays.
- The return address on the scarlet envelope was useful in expertizing the fifteen cent envelope essay when it was discovered.

Three Cent Value

Envelope Essays and Domestic Uses



envelope essays  
one of each recorded



3 cent domestic rate  
pigeon blood pink e

pink  
New Orleans to NYC  
via Adams Express

last day of  
through the lines use  
e



- Note the return address on the fifteen cent envelope essay.

- Only the 1 cent, 3 cent and 15 cent denominations are recorded as envelope essays.

Fifteen Cent Value

Envelope Essay, Domestic and International Destinations

15 cent envelope essay  
only recorded example

American packet  
to Rio de Janeiro, **Brazil**  
French packet to  
Buenos Ayres, **Argentina**  
25 cents for 1/4 - 1/2 oz.  
8/67 - 1/70

5 x 3 cents per 1/2 oz.  
domestic rate



Bremen mail to Switzerland  
19 cent rate ended 1/68  
sent NGU direct  
15 cents per 1/2 oz.  
1/68 - 4/68  
earliest recorded rate use

- The five cent colors provided great difficulty for the company.
- Several variations of buff were tried, with the olive yellow being rare.
- Blocks are very rare: 1 unused buff, 3 used buff, 3 unused red brown and 2 used red brown blocks exist.

Five Cent Value: EDU August 19, 1861



brownish buff



buff



buff



brown yellow



olive yellow



double transfer at B e



red brown



dark red brown



brown



dark brown



black brown



pale brown



red brown - 2 unused blocks recorded



buff - 3 used blocks recorded



red brown - 2 used blocks recorded



brown



"FORWARDED BY / U. S. CONSUL / Kanagawa, Japan."



brown



express cx'1 "WELLS" (FARGO)



San Francisco cogwheel cancels



illegal revenue use

- The ten cent has two types: the first design was likely shipped out in the rush to keep up with demand for stamps.
- It was likely one of the first values to be completed and is also known with a misplaced 90 cent transfer on position 94R4 and imperforate horizontally.

Ten Cent Value: EDU August 20, 1861



first designs      yellow green      deep yellow green      green      dark green      blue green  
EDU September 20, 1861



imperforate horizontally  
3 examples recorded e  
repaired



plate scratch UL



short transfer UR



\$2.24 likely paying 8 times the 28 cent Prussian closed mail rate per 1/2 oz. : 9/61-1/68



double & triple transfers, same positions



plate bruises at left



dry print at right



slip print



Brattleboro, VT star



flag & union



Wala Wala, WA Terr



Philadelphia cds pair



French maritime anchor

- The twelve cent has few of the varieties of the other values.
- Most notable was the large multiple of 80+ stamps used as revenues. Kept intact for 120 years, it was broken into blocks, some of which were cleaned in an attempt to provide unused multiples.

Twelve Cent Value: EDU August 30, 1861



black



gray black



intense black, plate bruise



double horizontal perfs



e



plate scratches same position  
at upper left corner at "12"



"lightened manuscript cancellations" e  
block was submitted as unused



PAID



a large multiple used as revenues was broken up in the 1980s, some bleached to seem unused



Paris star



San Francisco Cogwheel Ty III



six point negative star



Boston heart



- The fifteen cent paid a single rate to France.
- Blocks are rare.
- The rejoined block on cover is the only one I have seen on cover.
- Well centered unused blocks were broken for singles.

Fifteen Cent Value: EDU April 21, 1866

Prepays 15 cent rate to France and honors assassinated President Lincoln



black



full black



plate cracks center left



masonic trowel



rejoined block on cover to Paris

less than 5 used blocks recorded



less than 10 mint blocks recorded e



Union soldier's head

- The twenty four cent was printed in a variety of inks producing many colors that are hard to separate and somewhat fugitive.
- Blackish violet stamps come from two distinct mixes of ink. Output of one mix seems only to have been shipped to Hartford, CT.

Twenty Four Cent: EDU August 17, 1861



violet shades on thin paper of first printings

Cincinnati, OH violet

reddish violet

pale gray violet



steel blue shades

red lilac

dark red lilac

brown lilac

reddish brown lilac



lilac

dark lilac

gray lilac

gray

e blackish violet e



brown lilac e



steel blue - SUPPLEMENTARY/MAIL

largest known used multiple



Cincinnati violet e

largest known used multiple



gray lilac



brown lilac



Waterbury, CT  
Bridgeport fireman e



Hingham, MA bat



gray

- The orange color of the thirty cent value gave little trouble.
- It shows off cancels better than the other values.
- Many of the rarest destinations are found with this value.
- A one frame exhibit of 30 cent uses is available.

Thirty Cent Value: EDU August 20, 1861



yellow orange



orange



deep orange



RETURNED FOR POSTAGE



Alexandria, VA geometric



crossroads



Union soldier's head



Boston, MA heart



New Bedford, MA cogwheel



SUPPLEMENTARY/MAIL



San Francisco cogwheels types I, II and III



French maritime anchor

- The ninety cent value has some modest color variations at best.
- Most of the covers had stamps soaked off for collectors.
- Just over 60 covers survive, only two with blocks.
- The block of 25 on piece is the largest block, followed by a block of 12.

Ninety Cent Value: EDU November, 1861



blue



pale blue



dark blue



dull blue



small flaws e



largest recorded multiple

ex Ishikawa



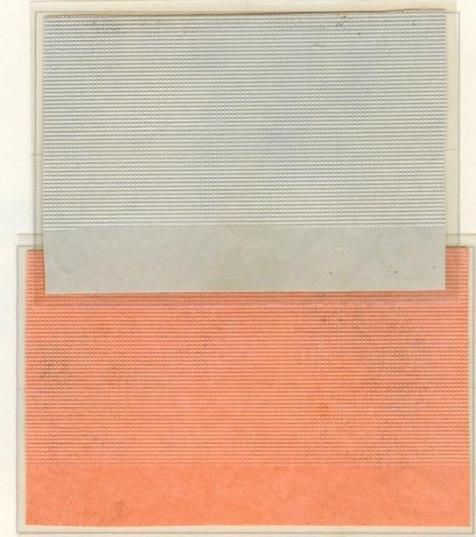
- Grill experiments at first focused on demonstrating the penetration of the canceling ink.
- While there were some experiments with grilling large areas and using rollers to produce grills, many of the grills covered small areas and were from flat plates.

Early Grill Experiments



"First experiment of grill" - 3 examples recorded

Production by Female and Male Rollers



produced by a female roller - depressions in the roller force the paper up into the depressions, forming pyramidal bosses, points up



test of ink penetration - only recorded example - sample produced by a male roller, projections on the roller piercing the paper, in this instance from the reverse, forming sharp horizontal ridges, points up



tests of ink penetration - samples produced by male roller, pyramidal bosses, points down - only recorded examples

- These are in the design of the original patent which envisioned grilling, then printing over the grill to flatten it except in a blank area, which was to receive the cancel.
- All of these grill experiments were from single grill units except for the LR embossing essay.

### Early Grill Experiments

Charles F. Steel

Grill Experiments Illustrated in Patent 70,147 by Charles F. Steel, October 22, 1867



lithographed die essays on wove paper, unprinted area embossed and grilled points down

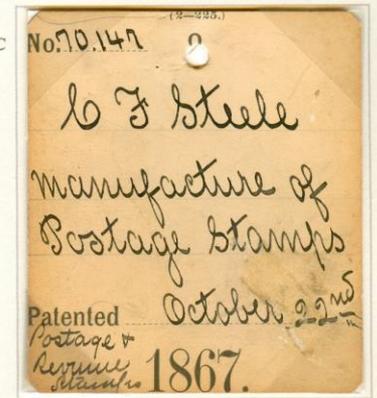
all rights were licensed to the National Bank Note Company

trial cancel from Washington, DC

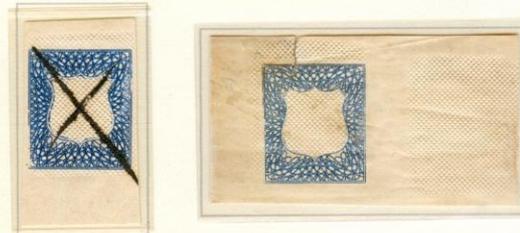


Post Office approval of "Steel Nature"

only recorded example



early experiments in grilling including patterns of grills over all-over grills only recorded examples



individually grilled diagonally and embossed, then printed and gummed trial cancel, to test whether printing or grilling should come first



test of embossing with central design, ungrilled

Hand operated press of the 1860's and a screw cutting foot lathe.

A screw-cutting lathe is a machine capable of cutting very accurate screw threads via single-point screw-cutting, which is the process of guiding the linear motion of the tool bit in a precisely known ratio to the rotating motion of the work piece.

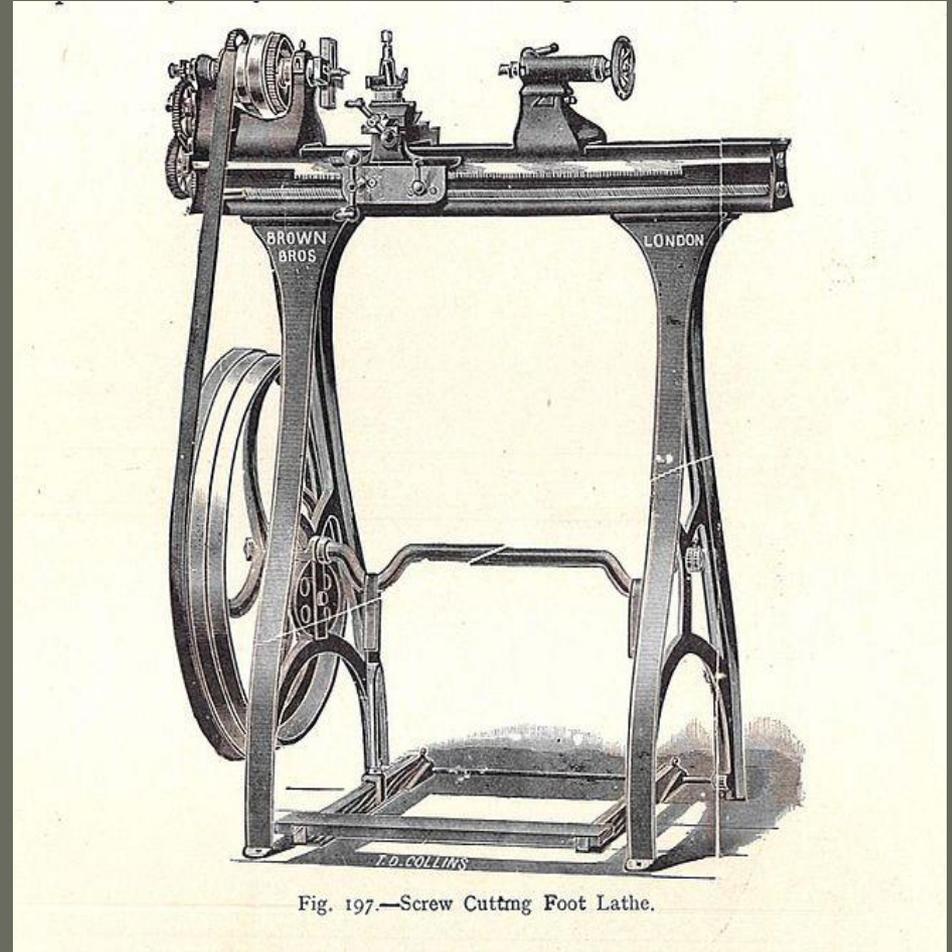


Fig. 197.—Screw Cutting Foot Lathe.

- Once a few tests of ink penetration had been conducted the focus became mass production.
- It is most likely that a printing press was adapted to the job of grilling.
- The printing roller, in a different size, was ideal for exerting sufficient pressure to produce grills.

Early Grill Experiments

Essay Grills Covering the Entire Stamp

Music Box Grills



trial cancel



regular points up



irregular points up



irregular points down



irregular points down



N.Y. SEP. 24, 1867  
only recorded example



pink trial cancel



misperforated



India proof paper



points down - boxy ridges



partially grilled



rose



trial cancel



black



unprinted



lake



preprinting paper creases

- Pressure required to produce biscuit grills from a female roller slowed down the process. The “A” grill created too much damage to the paper.
- Printing and then gumming came before grilling, yet sheets separated and perfs were damaged.
- Multiples are rare.

**Essay and Issued Grills Covering the Entire Stamp**



points up



points down  
horizontal ridges



NY P.O. cancel used to test grilling



shooting star

5 examples recorded

2 examples recorded

**“A” Grills**

**First Issued Grills - the "A" Grills**



e



female roller - points up - EDU AUG 13, 1867



imperf pair



irregular block of 3 e



4 used examples recorded e

4 unused examples are essays - 8 used examples of the thirty cent "A" grill are also recorded



4 blocks recorded e



earliest documented use - August 13, 1867 - 4 covers recorded e

- The female roller was quickly planed down to produce a smaller, “C” grill that still was points up, per the patent, yet could be produced more rapidly.
- Early essay sizes varied slightly, but some varied by 2 or 3 points.
- Note “GRILLING CYLINDER”.

**Experiments in Grill Production**

**Reduced Grill Size - Female Rollers - “C” Grills**

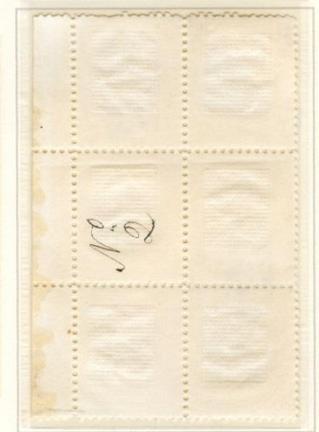
First Essays Points Up – Later Essays Were Points Down



partial erasure - coated paper



16-16 1/2 x 19-19 1/2 points e



16-16 1/2 x 19-20 points

**Planing down of “A” grill rollers produced “C” grill rollers with depressions of varying sizes.**

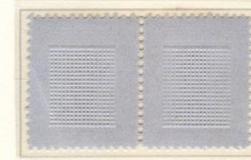
**The “A” grills weakened the stamps and required too much pressure to produce quickly.**



16 x 19 points  
coated paper



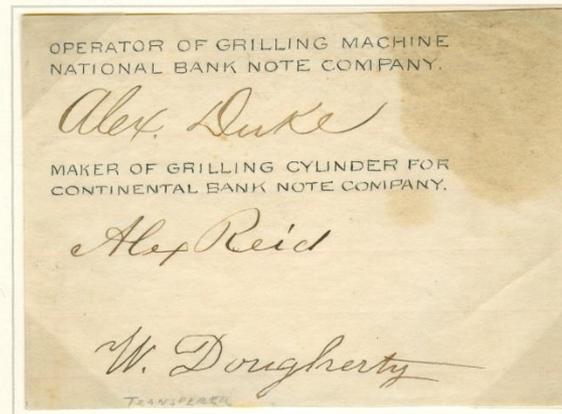
16 1/2 x 18 1/2  
points



16 1/2 x 19  
points

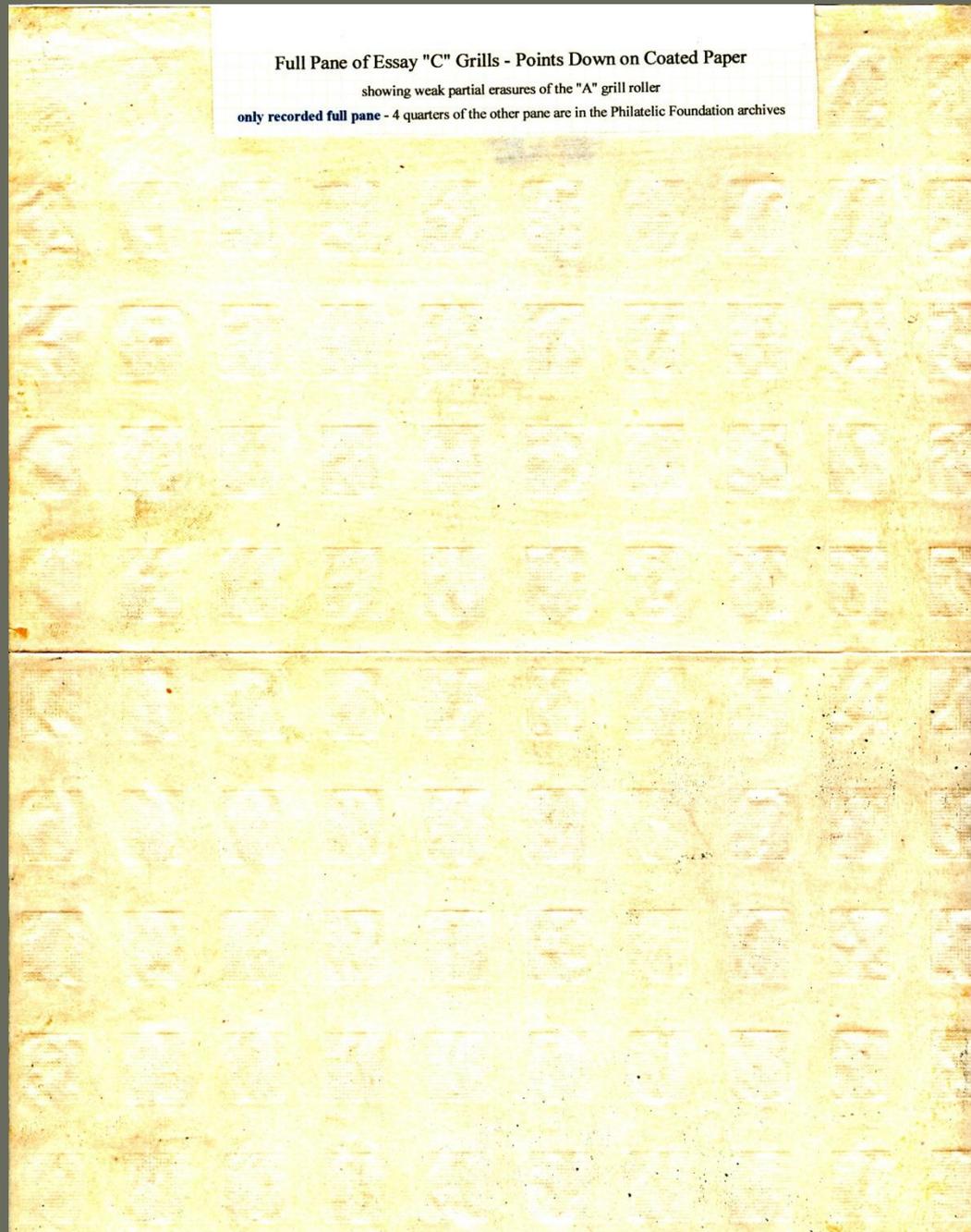


16 1/2 x 19 1/2  
points



only recorded example

- A full sheet of 200 of the “C” grill was in the Earl of Crawford collection.
- It was separated some time later and one pane of 100, now separated by handling and folding into blocks of 25, resides at the PF.
- This other pane was auctioned in the Belmont sale.



Full Pane of Essay "C" Grills - Points Down on Coated Paper

showing weak partial erasures of the "A" grill roller

only recorded full pane - 4 quarters of the other pane are in the Philatelic Foundation archives - ex Earl of Crawford

- The "C" grill was also tried on several other values.
- 2 examples, points down, are recorded for the 1 cent, one of which was certified as a stamp, but is now classified as an essay.
- The 3, 5, 10, 12 and 30 cent values exist with points up and down, ex Crawford.

Perforated and Gummed "C" Grill Essays



points down



points up



points down

only sound recorded example  
a defective example exists



points up



points down



points up



points down

only recorded examples of each of the above 10 essays - only recorded values

ex Earl of Crawford and Colonel Green

- The issued “C” grill only appears on the 3 cent value.
- The rush for higher volume caused many errors and varieties.
- Double, inverted and partially erased grills exist along with imperforate pairs.
- Blocks are very rare: 6 is the largest.

Second Issued Grills

Points Up "Biscuit" Bosses - 16-17 x 18-21 Points

"C" Grills



largest recorded multiple



inverted grill



points down e



double grill e



Rockford bluebird



imperforate pair e



less than 6 blocks

mint or used recorded e

partly erased "C" grills: poor planing of "A" roller, often

mistaken for "B" grill (4 examples from 1869 cover) e

a "B" grill essay exists in the Luff reference collection

partially erased "C" grill

often mistaken for "B" grill

eighth day of use e

PFC misses partial erasure



incoming from  
Great Britain  
to Cincinnati, OH  
forwarded to  
Boston, MA  
cover restored

- The biscuit grills still required too much pressure & slowed down production.
- A smaller “D” grill was produced points down.
- This speeded up production but did not make the cancel penetrate as well.
- Few were produced: multiples are rare.

**First Grills Issued Points Down**

"D" Grills - Vertical Ridges - 15 x 17-18 Points: Male Bosses Reduce Pressure, Speed Production



largest recorded used multiple

largest used multiple - 3 recorded

less than 5 blocks recorded e

drop letter rate, carrier service available e

British packet  
 NGU closed mail  
 to Germany e  
 15 cents per 1/2 oz.  
 1/68 -7/70



- Further reduction in grill size resulted in the much debated “Z” grills using the three and twelve cent designs in various colors and different papers.
- Few blocks and singles exist - items with the same color and paper match up, suggesting a small plate plus selvage.

### Experiments in Grill Production

Reduced Size

Reduced size to speed production - Points Down - Horizontal Ridges - 14 x 18 Points - “Z” Grills

Using miniature 3 cent & 12 cent plates (3 x 4) on various papers tinted with sensitive ink. Unprinted essays are from selvage.



black on yellow



red on green



dull brown on yellow



brown on rose



brown on yellow



brown on straw



red on horizontally laid salmon



brown on salmon



black on yellow



red on green



brown on rose



brown on yellow

horizontally laid papers



straw



blue on lilac



brown on salmon



green on salmon



green on straw



salmon

12 cent on vertically laid papers



green



black on deep orange



blue on deep orange



red on green



brown on green



yellow

- The issued “Z” grills differ slightly from the essay grills.
- Multiples are rare.
- The grills come in 2 varieties of nearly equal frequency: 18 high by 14 wide and 18 high by 1/2 13 1/2 wide, suggesting a roller planed in a spiral.
- The 1 cent, 10 cent and 15 cent are controversial & rare.

**Issued "Z" Grills**

**Less Heavily Embossed than the Essays - 14 x 18 Points**

*Grills 17 points high are listed in the literature. In 35+ years of examining all available multiples, no 17 point grill has been seen by this exhibitor, se-tenant with an 18 point high grill; nor has any clearly impressed, certified 17 point grill.*



# Several variations on the Bowlsby patent to prevent reuse of stamps were produced, including the fold-in examples & partial gumming. It was tested in combination with grills.

## Essays to Prevent Reuse

George Bowlsby - Patent No. 51,782 - 12/26/65 - Partially gummed and slit stamp essay

George Bowlsby



bronze overprint, "S" slits on 2  
only recorded example



unfolded variation



folded variation

original submissions on portions of patent papers

only recorded examples

at most 3 relatively intact examples of each survive



2 cent punchout variations

7.5 mm high US 10 mm high US e



3 cent punchout  
repaired



grilling -14 x 16 1/2 points also  
with partial gumming and slitting  
discovery example



large die proofs printed on glazed card stock and India paper



## Essays to Prevent Reuse

Adaptation of George Bowlsby patent No. 51,782 - 12/26/65 - Partially gummed coupon essay

George Bowlsby

plate essays on stamp paper unless noted



imperforate  
between



perforated  
between



rouletted  
between



gummed on stamp portion only - coupons ungummed  
removing the coupon was meant to cancel the stamp



imperforate



"C" grill  
imperforate



split "C" grill  
imperforate



peture paper  
imperforate



India paper  
imperforate  
previously  
considered a die proof

- The Thorp patent of a fugitive network over or underprint was tried mostly on the three cent value.
- In 1980 Bill Herzog, Jim Lee and I pooled our holdings of the networks and found about 83% had wide margins, suggesting a sheet size of 3 x 4.
- The top pieces are the proof.

Essays to Prevent Reuse      **Typographed in Relief for Surface Printing to Reduce Cost**  
 Safety networks in fugitive inks - Thorp patent of October 5, 1869 - Experimental sheets of 12: 3 x 4



Only 1 sheet of 12 of each variety was produced



red rings



black rings, patent cancel



at most 3 of each recorded    half of only recorded sheet : "ONE" underprint

Reconstructed strip of 3, pale green on dull violet, type of Row 3 overprint.



only recorded full sheet: "VEINTE" overprint

Further safety networks: Row 1. large wavy overprints    Row 2. tight wavy crosshatched overprints    Row 3. medium wavy overprints

Row 1



tan on tan



tan on violet



tan on green



gray on violet

Row 2



gray on rose-red



lt. brown on lt. red-brown



lt. brown on dk. dull red-brown



gray on rose-red

Row 3



dull blue on dk. green



gray-blue on dull rose-red



dull blue on violet



gray-blue on rose-red

The Loewenberg decal patent was essayed using existing plates of 200. Plates of 25 of a new reversed design were also produced and even made se-tenant with French designs.

Essays to Prevent Reuse

Henry Loewenberg

Henry Loewenberg - patent No. 45,057 - 11/15/64 - Self-canceling decal on goldbeaters skin:  
existing 200 subject plates were used, but only the 3 cent value exists in very large multiples.



5 and 10 cent images



gummed on the impression - attempts to remove the stamp for reuse destroy the image  
all paper types, essay colors and perforation combinations recorded are shown  
1 cent value reported but never viewed by modern authorities – now delisted

Essays to Prevent Reuse

Henry Loewenberg

Henry Loewenberg - patent No. 45,057 - 11/15/64 - self-cancelling decal on goldbeaters skin  
printed on the gum with images reversed - attempts to remove the stamp for reuse destroy the image



orange laid paper



plates were prepared with wider spacing for perforations



very few blocks are recorded se-tenant with French decal essays

only 5 perforation experiments are recorded, only on the 25 subject plates with narrow spacing  
note the lack of perforations between the selvage and the exterior stamps

- Additional essays to prevent reuse used the concept of self canceling papers and inks.
- Reversed designs were tested on treated paper that turned blue when wet.
- The Sturgeon patent used colorless ink that canceled the stamp when the stamp was wet.
- The Francis patent used treated papers that reacted to chemicals in a specially formulated canceling ink. It was tested in Providence, RI.

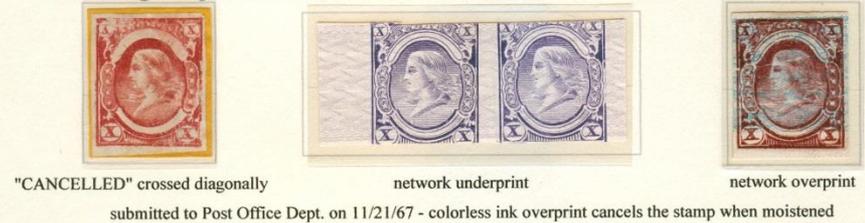
## Essays to Prevent Reuse

## Paper and Ink Experiments

Further paper and ink experiments using 25 subject plates with image reversed



John Sturgeon - patent No. 79,157 - 6/23/68 - self-cancelling stamp with colorless sensitive ink



Francis patent paper - 1000 stamps tested in Providence, RI - chemical cancel reacts with treated paper



- Experiments were done using existing one cent plates.
- Macdonough tried glycerin based ink.
- Loewenberg tried starch coated paper.
- Wyckoff produced the best impressions using Chinese white water-color coated paper.
- New designs tried embossing and surface printing.

Essays to Prevent Reuse

3 Contrasting Patents and Expense Reduction

James Macdonough - patent No. 52,869 - 8/27/66 - glycerin based ink



light brown



dark brown



wiped with water

Henry Loewenberg - patent No. 42,207 - 4/5/64 - sizing or starch coated paper



deep orange-red



gray lilac



wiped with water



rose



dull blue

William Wyckoff - patent No. 53,723 - 4/3/66 - Chinese white water-color coated paper



yellow orange



blue



wiped with water



green



gray black

Essays to Prevent Reuse - Embossed in Relief for Surface Printing to Reduce Cost



embossed untrimmed die essay on India

only recorded example



2 cent design embossed for envelopes



typographed die essay gummed, experimental grill, 13 x 14 points

only recorded example

- Variations of the new designs, produced on different papers, used embossing and/or typography.
- The designs were printed in a revised, negative design.
- The designs were printed in albino on laid paper and normally on laid paper with a US monogram.

Essays to Prevent Reuse

Typographed

Typographed in relief for surface printing to reduce cost



thin card stock



heavily laid paper  
albino

US monogram



thin card stock



heavily laid paper  
US monogram



US monogram



heavily laid paper US monogram



reversed image with extra lathework - 2 recorded examples



embossed on white wove paper

The current three cent design was adapted for printing by typography & lithography & in combination with "A" & "C" type grills. They were also printed in fugitive ink on opaque coated paper per the Gibson patent.

Essays to Prevent Reuse

Typographed in relief for surface printing to reduce cost



thin card stock



thick card stock - dots on face about the eye



thin card stock

lithographed

face dotted on

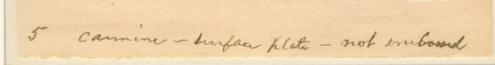
strongly impressed on wove paper and gummed



fugitive ink



grilled points down



Typographed

Essays to Prevent Reuse

Lithographed for Surface Printing to Reduce Cost

Tested with essay "C" grills - points down



typographed large die



chemical paper

trial cancel

ungrilled



tested with essay "C" grills - points up



wide grill

resembles "B" grill

chemical paper

Abram Gibson - patent No. 41,118 - 1/5/64 - fugitive ink on opaque coated paper



pelure paper

The existing three cent design was printed in many different colors and on many different papers, using some fugitive inks and double papers. The scarlet was used extensively, tying in with the Jan 31 1868 date.

Essays to Prevent Reuse

Paper and Ink Experiments

Further paper and ink experiments with existing 3 cent plates



Essays to Prevent Reuse

Paper and Ink Experiments

Further paper and ink experiments with existing 3 cent plates



Scarlet inks were tested in late 1867 and early 1868 as demonstrated in Frame II Page 15, refuting Wagshal's article.

- A liberty head design was tested in miniature sheets of 8, best known as the rainbow trials.
- The same design was used with under prints. The “2 in circle” design is listed, but I have found no photo of it.
- Later essays with perforations around the vignette belong to late 1869, just before the large bank notes, not 1861-68. This is also true for the envelopes.

Essays to Prevent Reuse

Later Typographed Essays to Reduce Cost

Circa 1867-68 by National Bank Note Company



ferrotype of head  
thick card



progressive die  
stiff paper



completed die  
thin paper



completed die  
stamp paper

Two colors shading into each other to produce rainbow colors - only recorded sheet



black over scarlet



Underprinted with designs in another color on safety paper - less than 6 of each recorded



essays using the Liberty head with perforations around the vignette are from the 1870's:

the underprint 2 in circle is listed but has not been pictured

- Bi-color essays of the Jones proposal of 7/20/68 prefigure the 1869 issue.
- Positive & negative typographic images of the five cent design were printed and had engraved vignettes pasted on.
- Notches and lines in the frame die & holes in the paper and crosses in the vignette die were meant for printing registration.

Bi-color Essays to Prevent Reuse

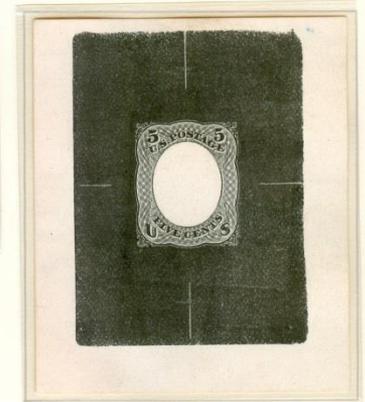
George Jones Proposal of July 20, 1868



vignette from 12 cent first design  
crosses for printing registration



lithographed frame  
positive image  
large, left facing  
Washington vignette  
pasted on



lithographed frame – negative image  
lines for printing registration



vignette from 12 cent first design  
punch hole through registration



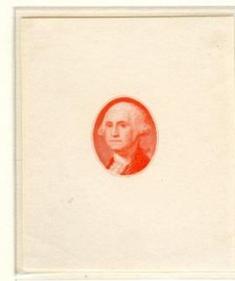
completed essay – negative image  
vignette printed  
only recorded 1 cent example



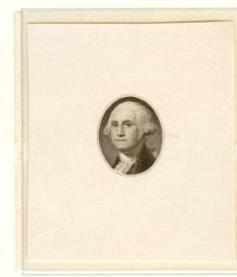
vignette from 12 cent first design  
punch hole through registration



completed essay—negative image  
vignette printed



colored vignettes - oval ring added - ivory paper



completed essay—negative image  
vignette printed

- Even as late as the “E” grill period the company was combining patents in an effort to cover all possibilities so they would have a patented method of preventing reuse that the Post Office would add to the bid requirements for the new stamp contract.
- The essay “E” grill was combined with an under print in a one cent frame and used with just a frame, as in the original patent.

### Experiments in Grill Production

#### The "E" grill - Points Down - Vertical Ridges - 14 x 15+ - 17+ Points

assayed with modified dies



1 cent frame

14 x 17 points

monogram *overprint*

2 examples recorded



grill approval

14 x 16 1/2 points

only recorded example



1 cent frame

network *underprint*

2 examples recorded



14 x 17 points



1 cent frame - 14 x 16++ points

laid paper



wove paper



specimen

14 x 16 points

#### additional experiments with reduced size grills and embossing



albino on tan

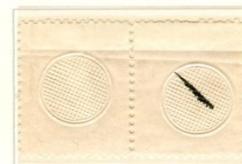


1/2 inch diameter grilled circle - points down

red on white quadrille



frame pasted on



5/8 inch diameter grilled

circle - points down



3 in 6 bar shield

embossed



3 in 7 bar shield

embossed



3 in 13 bar shield

embossed

- The “E” grills were further reduced in size & were the first widely distributed grills.
- They had many more varieties: split, doubled, quadruple split, doubled with 1 split, tripled, inverted and with continuous marginal grill.
- Number of points also varied more.

### The Issued "E" Grills

### Unused, Used and Varieties

Less Heavily Embossed than the Essays - Points Down - Vertical Ridges - 14 x 15+ - 17+ Points



e e



presentation copy  
full gum  
e "precancellation"

triple transfer  
different shifts  
upper L & lower R

inverted grill  
discovery example e

12 cent  
continuous  
marginal grill



1 cent  
split grill

3 cent  
quadruple split grill

2 cent  
split grill

12 cent  
double grill

3 cent  
triple grill

15 cent  
double grill



variations in grill sizes by number of points

14 x 15+

14 x 15++

14 x 16

14 x 16++

14 x 17

14 x 17+

- Multiples, especially used, continue to be difficult.
- Better centered mint blocks have mostly been broken to satisfy the demand for single stamps.

"E" Grill Multiples



ex Caspary, Ishikawa e



two recorded examples e



largest recorded used multiple





- The grilling varieties on the “F” grills show a great haste in production.
- Additional varieties include: double grill with 1 quadruple split, triple grill with one split, butterfly grill from foldovers, horizontal marginal grill & an accordion grill & an accordion grill with points up and down in wild profusion.

"F" Grill Issues

Major Varieties



imper pair



vertical misperf



diagonal misperf from  
foldover during grilling



scratch under A in POSTAGE  
extra grill in selvage at left



points up grill  
discovery example



5 cent - grill  
doubled vertically



3 cent - grill  
doubled horizontally



30 cent - grill  
doubled - angled



90 cent - grill  
split horizontally



10 cent - grill  
doubled - 1 split vertically



triple grills on 12 cent  
discovery and second example



triple grill on 30 cent  
discovery example



triple grill on 3 cent  
one split  
discovery example



"butterfly" grills on 3 cent caused by  
diagonal & vertical foldovers before grilling



2 cent double grill



3 cent double grill - 1 split



3 cent horizontal  
marginal grill  
discovery example



1 cent accordion grill



12 cent accordion grill

"miracle" grills - perfectly aligned extra wide or tall grills



15 cent  
quadruple split grill



2 cent  
double grill  
1 quadruple split



double grill - one quadruple split  
only recorded example  
HIOGO, JAPAN cancel



only one 90 cent cover and one wrapper  
fragment are known  
dates of sailing prove earliest documented use

These “butterfly” grills clearly show nearly full grill impressions, one points down and one points up, caused by an obvious foldover of the paper before it was grilled.



**"butterfly" grills on 3 cent caused by diagonal & vertical foldovers before grilling**

These accordion grills show more extensive foldover of the paper. The twelve cent also has a second grill, split horizontally.



**1 cent accordion grill**



**12 cent accordion grill**

*APS 87614*

The "F" grill multiples are not quite so rare, except for the thirty and ninety cent denominations. Note the continuous marginal grill in the selvage of the 3 and 12 cent blocks.

"F" Grill Multiples

Unused



ex Metzger

continuous marginal grill in selvage



e

e

continuous marginal grill in selvage  
ex Herzog



ex Ishikawa

split grills, pane dividing line  
ex Colonel Green

3 blocks recorded e  
ex Zoellner

"F" Grill Multiples

Used



e

4 blocks recorded – only color cancel

# A comparison of continuous marginal "F" grills.



continuous marginal grill in selvage



continuous marginal grill in selvage

A faulty catalog listing. The stamp on the right purports to be a double grill, one normal, one partial with points up. It is clearly a single pass of the grilling machine and is caused by a foldover. A similar item is diagrammed at the left.



FRONT

BACK

The stamp pictured above is Scott No. 94. It is the listing copy for the new listing in the Scott 2000 U.S. Specialized Catalogue, as follows:

"Double grill, one normal, one partial with points up."

It is the only example of this variety of which a record has been found.



James E. Kloetzel

Date: October 29, 1999



DOUBLE GRILL  
ONE INVERTED

The horizontal continuous marginal grill in the top 60% of the 3 cent stamp needs explaining. Without constructing a grilling machine and testing various hypotheses, there are no simple explanations for marginal grills running two ways.



12 cent

**continuous marginal grill**



**3 cent horiz. marginal grill**

*PFC 283938*

# 2 cent “D” Grill Block of 4

- This scan of the block has a computer generated rectangle superimposed from the UL of the UL grill to the LR of the LR grill. It clearly shows the slight “drift” of the grill ridges caused by a screw turning machine.
- The LR grill is  $18 \frac{1}{2}$  points tall while the LL stamp is the normal 18 high but has room for another complete row of grills the bottom and inside the rectangle.



Not all the fun is at the right!

