## Washington \& Franklin Coils 1910 Issues

Purpose of Exhibit: The purpose of the exhibit is to show an important stage in the development of the third Bureau coils with production examples and uses on cover to domestic and foreign destinations. The exhibit ncludes both imperforate and perforated government produced coils

## Exhibit Plan

A. Production: Perforated/Imperforate

1) Stamps
2) Paper/Watermark
3) Plate Markings
4) Coil Construction: Leader/Trailer Strips
B. One Cent Uses: Perforated/Imperforate
5) Vertical
6) Horizontal
C. Two Cent Uses: Perforated/Imperforate
7) Vertical
8) Horizontal
D. Plate Transition: Epilogue

Key Items have been highlighted in red.
Personal Study \& Research:
Documented uses are based on the number of known certified examples.

Historical Significance
The second govemment coil issues were a key step in the development of the production of the third Bureau issues. The demand for coils increased for use in vending and affixing machines as well as business mail. The $\mathrm{Bu}-$ reau changed from double line watermark to single line watermark and experimented with the Star plate which had varied spacing. The Bureau also developed an improved method of production using a coiling device where the sheets were cut in half, pasted together into a large roll, then striped on a machine into 10 coils. This large roll, then striped on a machine into 10 coils. This
was the new Auto-Wound method which decreased the was the new Auto-Wound method which decreased the
number of workers from 17 to 2 . Due to the tension of the machine a new perforation was adapted to reduce the breakage of the coils during production. The Star plate experiment also failed which resulted in a new plate which had a uniform spacing of 2.75 mm . This was the new "A" plate used for the 1910 perf- 8.5 issues.
 tions were issued in vertical and horizontal format. The 3 cent denomi*

## Indicates

 Certification

## Imperforate Issues

The imperforate issues of 1910 consist of the 1 and 2 cent values in vertical and horizontal format.
3) Experimented with new production process of auto winding
4) It was found the gauge 12 perforations were too brittle and broke.
5) This experiment lead to a change in perforation gauge for the next issue.


1) Bureau changed paper from double line to single line watermark
2) The 1910 issue continued to be printed on the Star Plates.
ll \& COMPA
ManuFacturing chemists orangeburg. new york
U.S. A.

The Orangeburg coil exists due a The Orangeburg coil exists due a
special order made by the Bell Pharmaceutical Company. This was an option where businesses for an additional fee.
G. Bagar Dean M.D.

Dunmore

## Actual Size of Single Line Watermark Letters



Regular orientation of letters when viewed from the back of the stamps.


Reversed orientation when viewed from the back of stamps.


Single Line Watermark Paste-up pair, left pair with normal orientation of watermark, right pair with reversed orientation of watermark.

## 1910 Coil Production

This issue was produced by the hand assembly method and by the new Auto-Wound method

## Auto-Wound Proces

Step 1: The 400 subject pane was perforated either vertically or horizontally, then the margins were trimmed to prepare for the paste-up stage.
Step 2: The 400 subject pane was slit in half.
Step 3: The half panes of 200 were pasted together until there were enough to make a roll of 500 or 1,000 .
Step 4: A piece of craft paper was attached to the beginning and end of the roll to make the trailer and leader strips.
Step 5: The roll was placed on a stripping machine which would cut the roll into 10 coils.
Step 6: The stripping machine also wound the coil automatically into the coil roll. This is the "Auto Wound" process

The "Auto Wound" process is what caused many of the coils to break during production because the gauge 12 perforations were too weak to handle the tension of the machine. This is what lead to a change in the perforation gauge for the new 1910 series.


Plate Numbers


Plate numbers identify the plate the issue was printed on. In the case of the Star plate a small star was placed be-

side the plate number.


The Bureau continued to place imprint in the margins. This practice continued through the 1910 series



Guideline \& Arrow
The purpose of the guideline \& arrow was to show where the panes of 400 were to be separated. Note, the pin hole at the bottom and top of the 1 c paste-up.

## New Production Variety

These pin holes may have been made from the pane of 400 being held in place while the sheet was stripped on the machine. It has only been found on hand assembled paste-ups. The hand assembled paste-up has these marks while the Auto-Wound example on the far left does not.


## Hand Assembled Pasto-Up

Note the difference in the uneven edges. This 1 cent paste -up pair is from the 1908 series and is shown for a comparison to the 2 cent pair below from the 1910 issue.

## Auto Wound Paste-Up

The 1 cent pair shows the clean, neat, straight edges that match up exactly. This characteristic is evidence of the "Auto Wound" process.

## Leader \& Trailer Strips

A piece of craft paper was attached at the beginning and end of the roll of the coil stock. Trailer strips were at the beginning and formed the center or core of the roll Leader strips were at the end and had printed information on the coil as far as how many, 500 or 1,000 , and the denomination of the stamps


One of Two 1910 Perf-12 Documented Leader Strips
Auto-Wound Process

- The green imprint, MABRY, HYATT, identify the Bureau workers who
inspected the coil.
Note, the green imprint, AUT -W UND, was added to the black imprint
identifying the denomination, orientation, and how many stamps in the roll.
- Note, the straight edges of the leader match the edges of the stamp. This is a
distinct feature of the Auto-Wound process.
- Very few leaders and trailers exist due to the nature of the weak perforations.
- The tension of the machine when it cut the roll into strips and wound them
into coils caused the perforations to break frequently.

Trailer Strip with part Bureau imprint


First class, 1 cent per piece.


Third class, 1 cent per 2 ounces
PF 550775

First class, UPU rate, 5 cents per first ounce.

$\qquad$

First class, 1 cent per piece.

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First class, 2 cents per ounce.


First class, double weight, 2 cents per ounce.

First class, double weight, 2 cents per ounce.


First class, UPU, 2 cents per piece

German Treaty Rate First class, German treaty rate, 2 cents pe ounce if carried on a German Steamship.



First class, Treaty rate, 2 cents per ounce


Mixed Franking 1 Cent Imperforate Sheet Stamp \& Two Cent Imperforate Coil First class, 2 cents per ounce, plus 10 cents registry fee.

First class, 1 cent per piece

## ELARK' Cruises of the "ARABIC"

It IN A Whit St ur Imine

This is the earliest use of any perf-12 1910 single line watermarked issue.

Third class, printed matter, 1 cent per 2 ounces.

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Earliest Documented Use
First class, 2 cents per ounce.
L. B. DOVER

Poos ore Stamp a end
Supplies For Collectors
ST. LOUIS, MO., U. S. A.



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One of Two Documented Uses Third class, 1 cent per piece, International Printed Matter.


One of 6 Documented Uses
First class, 2 cents per ounce.
PF 112562

Factors Contributing to Scarcity

- Only 6 Uses Known on Cover
- Six weeks between the perf-12 coil and the perf8.5 coil begin issued
- The early coil issues were only available by spe cial order from the Post Office
Majority of the coils were used by Businesses.

Dates Issued by the Bureau

## 1910 perforated 12 coil $11 / 1 / 1910$ 1910 perforated 8.5 coil $\quad 12 / 16 / 1910$

Earliest Documented Use 1910 perforated 12 coil $\quad 1 / 4 / 1911$ $\begin{array}{ll}1910 \text { perforated } 12 \text { coil } & 1 / 4 / 1911 \\ 1910 \text { perforated } 8.5 \text { coil } & 12 / 27 / 1910\end{array}$


First class UPU, 2 cents per piece
correct a paper shrinkage problem that created poorly spaced stamps.

- The Bureau designed a new plate with a uniform spacing of 2.75 mm .
- The 1 c and 2 c horizontal strips have the wide spacing of the $A$ plate.

They verify the transition from the old Star plates to the new A plates.
The 1 and 2 cent imperforate horizontal coils printed on the A plates share plate numbers with the 1 and 2 cent perf-8. 5 coils issued in 1910. There are 8 numbers for the 1 c and 4 numbers for the 2 c issues.

## Star Plate to A Plate

The 1910 perforated issues were originally printed on the Star Plates. - The varied spacing between designs was an experiment by the Bureau to
nily the first and horizontal coil to foreign destination.

One of 5 documented uses.


Unique A Plate Usage
This registered cover is a new discovery and the only documented use of an imperforate A plate horizontal coil.

PSE 1029554


Two of 5 Documented Uses/Largest Known Franking
First class, registered, 2 cents per ounce plus 10 cents registry fee. This is the only multiple of the 2c horizontal imperforate or perforated coil on cover. The line strip of four exhibits the A plate spacing of 2.75 mm . The paste-up pair has the imprint " A " and plate number on the tab

