Tagging Basics

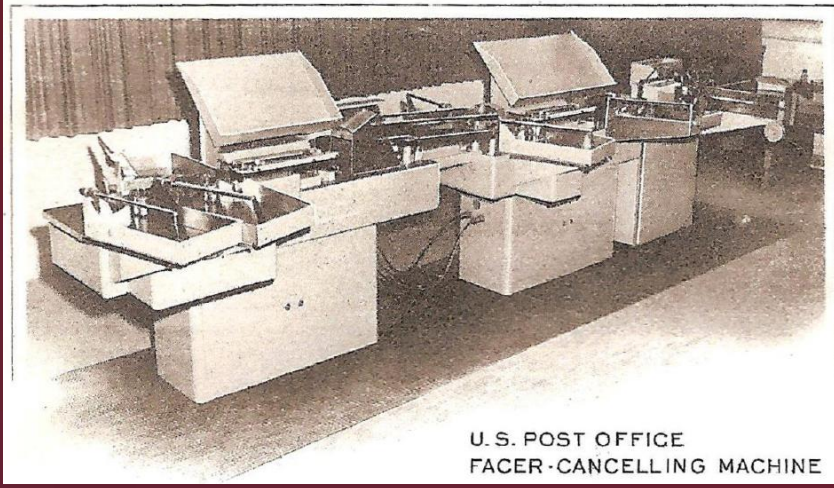
A 2023 Presentation for the
Rochester Philatelic Association

by
Tom Fortunato

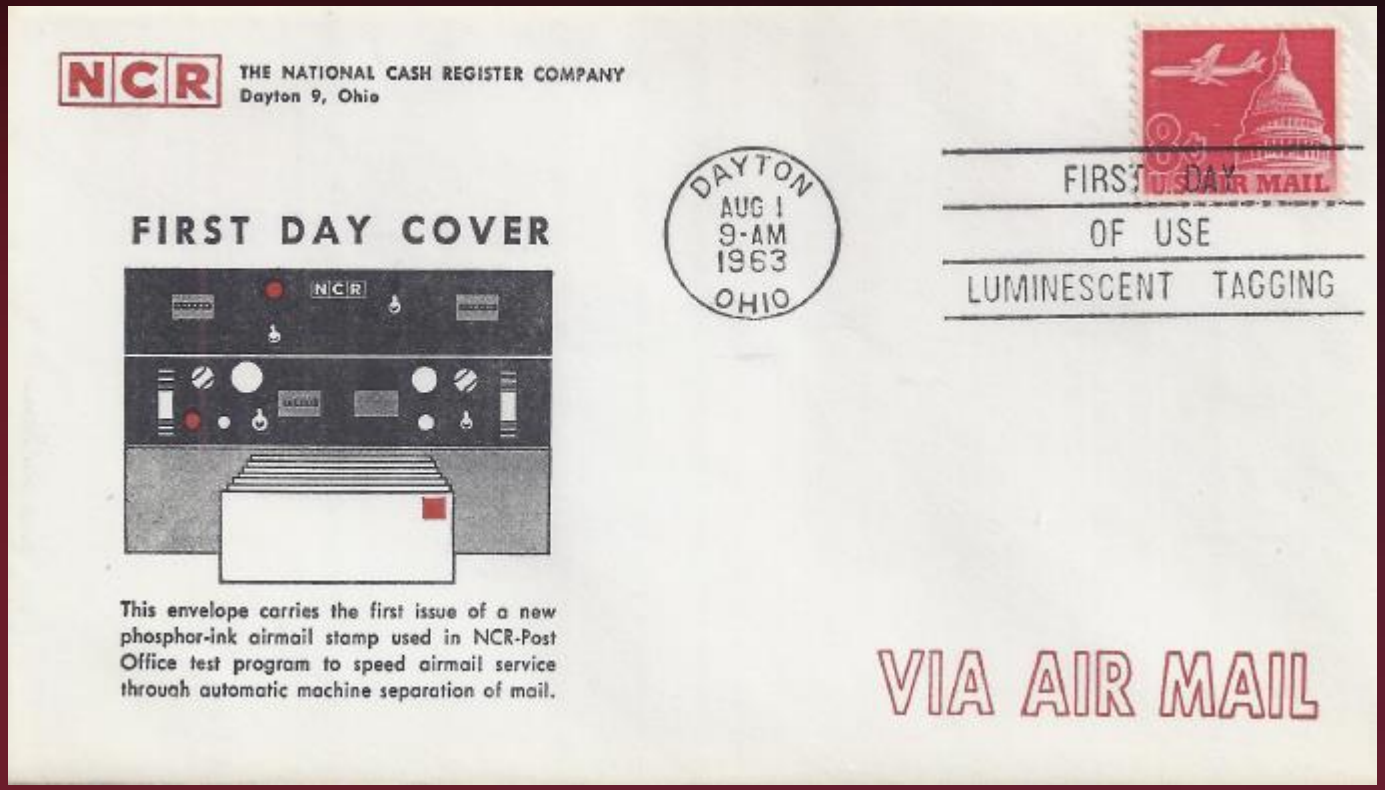
What is tagging, why was it needed and how did it become so important in stamp production?

By the late 1950s major countries around the world were looking for a way to process their increasing mail volumes quicker. One of the biggest problems to overcome in mail handling is to orient all letters in the same way so the stamp is in position to be cancelled.

Mark II Facer-Canceler



In the Beginning…



The era of U.S. tagged stamps began on August 1, 1963 with the introduction of the tagged 8¢ air mail stamp. This “first day of use” cover was produced by the National Cash Register Company that was key in the research in creating equipment to sort and cancel mail.

Image of Scott C64a
Under short-wave UV illumination

The solution was to apply an invisible coating of a substance over a stamp that would luminesce (“light up”) orange-red when exposed to ultraviolet light, allowing machinery to detect its location on the envelope and face all envelopes the same way.

All Postal Installations

8-Cent Luminescent Tagged Airmail Postage Stamp

The current 8-cent airmail stamp will be used in the first field test of luminescent tagging to speed mail handling. A luminescent ink, which glows a reddish-orange color under ultra-violet light, will be overprinted on airmail stamps used in the field tests. This ink contains an invisible, inorganic phosphor commonly used in creams, ointments, and medicines.

This stamp will be first placed on sale at Dayton, Ohio, on August 1, 1963. During controlled field test, and until further notice, the tagged stamps will be utilized only at Dayton. They are interchangeable with untagged stamps for normal postal purposes.

A small black box added to the Mark II facer-canceling machine will "recognize" and separate specially treated airmail stamps in the field tests. The relatively inexpensive modification was conceived and developed by the Post Office Department research scientists, working in conjunction with the National Cash Register Co., Dayton, Ohio, and climaxes experiments that have been going on for more than 3 years.

The luminescent tagging of this airmail stamp represents not only a significant technological advance but a first in U.S. postal history. The principles incorporated in this test will provide the Post Office Department with technical capabilities that offer great potential benefit to the mailing public in terms of dollar savings and improved service.

Collectors desiring first-day cancellations may send addressed envelopes, together with remittance to cover the cost of the stamps to be affixed, to the Postmaster, Dayton, Ohio 45401. See Postal Manual section 145.3. Mint stamps will be available at the Philatelic Sales Agency, Post Office Department, Washington, D.C. 20260, on and after August 2, 1963.—*Special Assistant to the Postmaster General, 7–18–63.*

The Dayton Experimental Station in Ohio was selected by the Post Office Department to run its first public test of the technology in 1963. A small supply of 8¢ airmail stamps was produced with an invisible calcium silicate coating for the city wide test meant to separate air mail from regular mail. It didn't go without problems, as POD and NCR officials noted many airmail envelopes were franked with ordinary postage rather than the specially coated stamps. A supply of tagged air mail labels was then ordered from the U.S. Printing Office, with postal clerks encouraged to use one on all air mail letters.

Airmail Label

Image of Airmail Label
Under short-wave UV illumination

The Dayton test proved to postal officials that a more wide-spread test was needed to prove the use of tagging. On October 26, 1963 the City Mail delivery stamp was issued in Washington, D.C. and it was announced that all 130 million of them would bear phosphor tagging. True, but the tagging was inconsistent from sheet to sheet. In fact, untagged errors were found by late December.

Since that time all U.S. commemoratives and most definitives have been printed using either an invisible tagging coating, on hi-bright fluorescent or phosphored paper stock that triggers the UV sensors on the facer-canceller machines.

Airmail issues until the 1978 coated with the red-orange glowing calcium silicate coating, after which they along with all regular issued stamps were coated in zinc orthosilicate, glowing yellow-green under UV light.

Types of Tagging

There are many ways the tagging can be applied to a stamp…

overall

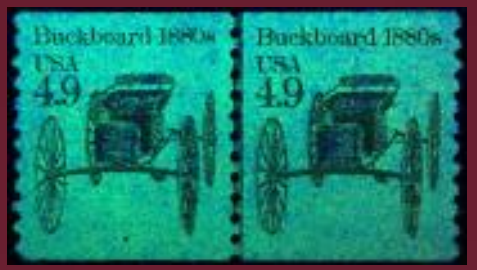
block

bar

background design

horiz. bar

highlighting design elements



hi-brite paper

Tagging Errors, Freaks and Oddities

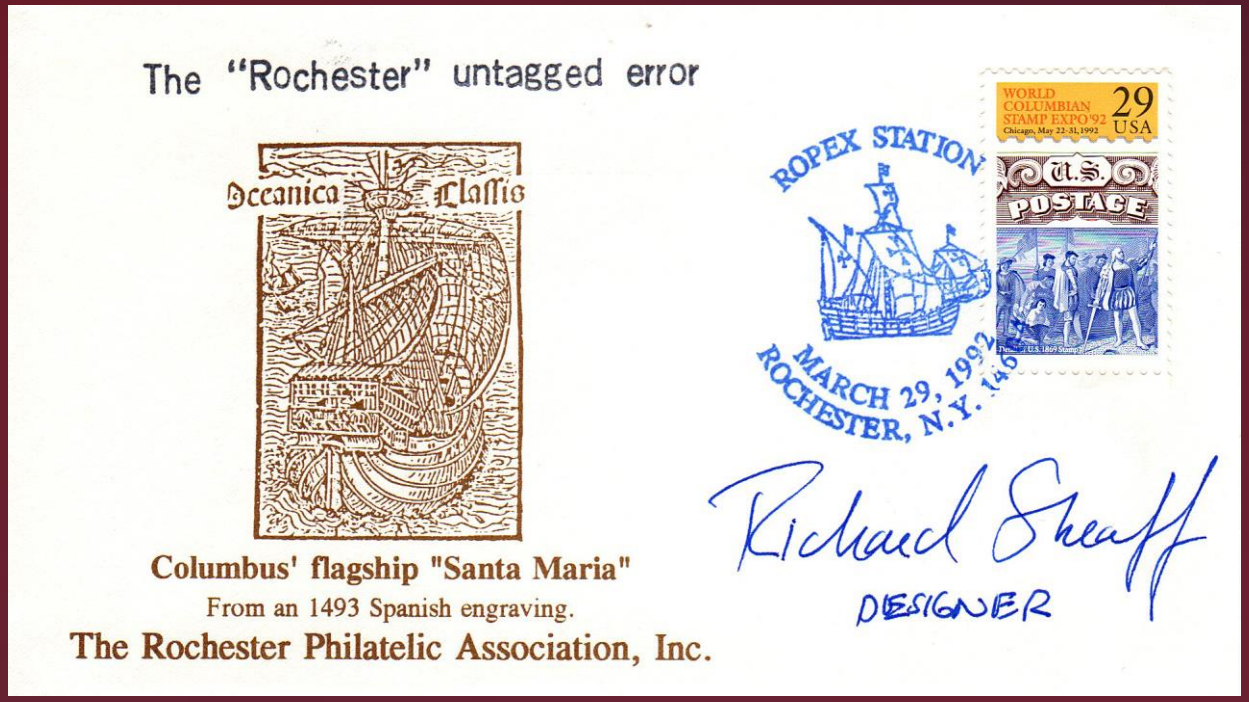
Although invisible to the naked eye, tagging errors can be quite interesting when exposed to UV light.

"Prarie Fire" tag error

excessive spot

tagging shifts

Here's an untagged U.S. error discovered locally in Rochester in 1992. Several sheets of the 29¢ World Columbian Stamp Expo were found at the Britton Road Post Office in Greece shortly after its issuance date of January 24. Some were used on ROPEX show covers in March and later signed by the stamp's designer.



UV Lamps

Although commonly called a “black light,” there are two types of ultraviolet lamps that philatelists use. Shortwave UV lamps (254-266 nm) are used to view U.S. tagging and detects phosphorescence; longwave UV lamps (365-380 nm) are used to see most foreign nation tagging as well as differentiate U.S. paper types and detects fluorescence. Use caution with shortwave light, which may cause cornea eye burns.

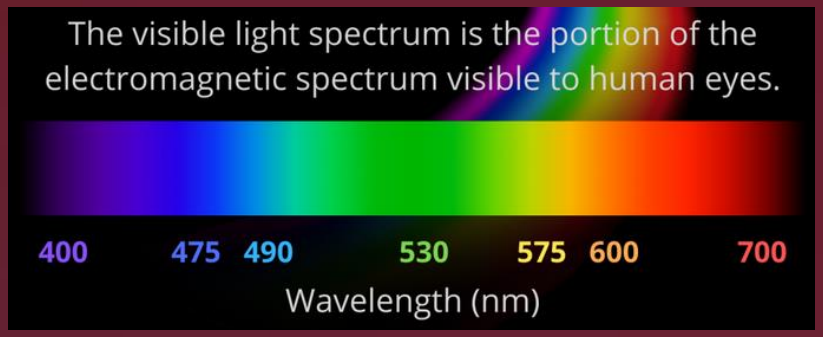
short wave lamp

long wave lamp

The difference between short and long UV can be confusing. This all deals with the way light is absorbed and reflected at certain wavelengths.

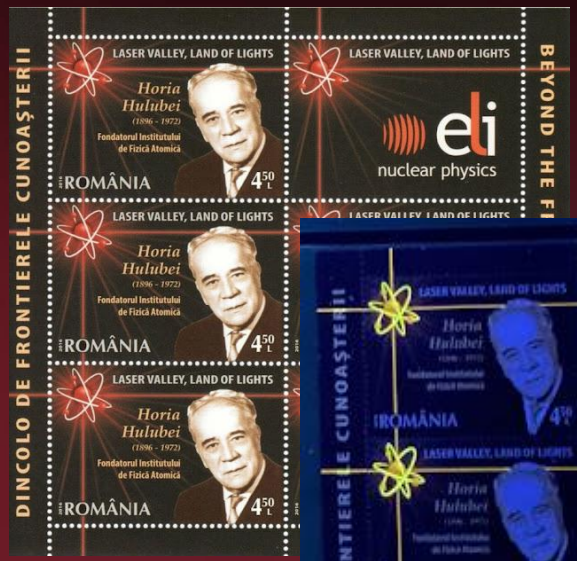
Phosphorescence coatings on stamps glow when exposed to shortwave UV light and start fading once the light is turned off, lasting for a few seconds.

Fluorescence can only be detected when longwave UV light is used and disappears as soon as the light is turned off.



Non-US Tagging

Unlike the U.S., most postal agencies use fluorescence as their taggant of choice, viewable under longwave UV.


DINCOLO DE FRONTIERELE CUNOAȘTERII
LASER VALLEY, LAND OF LIGHTS
Horia Hulubei
(1896 - 1972)
Fondatorul Institutului de Fizică Atomică
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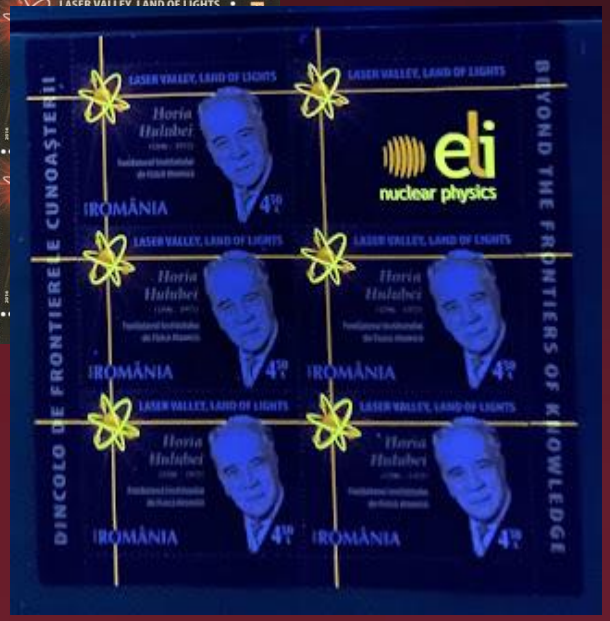
BEYOND THE FRONTIERS OF KNOWLEDGE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In the
GARDEN


In the
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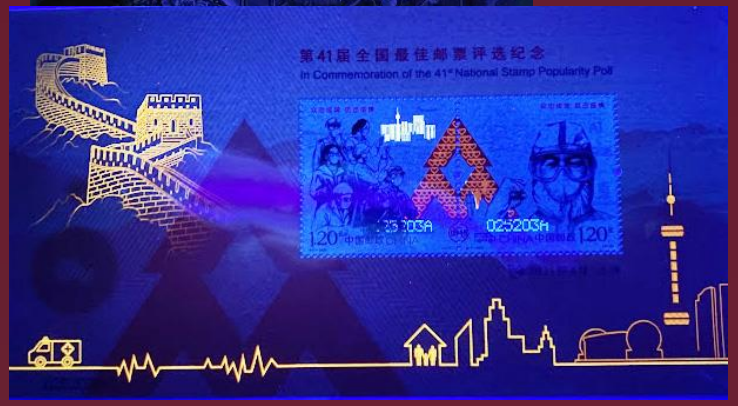
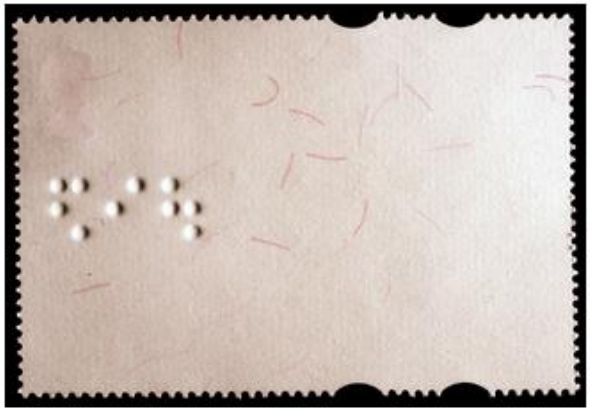
第41届全国最佳邮票评选纪念
In Commemoration of the 41st National Stamp Popularity Poll
120
CHINA 中国邮政 120
2021年4月 · 上海
025203A


第41届全国最佳邮票评选纪念
In Commemoration of the 41st National Stamp Popularity Poll
025203A
120


ten pounds
£10




1.25
BAHT
POSTAGE
CAT
CAT
THAILAND
ประเทศไทย


ten pounds


ten pounds

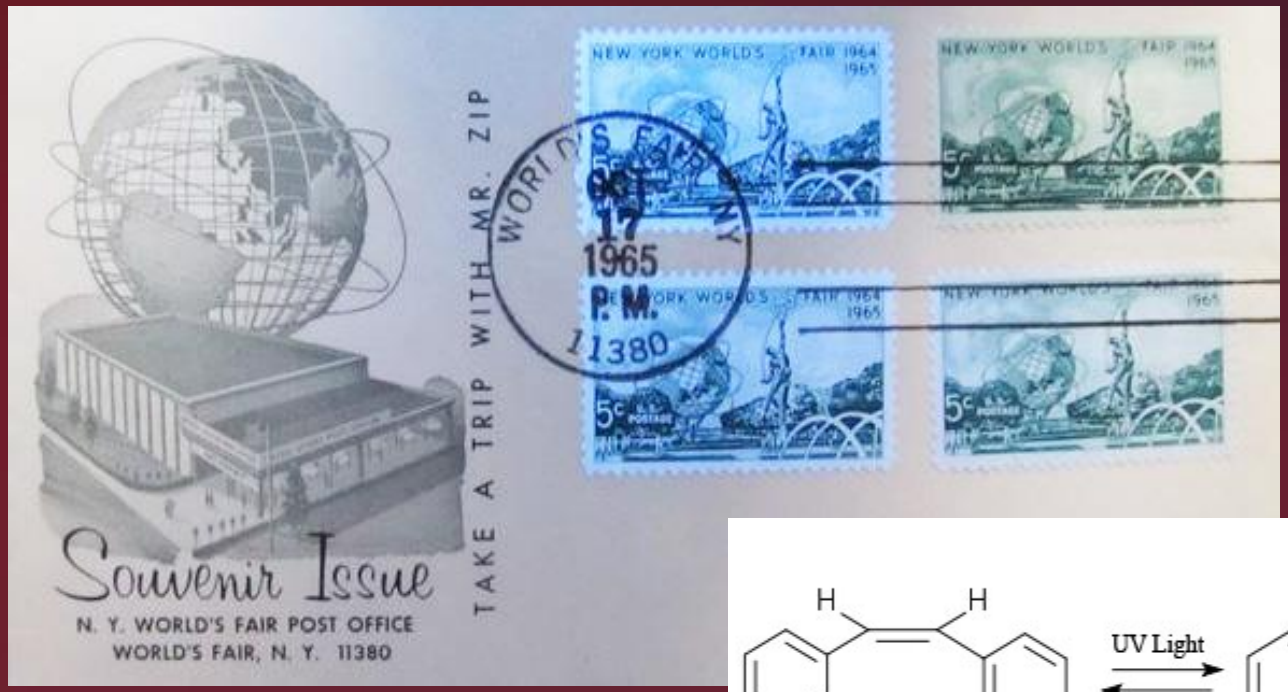

$2.10
香港
HONG KONG
$2.10
香港
HONG KONG

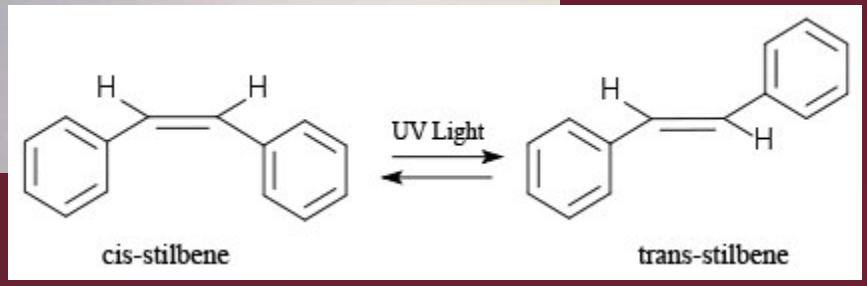
Paper Fluorescence

Ingredients known as optical brighteners can be added during the paper manufacturing process to create “Hi-Brite” paper, creating a built-in fluorescent taggant when exposed to longwave UV light. No surface tagging needed!

tagged vs. fluorescent paper

Stock supplied by paper makers can have differing amounts of optical brightener additives (sulfates) that whiten the fibers, with longwave UV fluorescent reactions ranging from dead to very bright, as seen here.





Canadian stamp specialists Irwin, Keane and Hughes developed a 12 point brightness scale in the 1970s to describe this:

Dead paper (Dead) - 0 on the Irwin scale
Non-Fluorescent (NF) - 1 on the Irwin scale
Dull Fluorescent (DF) - 2-3 on the Irwin scale
Low Fluorescent (LF) - 3-4 on the Irwin scale
Fluorescent (F) - 5-6 on the Irwin scale
Medium Fluorescent (MF) - 7-8 on the Irwin scale
High Fluorescent (HF) - 9-10 on the Irwin scale
Hibrite (HB) - 11-12 on the Irwin scale

For a detailed article on this scale, click here or go to:
https://brixtonchrome.com/pages/understanding-paper-fluorescence-advanced-version

Page from the Unitrade Canadian Specialized Catalog:

QUEEN ELIZABETH II, CENTENNIAL DEFINITIVES

1967–1973

Papers: The initial printings were on plain paper. Beginning in 1968, different papers with varying degrees of whiteness were used. The brightest on the scale is known as "hibrite" (HB), with other degrees known as 'high fluorescent' (HF) and 'fluorescent' (F). It is difficult to distinguish between these paper types without the use of an ultra-violet lamp.

Gums: Two types exist – dextrine, a shiny gum on the original printings which was later replaced by PVA, an almost invisible matte gum.

Printers: Canadian Bank Note Company (CBN) printed all the perf. 12 x 12 varieties, sheets and booklet panes, and the coils, British American Bank Note Company (BABN) printed the sheets and booklet panes either perf. 10 x 10 or perf. 12½ x 12.

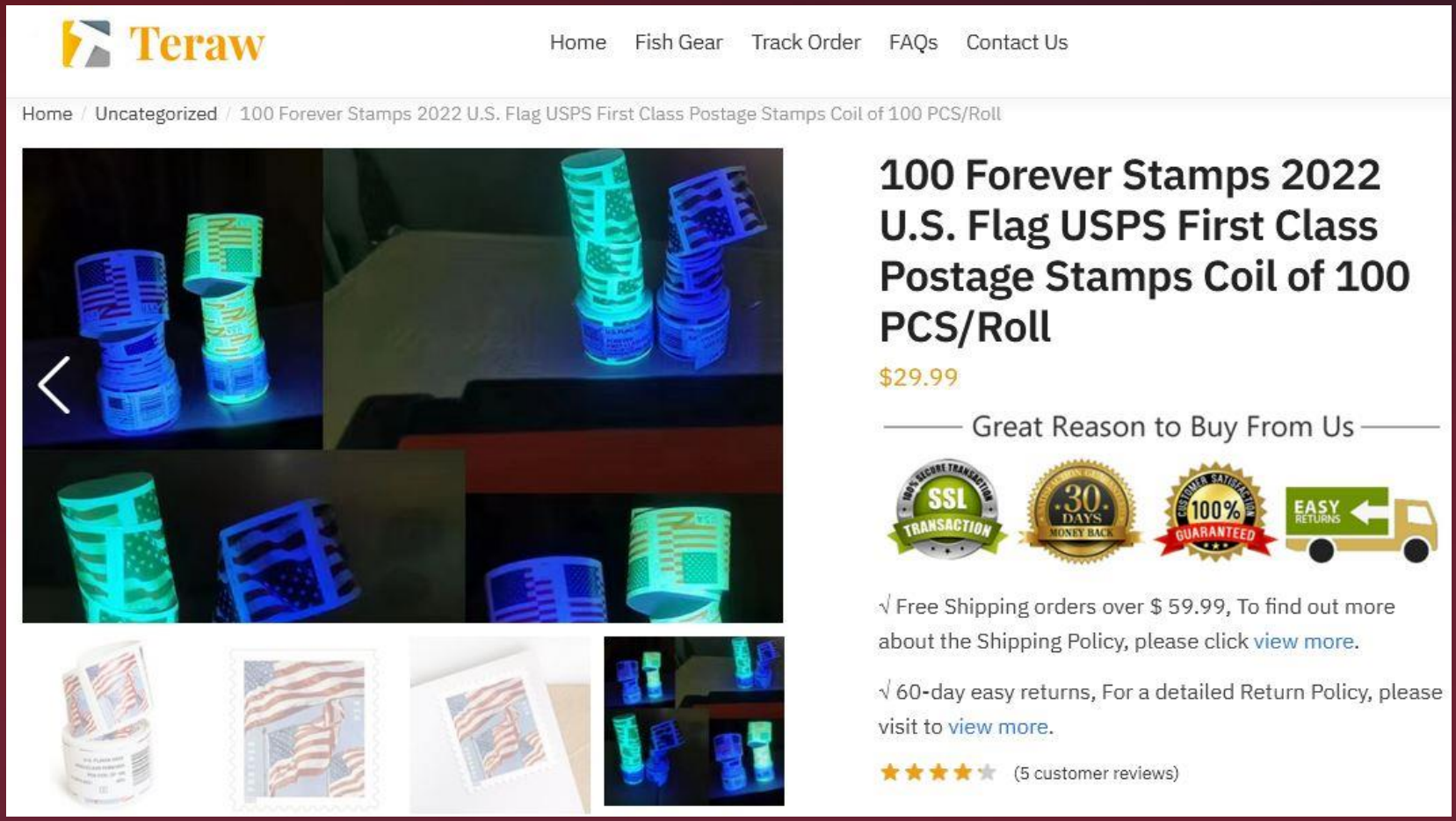
General (Ottawa) Tagging: The original Ottawa tagging (OP4 variety) used on stamps until October 1972 migrates onto or through other stamps, booklet covers and album pages. It can generally be contained in acetate mounts, but it might still leak or penetrate.

Perf. 12 x 12, CBN, panes of 100

		(PE) Date	NH–VF	⊙F	PB	FDC
454	1¢ Northern Lights, brown, DF, DEX	02/08/67	.20	.20		1.25
	plate blocks, plates 1, 2, all blocks				1.00	
	plate 3, all blocks				5.00	
	plate 4, all blocks				7.50	
	plate 5, all blocks				2.75	
➤ **f**	printed on gum side		1.200	—		—
i	NF, DEX	—/—/68	.75	.20	3.75	—
ii	HB, DEX	07/—/71	1.00	.25	7.00	—
iii	LF, PVA	12/—/71	.20	.20	2.75	—
xx	No. 454, precancelled, DF, DEX		.25	.20	10.00*	3.00
xxi	No. 454iii, precancelled, LF, PVA		.50	.20	15.00*	3.00
■ **454a**	BP of 5 x 1¢ (454) + label (BK 54)	02/—/67	.50	.40		
	single from 454a	(2,3)	.20	.20		
i	LF, DEX	—/—/67	5.00	4.00		
	single from 454ai	(2,3)	1.25	1.00		
ii	MF, DEX	—/—/67	6.50	5.00		
	single from 454aii	(2,3)	1.50	1.25		

Counterfeit Stamps

Beware! The proliferation of fake U.S. stamps sold as discount postage continues. Lack of tagging is no longer a tell-tale sign of a counterfeit! Look at this ad!



The stamps depicted in UV photo of that ad are the USPS 2017 flag coils, with each stamp having a value of 49¢ each when issued ($49 per coil).

This coil stamp was printed by two different manufacturers in rolls of 100. Ashton Potter used non-phosphored Type III paper with block tagging. Banknote Corporation of America's version used pre-phosphored paper with overall tagging.

So are the $29.99 coils legit?

Tagging-omitted errors found on 2019 Flag, 2022 Love stamps

BY CHARLES SNEE

New production errors have recently been found on two United States stamps.

On Jan. 17, Robert Thompson of Texas reported to *Linn's Stamp News* that he had received certificates from the Philatelic Foundation for genuine tagging-omitted errors of the 2019 nondenominated (55¢) Flag coil stamp printed by Banknote Corporation of America (Scott 5343) and the 2022 nondenominated (58¢) pink Love stamp (5661).

Both stamps, which are postally used, are illustrated here. The Flag coil stamp is on piece, and the Love stamp is shown cropped from the intact No. 10 size envelope to which it is affixed.

The Flag coil is a plate number single. Although it is almost totally obscured by the sprayed-on cancel, plate number B2222 is printed up the right side of the stamp.

According to Thompson, who is an active member of the Plate Number Coil Collectors Club (www.pnc3.org), the Flag coil was found by fellow plate number coil specialist Bob Murrin, "who set it aside because he thought it was fake."

New tagging-omitted errors of the United States 2019 Flag coil stamp printed by Banknote Corporation of America and the U.S. 2022 pink Love stamp were reported to *Linn's Stamp News* in mid-January. The Philatelic Foundation issued certificates in late December 2022 stating that the errors are genuine.

"I saw that [the Flag coil] was real," Thompson told *Linn's*. "I don't think that I realized it was a PNC [plate number coil] until I got the stamp back [from the Philatelic Foundation]."

Thompson said he found the envelope bearing the Love stamp error in mail that came to his office in March 2022. The envelope (not shown) bears a March 11, 2022, "NORTH HOUSTON TX" sprayed-on postmark.

When Thompson discovered the Love stamp was not tagged, he assumed it was a fake. Upon closer inspection, he realized the stamp was genuine.

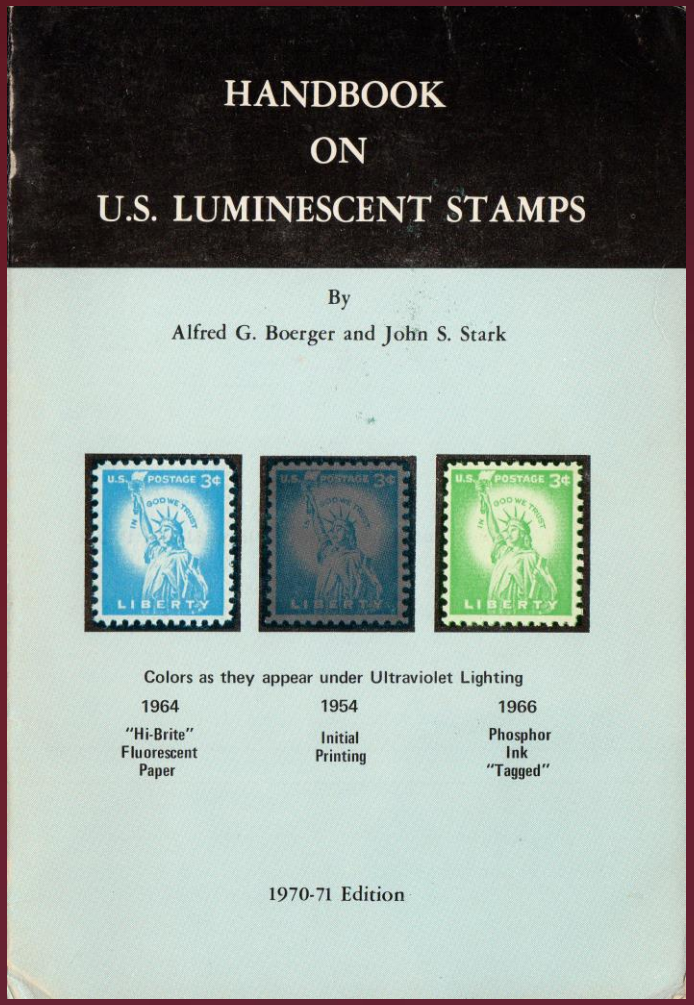
Given these findings, Thompson decided to send the stamps to the Philatelic Foundation, which issued certificates on Dec. 27, 2022 (for the Flag coil), and Dec. 29, 2022 (Love), stating that both stamps are "genuine, untagged."

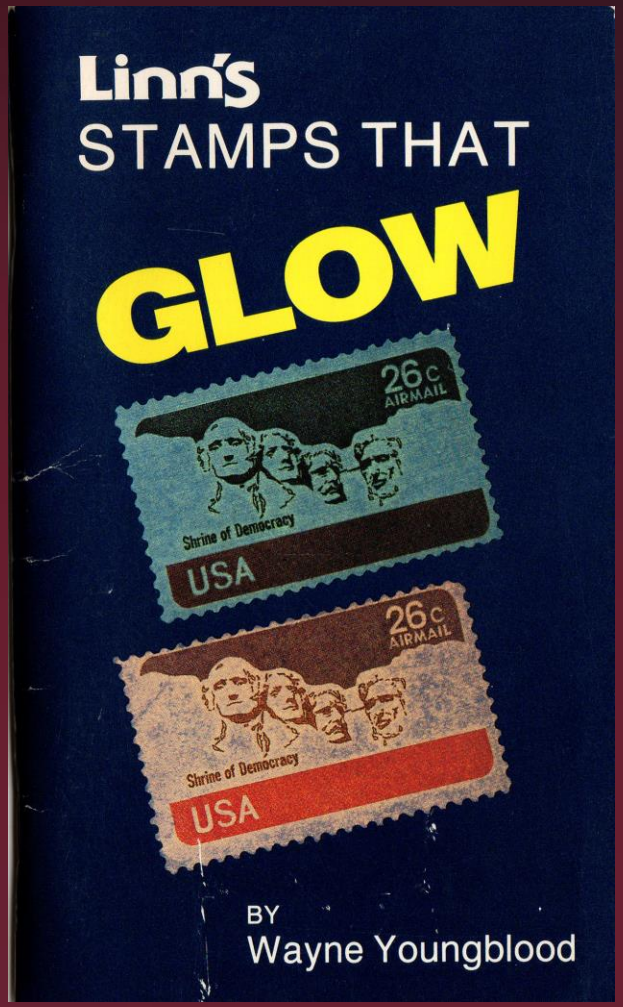
Both of these new tagging-omitted errors will be listed in the 2024 Scott *Specialized Catalogue of United States Stamps and Covers*, which will be published in October.

Here's an article that just came out in Linn's. New tag missing errors continue to be found, but they must be expertised to guarantee their authenticity.

Philatelic Resources…

Here is a web link and two booklets to learn more:
https://stampsmarter.org/features/TaggingView.html





Now it’s your turn to
“turn on” your stamps!