## The United States SPECIALIST

for the Collector of Postage \& Revenue Stamp Issues of the United States



## Postally Used Color Shift

CIPEX, Nathan Hale \& More

# The United States SPECIALIST <br> the journal of the United States Stamp Society 


#### Abstract

An association of collectors to promote the study of all postage and revenue stamps and stamped paper of the United States and US-administered areas produced by the Bureau of Engraving and Printing and other contract printers.


American Philatelic Society Affiliate No. 150

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 (Philatelic Foundation Certificate \# 565394)

## Scott \#C23c - The Whole Story Part I

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## Introduction

To the 75-year-old question regarding the existence, or not, of a distinct color error for the 1938 air mail stamp ultramarine Scott \# C23c, compared to the standard issue C23 in dark blue and carmine, we can report that the answer is definitely, "Yes, it is different from the normal C23." But is it an "error?" That is not so clear. Borrowing the title from Paul Harvey's radio program, here's "The Rest of the Story!"

In this series of articles, we will share information about the early history of this stamp design leading to its printing by the Bureau of Engraving and Printing. We will include information about the discovery and early distribution of the ultramarine (versus dark blue) color "error." We will share its listing, de-listing, and re-listing in catalogs, some of the controversy and discussions of the error, and clarification of its expertization. There will also be an explanation of the infrared analysis of multiple certified copies of the error and a possible explanation of how it might have occurred. We are of the opinion that the C23c ultramarine is indeed distinct from the normal C23 dark blue.

So, why study the color controversy, again? Many examples of C23 and C23c "look" different. The Scott Specialized Catalogue of United States Stamps and Covers (hereafter referred to as "Scott") has from time to time listed, and does currently list, a separate color variety. The C 23 c variety commands a valuation premium, but many dealers and collectors have a difficult time identifying the high-value variety. In addition, the issue has an interesting and, pardon the expression, "colorful" history.

## Background

During a session break at American Philatelic Society's (APS) Summer Seminar in June 2017, several attendees discussed a then current controversy surrounding the validity of Scott \#C23c as a legitimate color variety; whether it was an "error" or "just a different shade ofblue." Three of us, as authors with divergent backgrounds, joined forces from different disciplines to address the question and seek a definitive answer. In the research phase for this pursuit, we endeavored to locate all of the periodical and peripheral material available on this issue since 1938, and this article will attempt to separate fact from supposition. Footnotes and a detailed bibliography provide all the sources for the history and color controversy that we have uncovered, and serve to contrast the "error" theory with the latest technical verification of the ink composition by Fourier-transform infrared spectroscopy (FTIR).

## Early History \& Design

The $6 \$$ eagle holding shield, olive branch, and arrows air mail issue of 1938, Scott \#C23, has an interesting history - even without the controversy around an error of color (Scott\# C23c). Amazingly, this stamp went from concept through design, approval, engraving, printing and distribution to First Day of Issue sales in less than 40 days. On May 14, 1938, the new stamp was issued to commemorate the twentieth anniversary of air mail service in both Dayton, Ohio as the home of the Wright brothers and St. Petersburg, Florida where the first passenger flight was made. It was also sold at a temporary postal station in St. Petersburg at the headquarters of the annual convention of the American Air Mail Society. It was larger in size than all previous air mail stamps and the first airmail stamp to be issued in the horizontal, commemorative or special delivery size format of $84 / 100$ by $144 / 100$ inches in dimension. ${ }^{1}$

Since the 1925 Norse-American stamps (Scott \#620-621), the Post Office had only issued three bicolor commemoratives; namely the George Rogers Clark issue of 1929 (Scott \#651), the Red Cross (Scott \#702) and Yorktown (Scott \#703) issues of 1931. The only other bicolor issue during that time was the Air Mail Special Delivery stamp (Scott \#CE2) issued February 10, 1936 with a red frame and a blue vignette - the opposite of the C23 air mail.

The first mention of National Air Mail Week appeared in The Postal Bulletin on February 25, 1938. "The Post Office Department will celebrate the Twentieth Anniversary of the inauguration of regular airmail service on May 15, 1918, by observing the first National Air Mail Week from May 15 to May 21, 1938 ... A national organization is now being set up to plan and carry on the campaign. Every postmaster in the country will be chairman of the campaign in his respective city ... It is expected that as a result of this campaign every American will be impressed with the air mail service and the progress which has been made in aviation since the airmail service was established. It is also expected that every citizen will be acquainted with the advantages which the air mail service affords."2 Another notice appeared in The Postal Bulletin of March 15, 1938. ${ }^{3}$

In The Postal Bulletin of April 1, 1938, Postmaster General James A. Farley stressed his desire for "cooperation and enthusiasm" by postmasters and postal employees and issued the following order: "I want the postmaster at each office of the first class to write


Figure 1. Potsdam, New York Postmaster Ruth Perrin's sketches. ${ }^{5}$


Figure 2. Chicago Architect Richard McP. Cabeen's sketch. ${ }^{6}$


Figure 3. Postmaster Will Wardlaw's (De Queen, Arkansas) sketch. ${ }^{7}$
(Images above from United States Postal Service, Postmaster General's Collection. Courtesy Smithsonian Institution, National Postal Museum)
a personal letter to me not later than April 15, outlining the program formulated at his office. A further report should be sent to me immediately after May 15 showing the results which have been obtained, together with any suggestions which may be of benefit to the Department or to other postmasters in the furtherance of this program." ${ }^{4}$

Evidently, those notices sparked some interest in a new stamp for the occasion. In the correspondence files for this issue at the Smithsonian Institution's National Postal Museum (NPM), we discovered some letters pertaining to the design of the stamp. Between March 18 and April 2, at least three letters (from two Postmasters and a member of the APS) were addressed to Postmaster General Farley suggesting that a commemorative stamp be issued in conjunction with National Air MailWeek. They even included sketches for the proposed stamp (Figures $1,2 \& 3)$.

In his reply to McP. Cabeen's suggestion, Ramsey S. Black, Third Assistant Postmaster, stated on April 6, "the Department has under consideration the provision of a $6 \$$ air mail stamp of new design to be released in conjunction with Air Mail Week." ${ }^{8}$ Surprisingly, as late as April 6 a decision had apparently not been made. He goes on to state that, "It is expected that a definite decision will be made on the proposed $6 \$$ air mail stamp in the near future and, if approval thereof is given, announcement thereof will be distributed immediately." ${ }^{8}$
"During the Roosevelt era, all stamp designs were passed by the President [sp.] for his review, approval and suggestions. The proposed airmail stamp was no different. [William K. -ed] Schrage's three models were delivered to the White House on Monday, March 28, 1938, together with photographs of the plane from which the models were prepared. We can't be certain of what may have happened on Monday, but on the next day a new model was delivered to the White House. The new model, according to copies of correspondence in the [Bureau of Engraving and Printing - ed] file, showed 'an eagle as the central subject.' Clearly, Roosevelt either did not like the mail plane vignette, or he thought the stamp required a different look. The model with the eagle was approved on April 1, and the production process began in earnest. Two dies - one each for the vignette and frame - were finished and hardened by April 8. The first frame plates went to press 10 days later, the vignette plates followed two days later." ${ }^{9}$

The NPM has an undated pencil sketch of a design for this stamp signed by Franklin Delano Roosevelt. It is shown in Figure 4 below and can also be viewed via the Smithsonian's NPM website on-line collection [postalmuseum.si.edu/object/ npm_0.209045.13]. The Post Office Department reversed his proposed colors and the position of the text. Clearly, his sketch had more impact than others that had been suggested.


Figure 4. Franklin Delano Roosevelt sketch (Image from United States Postal Service, Postmaster General's Collection. Courtesy Smithsonian Institution, National Postal Museum).

In his answer of April 12 to the Postmaster of Potsdam, New York, Ramsey S. Black stated that, "the Department has already authorized a new air mail stamp to be released on May 14, as a feature of the above celebration. While the design will be different from that suggested in your letter, you will note, from the announcement, that the stamp is being printed in bicolor." ${ }^{10}$ It would thus be the first bicolor postage stamp since the Yorktown issue in October of 1931 (Scott \#703) and the Air Mail Special Delivery issue of 1936 (Scott \# CE2). The details of the final design were described in internal documents on April $11^{11 \& 12}$ and released in The Postal Bulletin of April 12, 1938:
"The new 6-cent air-mail stamp is of the special delivery size, 84/100 by $144 / 100$ inches in dimensions, arranged horizontally. The stamp will be printed in bicolor, the border in blue and the central design in red, the latter depicting an eagle with outstretched wings, bearing in its talons a shield, olive wreath, and bundle of arrows. At the top of the stamp is a panel of conventionalized wing design, divided in the center by a small United States shield, with the words "Air" at the left and "Mail" at the right in heavy dark letters of the gothic type. In rectangular-shaped panels in each lower corner is the denomination designation ' $6 c$ ' in white. An ornamental border extends from the top of these panels across the ends of the stamp. In a narrow panel with dark [back-ed] ground at the lower edge of the stamp is the inscription ' $U$. S. Postage' in white gothic-type letters.
"Every effort will be made to have the new 6-cent air-mail stamp available at all post offices where needed in conjunction with the observance of National Air Mail Week, May 15-21, announced in the POSTAL BULLETIN of April 5. To this end, postmasters at all direct and central-accounting post offices are requested to submit requisition to the Department promptly on Form 3201- $A$, endorsed 'Bicolor,' for a reasonable supply of the new 6-cent air-mail stamp to be filled as soon as the stamps can be printed. However, postmasters receiving the new issue air-mail stamps prior to the close of business on May 14 are cautioned not to allow them to be placed on sale until May 15.
"Postmasters at district-accounting post offices may obtain needed supplies of the new 6-cent air-mail stamps by requisition on the central-accounting post office." ${ }^{13}$

An article in Linn's Stamp News in 1989 stated, "The $6 \$$ stamp was designed by William K. Schrage, using an eagle and vignette by R. Ponickau and Charles A. Brooks. William B. Wells engraved the frame and lettering." ${ }^{14}$ One theory contends that the central eagle and shield design was borrowed from a Library of Congress bookplate used in the $19^{\text {th }}$ century as shown in Figure 5. ${ }^{15}$

James H. Patterson's article titled "The Design of the 1938 Eagle Airmail Stamp" appeared in the American Philatelic Congress book printed for StampShow '96. In it he noted that according to the BEP's records, the eagle for the Library of Congress bookplate was engraved by Ponickau as part of Miscellaneous Die No. 5324 dating from 1901 or earlier. Patterson believed that the more likely candidate for the origin of eagle engraving appeared in the National Bank Note Company's essay for a $\$ 200$ Internal Revenue stamp that dates to the late 1860's or early 1870's shown in Figure 6 below. There are many additional details about the evolution of the design, models, and essays for C23 in Patterson's article. ${ }^{17}$

Evidently, not everyone was pleased with the final design, even before it was issued. As the saying goes, "you can't please all of the people all of the time." ${ }^{18}$ Also in the correspondence files of the NPM is a letter received on May 3, 1938, based upon a newspaper image, complaining about multiple features of the design of the stamp including the use

Figure 6. Turner essay \#10b \$200 essay on gummed stamp paper (eBay listing from Bill's Bargain Stamps, December 2020).
of "U.S." instead of spelling out "United States," the typeface used, and the fact that the denomination appears twice. The letter states in summary, "The general appearance of this specimen stamp is poor and mediocre. A school child could design a more attractive stamp." ${ }^{19}$ The Third Assistant Postmaster cordially replied the same day stating, "As soon as you have the opportunity to inspect the completed stamp you should find the design altogether satisfactory from the viewpoint of the criticism in your letter." ${ }^{20}$

Incidentally, an engraving of the vignette appears (flipped horizontally) on the Veterans Administration Stamp (Scott \#1825) Commemorative Panel \#128 with the eagle facing to the left.


Figure 7. Engraving on Veterans Administration Stamp (Scott \#1825) Commemorative Panel \#128.

## Models, Proofs \& Color Choice

At least one of the early designs had an airplane instead of an eagle. On March 28, 1938, the Director of the Bureau of Engraving and Printing (BEP) submitted three models with different designs for the bicolor air mail stamp along with "two photographic prints of [the] airplane from which the models were prepared. ${ }^{21}$ We were not able to locate those designs or photos.

By April 8, the BEP submitted an "approved model and three die proofs printed in red and blue." ${ }^{22}$ On April 14, 1938, the Third Assistant Postmaster sent the approved model for the new six-cent bicolor air mail stamp to the Director of the BEP with the note, "As soon as the color for this stamp is selected, the die proofs which you transmitted with the approved model will be returned. ${ }^{23}$

We were able to piece together a timeline and reference numbers for the proofs leading to the final, accepted design and color selection from correspondence in the lateral files of the NPM in Washington, DC as shown in Table 1. Unfortunately, we have been unable to locate any proofs with these numbers and could not find any references or clarification for the color codes.

Table 1. Timeline for proofs leading to the final, accepted design and color selection of Scott \#C23

| Date | Notes | Proof Number | Color Reference |
| :---: | :---: | :---: | :---: |
| 1938-03-28 | BEP submitted 3 different design models $^{21}$ | no numbers |  |
| 1938-04-08 | BEP submitted the approved model and 3 die proofs ${ }^{22}$ | 548923-548860 | no color codes |
|  |  | 548924-548861 | no color codes |
|  |  | 548925-548862 | no color codes |
| 1938-04-12 | BEP submitted two additional die proofs using two different blue shades ${ }^{24}$ | 549360-549303 | R128-P B-228-P |
|  |  | 549362-549299 | R128-P B-241-P |
| 1938-04-14 | Third Assistant Postmaster returned the approved model ${ }^{25}$ |  |  |
| 1938-04-19 | Blue color chosen, two more proofs requested, and other proofs returned ${ }^{25}$ |  |  |
|  | Approved die proof | 549360 | B-228-P R-128-P |
|  | "Please have two additional proofs prepared in this color" ${ }^{25}$ |  |  |
|  | Other proofs returned | $\begin{aligned} & 548923,548924, \\ & 548925,549362 \end{aligned}$ |  |
| 1938-04-22 | BEP requests final approval and return of one proof ${ }^{26}$ | 550229-550228 | B-228-P R128-P |
|  |  | 550230-550307 | B-228-P R128-P |
| 1938-04-28 | Signed proofs "returned for proper disposition and replacement" ${ }^{27}$ | 550229-550230 | B-228-P R128-P |
| 1938-05-03 | BEP submitted two additional die proofs in the final colors ${ }^{28}$ | 551849-551887 | B-228-P R128-P |
|  |  | 551851-551888 | B-228-P R128-P |

The NPM has two die proofs in its collection, but neither has any identification that matches the BEP numbers from the correspondence. Neither of these proofs is available on the NPM website at this time, but are shown in Figure 8.

The NPM also has a certified plate proof of the entire printing plate for the blue frame which can be viewed on their website (Object Number 0.242263.15835). A certified plate proof is the last printed proof of the plate before the printing of stamps at the BEP. This proof (Figure 9, page 264) shows the approval signatures and date along with margin inscriptions, guidelines, plate number 21838, and the initials of the siderographer who created the plate from a transfer roll.

It is interesting to note that although the frame plate contains 100 subjects in two panes of 50, the vignette plate contained only 50 subjects. All bicolor issues of United States regular and commemorative postage stamps issued prior to C23 had plates with the same number of vignettes as frames with one exception. The first layout for the 1931 Yorktown issue (Scott \#703) used both border and vignette plates of 100 subjects each. However, the second layout for the Yorktown issue used border plates of 100 subjects


Figure 8. Two C23 Die Proofs (Image from United States Postal Service, Postmaster General's Collection. Courtesy Smithsonian Institution, National Postal Museum).
for the carmine rose, but plates of only 50 subjects for the black vignettes, similar to the plates for C23.

The NPM's vignette plate proof is also available on the NPM website (Object Number 0.242263.15836). It is a certified plate proof for Plate No. F 21840 shown in Figure 10 on page 266.

The NPM has a horizontal block of ten that is listed as C23c and is shown on the NPM website (Object Number 0.211547.1.1-10) but we were unable to view what, if any, marks on the back. Also on the website (Object Number 0.211547.2.1-4) is a bottom arrow block of four identified as C23c whose description includes the statement, "donor's signature in pencil on back of each stamp." The NPM staff were kind enough to provide us with an image the back of those stamps. The museum also has stamps identified as C23 and C23c that are not available on the website. None of these stamps are available for close examination or testing because they are currently mounted in the National Stamp Collection held in trust by the Postal Museum in one of the 275 pullout frames (namely frame \#167B) in the National Stamp Salon.

A small die proof was sold at a Harmers International Auction at the Collectors Club in New York City on May 12, 2017. "A small die proof for the bicolored $6 \$$ Eagle airmail stamp of 1938 (Scott \# C23P2) is very seldom seen, according to Harmer, who said he thought its Scott value of $\$ 2,750$ could turn out to be low."29 ${ }^{39}$ Indeed, it was low because it sold for $\$ 8,260$ according to a report in Linn's Stamp News. ${ }^{30}$ In 2015, the Scott Specialized Catalogue of United States Stamps and Covers listed the value of C23P2 at $\$ 2,750$. The 2021 issue of that catalog currently lists the value at $\$ 7,000$.



Figure 9. Certified C23 Frame Plate Proof (Image from United States Postal Service, Postmaster General's Collection. Courtesy Smithsonian Institution, National Postal Museum).


Figure 10. Certified C23 Vignette Plate Proof (Image from United States Postal Service, Postmaster General's Collection. Courtesy Smithsonian Institution, National Postal Museum).

## Conclusion

Having established the historical context for this issue, we move on toward the discovery that led to the controversy surrounding Scott \#C23c. In the next installment of this series, we will introduce the discovery of a color difference. The references that follow pertain specifically to the citations in this segment of the series. Future articles will be treated in the same manner with a large general bibliography included with the final installment of the series.

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Overrun Greece, The C23c Story Part II \& More

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#### Abstract

An association of collectors to promote the study of all postage and revenue stamps and stamped paper of the United States and US-administered areas produced by the Bureau of Engraving and Printing and other contract printers.


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Scott \# C23c Ultramarine \& Carmine (Philatelic Foundation Certificate \#565394)

## Scott \#C23c - The Whole Story

 Part II - The Color Discoveryby

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## Discovery of a Color Difference

Oliver Keith ("O.K.") Rumbel (1896-1977) was an internationally renowned Texas numismatist with a vast collection of church communion tokens. ${ }^{1}$ Rumbel was also a collector of U. S. stamp plate blocks and at some point, he decided to try to get all of the plate number and position combinations of the $19386 \$$ bicolor airmail. In 1941, he was still looking for combinations from the later printings of C 23 when the Post Office discontinued the printing of this stamp. Rumbel was looking through a stack of sheets provided to him in the Weslaco, Texas (south of Corpus Christi) post office. Rumbel was checking his want list and setting aside the sheets he wanted. As collectors with a particular interest are probably aware, we may be so focused upon our particular quarry that we sometimes do not notice other things about a stamp. It was actually Postmaster C. Davenport who noticed that one sheet appeared to be of a different color! The details of the discovery, plate numbers, and Rumbel's actions appeared in a January 9, 1954 article in STAMPS (transcribed below) ${ }^{2}$

## The Story of the Six-Cent Airmail Color Error

MANY of our readers will recall the article which appeared in STAMPS of August 18, 1945, concerning the discovery of an extraordinary color error of the U. S. $6 \$$ dark blue and carmine airmail stamp, Scott's No. C23. Ten sheets of this stamp were reported found in ultramarine instead of the usual blue.

We commented then that "The difference in color is so marked as to be more prominent than the $4 c$ Columbian error blue instead of ultramarine, and after careful study, the editors of Scott's and Sanabria's catalogs have decided to list this new find as an error." And this they did in their next editions.

As we reported at the time, these sheets had been found some years before by a Texas collector, who set them aside and did nothing about them until 1945.

The incident of this discovery was recently recalled to our mind when O. K. Rumbel, the original finder of the sheets in ultramarine color, came to New York with some of the stamps, and dropped in to see us. Back in 1945, when Mr. Rumbel first showed the stamps to Hugh M. Clark, then editor and publisher of Scott's catalog, Mr. Clark had suggested that Mr. Rumbel give a sheet or portion of sheet of the ultramarine stamps to the Philatelic Foundation for their Expert Committee. We concurred that it was a good suggestion, and Mr. Rumbel said he was quite agreeable to presenting a sheet or such portions of a sheet as the Philatelic Foundation might indicate they would find helpful. In discussing the matter, we decided that the presentation should be accompanied by affidavits attesting to the manner in which the discovery was made and the sheets acquired by Mr. Rumbel.

On his return to Texas after his visit with us Mr. Rumbel prepared a sworn affidavit attesting to the circumstances under which his find was made, and also secured corroborating affidavits from C. Davenport who at that time was Postmaster at Weslaco, Texas, and N. G. Hargett, the clerk at the money order window. These affidavits tell the story of the find so well that we thought our readers would like to have the details. Mr. Rumbel kindly supplied us with duplicate affidavits from which we have culled the story for you. (Meanwhile, we understand, Mr. Rumbel has given the Foundation some of the stamps with the affidavits.)

Mr. Rumbel had been interested in collecting plate number position blocks of U. S. postage stamps for many years. When the $6 \Phi$ bicolor air mail stamp was issued on May 14, 1938, he decided to put together a collection of as many different plate number combinations and positions of this stamp as he could find. As soon as these stamps were delivered to his Valley post offices, he made trips from Mission to Brownsville searching for different plate number combinations and positions. He sent check lists to various dealers in different parts of the country, and whenever he was in a new locality he would attempt to secure different plate number strips of this stamp. The Bureau of Engraving and Printing made sixteen different plates for the frame of this stamp, and forty different plates for the central design. Counting the right and left positions, there would be 1280 possible combinations.

Having secured most of the combinations from the early printings of the stamp, he was diligently looking for the late printings in 1941 when the Post Office Department issued a $6 \$$ carmine air mail stamp and discontinued printing the bicolor stamp. He realized that soon the bicolor stamp would no longer be in the post offices, so requested several of the nearby postmasters to specify the $6 \Phi$
bicolor stamp when next they ordered air mail stamps for their offices from the Post Office Department in Washington.

Postmaster Davenport of Weslaco placed an order for a large quantity, specifying that only the $6 \Phi$ bicolor stamps be shipped to him. Shortly after this shipment arrived, Mr. Rumbel called at the Weslaco Post Office. Mr. Davenport placed the stack of bundles of air mail stamps before him, and he began the exciting hunt for different plate number combinations and positions, while the Postmaster stood by. They found the usual sequence of four numbers in the packages, but near the bottom of the stack were some of the early plate numbers and some of the late ones, both right and left positions, with no sequence at all in the plate numbers.

Mr. Rumbel eagerly checked his want list, and laid aside several sheets of plate number combinations for which he had been looking. Suddenly, Mr. Davenport picked up one of the sheets Mr. Rumbel had laid aside, looked at it intently, then said: "Look, this sheet is of a different color from the others." Mr. Rumbel was so intent on his objective offinding new plate number combinations that the significance of Mr. Davenport's comment did not at first sink in, and he scarcely paid any attention to it. But finally he did take a look, and was struck at the difference in the color of the frame of the stamps, which appeared to be ultramarine instead of the customary clear blue. He hunted for more of the ultramarine color in the bundles at hand, but found them only in the one package that had the mixture of plate numbers, combinations, and positions.

Being unable to purchase many sheets at the moment, he requested the Postmaster to lay aside for him the few ultramarine and carmine sheets, which he agreed to do. Meanwhile, he had torn off a plate number strip of ten from a sheet, and the remaining forty stamps of the sheet were sold to N. G. Hargett, the money order clerk at the front window, who put the stamps in his stock.

Bright and early the next morning, Mr. Rumbel was back at the Weslaco Post Office, where he purchased the sheets that had been laid aside for him, plus the forty stamps that had been put in stock at the front window.

Mr. Rumbel decided to do nothing about the stamps until he was sure that they were not the usual issue. He carefully read all the stamp publications, expecting that each new issue would tell something of stamps being found in ultramarine color, but nothing happened. He intensified his search of dealers' stocks of this bicolor stamp, now looking for something more than just plate number combinations, but none of the ultramarine color in these stamps turned up.

In the fall of 1942, he sent seven of these ultramarine and carmine $6 \$$ air mail stamps to his son Keith E. Rumbel in Buffalo, New York, who used them on letters sent back to his father at Mission, Texas. O. K. Rumbel used fifteen of the stamps on letters to his son, who returned the used stamps back to him. Mr. Rumbel's search continued for some more of the ultramarine stamps, but at no time did he find any others besides the original find. [ Note that the Rumbel Cover illustrated in this article from his son Keith is postmarked June 9, 1942. - ed.]

It was not until June, 1945, that he had the opportunity of discussing this ul-
tramarine colored stamp with anyone considered a real authority on the subject. He called on Hugh M. Clark, then editor and publisher of Scott Publications, Inc., in New York City. Mr. Clark was much impressed when he saw the stamps, and asked for full details of the find. Mr. Rumbel had two sheets with him at the time. Mr. Clark examined the copies of the stamp in the Scott Reference Collection, and in the stock of the Scott Stamp and Coin Co., but none of them showed the ultramarine color.

The following day Mr. Rumbel met with the late Emil Bruechig, the wellknown air mail specialist dealer, who showed great interest when he saw the stamps, and asked permission to take one of the sheets with him to check with Alvin W. Hall, Director of the Bureau of Engraving and Printing at Washington, D. C. To this Mr. Rumbel agreed, and the Bureau made spectrophotometric tests of the stamp. Mr. Hall wrote Mr. Bruechig under date of July 7, 1945 as per illustration accompanying this article.

On July 18, 1945 Mr. Bruechig purchased eight sheets of the color error from Mr. Rumbel, which he later offered for sale to his customers. Early in 1947 Mr. Bruechig informed Mr. Rumbel that he was planning an exhibit of the error at the CIPEX exhibition in New York in May, and that he would inform Mr. Rumbel fully of the special exhibit after he returned from the hospital where he was to undergo an operation. Mr. Bruechig knew of Mr. Rumbel's collection of plate combinations of this stamp, and had previously expressed a desire to see the same plate number combinations in both the normal and error of color. Mr. Bruechig never recovered, and Mr. Rumbel learned of his untimely death when a friend in New York sent him a newspaper clipping reporting it.

Mr. Rumbel's records show the following plate number combinations of the ultramarine color stamp: 21948 with 21903; also with 21910 ... 21949 with 21903; also with 21912 ... 21950 with 21903; also with 21911 and 21912 ... 21951 with 21910; also with 21911 and 21912.

The right and left sheets of the combinations found are as given by Mr. Rumbel in the accompanying table.

Mr. Rumbel gives it as his opinion that the only possible solution for this error of color is the assumption that some of the carmine ink used for the printing of the central portion of this stamp had been left in the ink pot when the usual blue ink was poured into it. Then, as the blue ink was used down to where the carmine ink had blended with the blue, the result was the ultramarine color. He feels that the finding of these few sheets only in the one mixed-up package seems to indicate that it was a left-over package made from odds and ends of perhaps the final printing. These few stray sheets were possibly included in this package in order to complete the order from the Weslaco Post Office.

The affidavit by Postmaster Davenport and the one by N. G. Hargett, who is now Postmaster at Weslaco, Texas, substantiate the details given in the affidavit of Mr. Rumbel.

| TABLE - RIGHT AND LEFT SHEET COMBINATIONS |  |  |
| :---: | :---: | :---: |
| The right and left sheets of the combinations found are as follows: |  |  |
| Ultramarine | Carmine | Position |
| 21948 | with 21903 | Both right and left |
|  | with 21910 | Both right and left |
| 21949 | with 21903 | Right only |
|  | with 21912 | Both right and left |
| 21950 | with 21903 | Right only |
|  | with 21911 | Both right and left |
|  | with 21912 | Both right and left |
| 21951 | with 21910 | Right only |
|  | with 21911 | Both right and left |
|  | with 21912 | Right only |
|  |  |  |
| making 16 different plate number combinations and positions of this error of color. |  |  |

There was a duplicate sheet of each of the following combinations and positions: (10 Total)

| Ultramarine | Carmine | Position |
| :---: | :---: | :---: |
| F21948 | with 21903 | Right sheet |
|  | with 21910 | Right sheet |
| 21948 | with 21910 | Left sheet |
| F21949 | with 21903 | Right sheet |
|  | with 21912 | Right sheet |
| F21950 | with 21903 | Right sheet |
|  | with 21911 | Right sheet |
|  | with 21912 | Right sheet |
| F21951 | with 21910 | Right sheet |
|  | with 21911 | Right sheet |

A copy of the affidavit and reference examples were given to the Philatelic Foundation (PF) in New York City. The correspondents at the PF were very helpful and shared information about their reference examples for this article. We requested to view copies of the affidavits, but they could not be located.

The text of the reply dated July 7, 1945, to Bruechig from Alvin W. Hall, Director of the Bureau of Engraving and Printing, is transcribed below:

Dear Mr. Bruechig,
We have examined the fifty-subject sheet of six-cent airmail stamps issued in 1938 and referred to in your letter of June 29, 1945.

Spectrophotometric tests which were conducted show the hue is redder than standard for stamps of this series. The reddish tinge of the paper itself may also be a contributing factor to the color variation which has been observed. A spectrographic analysis of the ink was compared with a similar analysis of ink from the stamps having a normal color. While slight differences were observed, these differences did not disclose the presence of an inorganic pigment in the off-color ink which was not present in the ink of normal color.
The character and color of the stamps is such that they should have been removed by the bureau during examination and not permitted to get into circulation. However, when it is realized that this bureau produces about twenty billion stamps of all types annually, it will be seen that some substandard work might inadvertently be placed in circulation.
Under separate cover in an insured package we are returning the sheet to you, together with the samples of normal color which you sent us. ${ }^{3}$
Although the letter states that spectrophotometric and spectrographic tests were conducted, the letter does not state what type of equipment was actually used nor what kind of analysis was performed. It would appear that the goal of these tests was to determine if the "off-color" stamps contained an additional ink pigment not present in stamps having the "normal color." It was concluded that the "off-color" stamps contained the same pigments as the "normal color" stamps, but the type of analyses that could be conducted in the 1945 time period would not have permitted anything other than a qualitative result, and certainly not a quantitative result. As will be shown in a later section of this paper, the conclusions drawn by Mr. Hall are correct in as far as they go.

Of special note, the Director of the BEP clearly stated, "The character and color of the stamps is such that they should have been removed by the bureau during examination and not permitted to get into circulation." ${ }^{15}$

## Total Quantities

The affidavits confirm that 26 panes of the ultramarine "error" in 1941 were acquired by Rumbel. This is important, since this issue was nearing the conclusion of its printing cycle, and the panes were from later plate numbers of the issue. Bruechig purchased eight sheets of the color error from Mr. Rumbel on July 18, 1945 which he later offered for sale to his customers

And, according to those affidavits, there are only 16 different plate number combinations and positions for C23c. Those 16 different sheets plus the 10 duplicate sheets would mean a total possible population of 1300 C 23 c stamps including 22 used by Rumbel or his son presumably postmarked in either Buffalo, New York or Mission, Texas.

As shown in Figure 2, his penciled notation at right says: " 7 covers; 22 used, including covers" and signed "O. K. Rumbel"


Figure 1. A single canceled Mission, Texas October 19, 1942. This example was printed in the April 14, 1986 edition of Linn's Stamp News. ${ }^{4}$


Figure 2. June 9, 1942 letter sent to him by his son, Keith E. Rumbel, Buffalo, New York. The reverse side is blank and therefore not pictured (PSAG Cert 585735 and CPF-2020-06-02).


Figure 3. A cover addressed to Rumbel's wife with a note and signed by O.K. Rumbel. ${ }^{5}$


Figure 4. A cover sold in Robert A. Siegel Auction \#1010 June 18, 2011 (2009 PSE certificate).

From 0 If. 1 umbel
Mission
Tennos.


VIA AIR MAIL
Mr. IFeith E. Rumbel, 159 College st., Buffalo.
New York.

Figure 5. Cover (front only) with Railway Express Agency cancel from Mission, Texas from the collection of Robert D. Hohertz.


Figure 6. Philatelic Foundation image.

## Printing Records

The following plate numbers are the only ones reported in the initial discovery, and no others have been verified via the analytical testing methodology which is described in a later installment of this series.

Frame: \#21948, 21949, 21950 and 21951 - both left and right positions.
Vignette: \#21903, 21910, 21911 and 21912
According to the BEP production records in Wallace Cleland's 2011 "Printing History of the 64 1938 Airmail Stamp, C23" from US Stamp Society Research Paper \#21, ${ }^{6}$ these plates were only at press with each other for a short period in 1940. These four frame plates were only used on Press \#620 from September 18 through December 5, 1940 for a total of 93,550 impressions. That press was never used to print any other frames or vignettes for C23. Coincidentally, the four vignette plates were only used on Press \#634 from September 23 through December 10, 1940 for a total of 60,775 impressions. That press was never used to print any other frames or vignettes for C23.

This combination of plates was only simultaneously at press once, late in the production of this issue. The fact that the only time these two presses were used to print any C 23 stamps was the same time period for both the frame and the vignette suggests that this may have been for some kind of experiment. If so, it seems unlikely that any earlier plate numbers are candidates for the presence of the ultramarine ink. If it was an "error," it was rectified fairly quickly. Further, if it was an "error," it seems plausible that the "off-color" panes were set aside, not destroyed for some unexplained reason, and shipped with the bulk order for the remaining inventory of this issue to the Westlaco, Texas post office. It is certainly possible that additional panes or plate blocks of C23c are in collections awaiting discovery, and we would urge collectors to scrutinize their sheets and plate number blocks for this possibility.

Note that normal C23 plate blocks also exist with these plate number combinations and positions. Therefore, numbers alone can NOT be used to definitively identify the C23c variety.

## Early Article \& Sales

As stated earlier, Rumbel "discovered" and acquired the sheets of "a different color" in 1941. The first article describing the ultramarine color discovery did not appear until August 1945 as shown in Figure 7.

Later in that same issue of STAMPS, Mr. Bruechig had an advertisement on page 251 (Figure 8). Note that this 1945 advertisement opens by saying that, "Ten sheets of this stamp in ULTRAMARINE and carmine were discovered in Texas." Later in the ad he states that, "Only ten sheets of 50, a total of 500 stamps, in this ULTRAMARINE error of color have come to light although this stamp has been under the constant scrutiny of collectors for almost seven years." And in the pricing box it says, "There are only ten complete sheets of this stamp which limits the number of positions available to only ten of each." ${ }^{\prime}$

The advertisement also alludes to an admission by the Bureau of Engraving \& Printing that these sheets should not have been "permitted to get into circulation." It also

## SIX-CENT AIRMAIL COLOR ERROR

AN extraordinary color error of the U. S. 6c blue and carmine airmail stamp has just come to light with the discovery of ten sheets of this stamp that are printed in ultramarine instead of the usual blue. The difference in color is so marked as to be more prominent than the 4 c Columbian error blue instead of ultramarine, and after careful study, the editors of Scott's and Sanabria's catalogs have decided to list this new find as an error. The list-
ing of the error, we are informed, will read as follows in the 1946 catalog:

## Scott-C28c 6c ultramarine \& red (error)

Sanabria-29 6e ultramarine \& red
The word "error" for United States stamps has been used very sparingly by the catalog editors, and then only to describe an error of color, Only two such descriptions are recalled for U. S. adhesive

## We Wish to purchase a Boantiful UNITED STATES COLLECTION

- It may be either mint or used, singles or both singles and blocks.
- We prefer a collection that would cost us between $\$ 2500.00$ and $\$ 25,000.00$. To any party having such a collection for sale we can promise to pay a very attractive figure.
All corrospondence will be hold otrictly confidential FRED E. S'RENCO 213 WEST FOURTH ST.
los angeles 13, calif.


## UNITED STATES MINT SHEETS

Very Fine and Guaranteed Satisfactory


## EARLY FALL AUCTION IN PREPARATION

19th and 20th Oentury U. S., singles and blocks, 20th Century British Colonials. Aals to receive our catalog.

PERRY W. FULLER
Baltimore Life Building
Charles and Saratoga Streets
stamps-the 4 c Columbian blue error, and the 5 C rose errors of the 1917-19 issue. Thus, the use of "error" following the catalog description of this new 6c airmail discovery clearly indicates the striking difference in the color of the new find as compared with the ordinary stamp. Actually the character and color of this stamp is such that these sheets should have been removed by the Bureau of Engraving \& Printing during examination, and should not have been permitted to get into circulation.

Ten sheets of this ultramarine and carmine error were found in Texas some years ago by a collector who thought them to be an unusual shade, so put them aside as a curiosity. Although some seven years have passed since they were purchased at the Post Office, no others in anything like this ultramarine color have turned up.

The stamps came to the attention of Emil Bruechig, who promptly recognized them for what they are-an error of color. His research subsequently proved this correct.

Errors of color are rare in philately, and when they have occurred, they have usually been in small quantities, and have commanded extraordinary premium values over the stamps in the ordinary color. The 4 c Columbian stamp, printed in blue instead of ultramarine (the exact reverse of this 6c airmail discovery) is one of the most sought after of U. S. adhesive stamps, being quoted at $\$ 1,000$ for a single copy in the current Seott catalog. The ordinary blue stamp is quoted at only $\$ 2.50$ !
It is interesting to note that similar color errors on foreign stamps bring similar premiums. Great Britain's $21 / 2$ p Prussian blue instead of ultramarine (Scott's $\# 229$ ) is quoted at $\$ 175$, as against 30 cents for the ordinary blue stamp, a ratio of about 580 to one.

The 6c blue and carmine airmail stamp has produced two other major errors that have startled the philatelic world. First of these was the discovery of forty sheets ( 1000 pairs) imperforate horizontally in a Brooklyn post office a few years ago. These stamps were disposed of at $\$ 100$ a pair. A later discovery was a sheet with the vertical perforations so misplaced as to leave the upper diagonal half without vertical perforations. It is expected that the new ultramarine color error will prove quite as sensational as the perforation varieties of this stamp.
states that Scott Publications intends to list the ultramarine stamps "as an error" and the Sanabria Air Mail Catalogue intends to list them "as a major variety."

According to the affidavits cited above, Bruechig purchased eight sheets of the color error from Rumbel on July 18, 1945 which he later offered for sale to his customers. So we know that Bruechig saw eight sheets which we assume to be from Rumbel's ten duplicate sheets. We do not know if Bruechig saw the other two sheets and did not buy them or if he even saw them. But evidently, Rumbel failed to mention the additional set of 16 sheets with different plate numbers and positions which we assume he kept in his personal collection.

Shortly after the advertisement appeared, Third Assistant Postmaster General Black had already received at least one letter shown in Figure


Figure 8. Emil Bruechig's 1945 advertisement (Image from United States Postal Service, Postmaster General's Collection. Courtesy Smithsonian Institution, National Postal Museum). ${ }^{8}$ 9 complaining about "How ten sheets could escape the notice of the personnel of the Bureau of Engraving and the distributing post offices handling those stamps seems very odd. ${ }^{10} \mathrm{Mr}$. Peter Gouled even thought "that a thorough investigation should be instituted to establish the cause of that leakage of faulty material." ${ }^{10}$

In his reply, Third Assistant Postmaster General Black addresses the matter of the "border appearing in a shade resembling ultramarine rather than the darker blue originally approved" ${ }^{11}$ and comments upon the roles of the Post Office Department and the "collecting public" in such matters. Portions of that reply are transcribed below:
"The Department, as you know, exercises no influence over the relative importance or values attributed by collectors to so-called varieties nor has it any control over the character of material considered as such. It believes, however, that some distinction should be drawn between intensities of color and differences in its chemical composition. It also feels that it is a mistake to attach too much importance to any varieties which might be readily duplicated by persons so disposed or which permit reasonable facsimilies [sp] to be fraudulently produced which may thereafter defy identification by other than an expert.

These matters are for determination solely by the collecting public and not this Department, which is concerned primarily with supplying postage stamp paper completely satisfactory to the mailing public for the prepayment of postage and
to provide such assistance as it can be to collectors without seriously effecting the efficient handling of the mails. The Department cannot, as you know, attempt to exercise any supervision over philately or prescribe standards of ethics for its guidance." ${ }^{11}$


Figure 9. Letter to Third Assistant Postmaster General Black (Image from United States Postal Service, Postmaster General's Collection. Courtesy Smithsonian Institution, National Postal Museum). ${ }^{10}$

## Controversy Regarding "Error" Status Began Immediately

By calculation from his affidavit, Rumbel sat on his discovery for four years before taking what we assume to have been his ten duplicate panes to New York in 1945 for "show \& tell" and for sale. The article in STAMPS, January 9, $1954^{2}$ as shown and transcribed above provides the information in the affidavits about the discovery. The article in STAMPS, dated August 18, 1945 ${ }^{7}$, also shown above, is the earliest published article that we found about C23c.

We know about the correspondence from Hall at the BEP ${ }^{12}$ and Kessler's sale in $1947,{ }^{13}$ but we did not uncover any other published articles until 1954. In March of 1954, an article appeared in The American Philatelist by Stephen Rich seemingly in response to the STAMPS, January 9, $1954^{2}$ article. Most of Rich's article, titled "CAUSE AND DATE - 6c Airmail 'Color Error,', ${ }^{14}$ is transcribed below:

From the point reached in the article citing affidavits in Stamps of January 9, 1954, it is now in order to continue the discussion of this variety, using further informative material that has been shown before several stamp clubs, but of which no separate detailed report in print has been given. This material was mentioned incidentally in various articles by me. It was worked up by me in 1945, when discussion of the variety was active. It is almost wholly used material, in most cases bearing postmark dates on the actual stamps.

When the "ultramarine error" of the 1938 bicolor 6 cent air mail stamp was first discovered and shown, I made it my business to see under good clear daylight some half dozen copies of it owned by various collectors in North Jersey and adjacent New York state. One striking fact, which has not had mention in any published discussion of this stamp, struck me.

Every copy that the exhibitors showed as unquestionably the genuine "ultramarine error," showed a pinkish surface coloring over the white paper spaces and the margins. This was sometimes more conspicuous than in other cases. But every authenticated copy showed it, uniform over the whole stamp.

Now such surface coloring is far from uncommon on United States stamps, especially those of the last thirty years. Its nature is well known. It is a product of a newly chromed plate. The chrome plating is slightly granular in surface when the plate first goes to press, and retains a thin film of ink. The wiping of the plate gradually smooths the chromium surface, and in exact proportion to this smoothing, the retention of ink vanishes.

Since the "ultramarine" color of this 6 cent variety is not precisely that of most stamps called by that name, but quite clearly a much darker color, it seemed evident that some combination of a small amount of reddish ink had produced it. This is now borne out by the letter of Director Hall, July 7, 1945, in the January 9 article in Stamps. That letter states definitely that spectrochemical analysis indicates the presence of red ink pigment.

Furthermore, material which I have, shows likewise that copies of this stamp exist in which there is a similar blue shading, patina or surface coloration over the whole stamp. However, I have yet to discover a copy in which the thin films of ink of both colors of the printing occur on any one stamp.

The cause of the "ultramarine error" can therefore be ascribed definitely to use of plates that had been recently chrome-plated, for the red printing.

Purposely, I avoid any judgment as to whether the name "ultramarine" is a correct one for the color. Mention must be made, however, that the term "error" for the variety was dropped some years back by Scott's catalog.

The material from which I worked was used singles and pairs of this stamp, some off paper and some on piece or cover, which came to me between the date of its issue and 1945. This accumulation of maybe 100 to 120 copies, covering the whole period of use, was very rich in material from Evansville, Ind., and Webster Groves, Mo., in 1938 to 1941.

I report the following results.
First: Copies of the "ultramarine" color appear almost entirely in the years 1938, 1939, and 1940. The earliest date I have is May 15, 1938, on a special flight cover from Philadelphia, Pa. Evansville, Ind., shows up on May 24, 1938, with the ultramarine, a pair. From that same city, a top guideline-plate number pair, plates 21851-21837, was used on July 11, 1940, by the same sender (Henry A. Meyer, from whom most of my Evansville copies, if not all, have come, on mail to me). Webster Groves, Mo., shows up with a 1940 item off paper, with only year of date on the stamp.

These dates all point to the probability that the color variety came wholly from the earliest printings. That fact would agree with the known cause of origin thereof.

It has further been possible to construct a series, showing eight stamps that intergrade completely from the brightest, least ultramarine-like of the regular color copies to an unmistakable ultramarine. The last of the series is of this color beyond any reasonable doubt. How far up the series the name applies, is apparently somewhat subjective; but to my eyes in clear bright daylight, at least one and maybe two more of the set would be good honest examples of this color.

Actually, an equally great variation occurs in the color of the red portion of the stamp. An exceedingly dark red, which I call crimson because it approaches that color as shown on any correct banner or emblem of Harvard University, exists. The copies showing this are postmarked San Francisco, Calif., Ferry Annex Nov. 1, 1938, and St. Louis, Mo., Jan. 20, 1940, (a vertical strip of three). The St. Louis item came from the same correspondence as the Webster Groves item of the ultramarine. It also is found, this crimson color, on a top guideline-plate number pair, plates 21844-21858, which is precancelled with the "integral" of Sears Roebuck \& Co. at Atlanta, Ga., with their firm initials and date "Feb 39" included.

All the crimson copies show conspicuously the blue chrome-grain patina over the whole stamp. In fact, just as in no case do I find an ultramarine without the red patina over all white portion, neither do I find a crimson without the corresponding blue patina.

The accumulation of this material has an interesting story. In 1939 and 1940, though beginning in late 1938, there was much correspondence requiring speed between certain officers and directors of the Society of Philatelic Americans. I was one of those directors in late 1938, and secretary of the society from Jan. 1, 1939, until Sept. 1, 1940. The correspondence from Mr. Meyer and the then vice-president of the society, J. Edward Vining, to myselfwas nearly all conducted
by airmail, because most matters then active required quick communication. Mr. Meyer had bought several sheets of this stamp when it appeared, and was using this supply at the time. Mr. Vining, then living in Webster Groves and in business in St. Louis, used up his early supply very soon save for a few copies.
I am indebted to John N. Myer of New York for starting me in 1945, when he believed the "ultramarine error" was imaginary, on the study now reported, and to James H. Baxter's well known book on "Printing Stamps by Line Engraving" for the information about the chromium film that holds the ink ere it is wiped into smoothness.

This study further brings the implication that used copies of the $6 \$$ in ultramarine are far from scarce, but mostly not recognized at their true nature. Quite probably they are as plentiful as unused copies, and hardly rate at more than $\$ 2.00$ each actual price. The variety unused, for that matter, is probably really sufficiently frequent to be at most a $\$ 5.00$ actual price item. ${ }^{14}$
We feel that Rich's conclusions were incorrect and that he based his opinion upon material that was not in fact the ultramarine variety. He states that, "Every copy that the exhibitors showed as unquestionably the genuine 'ultramarine error.'" He does not mention who those exhibitors were nor if their examples were mint or used. Rich states that the material in his study, 100-120 copies, was "almost wholly used material." He notes the postmarks of the material upon which he based his conclusions were dated 1938-1940.

But we know that Rumbel purchased his ultramarine sheets in 1941, we know the plate numbers from Rumbel's affidavit, and we know those plates were on press in late 1940 from Cleland's printing history. We do not know who, if anyone, "authenticated" the stamps which Rich examined and he never mentions any markings on the back of the stamps he examined.

The shade differences that Rich reported and the possible cause that he identified are the same shade differences of "normal" examples of C23 that some dealers and collectors have also seen and mis-identified as C23c. One of the authors of this article has multiple examples of mint C 23 with the overall pink or blue tint that Rich attributes to a residual film of ink due to chromed plates. None of these examples are the same color as expertized and back stamped copies of C23c.

In January of 1962, Clyde Jennings, Jr. presented a program entitled, "United States, Freaks, Errors, Oddities and Varieties" to the Collectors Club in New York City. In the written description of that presentation, it was noted that, "Other well known errors of color are the $4 \notin$ Columbian in blue rather than ultramarine and the $6 \$$ air mail stamp of 1938 printed in ultramarine and carmine instead of the normal dark blue and carmine. It should be noted at this point that there are many, who do not accept C 23 c as a true color error." ${ }^{15}$

## And the Controversy Continued

In November 1980, an article about the Scott catalog listing of C23c appeared in The American Philatelist by Herman (a.k.a "Pat") Herst, Jr. titled "Behind the Scott Listings." ${ }^{16}$ A small box on the first page of that article stated, "Herman Herst, Jr., a prolific philatelic
writer, has won nearly every philatelic award there is." ${ }^{17}$ In that article, he states, "lest anyone wish to question the facts I am about to relate (a story which I have never told before), let me state that I have indisputable evidence regarding this series of events, in the form of contemporary correspondence." ${ }^{18} \mathrm{He}$ begins his tale stating, "some time in late 1938, a collector by the name of O.K. Rumbel from Mission, Texas, came to New York. He had with him a number of sheets of the 6-cent Eagle which he suggested were in a color different from the normal." ${ }^{18}$ But, we know from the affidavits that Rumbel did not purchase those stamps until 1941. Herst states that "To put it mildly, as a philatelic dealer I was not impressed" and told Rumbel that the stamps were merely different "hues." Evidently, neither Herst nor any of the other 25-30 stamp firms at 116 Nassau Street purchased any of the stamps in question.

Herst goes on to say that Rumbel, "had better luck uptown. He visited Emil Bruechig, one of the air mail specialists on Fifth Avenue. Bruechig was very friendly with Sanabria, the catalog editor, and he also had some influence with Hugh Clark, owner of Scott Publications." ${ }^{19}$ Herst said that most collectors and dealers (except for Bruechig, Sanabria, and Kessler) insisted that the stamps were only shade differences. Herst goes on to explain the catalog listing, "To silence critics, it was imperative that the stamps not only be listed in Scott as being in a different color, but that they be explicitly described as being errors. Hugh Clark was reluctant at first to give the variety the desired listing, but talk along Nassau Street at the time was that a gift of a number of the stamps was enough to buy his consent for the listing." ${ }^{20}$
"At the time, the final arbiter in matters of this sort was the Bureau Issues Association ... Samples of the stamps were sent to the BIA catalog advisory committee, which decided that the stamp was not an error, but merely a different shade. George R. M. Ewing, a member of the BIA Catalog Advisory Committee, received samples of the stamps from Hugh Clark." ${ }^{20}$ Herst goes on to say Clark sent Ewing a letter signed by Hall of the BEP "stating that the 'ultramarine' shade was in fact an error." ${ }^{21}$ Herst surmised that Bruechig had had someone at the BEP slip the letter into a stack of papers for Hall to sign ${ }^{23 .}$ and that Hall signed it without knowing what it said.

Herst also stated in his article that "Rumbel continued to supply Bruechig with stamps as they were needed. No one along Nassau Street knew how many he had, but the rumor was that he had at least a book, which would be 100 sheets ... Only Sanabria might have known the facts of this, and death sealed his lips years ago."22 Recall that the Philatelic Foundation received affidavits from Rumbel, Davenport, and Hargett in 1945 referring to the discovery of only 26 sheets and that the details of the discovery were published in the STAMPS in a 1954 article. Herst also said in his article that he did not know when the word "error" was dropped from the Scott listing. A simple check of old Scott catalogs would show that the word "error" was removed in 1948.

In a February 1981 letter to the editor of The American Philatelist titled "C23c Continues to Lose Ground," Herst made his position very clear. "I still believe, as do many others, that the stamps not only are not errors, but that they do not even deserve listing by Scott, especially in view of the subterfuge and dishonesty by which they achieved catalog recognition."24

In 1981, R.H. White published what is generally recognized as the reference work
on stamp colors with professionally and accurately reproduced color plates. In Volume IV of his Encyclopedia of the Colors of United States Postage Stamps, he includes an essay titled, "1918-1939 Issues - Two Dollar, Three Cent Victory Issue, Six Cent Airmail" in which he refers to his images of C 23 and C 23 c :
"... in the case of these two stamps, an $8 x$ magnification clearly reveals the C23 to be bluer (less purple) than the specimen identified as C23c. Brighter ultramarine examples of $C 23$ c have been reported.

Because of an unequal degree of inking or a slight discoloration of the paper on the left-hand stamp [C23c-ed.], a non-destructive ink analysis was performed. The results are conclusive, if alarming, to those who have had serious doubts about the possible differences between the blue and the 'ultramarine' printings. Both stamps have been printed with similar inks of varying composition. The colorant of the normal stamp is a mixture of two pigments, one classified as a mineral blue, the other a mineral ultramarine. The C23c specimen is also printed with ultramarine and blue colorants, but there is approximately $30 \%$ less mineral blue present. The mineral, a blue iron compound, is quite similar to the blue colorant used in some of the earliest U.S. issues and is found in most blue stamps. Some recent issues have resorted to blue dye type colorants. Numerous articles on the C23 airmail have appeared in philatelic journals, magazines, and newspapers since its issuance in 1938. Most have revolved around the controversy over the existence of the ultramarine shade. The unfortunate aspect of most of the debate relates not to the facts concerning the ink composition but to the difficulty some individuals have with shades of ultramarine. It has been noted previously that ultramarine blues are 'redder' than iron blues. When both colorants are used to affect a certain type of 'blue' color, the problem is intensified. None of the C23's examined is completely free of the ultramarine pigment. Whether intentional or not, the two stamps are appreciably different, both chemically and spectrophotometrically. One can be easily be distinguished from the other, if not by the color perception acuity of the collector, then by readily available color analysis services. ${ }^{124}$

White reached the conclusion that the blue coloration in both the C23 and C23c stamps was achieved using a mixture of two pigments, one that he termed "mineral blue" (which we now know to be the non-mineral pigment Prussian blue) and the other was ultramarine. He further noted that the C23c stamps were printed with approximately $30 \%$ less Prussian blue relative to C23 stamps, but his analysis methods did not allow him to deduce any conclusions regarding the relative amounts of ultramarine in the two varieties. As will be shown in a later section of this paper, it has been found that the C23c stamps actually contained approximately half the amount of Prussian blue relative to that used in the C23 stamps, a conclusion that is in fair agreement with White's conclusion. However, our work has also shown that the C23c stamps contain approximately double the amount of ultramarine pigment than is found in C23 stamps.

A C23c on cover was shown in the Collectors' Forum in Linn's Stamp News in December 1985. A Forum Update in January 1986 reported that Herst said of Rumbel, "The shrewd collector posted covers to his wife from post offices all over the country
to make it seem that the stamp had appeared in other offices as well as the one in Texas, Herst said Rumbel told him." ${ }^{9}$ In another Forum Update in April 1986, ${ }^{4}$ the unidentified author had received information from James H. Patterson with some of the facts from the January 9, 1954 article in STAMPS including the fact that Rumbel and his son only used 22 of the stamps between them.

Herst authored an article entitled "Delisting 'stamps' from Scott catalogs" in the June 2, 1986 issue of Linn's Stamp News. In it, he repeated his version of how the C23c and "error" listings came about and his accusation that, "I do not think that the story of the skull duggery and dishonest [sp] that landed a rather undistinctive stamp, at a $\$ 250$ price in the catalog is known to many collectors." ${ }^{35}$ He repeated most of his version of the story from his previous articles including some of the inaccuracies such as, "I know that Rumble [sp] had an entire pad of 100 sheets of the stamps, some 5,000 stamps. ${ }^{25} \mathrm{He}$ states that what he objected to was the use of the word "error" which he now admitted was removed in 1948. Nonetheless, Herst evidently still had some "sour grapes" because one of his discoveries had not received a similar listing. He stated, "take a look at my 'rose violet' shade of the $3 \$$ Connecticut. It is in the catalog but it is not blessed with its own catalog number, as is $\mathrm{C} 23 \mathrm{c} .{ }^{25} \mathrm{He}$ refers to "his" rose violet in a number of other articles arguing for a delisting of C 23 c .

In the April 1987 issue of The United States Specialist, Stephen J. Rod contributed a summary of stamp-related news for the year 1945. That article included the same details about the C 23 c discovery that had been published earlier and cited above:
"A major color error was discovered in the summer of 1945, with the finding of ten complete sheets of blue and carmine 6\$ airmail stamps, \#C23. After careful study, Scott's editors decided the color transformation was more distinct than the $4 \Phi$ Columbian ultramarine error, and decided to list it in the next catalog. They were purchased seven years ago by a 'Texas collector who thought them to be an unusual shade', and set them aside. (S,Aug. 18, L, Aug. 23) [STAMPS, Aug. 18, LINN'S, Aug. 23, 1945 -ed] The article also reminds readers that forty sheets or 1,000 pairs of this stamp had been previously discovered imperforate horizontally. The 1987 Scott Specialized lists the color error at \$200, and the imperferror at $\$ 350$ (note that there would be a potential 500 color error stamps versus the 1,000 reported imperf pairs). The first public offering of the color error was by dealer Emil Bruechig for $\$ 100$ per single stamp; it's interesting to now see how high this price was! (L, Aug. 18).'"26

Herst responded three months later in the July 1987 issue of The United States Specialist. Once again, he repeated much of his version of the history of C23c and its catalog listing from his article "Behind the Scott Listings" that appeared The American Philatelist in November 1980. Herst claimed that Rumbel purchased a pad of 100 sheets in Brownsville and that the "errors" used on covers were to make it appear they were distributed over the country. Herst claimed that in "1963, George R.M. Ewing, one of the founders of the BIA [Bureau Issues Association -ed] wrote up the story, asking me not to divulge it until all of the characters were dead. That time has come. I still have the letter." ${ }^{27}$ He repeated his objection to the designation of "error" and included his assumptions about how and why C 23 c received that listing. He added some more details about the correspondence in his files and explained why he had hesitated to divulge them before:
"Ewing persisted, and Hall told him what had probably happened. At the end of the day, a pile of letters would be put on his desk for signature. He usually did not read them, assuming that his secretary had followed his instructions after his dictation. The letter that Clark received signed by Hall and on Bureau stationery, was among the letters presented for his signature.

Ewing, who had led the fight thus far, had no intention of giving up the battle. He was an early contributor to the Scott Specialized, and he did not want it cluttered up with stamps that not only did not belong, but whose listing had been obtained through fraud and collusion. Hall advised him to drop the fight. He would have been too embarrassed to have had to admit that a letter had gone out over his signature certifying that a stamp was something it was not. Needless to say, Bruechig had a good stiff price on the stamps.

Other examples of this so-called 'error shade' have turned up, even at the time the Rumbel find was made. To assure that these would not conflict with the Bruechig variety, the latter handstamped his initials on each and every stamp that he sold. The absence or presence of these initials served to identify the stamps sold by him. At the time, the word in the trade was that the donation of a few stamps of this variety to Hugh Clark helped assure listing. This was hotly denied by the late Ernest A. Kehr, who told the writer that Clark's honesty would not permit such bribery.

One sidelight of this affair was that last year covers turned up postmarked Buffalo and addressed to Rumbel. Apparently, in order to help the cause along, Rumbel addressed some covers to Buffalo, probably to his son, to make it appear that the "errors" received distribution over the country.

## I can quote from Ewing's letter to me dated Sept. 7, 1963:

'When I dropped that endeavor to block its listing, I was conscious that any further activity on my part might drag Alvin Hall into the controversy. When he got angry with me for dropping my fight I told him that and he said he would not have minded that. What he and I objected to was the use of the word 'error.' We didn't object to the shade being called ultramarine. Emil Bruechig had a good stiff price on his supply due to his claim that the shade was an 'error.'

I have several Ewing letters sent me over the years giving the 'inside story' on incidents that happened in his lifetime, of which he wanted the true story told for later generations. I have hesitated to use some of them; a few have been destroyed, for they would do no good to the reputations of some philatelists no longer alive.

On this story, the amazing thing is that the stamp is still in the Scott Catalogue. The word 'error' has long since been removed from the catalogue, but the listing is still there, with a price of $\$ 200$ on it. It may be disappointing to the owners of the stamp to know that they do not have an error in their collection, and that in actuality they own only a minor shade, valued at far less than the catalogue figure.

We may yet see this imposter, masquerading as an error, removed from the catalogue. It simply does not belong there.' "27

Five years later, Herst told his story yet again in an article in Stamp Collector in May 1992 in which he repeated most of the same statements, details, accusations, and inaccuracies. He was still saying that Rumbel had found 100 sheets in Brownsville, TX, still quoting from Ewings's letter, and still upset that his Connecticut stamps had not received a sub-listing. This time he did acknowledge that he and Rumbel were friends before the ultramarine stamps were brought to New York, that the "error" listing was removed in 1948, and that Bruechig's backstamp was his name and not just his initials. Herst concluded this article with these words:
"Are there others of this shade around today? The answer is an unqualified yes. Are they worth $\$ 150$ each? The answer is an unqualified no. Bruechig saw to that.

His name, rubber stamped in a tiny frame, is on the back of every stamp he sold. Any that he did not sell, he insisted, were not errors.

If the shade warrants a listing in the Scott catalog today, it does not deserve its own number. My 'rose violet' shade of the $3 \$$ Connecticut is in the catalog, but it is not blessed with its own catalog number, as is C23c.

Will Scott catalog change this listing? Let us see. Meanwhile, try putting that toothpaste back in the tube. It might be easier to achieve." ${ }^{28}$

An article titled, "Facts of the discovery speak for themselves," by James H. Patterson appeared a couple months later in the July 4, 1992 issue of Stamp Collector along with a response from Herst. Patterson noted that Herst misstates some of the facts in the many articles he wrote about this stamp. Patterson tried to correct some of those details such as the fact that Rumbel never claimed to have had an entire pad of the error, that the letter from the BEP by Hall never described the ultramarine stamp using the word "error," and that Rumbel never sent the stamps "around the country to suggest nationwide distribution." ${ }^{29}$ Patterson provided some additional confirmation when he wrote that, "In 20 years of keeping track of this stamp, I have never seen a full pane or plate number block of the ultramarine variety, which did not coincide with the numbers on Rumbel's list." ${ }^{29}$

Patterson has collected and studied the $19386 \$$ air mail stamp since 1972 and is now the chairman of the USSS Essay-Proof Committee. We corresponded with him earlier this year, and he confirmed his stance that the Herst's and Ewing's arguments were technically and chronologically incorrect. Reprinted here with Patterson's permission, "Yes, I was the person who antagonized Pat Herst about the legitimacy of C23c in that series of articles. I never knew why Herst was so obsessed with de-listing the stamp."30

## Conclusion

Part one of this series established the historical context for this issue, and this second installment has explored the discovery, and the ensuing controversy, surrounding Scott \#C23c. As we continue this detailed examination, we will investigate the issues surrounding catalog placement for the variety including value, expert marks and certificates. As with the first segment, the references that follow pertain specifically to the citations in this segment of the series. Future articles will be treated in the same manner with a large general bibliography included with the final installment of the series.

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# The United States SPECIALIST 

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plus


## Buffalo Plate Varieties

The C23c Story Part III \& the 4 \& Washington Bicentennial

# The United States SPECIALIST <br> the journal of the United States Stamp Society 

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#### Abstract

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Scott \#C23c Ultramarine \& Carmine (Philatelic Foundation Certificate \#565394)

# Scott \#C23c - The Whole Story Part III - Catalog Listings, Values \& Certificates by 

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## Introduction

This article is the continuing exploration of Scott \#C23c. Part one, in the June 2021 edition of The U.S. Specialist, introduced the story and provided historical context for this issue. In the July edition, the story continued with the discovery of the color difference and the controversy this ignited. Now, in part three, the authors delve into the issues surrounding catalog listings for the C23c, as well as the topics of value and certificates.

## Catalog Listings (and lack thereof)

As a primary reference for this study, the annual listings for C23c in the Scott Specialized Catalogue of United States Stamps and Covers ${ }^{1}$ tell the chronological evolution of the ultramarine color variety as shown in Table 1 below. The early efforts by Emil Bruechig to convince the Scott editor, Hugh Clark, that the color variety was an error were successful, as the initial listing in the 1946 edition carried the "error" designation. At the time, BEP director Alvin Hall confirmed the color variety in a letter to Bruechig dated July 7, 1945. ${ }^{2}$

That designation immediately came under fire. Errors of color are usually for omission of color rather than pigment composition. The "error" designation was dropped in the 1948 edition. Hall was later erroneously quoted by Herst as objecting to the term "error" for what was a simple mistake in that the different color panes should have been destroyed.

Table 1 - Scott Catalog listings of the ultramarine C23-with and without the " c " ${ }^{1}$

| C23-6\$ Eagle Bicolor - Dark Blue \& Carmine - First Day of Issue: May 14, 1938 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Year | C23a | C23b | C23c | Comments (relative to the Scott U.S. Specialized Catalogue listings) |
| 1939 | - | - | - | Stamp first listed as Scott \#1322 |
| 1940 | \$50 | - | - | Scott number changed to C23; C23a listed as "Imperf. Horizontally Pr. \$50." |
| 1941 | \$100 | - | - | C23a value raised to $\$ 100$. |
| 1942 | \$100 | \$0 | - | C23b listed as "Imperf. Vertically. Pr. - " (Unvalued) |
| 1943 | \$100 | \$1,500 | - | C23b valued at $\$ 1500$. |
| 1944 | \$100 | \$0 | - | C23b value changed to: " - " (Unvalued) |
| 1945 | \$100 | \$0 | - | C23b value remains " - " (Unvalued) |
| 1946 | \$100 | \$0 | \$0 | C23c first listed: "Ultramarine and Carmine (error) - " (Unvalued) |
| 1947 | \$100 | \$0 | \$0 | C23c: "Ultramarine and Carmine (error) - " (Unvalued) |
| 1948 | \$100 | \$0 | \$0 | C23c " - " (Unvalued), (error) removed |
| 1949 | \$100 | \$0 | \$0 | C23c " - " (Unvalued) |
| 1950 | \$100 | \$0 | \$0 | C23c " - " (Unvalued) |
| 1951 | \$100 | \$0 | \$0 | C23c " - " (Unvalued) |
| 1952 | \$100 | \$0 | \$0 | C23c " - " (Unvalued) |
| 1953 | \$100 | \$0 | \$0 | C23c " - " (Unvalued) |
| 1954 | \$100 | \$0 | \$0 | C23c " - " (Unvalued) |
| 1955 | \$100 | \$0 | \$0 | C23c " - " (Unvalued) |
| 1956 | \$100 | \$0 | \$0 | C23c " - " (Unvalued) |
| 1957 | \$100 | \$3,500 | \$0 | C23c " - " (Unvalued) C23b raised to \$3500. |
| 1958 | \$100 | \$3,500 | \$0 | C23c " - " (Unvalued) |
| 1959 | \$100 | \$3,500 | \$0 | C23c " - " (Unvalued) |
| 1960 | \$100 | \$3,500 | \$0 | C23c " - " (Unvalued) |
| 1961 | \$100 | \$3,500 | \$0 | C23c " - " (Unvalued) |
| 1962 | \$100 | \$3,500 | \$0 | C23c " - " (Unvalued) |
| 1963 | \$100 | \$3,500 | \$0 | C23c " - " (Unvalued) |
| 1964 | \$100 | \$3,500 | \$0 | C23c " - " (Unvalued) |
| 1965 | \$100 | \$3,500 | \$0 | C23c " - " (Unvalued) |
| 1966 | \$100 | \$3,500 | \$75 | C23c valued for the first time at \$75. |
| 1967 | \$100 | \$3,500 | \$75 | C23c Unchanged at \$75. |
| 1968 | \$100 | \$3,500 | \$75 | C23c Unchanged at \$75. |
| 1969 | \$100 | \$3,500 | \$75 | C23c Unchanged at \$75. |
| 1970 | \$100 | \$4,000 | \$75 | C23c Unchanged at \$75. C23b raised to \$4000. |
| 1971 | \$100 | \$4,000 | \$75 | C23c Unchanged at \$75. |
| 1972 | \$100 | \$4,000 | \$75 | C23c Unchanged at \$75. |
| 1973 | \$100 | \$4,000 | \$75 | C23c Unchanged at \$75. |
| 1974 | \$100 | \$4,000 | \$75 | C23c Unchanged at \$75. |
| 1975 | \$100 | \$4,000 | \$75 | C23c Unchanged at \$75. |
| 1976 | \$100 | \$4,000 | \$75 | C23c Unchanged at \$75. |
| 1977 | \$100 | \$4,000 | \$75 | C23c Unchanged at \$75. |
| 1978 | \$100 | \$4,000 | \$75 | C23c Unchanged at \$75. |
| 1979 | \$100 | \$4,000 | \$100 | C23c value raised to \$100. |
| 1980 | \$100 | \$4,000 | \$150 | C23c value raised to \$150. |
| C23a-Imperfhorizontal |  |  | C23b-Imperf vertical C23c - Ultramarine |  |

C23-64 Eagle Bicolor - Dark Blue \& Carmine - First Day of Issue: May 14, 1938

| Year | C23a | C23b | C23c | Comments (relative to the Scott U.S. Specialized Catalogue listings) |
| :--- | :--- | :--- | :--- | :--- |


| 1981 | $\$ 350$ | $\$ 4,500$ | $\$ 200$ | $\mathrm{C} 23 \mathrm{a}=\$ 350 ; \mathrm{C} 23 \mathrm{~b}=\$ 4500 ; \mathrm{C} 23 \mathrm{c}=\$ 200$. |
| :--- | :--- | :--- | :--- | :--- |


| 1982 | $\$ 400$ | $\$ 6,500$ | $\$ 200$ | $\mathrm{C} 23 \mathrm{a}=\$ 400 ; \quad \mathrm{C} 23 \mathrm{~b}=\$ 6500 ; \mathrm{C} 23 \mathrm{c}=\$ 200$. |
| :--- | :--- | :--- | :--- | :--- |
| 1983 | $\$ 450$ | $\$ 8,500$ | $\$ 225$ | $\mathrm{C} 23 \mathrm{a}=\$ 450 ; \quad \mathrm{C} 23 \mathrm{~b}=\$ 8500 ; \mathrm{C} 23 \mathrm{c}=\$ 225$. |


| 1984 | $\$ 450$ | $\$ 8,500$ | $\$ 225$ | $\mathrm{C} 23 \mathrm{a}=\$ 450 ; \quad \mathrm{C} 23 \mathrm{~b}=\$ 8500 ; \mathrm{C} 23 \mathrm{c}=\$ 225$. |
| :--- | :--- | :--- | :--- | :--- |
| 1985 | $\$ 450$ | $\$ 8,500$ | $\$ 225$ | $\mathrm{C} 23 \mathrm{a}=\$ 450 ; \quad \mathrm{C} 23 \mathrm{~b}=\$ 8500 ; \mathrm{C} 23 \mathrm{c}=\$ 225$. |


| 1986 | \$450 | \$8,500 | \$225 | $\mathrm{C} 23 \mathrm{a}=\$ 450$; | $\mathrm{C} 23 \mathrm{~b}=\$ 8500 ; \mathrm{C} 23 \mathrm{c}=\$ 225$. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1987 | \$350 | \$8,500 | \$200 | $\mathrm{C} 23 \mathrm{a}=\$ 350$; | $\mathbf{C 2 3 b}=\mathbf{\$ 8 5 0 0} ; \mathbf{C 2 3 c}=\mathbf{\$ 2 0 0}$. |
| 1988 | \$350 | \$8,500 | \$200 | $\mathrm{C} 23 \mathrm{a}=\$ 350$; | C23 |

$1989 \quad \$ 350 \quad \$ 8,500 \quad \$ 200 \quad \mathrm{C} 23 \mathrm{a}=\$ 350 ; \mathrm{C} 23 \mathrm{~b}=\$ 8500 ; \mathrm{C} 23 \mathrm{c}=\$ 200$.

| 1990 | $\$ 350$ | $\$ 8,500$ | $\mathbf{\$ 1 5 0}$ | C 23 c value lowered to \$150. |
| :--- | :--- | :--- | :--- | :--- |


| 1991 | $\$ 350$ | $\$ 10,000$ | $\$ 150$ | C23b value raised to $\$ 10,000$ |
| :--- | :--- | :--- | :--- | :--- |
| 1992 | $\$ 350$ | $\$ 10,000$ | $\$ 150$ | C23c Unchanged at $\$ 150$. |
| 1993 | $\$ 300$ | $\$ 10,000$ | $\$ 150$ | $\mathrm{C} 23 \mathrm{a}=\$ 300 ; \mathrm{C} 23 \mathrm{~b}=\$ 10,000 ;$ |


| 1994 | $\$ 300$ | $\$ 10,000$ | $\$ 150$ | "C23c" Removed, but "Ultramarine \& Carmine" valued at \$150. |
| :--- | :--- | :--- | :--- | :--- |
| 1995 | $\$ 300$ | $\$ 10,000$ | $\$ 150$ | No "C23c", but "Ultramarine \& Carmine" valued at \$150. |



| 1997 | $\$ 300$ | $\$ 12,500$ | $\$ 150$ | No "C23c", but "Ultramarine \& Carmine" shade valued at \$150. |
| :--- | :--- | :--- | :--- | :--- |
| 1998 | $\$ 300$ | $\$ 12,500$ | $\$ 150$ | Unchanged |

1999
2000 \$300

2001 \$300 | $\$ 12,500$ | $\$ 1$ |  |  |
| :--- | :--- | :--- | :--- |
| 2002 | $\$ 300$ | $\$ 12,500$ | $\$ 150$ |

| 2002 | $\$ 300$ | $\$ 12,500$ | $\$ 1$ |
| :--- | :--- | :--- | :--- |
|  |  |  |  |

2003 \$300 |  | $\$ 12,500$ | $\$ 150$ |
| :--- | :--- | :--- | :--- |

| 2004 | $\$ 300$ | $\$ 12,500$ | $\$ 150$ |
| :---: | :---: | :---: | :---: |
| 2005 | $\$ 300$ | $\$ 12,500$ | $\$ 150$ |


| 2005 | $\$ 300$ | $\$ 12,500$ | $\$ 1$ |
| :--- | :--- | :--- | :--- |
| 2006 | $\$ 300$ | $\$ 12,500$ | $\$ 1$ |


| 2007 | $\$ 300$ | $\$ 12,500$ | $\$ 150$ |
| :--- | :--- | :--- | :--- |
| 2008 | $\$ 300$ | $\$ 12,500$ | $\$ 150$ |


| 2008 | $\$ 300$ | $\$ 12,500$ | $\$ 150$ |
| :---: | :--- | :--- | :--- |
| 2009 | $\$ 300$ | $\$ 12,500$ | $\$ 150$ |

2010

|  | \$300 | 12,500 | S150 |  |
| :---: | :---: | :---: | :---: | :---: |
| 2012 | \$300 | \$12,500 | \$150 | As above; C23c "On Cover" added at \$1750. |
| 2013 | \$300 | \$12,500 | \$150 | As above C23c = \$150; PB=\$1500; Centerline = \$1200; On cover = \$1750. |
| 2014 | \$300 | \$12,500 | \$150 | Unchanged |
| 2015 | \$300 | \$12,500 | \$150 | Unchanged |
| 2016 | \$300 | \$12,500 | \$150 | Unchanged |
| 2017 | \$300 | \$12,500 | \$150 | Unchanged |
| 2018 | \$300 | \$12,500 | \$150 | Unchanged |
| 2019 | \$300 | \$12,500 | \$200 | $\begin{aligned} & \text { C23c Single =\$200; Used }=\$ 1500 ; \text { On cover }=\$ 1750 ; \\ & \text { Centerline Block }=\$ 1200 ; \mathrm{PB}=\$ 1500 . \end{aligned}$ |
| 2020 | \$300 | \$12,500 | \$200 | $\begin{aligned} & \text { C23c Single =\$200; Used = \$2000; On cover = \$2250; } \\ & \text { Centerline Block }=\$ 1200 ; \text { PB }=\$ 1500 . \end{aligned}$ |
| 2021 | \$300 | \$12,500 | \$210 | $\begin{aligned} & \text { C23c Single }=\$ 210 ; \text { Used }=\$ 2000 ; \text { On cover }=\$ 2250 ; \\ & \text { Centerline Block }=\$ 1200 ; \text { PB }=\$ 1550 . \end{aligned}$ |
| C23a - Imperf horizontal |  |  | C23b - Imperf vertical C23c-Ultramarine |  |

The 1938 6\$ Eagle air mail stamp was originally listed in the Scott catalog in 1939 as Scott\#1322. The next year, the listing was changed and the normal stamp officially became Scott\#C23. In 1946, the C23c listing appeared for the first time described as "Ultramarine and Carmine (error)" and unvalued. The first time a value appeared for C23c was in 1966.

A close look at the annual listings in the Scott Specialized Catalogue compilation (see Table 1) reveals that the listing description was changed significantly in 1994 when the C 23 c minor number was dropped. Only the indication of the different "ultramarine and carmine" variety remained, along with the $\$ 150$ valuation. Scott Editor Emeritus, Jim Kloetzel, began his career with the Scott firm shortly after the 1993 decision was made to delist C23c in the 1994 edition. He shared with us correspondence from his files - with James Patterson (cited previously), which explained the Scott policy regarding stamp colors and shades in detail.

Patterson wrote to Stuart J. Morrissey, Vice-President and Publisher at Scott Publishing, responding to advertised requests for suggestions and comments from readers and customers.
"In the 1946 edition of the catalog, Mr. Clark listed this as C23c, with the colors being described as 'ultramarine and carmine.' It originally was designated as an 'error' in the 1946 Specialized, but that label was dropped the next year. [in the 1948 edition -ed]
However, the listing for C23c remained in the catalog for nearly 50 years -- until this year's edition. The variety is still listed, but it has been stripped of its separate subscript "c." I have not seen in the philatelic press any specific comment about this, or any explanation from your company or your editors for the change.

I am not aware of evidence or commentary in the last year or two which would justify or support your decision suddenly to delist C23c. This is a popular stamp and a well-recognized variety (please note that I am not calling it an "error"), and it seems to me that a decision of this nature should have been based on something significant, and not caprice.

So - my first question is, what was the basis for your decision?"3
He also asked if there was any information in the company files from the Hugh Clark era. Patterson never received a response to his inquiry. Almost 11 months later, he sent a copy of his original letter to James E. Kloetzel, the new editor of the catalog.

Kloetzel replied in less than a month. He was not part of the decision-making process which led to the 1994 delisting, but was already well-versed on editorial policy. Without targeting C23c specifically, he explained his predecessor's decision as follows. "The Scott editors, as always, were trying to maintain consistency in the listings. After careful review, it was decided that the minor number status of the ultramarine and carmine shade was inappropriate, both in regard to objective chemical factors and also subjective visual factors." ${ }^{4}$ He went on to explain, "that a decision concerning the status of minor listings versus non-minor listings for color shades usually comes down to the more subjective visual component. That is, color or shade differences that are major and easily observable are more likely to receive minor number differentiation than very slight color or shade differences." ${ }^{4}$ Kloetzel indicated that, at the time and new in the editor's position, he fully
supported the removal of the "c." But, he left the door slightly open by saying, "if you continue to believe that No. C23c should be reinstated, we would need your analysis of, among other stamps, all those shade-different items mentioned earlier in this letter, plus the myriads of others that could be listed. In other words, we would need to address the question of how a relisting of No. C23c would affect the consistency of all other shade listings in the catalog." ${ }^{4}$ Of course, they must have considered all of those factors when they de-listed the " c " after 48 years.

Patterson sent Kloetzel at least one more letter in early 1995, admitting that while some collectors have a difficult time differentiating between C23 and C23c, his wife, an artist, "dismisses the controversy with the wave of her hand, saying that it is 'obvious' that the two stamps are entirely different." ${ }^{5}$

Although the "c" was removed in 1994, the "Ultramarine and Carmine" shade description was carried in the Scott Specialized Catalogue, along with the $\$ 150$ mint single valuation, for the next thirteen years. The C23c minor listing with the lower case "c" was restored in 2007, and has remained unchanged to this date. Mr. Kloetzel's explanation: "I examined a genuine ultramarine next to the C23 and determined that it was significantly different, plus the acceptance of the stamp and the popularity of the item amongst airmail collectors resulting in a high value made the decision pretty easy." ${ }^{\prime}$

But, the controversy did not end there. Philatelic columnist, Error, Freak, and Oddity (EFO) specialist, and 2020 Philatelic Foundation Neinken Medal Awardee, John M. Hotchner, began a series of articles on expertization for Linn's Stamp News in 2016. His article titled "Expertizing something that doesn't exist" appeared in Linn's Stamp News in February 2016. It included the following:
"Another possible candidate for delisting is Scott C23c, the 1938 6\$ Eagle Holding Shield airmail stamp with an ultramarine frame. Scott describes the normal variety of this stamp, C23, as having a blue frame. As for the ultramarine shade, partisans swear it exists. Others swear just as vehemently that it does not, saying that it is some sort of changeling. I have never seen one, so I have no opinion, but it is not a settled matter.

The editors of Scott, and other catalogs, generally have to see a variety in person and have a confirming expertizing certificate before they will list. So I don't doubt that one or both of these requirements were met before Scott C23c was listed. But I also have no doubt that, as with the China clay paper, new information can result in changes." ${ }^{7}$
In Hotchner's article titled "The controversy behind a $6 \$$ Eagle airmail variety" which appeared in the U.S. Stamp Notes in Linn's Stamp News in May 2017, he admits he might have been too hasty in calling for the delisting of C23c. Bob Rufe, one of the authors of this article, shared with Hotchner some of the material that we had uncovered so far. The following are excerpts from the May 2017 article:
"That these stamps are different from the normal blue colors associated with the issue, there can be no doubt. First, the purported error is not very different from the used color misregistration shown, which has been in my collection for decades.

Second, the color of the error is decidedly not ultramarine ...

For the expertizer, this presents something of a nightmare. It is not unusual to find used and even mint examples of Scott C23 that match up favorably with the signed block shown here, but they are not signed.

That does not mean that they are not real, because at least one other major discovery was made. Furthermore, it is likely others were simply purchased and used with no thought given to the color anomaly.

Another thought to add to this mix: I can't dismiss the possibility there is some way to chemically darken the normal color of that airmail stamp ...

So, my bottom line is this: I acknowledge that Scott No. C23c is a differentiable color, but believe that 'ultramarine' is the wrong description. Further, I am unconvinced that it is any sort of rarity deserving of the values Scott quotes - though the only way to authenticate purported examples is from the signature marks on the backs of the Bruechig find." ${ }^{8}$
Hotchner wrote another article in July 2017 titled, "1938 Eagle airmail color error revisited and verified." In it he writes, "I was not convinced that C23c was a real error. But, thanks to Linn's reader James Patterson, I am now a believer." ${ }^{9}$ Referring to R.H. White's book, Hotchner stated, "[b]ecause it is scholarship at its finest, is conclusive about the existence of Scott C23c and allows us to put this question to bed." ${ }^{10}$ And he concludes, "Bottom line: Scott C23c exists and deserves to be listed as an error. Examples must be expertized." ${ }^{11}$

## Catalog Value

C23c was not valued when first listed in the 1946 edition, nor any subsequent edition until 1966, when it was first assigned a value of $\$ 75$ for a never hinged mint single. It remained at $\$ 75$ until the 1979 edition, when it rose to $\$ 100$, and increased almost annually in the inflationary period of the early-1980s, reaching a peak of $\$ 225$ in the 1983 edition where it remained until 1986. It dropped to $\$ 200$ in 1987 , and to $\$ 150$ in 1992. It rose again to $\$ 200$ in the 2019 edition and to the current level of $\$ 210$ in the 2021 catalog.

The letter "c" designation disappeared in the 1994 edition but reappeared in the 2006 catalog still valued at $\$ 150$, along with a used single at $\$ 150$ and a plate block at $\$ 1500$. A listing for a C 23 c centerline block of four was added in the 2010 catalog valued at $\$ 1200$.


Figure 1. A plot of Scott Catalog values for the ultramarine C23 - with and without the "c."

The first "on cover" listing debuted two years later at $\$ 1750$. Values for various ultramarine listings changed in the 2019, 2020, and 2021 Scott catalogs as shown previously in Table 1 and in the graph of Figure 1.

## Expert Marks, Backstamps and Pencil Notations

After Emil Bruechig's death in 1947, Fred W. Kessler purchased what he thought were the remaining C23c stamps, "considerably less than 100 copies," from Bruechig's estate as shown in the letter in Figure 2.


FIK:AR
Sincerely yours,

F.I. KESSLER

Figure 2. F.W. Kessler's 1947 letter - part of a lot in Michael Rogers Inc. Auction Sale M99 September 23, 2011 . $^{12}$


Figure 3. Approval invoice from Kessler.

Originally offered at $\$ 100$ by Bruechig in 1945, Kessler offered singles to some of his customers at $\$ 35$ each in 1947. In his letter, Kessler incorrectly points out "that every one of the 500 existing copies was signed by Mr. Emil Bruechig and bears his guarantee mark. Likewise, each stamp is identified by the sheet and position number (for instance, Sheet A, Position 1, etc.). The enclosed stamp in addition has my own guarantee mark." ${ }^{12}$ Kessler included an invoice (Figure 3) for the approval dated the same day as his letter (June 12, 1947).

Which brings us to the subject of the various markings on the back of these stamps.

Consider the British Guiana $1 \$$ magenta of 1856, often referred to as "the world's rarest stamp" despite other examples of unique surviving stamps. That stamp has a veritable log book of ownership on the reverse. One-time owners and expertizers sometimes sign or place their personal mark on the back of extremely rare stamps. The same is true for most examples of C 23 c . Of course, if you or I wrote our name or rubber stamped the back of our stamps, most stamp dealers and collectors would consider that "damage" and actually lower the value of that stamp.

To the best of our knowledge, O. K. Rumbel owned ALL the sheets "of a different color" when they left the Weslaco, Texas post office. The subsequent distribution of many of those stamps was "controlled" in that identifying marks were added by dealers and experts to verify their identity.

Rumbel himself signed at least some of his discovery stamps in pencil. We believe that he also indicated the exact position of each stamp on each sheet of those that he signed and intended for sale. Considering the markings on the back of each stamp in the block of four in Figure 4, we believe that the notation " 748 " would indicate that this stamp was position 48 of sheet number 7. Remember, Rumbel originally had 16 sheets with different plate numbers and positions, plus ten duplicate sheets. We have deduced, and will later explain, this example came from one of the ten duplicate sheets that he intended to sell.

Other Rumbel markings exist. The C23c plate strip of ten shown in Figure 5 has his signature twice on the back of the plate block selvage, but only his initials and no sheet or position marking on each stamp.


Figure 4. Signature of "O. K. Rumbel" on the arrow block at the National Postal Museum. The lower left stamp is enlarged to show the position indication " 748 " for Sheet 7 Position 48.
(Image from United States Postal Service, Postmaster General's Collection. Courtesy Smithsonian Institution, National Postal Museum).


Figure 5. Signature of "O. K. Rumbel," twice, on the reverse of a plate strip of 10 and his initials on the back of each stamp (sold in May 2020 on eBay by Adam Pennington).


Figure 6. Signature of "O. K. Rumbel" on mint (top) and used (bottom) singles. Pencil note on back of used stamp says: "used 1942-43; 7 used if on covers; 15 used singles ..." (From the collection of Robert D. Hohertz).

Additional "Rumbel-signed" examples, both on and off cover, were recently sold on eBay and are shown in Figure 6. The mint single is signed in ink on the front of the selvage and in pencil on the back, but with no indication of sheet number or position. We theorize, that because there are no sheet or position numbers, these are NOT from the ten duplicate sheets which he intended to sell. The used single in Figure 6 is signed in pencil on the back with additional notations, but no indication of sheet number or position.

From these examples, we know that Rumbel stamps exist in four different variations: with the signature "OKRumbel," with Rumbel's signature plus sheet and position numbers, and Rumbels's initials "OKR" only, as well as at least one used single with additional notations.

As noted earlier, "On July 18, 1945 Mr. Bruechig purchased eight sheets of the color error from Mr. Rumbel, which he later offered for sale to his customers." ${ }^{13}$ Bruechig backstamped some, if not all, of those 400 stamps. With one exception, all of the C23c stamps that we have seen or have seen illustrated that have a Bruechig handstamp (with or without additional markings), have a pencil notation believed to indicate sheet letter and position as shown in Figure 7.


Figure 7. Certified examples showing original sheet and position markings: Bruechig mark on position B33 (image courtesy of Robert D. Hohertz), F9 (image courtesy of Stuart Katz), and F41 (image courtesy of Hanspeter Esslinger).

The one exception that we have seen of a Bruechig handstamp without a pencil position notation is shown in Figure 8. It is possible that the notation was erased at some point in its history.

The other handstamps seen in the above examples, enlarged in Figure 9, belong to Nicolas Sanabria and Fred W. Kessler. Sanabria (1889-1945) from New York City was a noted philatelist in the field of aerophilately and familiar to philatelists because of his Sanabria Catalog. Sanabria was named to the American Philatelic Society


Figure 8. Bruechig, Kessler, and Sanabria handstamps with no position indicated (image courtesy of Robert Hohertz). Hall of Fame in 1951. ${ }^{14}$ Kessler (1904-1963) was a philatelist noted for sending the first mail by rocket and a dealer in air mail stamps with offices at 500 Fifth Avenue in New York City. ${ }^{15}$


Figure 9. Bruechig, Kessler, and Sanabria handstamp (image courtesy of Robert Hohertz).

All of the examples of C 23 c that we have seen or have seen illustrated that have a Kessler backstamp also have a Bruechig handstamp, whether or not they have an additional Sanabria handstamp. But, not all of the examples handstamped by Bruechig and Kessler have a Sanabria handstamp. Therefore, we assume that Kessler bought his material from Bruechig, and later sold some to Sanabria.

All of the examples of C23c that we have seen or have seen illustrated that have a Sanabria backstamp also have both a Bruechig and a Kessler handstamp. We therefore believe that Sanabria bought his material from Kessler.

We note that all C23c stamps that we have seen or have seen illustrated that have a Kessler backstamp and a pencil notation for position use only the letters A through



Figure 10. Bruechig and Kessler marks on position F16 (image courtesy of Robert Hohertz).


Figure 11. Bruechig and Kessler marks, with O.K. Rumbel sheet and position mark "a27" enlarged, and traced. (Image courtesy of The Philatelic Foundation using their reference copy from the Stanley Rice collection).

H; a total of 8 different letters. Therefore, we assume these were the eight sheets that Bruechig purchased from Rumbel.

But in Kessler's letter to Steinbiss, shown previously in Figure 2, he stated that "Only ten sheets of 50 stamps each are known to exist and the entire supply was bought by the late Mr. Emil Bruechig who was a well-known dealer in airmail stamps. ...please note that every one of the 500 existing copies was signed by Mr. Emil Bruechig and bears his guarantee mark. Likewise, each stamp is identified by the sheet and position number (for instance, Sheet A, Position 1, etc.). The enclosed stamp in addition has my own guarantee mark." ${ }^{12}$ So, did Kessler believe that he had purchased from Bruechig eight of only ten existing sheets? And, did Kessler backstamp every one of the 400 of the stamps that he acquired?

We know of at least one block of four C23c stamps (Figure 12) that has Sanabria backstamps that does not have a Kessler backstamp. Did Kessler not stamp all of his C23c stamps -or- did Sanabria also buy directly from Bruechig at some point?


Figure 12. An example of Bruechig and Sanabria expert marks without the marks from Kessler.

There is another widely-accepted authentication marking in pencil on some certified C23c examples. It is not as legible as the other marks, but has been identified as belonging to Herbert J. Bloch (1907-1987). Bloch emigrated from Europe to New York City in 1936 and was a philatelist and stamp dealer who became recognized as a leading expert on the authentication of rare European postage stamps. ${ }^{16}$ Bloch was a well-known expert and his "mark" appears on numerous certificates of the mid-1900s, as seen in Figure 13.

In all cases that we have seen or seen illustrations of certified C23c stamps with the Bloch expert mark, the mark appears in pencil in the lower right corner on the back the stamp. Furthermore, none of the examples that we know of with a Bloch pencil mark exhibit any other expert markings or position indications. This would indicate that there were at least some sheets that either were not given penciled position markings, or had them subsequently erased.

During the research phase of this study, we sought out as many illustrations of the C 23 c variety as readily available in archives of public auctions and in online auction venues such as eBay and HipStamp. Many offerings lacked any commentary at all regarding the type of expert markings on the gum side, if any.
E.C
E.C
FRIEDL EXPERT COMMITTEE
FRIEDL EXPERT COMMITTEE
M,
M,
M
M
opinion yenuine. t have sisned it put
opinion yenuine. t have sisned it put


Figure 13. Bloch expert initials on a typical expert committee certificate in $1978{ }^{17}$


Figure 14. Herbert J. Bloch expert marks (detail) appear on the reference copy of C23c at the APS (middle) and on the stamp of PF certificate \#565394 (right).

Figure 15. Additional examples of Bloch expert marks (StampCzar lot on eBay in March 2020).

Figure 16. "Herbie" Bloch expert marks on two different corner margin blocks of C23c (block above has PSAG certificate \#0584714 and CPF certificate \#2020-04-01; block on right has PF
 certificate 520640).

## CERTIFICATES

As one of our research exercises, we looked through The Philatelic Foundation (PF) archived certificates online database for C23c. There are 103 entries on the website including 14 determined to be normal C23 (not C23c). All of the seven PF certified examples of plate blocks have number combinations that agree with Rumbel's original numbers as reported in the 1954 STAMPS article. All seven are shown in Figure 17.


Figure 17. The seven PF certified plate blocks of C23c from The Philatelic Foundation website. ${ }^{18}$
On the PF certificates for the seven genuine C23c plate blocks, none of them mention any pencil marks or backstamps on the certificate. Lewis Kaufman, expertizing specialist at PF, was most gracious in responding to our observation by checking the PF's worksheets for these patients. He responded saying, "I checked the [worksheets for -ed] C 23 c plate blocks and can tell you that signatures were noted on five of the worksheets: 219865: Kessler \& Bruechig; 283239, 298034 \& 304225: all Bloch; 322451: Bruechig. There were no signature indications on the other two." Further, "I also checked six plain
blocks. Only two had signature notations. There is no way to easily check all the certified C23c's. That can only be done by putting in the cert \# one at a time, and then going to the corresponding worksheet, which may or may not have a signature notation. Also, the lack of a signature notation on the worksheet does not necessarily mean there was no signature on the stamp, only that none was recorded." ${ }^{19}$

It is interesting to note that on the 89 PF certificates for C 23 c that state they "are of the opinion that is genuine," only three mention any markings on the back of the stamps and 11 mention a crease. Only one of the certificates (PF \#231434) is for a genuine used C 23 c which is "on piece" and shows "XAS" in the partial circular date stamp, consistent with Rumbel's comments on mailing some from Mission, Texas.

The American Philatelic Society (APS) also has an on-line database called the APEX Certificate Archive. It shows five certificates for C 23 c as "genuine in all respects." Only one of the five mentions any markings on the back of the stamp stating "signed Bloch" (on APS certificate \#214362). ${ }^{20}$
J. Randall Shoemaker of the Philatelic Stamp Authentication and Grading (PSAG) recently announced an alliance with Harry G. Brittain and his Center for Philatelic Forensics (CPF) to provide "infrared spectroscopy to identify the pigments in the ink of a stamp. After that, Brittain uses optical microscopy (reflectance mode) to study the surface details of the pigment layers, comparing those of a reference to those of a patient. He has a full-scale reflectance spectrometer that acquires spectra in the visible region, and will eventually use this for better color evaluation." ${ }^{21}$

Brittain has also included an image of Professional Stamp Experts (PSE) certificates when available and an image of the back of the stamp on his Certificate of Analysis for C 23 c patients.

The actual certificates from the major expertizing services, PF, APS, PSAG, and PSE, that we have examined show that backstamps and/or pencil markings are not usually recorded on the actual certificates. It was surprising to us that certificates that often mention "previously hinged," creases, gum skips, paper inclusions, and other artifacts would not specifically mention pencil marks or rubber stamps on the back of stamps. This seems to be the standard practice, although we have not explored this absence of notation beyond the comments above.

All of the examples that we have tested via Fourier-transform infrared absorption (FTIR) analysis and proven to be C23c have exhibited expert marks on reverse. We have found no examples to date of any C23c ultramarine "patients" without expert marks despite significant testing via FTIR analysis.

Other certificates exist. William T. Crowe issues his own certificates as illustrated in Figure 18. We do not know what reference he might have used. We also do not know if the stamp on certificate or his reference was subjected to spectroscopic analysis. On the certificate, he did specifically refer to the Bruechig handstamp on the back.

Another item that was listed on eBay came with a First National Investors Group Certificate of Authenticity (Figure 19). Although the certificate did not use the word "ultramarine" nor "C23c," it was listed by the seller on eBay as a C23c and the photo of the back showed a Bloch pencil mark. First National Investors Inc. filed as a Domestic


Figure 18. William T. Crowe certificate from a November 2020 eBay listing by Gary Posner.


Figure 19. First National Investors Group Certificate of Authenticity from a November 2020 eBay listing by "luckylindat."

Corporation in the State of Nevada on January 5, 1993. According to CorporationWiki that filing was permanently revoked in 2013. ${ }^{22}$

A full sheet was offered and sold at public auction in November 2020 by Daniel F. Kelleher Auctions, LLC, as shown in Figure 20. The description on the accompanying PSE certificate \#01189598 states, "it is a genuine unused, o.g., hinged, full pane of fifty (hinged in the selvage only, the stamps never hinged), with Plate Nos. 21912 and F 21949 , a few tiny natural gum skips and several natural gum bends and wrinkles."23 Daniel F. Kelleher auctions was kind enough to provide an image of the gum side of this sheet and no expert marks of any kind were visible in the image. The PSE on-line population report webpage shows a total of two OG C23c and nine OGNH C23c and how they were graded. ${ }^{24}$

Another full pane, this one from a Siegel auction (Sale 1048, Lot 379 on 2013-06-25), was shown with an illustration of a pencil notation on the front bottom selvage, namely "sheet no. 9," as shown in Figure 21 below, but no mention of a certificate or other markings on the gum side.

These are the only two sheets that we came across during our research. We wonder what markings, if any, might appear, or if pencil marks may have been erased, on the gum side. We have not spectroscopically tested either sheet. IfFTIR analysis confirms either sheet as C23c with no marks on the gum side, then we would speculate that it probably came from Rumbel's original find and his personal collection, and further, that he did not bother to sign his own material. [Additional information came to light after this article was submitted for publication. Further research, testing and conclusions will be addressed in an upcoming addenda to Part IV.- ed]

Our research has not been able to uncover the disposition of Rumbel's personal holdings of C23c sheets nor his collection of C23 plate number combinations, which are believed to have been extensive. Readers are encouraged to share with the authors any information about the disposition of any of Rumbel's C23/C23c material.


Figure 20. Full pane of C23c sold in Daniel F. Kelleher auction \#750, lot \#3295 in November 2020.
 Siegel auction - Sale 1048, Lot 379 - June 25, 2013. Insert: Pencil notation on front bottom right selvage = "sheet no. 9."


## Conclusion

Part one of this series established the historical context for this issue, part two explored the discovery, and the ensuing controversy, surrounding Scott \#C23c. Now that part three has presented the issues surrounding catalog placement for the variety including value, expert marks and certificates, the study turns to science. Part four will present the results of spectroscopic color analysis.

As with the first two segments, the references that follow pertain specifically to the citations in this portion of the series. Future articles will be treated in the same manner with a large general bibliography included with the final installment of the series.

## References

1. Scott Specialized Catalogue of United States Stamps and Covers, Scott Publishing Company and later Amos Media, Annual Editions, 1939 through 2021.
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## Scott \#C23c - The Whole Story

 Part IV - Scientific Color Analysisby

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## Introduction

This article reports scientific color analysis in the continuing exploration of Scott \#C23c. Part one, in the June 2021 edition of The U.S. Specialist, introduced the story and provided historical context for this issue. In the July edition, the story continued with the discovery of the color difference and the controversy this ignited. Part three, August 2021, dealt with the issues surrounding catalog listings for the Scott \#C23c, as well as the topics of value and certificates. Now, part four will scrutinize the color question from the perspective of scientific method.

## Spectroscopic Color Analysis

It has become established that infrared absorption spectroscopy, when conducted using Fourier-transform and attenuated total reflectance data acquisition, is a premier technique for the identification of pigment components in the inks used to print postage stamps. ${ }^{1,2,3}$ The use of this methodology, typically known as Fourier-transform infrared absorption (FTIR) spectroscopy, has been shown to enable the ready differentiation between the Scott \#C23 and \#C23c stamps. In short, since each pigment is characterized by a unique set of peaks in its FTIR spectrum, one can compare the spectrum of a stamp under study to the spectrum of known references to make the identification.

## Experimental Details

FTIR spectra were obtained at a resolution of $4 \mathrm{~cm}^{-1}$ using a Shimadzu model 8400S spectrometer (Figure 1), with each spectrum being obtained as the digital average of 40 individual spectra. The data were acquired using the attenuated total reflectance (ATR) sampling mode, where the samples were clamped against the ZnSe /diamond crystal of a Pike MIRacle single reflection horizontal ATR sampling accessory. The intensity scale for all spectra was normalized so that the relative intensity of the most intense peak in the spectrum was $100 \%$.


Figure 1. Shimadzu model 8400S spectrometer, fitted with a Pike Miracle sampling accessory. The analyzed portion of the stamp is immediately below the micrometer anvil of the ATR accessory..

For the studies to be described in the following sections, ${ }^{4}$ the reported FTIR spectra each reflects the digital averaging of individual spectra obtained from five stamps of the same type. As such, these spectra are deemed to be characteristic of the blue and red printing inks used in the manufacture of the Scott \#C23 series of stamps.

## Blue Inked Regions of the Scott \#C23 and Scott \#C23c Stamps

Figure 2 contains FTIR spectra characteristic of the blue inked region of Scott \#C23 and \#C23c stamps, as well as the FTIR spectrum of the paper itself (measured in the unprinted selvage).

As shown in Figure 2, the FTIR spectrum of the printing is dominated by the cluster of peaks centered around 1030 wavenumbers, which are due to absorptions associated with the many hydroxyl groups of the cellulose. The region between 1300 and 1500

Figure 2. FTIR spectrum of the blue-inked region of Scott \#C23, and spectrum obtained for the analogous region of Scott \#C23c. The characteristic peak due to the presence of barite in the ink is marked by the $\nabla$ symbol, and the peak characteristic of Prussian blue marked by the * symbol. Also shown in the figure is the FTIR spectrum of the unprinted selvage ("paper") of the C23 stamp.

wavenumbers is complicated, in that it contains many other peaks associated with cellulose as well as contributions from any carbonates contained in the printing ink. Since the Scott \#C23 and \#C23c stamps all contain calcium carbonate as an additional whitening agent, no further discussion will concern this region of the absorption spectra.

The spectrum of the Scott \#C23 stamp contains a dominant peak around 600 wavenumbers, which is due to the sulfate absorption band of the barite (i.e., barium sulfate) component that was used as a whitening agent in the ink formulation. The blue color of the ink is derived from the Prussian blue pigment, which is characterized by a strong absorption band around 2100 wavenumbers.

Figure 2 also demonstrates some notable differences between the FTIR spectra of the Scott \#C23 and \#C23c stamps. Relative to the Scott \#C23 stamp, both the amount of the barite whitening agent and the Prussian blue pigment are decreased in the spectrum of the Scott \#C23c stamp. At the same time, the broad band in the cellulose region (i.e., 900 to 1200 wavenumbers) is seen to have undergone additional broadening, and the peak maximum has decreased to approximately 990 wavenumbers.

The nature of the broadening/shifting phenomenon described in the preceding paragraph was further investigated by expanding the wavenumber scale of the spectra of Figure 2 to what is pictured in Figure 3.

Figure 3. Expanded FTIR spectra of the Scott \#C23 printing paper, and the spectra obtained for the Scott \#C23 and \#C23c stamps. The peak characteristic of ultramarine (as measured on a sample of the pure pigment) is marked by the $\checkmark$ symbol.


It is fairly evident from examination of Figure 3 that the broadening/shifting phenomenon noted above is due to the presence of a significant amount of blue ultramarine pigment in the ink used to print the Scott \#C23c stamps.

As shown in Figure 4, additional investigation into the differences in ink components between the Scott \#C23 and \#C23c stamps was performed by digitally subtracting the FTIR spectrum of the printing paper from the FTIR spectra of the blue-inked regions of the Scott \#C23 and \#C23c stamps.

Figure 4. Differential FTIR
spectra obtained by digitally subtracting the FTIR spectrum of the printing paper from the spectra obtained for the Scott \#C23c (green trace) and Scott \#C23 (blue trace) stamps. As before, the characteristic peak due to the presence of barite is marked by the $\boldsymbol{\nabla}$ symbol, The peak characteristic of ultramarine is marked by the $\backslash$ symbol, which is clearly much more intense in the spectrum of the C23c stamps. Note also that the peak characteristic of Prussian blue (marked by the 米 symbol) is much lower in the spectrum of the C23c stamps. The line of zero difference is shown as the heavy horizontal line.


Analysis of the relative intensities of the peaks in the differential FTIR spectra of Figure 4 enables two extremely important conclusions to be made. The most obvious difference concerns the peaks around 2100 wavenumbers, where the results indicate that the amount of Prussian blue (* in Figure 4) in the Scott \#C23c stamps was approximately $40 \%$ the amount used in the Scott \#C23 stamps. At the same time, the amount of ultramarine ( $\Delta$ in Figure 4) used in the ink of the Scott \#C23c stamps was approximately 2.5 times more than the amount in the ink used to print the Scott \#C23 stamps.

Given the fact that the relative amounts of both blue pigments were modified in the Scott \#C23c stamps relative to the \#C23 stamps, it would certainly appear that the ink used for the Scott \#C23c stamps represents a deliberate modification of the ink normally used to print the Scott \#C23 stamps. One can theorize that, for some reason, the ink formulators sought to develop an alternate ink composition that would still match the color of the Scott \#C23 stamps. This experimentation resulted in an alternate ink composition that decreased the amount of barite whitener and Prussian blue pigment, while increasing the amount of ultramarine pigment. This alternate ink composition is the defining characteristic property of Scott \#C23c stamps.

## Red Inked Regions of the Scott \#C23 and Scott \#C23c Stamps

During the analysis of the Scott \#C23 and \#C23c stamps, an interesting area of investigation developed around the ink used to print the eagle vignette in the center of the stamps. According to the 2021 Scott Specialized Catalogue of United States Stamps and Covers,' the official color listed for the Scott \#C23 issue is "dark blue \& carmine," which is taken to mean that the official color of the vignette is carmine. Carmine is a complicated pigment derived from natural sources ${ }^{6}$ that was extensively used by the Bureau of Engraving and Printing to print a very large number of regular issue and commemorative 2 \& stamps.

For reasons that will become apparent in the following paragraphs, it is first necessary to establish what the FTIR spectrum of authentic carmine looks like. A forthcoming publication will discuss the FTIR spectroscopy of carmine in great detail, ${ }^{7}$ but for now it will suffice to disclose that forensic analysis has identified six different "carmine" ink compositions that were used between 1894 and 1937. To develop an FTIR spectrum characteristic of latter-issue "carmine" stamps, the FTIR spectra of the $2 \Phi$ stamps issued before the first-class postage rate was raised from $2 \Phi$ to $3 \Phi$, were acquired. Figure 5 contains the fingerprint region FTIR spectra of a Scott \#703 stamp (plate \#20671), a Scott \#707 stamp (plate \#20806), a Scott \#716 stamp (plate \#20826), and a Scott \#717 stamp (plate \#20877).

Figure 5. FTIR spectra of the red-inked regions of Scott \#703 (black trace), Scott \# 707 (blue trace), Scott \#716 (green trace), and Scott \#707 (red trace) stamps, illustrating the spectra characteristic of carmine pigment.


While the FTIR spectra of the carmine stamps are dominated by the barite peak at 600 wavenumbers and the cellulose band structure around 1030 wavenumbers, the weak sequence of peaks in the 650-925 and 1225-1375 wavenumber regions are the defining peaks characteristic of the carmine pigment used in these stamps.

However, examination of the FTIR spectra of the red-inked regions of Scott \#C23 and \#C23c stamps conclusively shows that none of the stamps of this issue actually contain carmine as the red pigment. As shown in Figure 6, in the spectra of Scott \#C23 and \#C23c stamps, the characteristic "carmine" region of 650-925 wavenumbers is dominated instead by a very strong double peak centered around 850 wavenumbers.

Close examination of the FTIR spectra shown in Figure 6 indicates that the additional peak (which is only detectable when studying the red-inked vignette) actually consists of two closely overlapping peaks at 847 and 870 wavenumbers. It is further noted that this double peak has a different appearance in the spectra of Scott \#C23 stamps relative to Scott \#C23c, indicating that the peak structure in this spectral region could serve as a secondary means of differentiation between the two stamp types.

Figure 6. FTIR spectra of the printing paper and the spectra obtained in the red-inked regions of Scott \#C23 and \#C23c stamps. The characteristic peak due to the presence of barite is marked by the $\nabla$ symbol, while the region of the additional FTIR peak in the spectra of the Scott \#C23 and Scott \#C23c peaks is marked by the symbol. Also shown is the FTIR spectrum characteristic of carmine, obtained by digitally averaging the four spectra shown in Figure 5.


The large intensity of the peaks in the 847/870 wavenumber system is a clear indication that these peaks cannot be due to the presence of an organic dye, but instead must be due to the presence of an inorganic pigment. It is well known ${ }^{8}$ that the presence of a chromate-based pigment will yield strong peaks in this region, thus suggesting that the red color of the eagle in the Scott \#C23 and \#C23c stamps is due to the presence of red pigment containing the chromate group. This deduction immediately suggests that the pigment is actually chrome red, which is a complex mixture of lead oxide and lead chromate. ${ }^{9}$ The assignment of the 847/870 wavenumber system is confirmed in Figure 7 through a correlation of the peaks of a chrome red pigment standard with the peaks observed in the spectra of Scott \#C23 and \#C23c stamps.

Figure 7. Expanded FTIR spectra of red-inked regions of the Scott \#C23 and \#C23c stamps. Also shown is the FTIR spectrum of chrome red pigment reference, where the characteristic peaks of this pigment at 847 and 870 wavenumbers have been marked by the symbol.


Chrome red is a complicated pigment that can be prepared by mixing lead chromate in a sodium hydroxide solution, and then heating the suspension until it becomes dry. The actual color of the pigment can vary from brown-yellow to brick-red depending on the ratio of lead chromate to lead oxide, as well as on the particle size of the component particles.

When the chrome red pigment is adsorbed onto the cellulose surface of the printing paper, additional changes in the nature of the pigment take place, such that the number of peaks in the "chromate" region expands from the two at 847 and 870 wavenumbers to feature a third at 833 wavenumbers. It is worth noting that the intensity of the 833 wavenumber peak is comparable for the Scott \#C23 and \#C23c stamps.

However, the relative intensities of the peaks in the 847/870 wavenumber system represent a second means to differentiate between the Scott \#C23 and \#C23c stamps. In the spectra of Scott \#C23c stamps, these two peaks have approximately the same relative intensity. On the other hand, in the spectra of Scott \#C23 stamps as seen in Figure 7, the intensity of the peak at 870 wavenumbers is significantly reduced relative to the intensity of the peak at 847 wavenumbers.

## Conclusions from the FTIR Studies

The fingerprint regions in the FTIR spectra of Scott \#C23 and \#C23c stamps contain quite definitive trends that permit their easy distinction, which has been summarized in the following table.

Table 1 - Summary of FTIR results for Scott \#C23 and \#C23c

|  | Scott \#C23 | Scott \#C23c |
| :--- | :--- | :--- |
| Blue-inked region <br> (refer to Figure 4) | The strong band of absorbances, <br> centered around 1040 wave- <br> numbers, is effectively due to the <br> presence of cellulose from the <br> printing paper. | The FTIR band system of <br> the cellulose region is shifted <br> down to approximately 1000 <br> wavenumbers, due to the strong <br> FTIR absorption from the <br> additional amount of ultramarine <br> pigment. |
| Red-inked region <br> (refer to Figure 7) | The chromate peak at 847 <br> wavenumbers is significantly more <br> intense than the chromate peak at <br> 870 wavenumbers. | The chromate peaks at 847 and <br> 870 wavenumbers have approxi- <br> mately the same relative intensity. |

## Conclusion

This series has established the historical context for this issue, explored the discovery and controversy surrounding Scott \#C23c, presented the issues surrounding catalog listing for the stamp, and the spectroscopic color analysis of the stamp. The next installment of this series will discuss the perceived appearance of colors and the authors' conclusions. After this article was submitted for publication, subsequent research uncovered additional information and new material came onto the market. The final segment of this series will address those new findings and conclusions.

As with the first three segments, the references that follow pertain specifically to the citations in this portion of the series. Future articles will be treated in the same manner with a large general bibliography included with the final installment of the series.

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Figure 1. Certified Scott \#C23c (upper left) and three shades of "normal" Scott \#C23.

Scott \#C23c - The Whole Story Part V - Perception, Census \& Summary<br>by<br>Greg M. Ajamian - USSS \#9506| Msd40gma@aol.com<br>Robert G. Rufe - USSS \#15298| Mrrufe1@aol.com<br>Harry G. Brittain, PhD, FAAPS, FRSC - USSS \#16446| Mhgbcpp@gmail.com

## Introduction

This article continues the Scott \#C23c story and presents information on the perceived appearance of colors, the census of known examples, and the authors' original summary and conclusions. Since the undertaking of this research and writing, additional information has come to light which will be presented in one final installment in the November 2021 edition of The U.S. Specialist.

## Perceived Appearance of Colors

Scott \#C23 had the highest printing quantity for any air mail issue to date. In fact, no US Airmail stamp had a larger press run until World War II. Considering that 349,946,500 Scott \#C23 stamps were printed over a three-year period, ${ }^{1}$ it is not surprising that there would be slight variations in appearance. In fact, the surprise might be that there is not more variation in the billions of stamps of all issues that were produced by the BEP.

Even with proper lighting, color differences may not be easily discernible by some collectors and stamp dealers. For example, in Figure 1, although they all look different (to some people), only the upper left stamp is a certified and FTIR-confirmed Scott \#C23c.

Hotchner wrote in his July 2017 article titled, "1938 Eagle airmail color error revisited and verified," that "there is quite a range of blue color available in any accumulation of Scott \#C23. This is probably due to the normal variations seen in wet paper printing,
wiping variations and thus inking application flaws, oxidizing, and changes due to the chemical content of water or paper when used stamps are washed from envelopes." ${ }^{2}$ For example, consider the assortment of mint, never hinged stamps in Figure 2. The only certified Scott \#C23c example is the one on the far left.


Figure 2. Certified Scott \#C23c (far left) and 13 shades of "normal" Scott \#C23.
Even with more area to view, consider the blocks of four in Figure 3. The plate block on the far left has an overall pink tint which is hard to see in the scan. The certified and FTIR-confirmed block with both Bruechig and Sanabria backstamps is second from the left. The third block has an overall blue tint. The block on the right is a typical shade of blue, but has unusually dark red vignettes.


Figure 3. Certified Scott \#C23c (second from left) and three shades of "normal" Scott \#C23.
All color differences mentioned above can be difficult to see even with the examples side-by-side in Figures $2 \& 3$. When viewing scanned images on-line, it can be even more difficult to identify a true Scott \#C23c. And do not forget that what you see on your screen is subject to the lighting and calibration of the seller's scanner, the image handling of the website, the calibration of your computer screen, and the lighting in your room - not to mention your ability to perceive shades of blue.

Since color determination "by eye" can be a subjective evaluation, especially with online images, we encourage confirmation of pigment content by FTIR or similar objective analysis. For this article, we have endeavored to test as many certified ultramarine Scott \#C23c stamps as we could secure, from our own collections or borrowed from individuals and organizations.

## Census of Known Examples

Based on what we have uncovered to this point, we believe that the total possible population of Scott \#C23c stamps was 26 sheets, or 1300 total stamps. We believe that Rumbel held on to 16 different plate number combinations in his own collection. We do not know about the ultimate disposition of his collection after his death. We believe that Rumbel sold the ten duplicate sheets at some time. Our best guess is that he sold eight sheets to Bruechig (identified A thru H) who sold some to Kessler. Some of those eventually made it into the hands of Sanabria based on the backstamps. We think that Bloch may have purchased the other two duplicate sheets and other material directly from Rumbel which only Bloch signed and do not show any backstamps. That could explain the absence of any other markings on the back of Bloch-signed stamps.

You may, indeed, have a Scott \#C23 that looks distinctly different from other Scott \#C23 stamps, and you may have paid a lot of money for it. But, we believe that without a recent expertization certificate, certain pencil marks or rubber stamps on the back, and/or an FTIR analysis, it is probably not a genuine Scott \#C23c. We could be wrong, and we would love to confirm the existence of a genuine, FTIR-confirmed Scott \#C23c without any markings on the back.

We believe that there is a very small number of genuine used examples of Scott \#C23c on or off cover that Rumbel generated via "controlled mail." We further believe that they were probably postmarked in Mission, Texas or Buffalo, New York where his son Keith resided.

We are assembling a table of all of the genuine Scott \#C23c stamps which we have been able to document. We would very much like to add other CERTIFIED and/or FTIR-ANALYZED examples to the census. At a minimum, we would like to see scans of all certificates plus images of the front and back of each stamp, block, plate block, or sheet. We would like to run an FTIR analysis as it is the only way to confirm the ink composition. If you are willing to share information about your C23c stamps, we would like to include them in our census, but we would NOT disclose your identity.

Philatelic Stamp Authentication and Grading (PSAG) has established an alliance with the Center for Philatelic Forensics (CPF) to include an FTIR certificate for all C 23 c stamps confirmed by their analysis. In support of this census effort, if you have a certificate from a different source, Harry Brittain has agreed to conduct an FTIR analysis of your certified C23c at no charge for the test as long as you provide funds for the return postage and insurance costs. The FTIR scan in no way harms the stamp.

## Summary \& Conclusions

In the General Glossary section of the Introduction to the Scott Specialized Catalogue of United States Stamps and Covers, the definition is given as follows, "Error - stamps having some unintentional major deviation from the normal. Errors include, but are not limited to, mistakes in color, paper, or watermark; inverted centers or frames on multicolor printing; missing color; inverted or double surcharges or overprints; imperforates or part-perforates; unintentionally omitted tagging; and double impressions." ${ }^{3}$

Without a doubt, the $5 \Varangle$ rose Scott \#505 is an "error of color" as are Scott \#467 and

Scott \#485. ${ }^{4}$ Their listings in the Scott catalog all include the notation "(error)." When the die for a $5 \$$ stamp was used for an impression on a plate intended to print $2 \Phi$ stamps, every one of the stamps produced from that impression was printed in rose instead of blue. The $4 \Phi$ Columbian Exposition Issue, in blue instead of ultramarine Scott \#233a, also has "(error)" in its listing.

Proponents of the existence and listing status for the Scott \#C23c ultramarine variety included contemporary figures of the mid-1940s namely BEP Director - Alvin Hall, Scott editor - Hugh Clark, and expertizers of the day - Emil Bruechig, Herbert "Herbie" Bloch, Nicolas Sanabria. In more recent times - Scott editor, Jim Kloetzel, and the principal expertizers for all four major services in the US, namely PF, PSE, PSAG and APS, were all interviewed for this article and all believe that the variety should be listed with a minor catalog number as Scott \#C23c. Whether it should be listed as an "error" is a different question and has not been widely agreed upon.

The 1938 6\$ ultramarine and carmine air mail designated Scott \#C23c first appeared in the 1946 edition of the catalog with the word "error" in its listing. In the 1994 edition, the "C23c" designation was removed as was the term "error," but the ultramarine and carmine variety of the stamp was still shown as a different shade. The minor catalog number designation "C23c" was reinstated in the 2007 edition without the word "error." Whether you call it an error depends upon your definition of the term.

Whether the ultramarine version was due to an ink reformulation experiment, a mistake in ink selection, or from some other cause, nonetheless the $19386 \$$ air mail Scott \#C23c stamps are clearly and demonstratively different from "normal" dark blue Scott \#C23 stamps. Therefore, we feel that they should continue to be listed in the catalog and noted as being distinctly different with the designation Scott \#C23c.

All of the Scott \#C23c stamps that we have analyzed by FTIR have the same ink composition. That composition is different from the ink composition used in all the "normal" Scott \#C23 stamps that we have tested. We suspect that the Scott \#C23c stamps were some kind of ink formulator's experiment, as the ink formulation for the frame has items removed, as well as items added.

The dark color of the Scott \#C23c stamps reflects the near absence of barium sulfate whitener. The amount of Prussian blue pigment in these stamps is roughly half that of the Scott \#C23 stamps, but the ink of these stamps definitely contains ultramarine pigment. So, the experiment would have been to replace about half of the Prussian blue normally used in the Scott \#C23 stamps with ultramarine. This probably would have led to an ink color that was too light, and hence the removal of the whitener (barite) to achieve a reasonable degree of color.

Here are our conclusions:

- Scott \#C23c stamps actually exist and are demonstrably different from Scott \#C23 stamps.
- The known population of Scott \#C23c consists of the 26 sheets from the original discovery for a total of 1300 stamps.
- Oliver Keith Rumbel used 15 Scott \#C23c stamps as postage and sent seven more to his son, presumably to be used on mail back to his father and mother.
- There are 16 known plate number and position combinations of the eight known plate numbers (four ultramarine and four red) of Scott \#C23c. Duplicate panes of only ten of the plate number and position combinations were found, meaning that there were six unique plate number position combinations. There are also two each of ten plate number and position combinations. We assume that all 26 of the Scott \#C23c plate blocks still exist as at least pairs, but we have very little actual data to confirm their existence.
- No examples of stamps from plates other than the 16 reported plate number combinations have been certified as Scott \#C23c, nor tested positive for ultramarine by FTIR analysis.
- The results of the analyses reported in a letter to Emil Bruechig from Alvin W. Hall (dated July 7, 1945) was that the Scott \#C23c stamps did not contain an ink pigment that was not present in the Scott \#C23 stamps. The results of the analyses reported in the current work are consistent with this conclusion.
- The White reference work was largely silent on the relative amounts of ultramarine in the Scott \#C23 and Scott \#C23c stamps, but did state that the Scott \#C23c stamps contained only $70 \%$ of Prussian blue pigment relative to the amount used in Scott \#C23 stamps. The results of the analyses reported in the current work are in reasonable agreement with this conclusion.
- All of the examples of Scott \#C23 stamps that we tested using FTIR spectroscopy were found to contain ultramarine and Prussian blue pigments in the blue ink.
- All certified examples of Scott \#C23c stamps that were tested using FTIR spectroscopy were also found to contain ultramarine and Prussian blue as the colored components of the blue ink. However, the amount of Prussian blue in the Scott \#C23c stamps was only approximately $40 \%$ of the amount used in the Scott \#C23 stamps. At the same time, the amount of ultramarine used in the ink of the Scott \#C23c stamps was found to be approximately 2.5 times more than the amount in the ink used to print the Scott \#C23 stamps.
- All examples of Scott \#C23 and Scott \#C23c that we have tested by FTIR spectroscopy show that the red eagle vignette in the stamps is not derived from a carmine-based ink, but instead is derived from the red pigment Chrome red. In addition, the bandshape of the Chrome red peak of the Scott \#C23 stamps is measurably different from the bandshape of the Chrome red peak of the Scott \#C23c stamps.
- Of the nine PF certificates that we have seen, plus the 80 other genuine certificates listed on the PF website, only three actually mention the pencil notations on the back. Only one of the PF certificates that we have seen mentions any of the rubber-stamped expert marks on the back.
- Of the five APS certificates shown on their website, only one mentions the pencil notation on the back.
- Of the five PSE certificates that we have seen, or seen illustrations of, certifying Scott \#C23c stamps, none of them mentions any markings on the back. One of the three Scott \#C23c stamps with PSE certificates that have been confirmed by FTIR
analysis appears to have no markings on the back. It is the one stamp that does not have one or more back stamps and/or pencil marks [Rumbel, Bruechig, Kessler, Sanabria] that has tested positive by FTIR to have ultramarine ink. We believe one or more pencil marks have been removed.
- The one Crowe certificate that we have seen mentions a Bruechig backstamp.
- We know of one left margin single (believed to be from Rumbel's own collection) that does not have any back stamps or pencil marks on the back, but does have "C23c" and his signature on the front on the selvage. It was recently sold on eBay. We have not tested it.
- All certified examples of Scott \#C23c that we have seen have one or more back stamps and/or pencil marks [Rumbel, Bruechig, Kessler, Sanabria, Bloch].
- All examples of Scott \#C23c that we have seen or have seen illustrated that have a Kessler backstamp also have a Bruechig handstamp; whether or not they have an additional Sanabria handstamp.
- Not all examples handstamped by Bruechig and Kessler have a Sanabria handstamp. Therefore, we assume that Kessler bought his material from Bruechig, and later sold some to Sanabria.
- All Scott \#C23c stamps that we have seen, or have seen illustrated, that have a Kessler backstamp and a pencil notation for position refer to sheets A through H ; a total of 8 different letters. Therefore, we assume these were the eight sheets that Bruechig purchased from Rumbel.
- In all cases that we have seen, or seen illustrations, of certified Scott \#C23c stamps with the Bloch expert mark, it appears in pencil in the lower right corner on the back the stamp. Further, none of the examples that we know of with a Bloch pencil mark exhibit any other expert markings or position indications. This would indicate that there were at least some sheets that either were not given penciled position markings by Rumbel, or that they were subsequently erased.


## Conclusion

In the next and final installment of this work, the authors will present their most recent findings and outline their path forward. As with the previous segments, the references that follow pertain specifically to the citations in this portion of the series. Future articles will be treated in the same manner with a large general bibliography included with the final installment of the series.

## References

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4. 2021 Scott Specialized Catalogue of United States Stamps and Covers, Amos Media, Sidney, Ohio, pages 58-60.
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