Part IIIA. A Detailed Study of the 3¢ 1851 Relief Characteristics

by Richard Celler and Elliot Omiya

Introduction

Dr. Carroll Chase published his ground-breaking work, *The 3c Stamp of the United States 1851-1857 Issue*, in 1929, the result of research begun in 1907. Dr. Chase accomplished the phenomenal achievement of reconstructing ("plating") the 3¢ 1851 plates largely using overlapping multiples. He did so without knowing how many plates there were or how many panes were on each plate. The process of plate production was not covered extensively in his book and, indeed, was not strictly necessary to accomplish reconstruction or plating. When the book was reprinted in 1942, Dr. Chase himself stated that most errors corrected were "largely typographical."[1] During the 1950s, Elliott Perry published a series of articles concerning plate production processes and discovered the technique he called "guide reliefing." The purpose of this article is to show the effects of guide reliefing on the imperforate 3¢ stamp, and in order to do this, highly detailed pictures and descriptions of the 3¢ Type I reliefs are provided.

Figure 1. 1851 3¢ Original Die Proof

We will discuss the "imperforate" plates created starting in 1851 by Toppan, Carpenter, Casilear and Company (TCC&Co) to print the Type I stamps. It is evident that somewhat different methods were used in making the first group of plates in 1851 and early 1852 (plates 1^E, 2^E, 5^E, "0" and 3) than were used in making the second group of plates in 1855 and 1856 (plates 4, 6, 7 and 8). In this article, the first group will be referred to as the "1851 plates" and the second group as the "1855-56 plates."[2]

Readers are encouraged to read the article entitled "The Toppan Carpenter Plates and the Guide Reliefing Method" in Part I of this volume (we will refer to this as the "Guide Relief" article). Familiarity with guide reliefing concepts will be helpful in understanding the text and illustrations presented here.

The 3¢ Stamp Design

Figure 1 shows the original 1851 3¢ die proof in black.[3] Figure 2 overlays this proof with a 1903 Roosevelt die proof and a 1915 Panama-Pacific die proof for comparison. All of these were printed from the original die. However, the actual printed 1851-1857 issue 3¢ stamps are slightly different than these die proofs. The story of how and why these differences exist will be discussed in this article.

Certain terms will used to identify particular areas of the stamp design. These terms are indicated in Figure 3 and are defined as follows:

- The *white oval* is the colorless oval that surrounds the portrait of Washington.
- The *inside oval line* is the inner line creating the white oval, the line surrounding the portrait of Washington.
- The *outside oval line* is the outer line creating the white oval.
- The *solid background* is the dark area surrounding Washington's portrait, enclosed by the inside oval line.
- The *tessellated work* is the band of geometric lathe work seen on all four sides, outside the oval line.
- The *tessellation impingements* are the parts of the tessellated work that extend into the white oval.

On the original master die, the tessellation impingements protruded into the white oval at the top, both sides and the bottom (see Figures 1 to 4). Because the impingements were not intended to be part of the stamp design, TCC&Co removed them from each relief during the production of the 3-relief transfer roll.[4] The removal was not done identically on each of the three reliefs, and it is primarily the differences in the removal of the impingements from the white oval that we use to identify the reliefs.

Figure 2. Original Die Proof, Roosevelt Proof and Panama-Pacific Proof

Relief Characteristics

It has been well established that there were three closely-spaced reliefs on the transfer roll, which Dr. Chase designated as C (top), A (middle) and B (bottom). Every plate used in the production of the 3¢ Type I stamps (numbered 1 to 8, plus the unnumbered plate Chase called "0") was transferred using the 3-relief roll.

Dr. Chase described and illustrated the major characteristics of the three reliefs on pages 46-47 of his book. Figure 5 pictures an example of each relief, A, B and C, pointing out the features Dr. Chase used to tell the reliefs apart. For the B relief, he describes the break in the outside oval line at top and bottom, and the impingement of tessellation into the white oval at bottom. For the C relief, he describes the gash on the shoulder. The A relief is essentially described as the lack of these B and C characteristics, "a smooth, continuous line outside of the white oval, both at the top and the bottom."

However, there are a number of other less obvious differences between the three reliefs than those Dr. Chase describes. Many of them have been discovered in recent years, largely by Keiji Taira. It is the knowledge of these other features, illustrated and described in this article, which allows us to see the effects of guide reliefing on the 3¢ stamp. In addition, these subtleties can be very useful in identifying a relief where the characteristics Dr. Chase described are obscured.

Figure 6 illustrates how the removal of the tessellation impingements at the top of the white oval differed on the three reliefs. At the top for reference is the 1903 Roosevelt die proof, showing the impingements that were removed, and reliefs A, B and C are shown below. The arrows on reliefs A, B and C point to four spots where the removal was not identical, and they will be described from left to right.

Figure 3. 3¢ Die Proof with Labels

Figure 4. Die Proof with arrows pointing to the tessellation impingements in the white oval that needed to be removed

The first arrow points to where the outside oval line is thinner on relief B than on A or C. The second arrow points to a notch in the solid background which occurs only on relief A. The third arrow points to a tiny break in the outside oval line found only on relief C. The fourth arrow points to the large break in the outside oval line found only on relief B.

Figure 7 similarly illustrates how the removal of the tessellation impingements at the bottom of the white oval differed on the three reliefs. Pictured at the top is the die proof, showing the impingements that were removed.

On relief A, the arrow points to a single large break in the inside oval line. On relief B, the two arrows at the right point to two small breaks in a similar location. The two arrows to the left of them point to the two small breaks in the outside oval line, located on either side of the tessellation impingement. There is often a blur of color in the white oval towards the left, and the white oval is quite narrow above the tessellation impingement. On relief C, there are no breaks in the inside oval line. Relief C often has a blur of color in the white oval where indicated. In addition, arrows point to where there is a weak spot in the outside oval line, and just to the right of this, where the white oval is narrow.

Figure 8 is a comparison of the break(s) to the inside oval line on reliefs A and B, inside the two dotted lines. Note that at the left-hand dotted line, the inside oval line extends a bit further to the right on the B relief than it does on the A relief.

Figure 9 illustrates the removal of the tessellation impingements at the right side of the white oval. At the left is the die proof, with reliefs A, B and C shown alongside. There is a slight impingement into the white

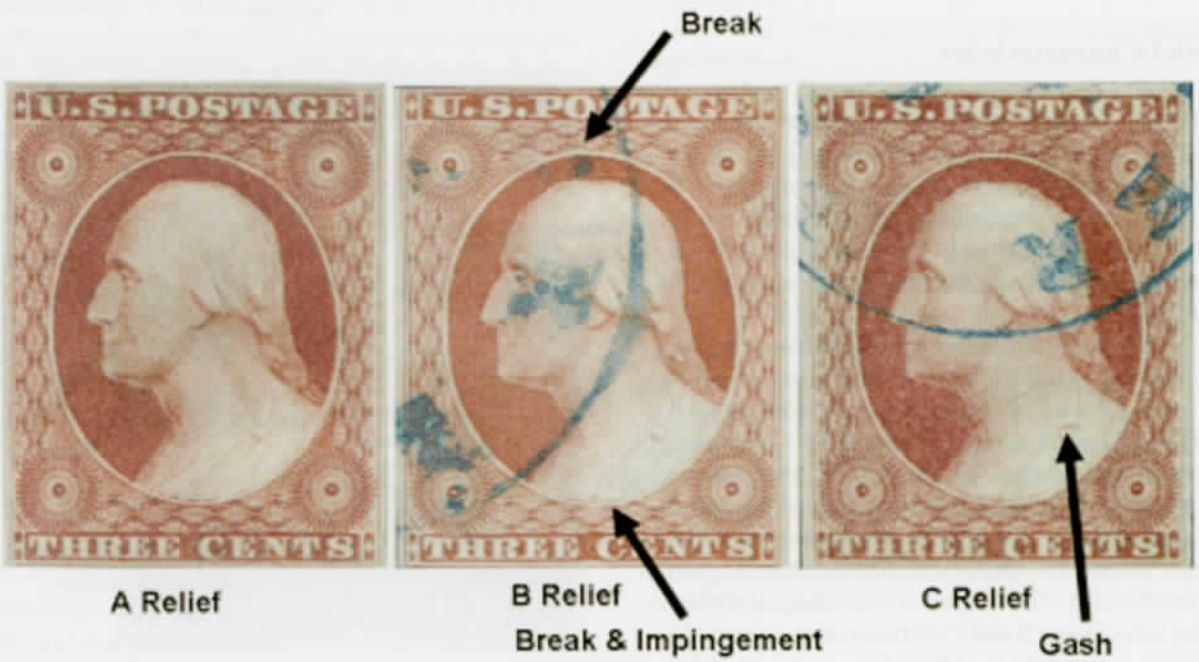

Figure 5. Reliefs A, B and C showing Dr. Chase's identification characteristics

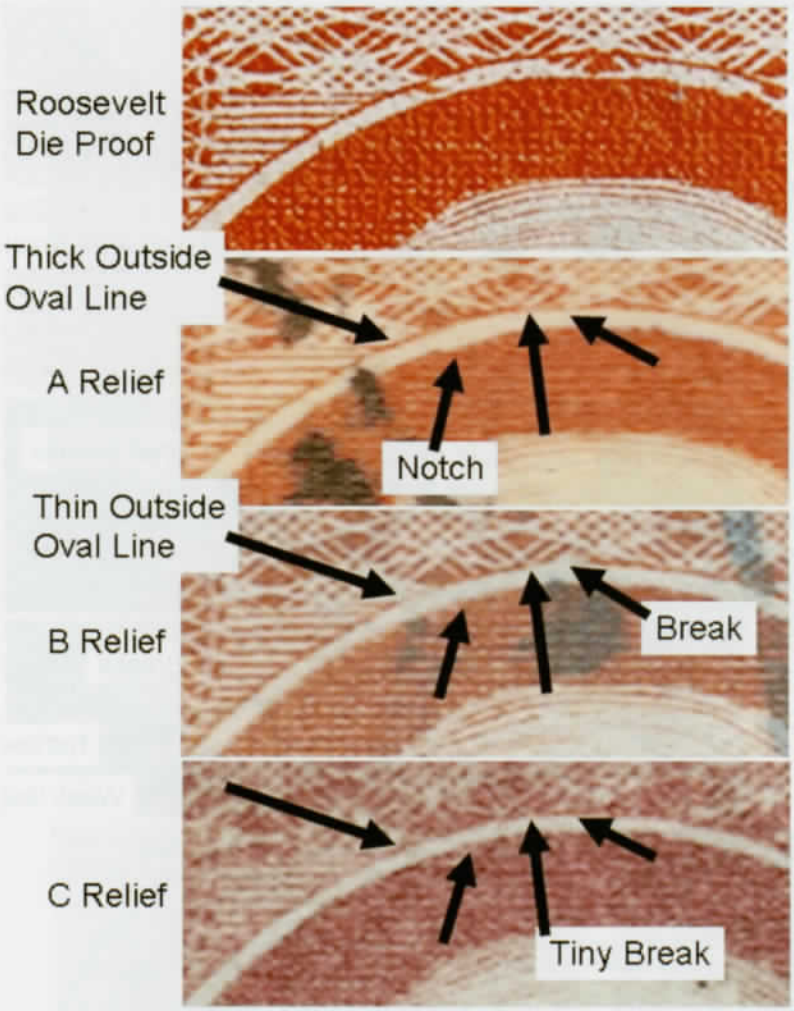

Figure 6. Relief Characteristics at the Top of the White Oval

oval on relief A. The upper arrows point to the outside oval line, which is weak on relief B. The lower arrows also point to the outside oval line, which is heavy on relief A, average on relief C and very weak on relief B.

As can be seen in Figures 1 to 4, the die also had tessellation impingements at the left side of the white oval. The removal of them was done very carefully, and no differences between the three reliefs have been noted at the present time.

It should be cautioned that well-printed early impressions sometimes do not have the expected breaks and weak areas described above. It is believed that these areas of the design were initially intact, and were transferred shallowly to the plate. After the plate started to show a little wear, these faint lines disappeared, leaving the breaks.

Plate Production and Guide Reliefing

One might assume that any given stamp from one of the Type I plates would show the distinct characteristics of one of the three reliefs, but this is not always the case. The process of making the stamp plates introduced variations that we see in the actual stamps, variations that can be explained through an understanding of the technique known as *guide reliefing*. The *Guide Relief article* provides a detailed explanation of this process. What happened, in brief, was that a stamp already entered on the plate was altered slightly by the guide relief when the subsequent position was transferred.

The Influence of Guide Reliefing on the 3¢ Stamp

As explained in the *Guide Relief article*, the normal pattern of reliefs for the 3¢ stamp was, by horizontal row, C-A-B-A-B-A-B-A-B-B. The B reliefs from the various rows will be referred to below as B3, B5, B7, B9, and B10. Relief C should only be found in the top row.[5] However, a number of non-top row positions have the gash on shoulder.

Figure 10 shows position 46R1E, a position Dr. Chase calls a C relief, because the stamp shows a distinct gash on the shoulder. However, a careful examination reveals that other details of the relief do not match the normal C relief characteristics that were previously shown in Figures 6-9. The insets in Figure 10 show (top right) a faint B relief break in the outside oval line at top, and (bottom right) the B relief tessellation impingement.

Elliott Perry explains:

> The C relief of the 3¢ was a guide relief and has the "gash on the shoulder." On certain plates, its normal position is in the top row only [*Authors' Note*: plates 4, 6-8 only]. It could occur on other positions whenever the transfer roll was rocked far enough to enter the gash on a previous regular entry on which the C relief had been superimposed as a guide. Since it was the first

of three reliefs known as C, A and B on a three relief roll, when used as a guide relief it was superimposed on a B entry. Hence, stamps showing the gash that are found in B relief rows may be B designs with enough of the C relief entered on top of them to show the gash that is characteristic of the C relief.[6]

It is important to emphasize that while a small number of positions in B relief rows show a (usually faint) gash on shoulder from a relatively high over-rocking of the C relief, *no so-called misplaced C relief ever occurs on a position in an A relief row*. The term "misplaced relief" is a misnomer because these are not misplaced reliefs, but rather reliefs that are visibly influenced by guide

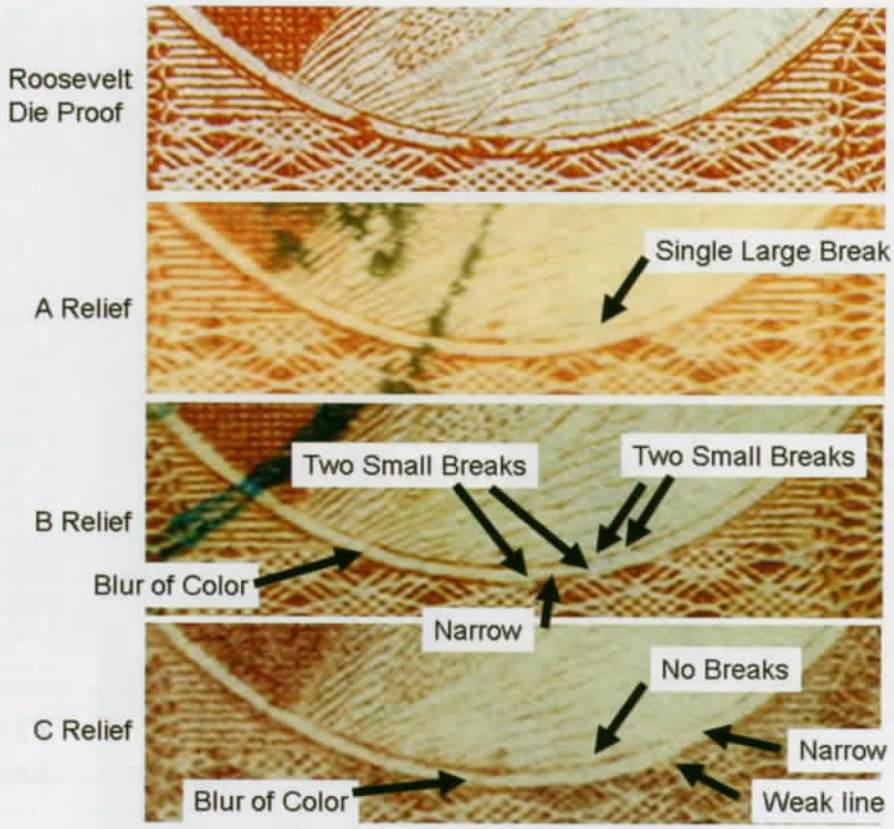

Figure 7. Relief Characteristics at the Bottom of the White Oval

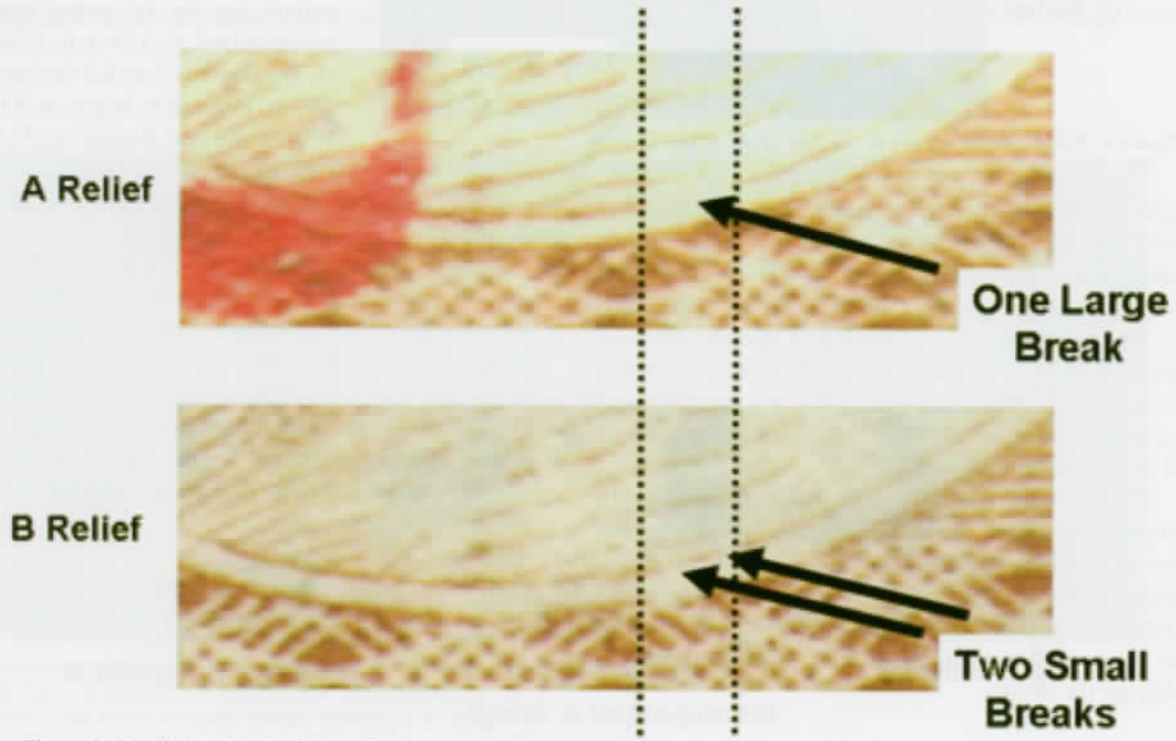

Figure 8. Detail of Inside Oval Line Break(s) on Reliefs A and B

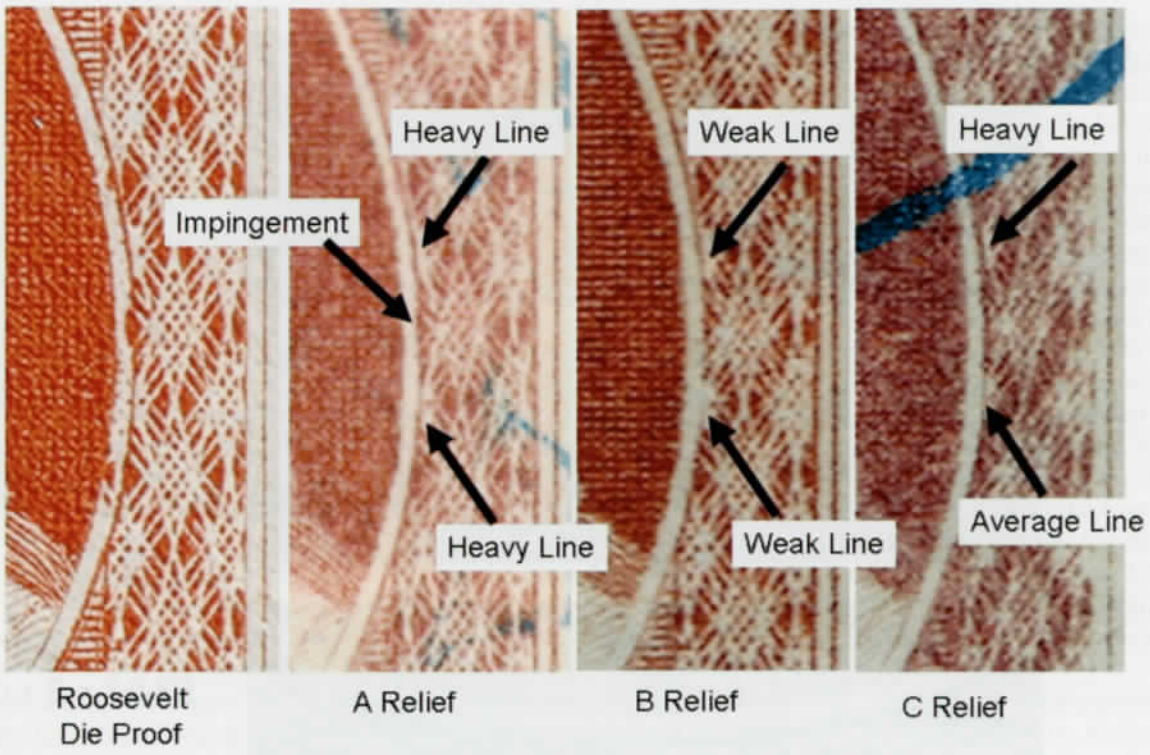

Figure 9. Relief Characteristics at the Right Side of the White Oval

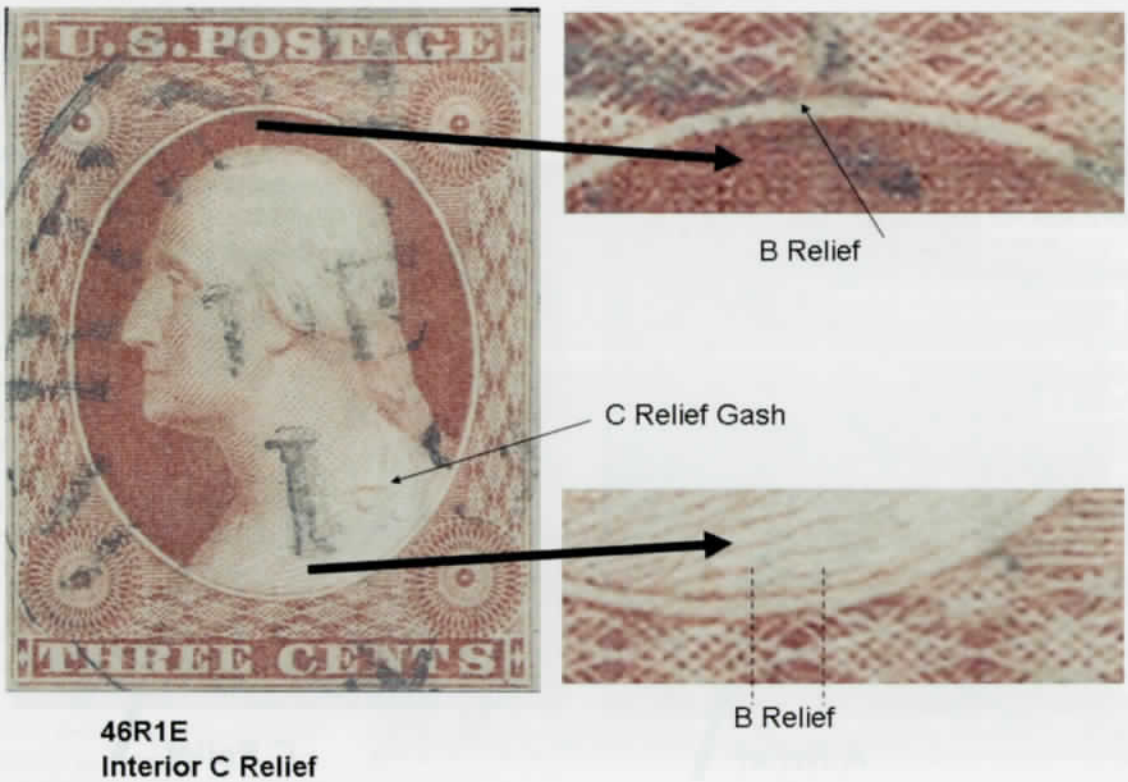

Figure 10. Interior C Relief, Position 46R1E

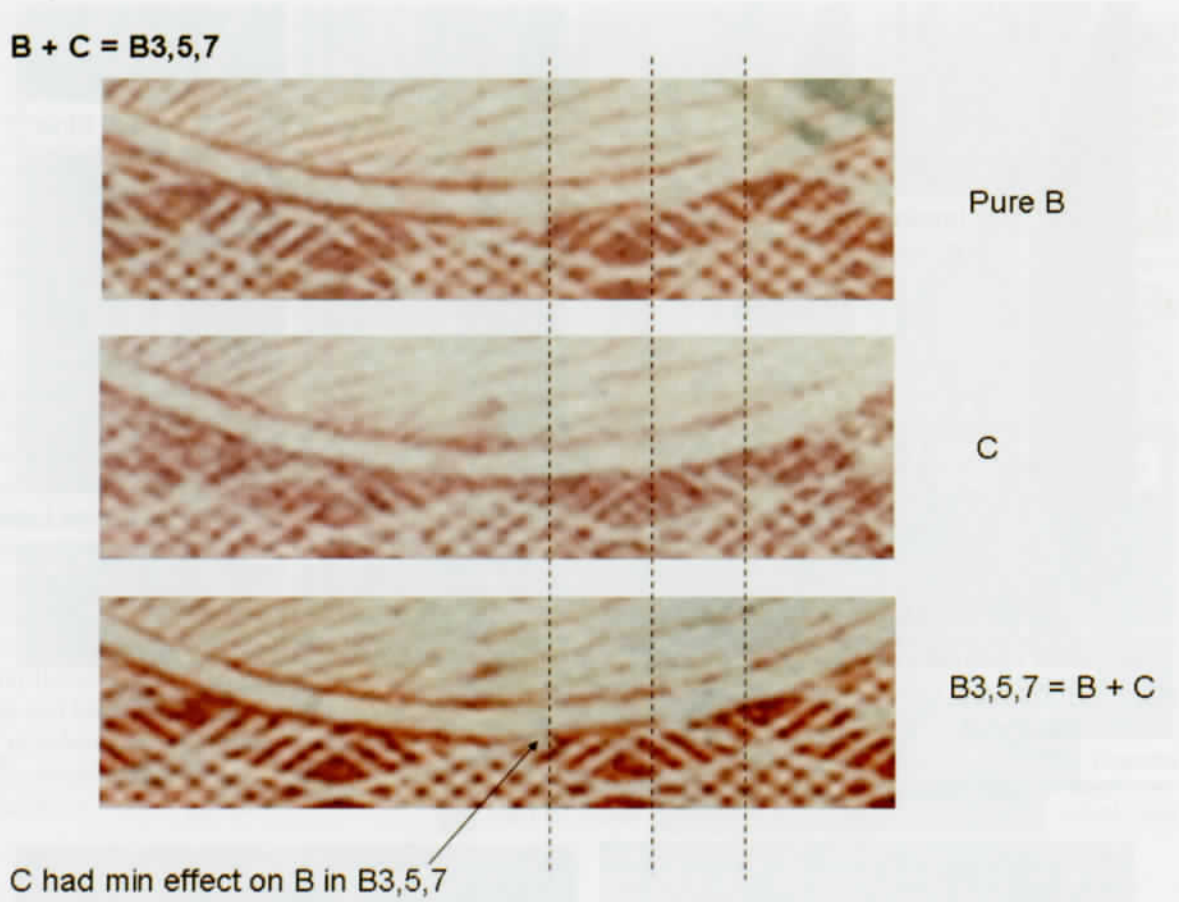

Figure 11. B Relief with Guide Relief Influence from C Relief

reliefing.

Figure 11 illustrates how the B reliefs in the third, fifth and seventh horizontal rows (B3, B5, B7) could be affected by the over-rocking of the C guide relief. At top

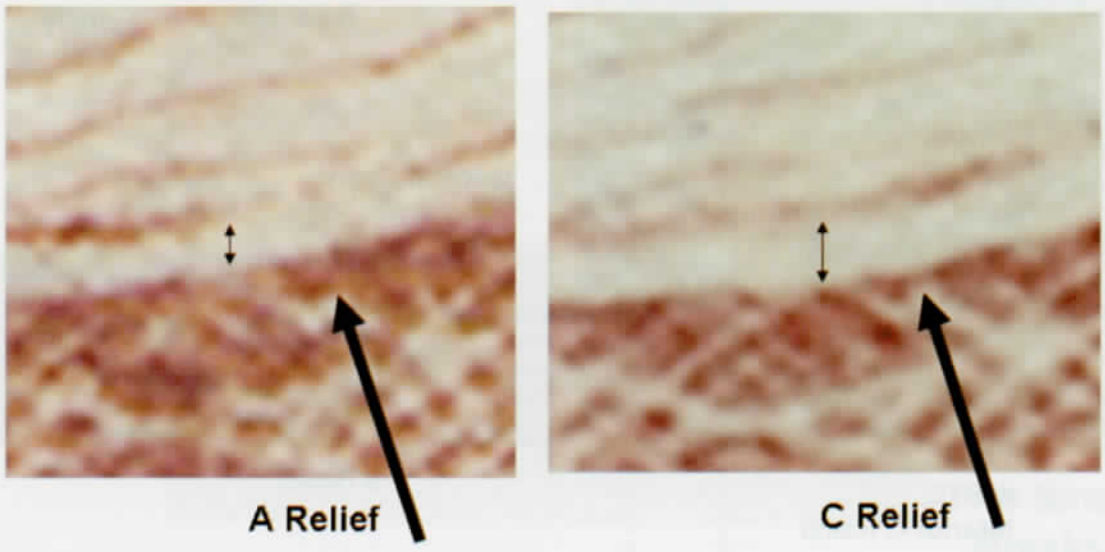

Figure 12: Detail of Width of White Oval on Reliefs A and C

Figure 13. Ninth row B Relief showing Guide Relief influence from A Relief, with "pure B Relief" for comparison

is shown a detail of a "pure" B relief from the bottom row (B10), one which was not affected by a guide relief. In the middle is a "pure" C relief from the top row. When the C relief was guided into the B3, B5 or B7 entry, and over-rocked far enough, a bit of the break in the outside oval line (see arrow) was sometimes filled in. The inside oval line (between the dotted lines) remained basically unchanged. In particular, the width of the white oval between the center and right dotted lines did not change.

When, however, an A relief was guided into a B relief entry, as was normally done to a ninth row B relief (B9) during the entry of the bottom row stamp, the fully complete outside oval line (at bottom) of the A relief was superimposed over the B relief to a much greater extent than did the C relief.

Figure 12 is an enlarged comparison of the A and C reliefs in this area. The large arrows point to where much less tessellation was cut away on the A relief than on the C relief, resulting in a narrower white oval on the A relief (small arrows). Because of this more complete A guide relief, the outside oval line has been filled in on many B9s, and tends to be mostly complete.

Figure 13 illustrates an example of a B9 relief, position 89R7, where the bottom of the white oval looks more like an A relief than a B relief. Figure 13 also shows a B10 stamp (a pure B) for comparison, position 93L1E. The arrows at top and right point to two characteristics which show both stamps are fundamentally B reliefs. The heavy arrow at bottom points to the B relief tessellation impingement.

Figure 14 shows the bottoms of the two stamps in Figure 13, with an A relief in the middle. The arrow on the B10 points to the tessellation impingement area of the B relief. The arrows on the A relief and the B9 show how superimposing the A relief over the B relief filled in the breaks in the outer oval line and narrowed the white oval, resulting in a stamp resembling an A relief more than a B relief.

Figure 15 is an enlargement of a portion of the three stamps in Figure 14. It shows more clearly the two breaks in the outside oval line which were filled in (between the left and center dotted lines), and the narrowing of the white oval (between the center and right dotted lines). Also, the inside oval line between the center and right dotted lines is faint, and resembles the A relief more than the B relief. Compare this with Figure 11.

Figure 14. Detail Showing how the A Guide Relief Changed Ninth Row B Relief Appearance

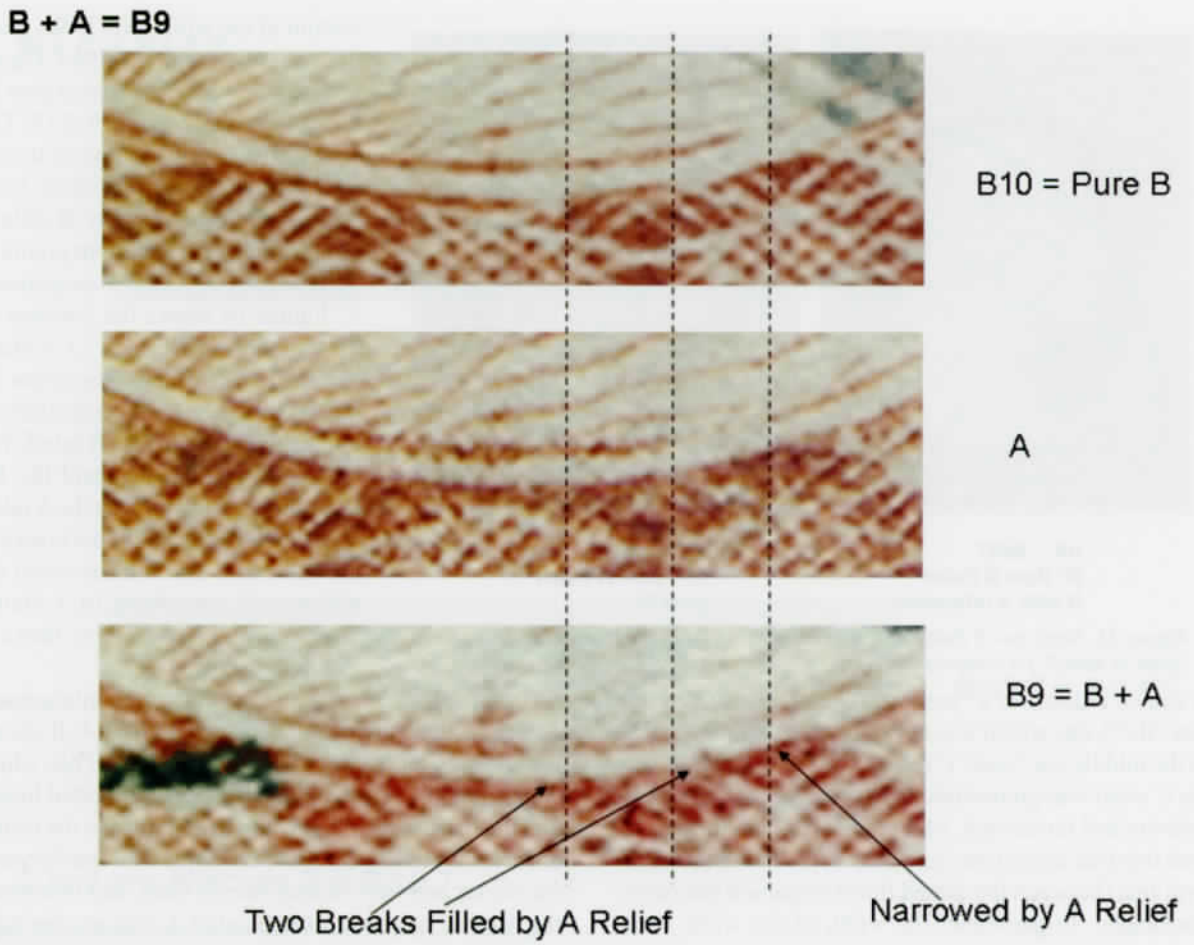

Figure 15. Detail Showing how the A Guide Relief Altered Break(s) in Outside Oval Line

Examination of a great many stamps has led to the observation that the A guide relief influence on B9s is actually less prominent or possibly even absent on the 1851 plates, while it is prominent and consistent on the 1855-56 plates (especially plates 6, 7 and 8). Indeed, on plate 1 Early, many B9s look almost like B10s. The conclusion we draw is that when making the first plate, TCC&Co was very careful not to over-rock the transfer roll any further than necessary. When making later plates, they realized it did not make much difference how far they rocked. Plate 2 Early shows some evidence of this guide relief influence on some B9 positions, notably 81, 84, 87, 88, 89 and 90R2[E], but not the very strong A relief influence we would expect.

Figure 16. Tenth Row A Relief, Position 96R6

Figure 17. Ninth Row B Relief, Illustrating C Relief Influence Instead of A Relief Influence

Plate 5 Early shows a lot of influence on most B9 positions (but still not as much as the 1855-56 plates). On Plates "0" and 3, some B9 positions have A guide relief influence and some do not.

We have seen positions where an early impression B9 shows the guide relief influence, but later impressions show little or no such influence. We believe this is because the guide relief influence was faintly impressed on the B9 entry, and after the plate began to wear, it disappeared. The depth of the guide relief influence depended on the distance of the over-rocking on each of the many passes of the transfer roll necessary to enter a position on the plate, as well as the amount of pressure applied during each pass.

Tenth Row A Relief

Figure 16 shows position 96R6, which is a misplaced A relief in the bottom row. Figure 17 shows the position above it, 86R6, to illustrate the difference when a B9 relief had a C relief guided into it instead of the normal A relief.[7] The inset in Figure 17 shows the typical breaks in the outside oval line as found on the B3, B5 and B7 reliefs. Compare this with 89R7 in Figures 13-15.

"11th Row" Guide Reliefing Example

In the *Guide Relief article*, the transferring process is described for the 3¢ plates utilizing a 3-relief transfer roll and the "10th row adjustment" needed to be made to avoid creating a partial 11th row entry. This adjustment required the use of the A relief as the guide relief instead of the normal C relief. If the siderographer failed to make the 10th row adjustment, the top of a B relief could be transferred onto the plate, into the margin below the bottom of the 10th row stamp.

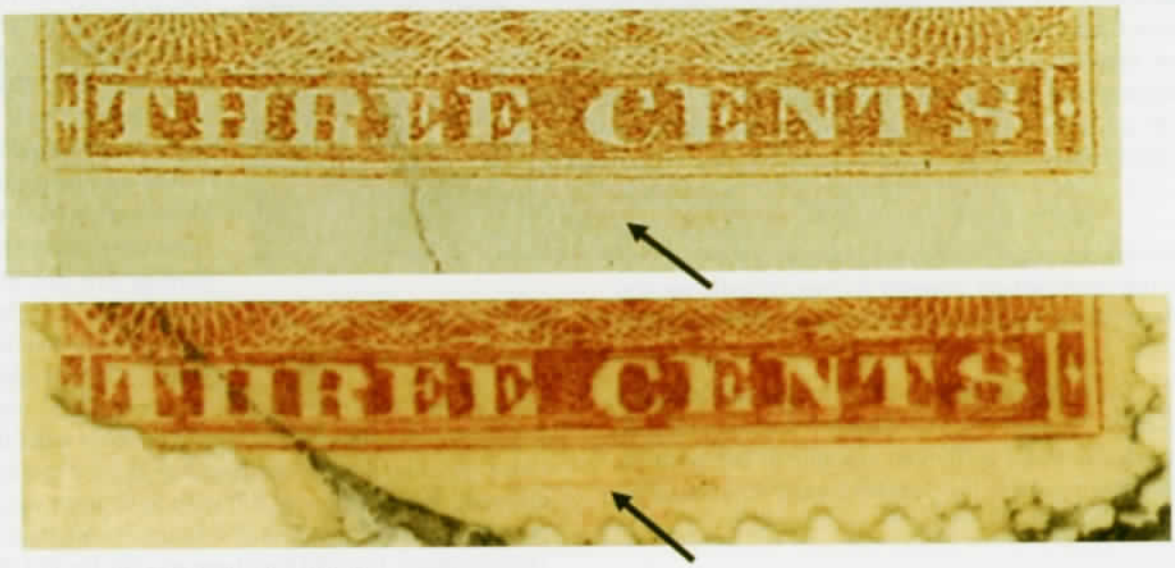

Figure 18. 91L5L Showing 11th Row

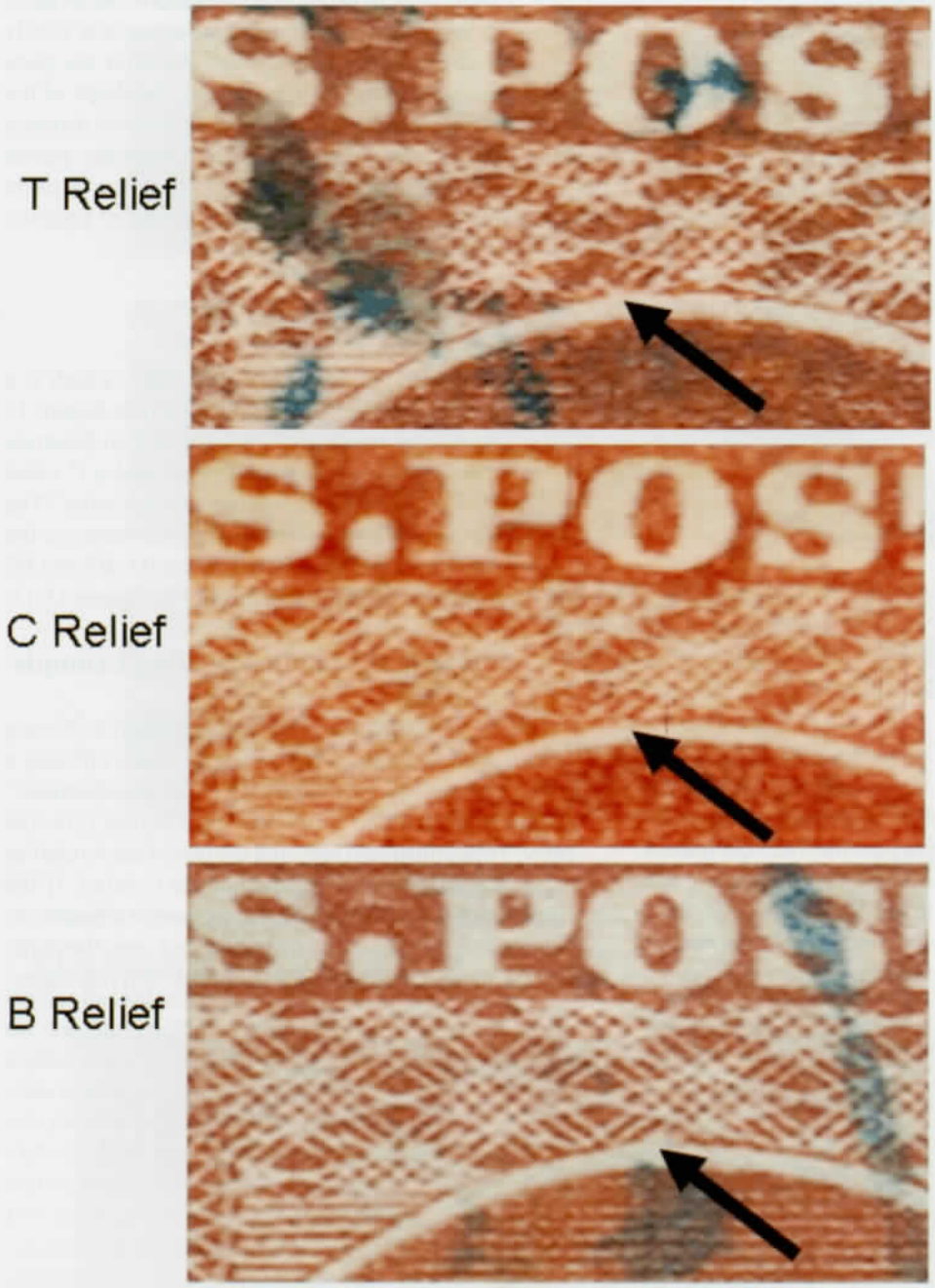

Figure 19. Comparison of "T" Relief Break in Outside Oval Line with "C" Relief and "B" Relief

The best example of an 11th row on the 3¢ Type I plates is position 91L5L.[8] Figure 18 shows both an imperforate and a perforated example of this position. The arrows point to the faint horizontal remnant of the 11th row entry.

The Mysterious "T" Relief

Another intriguing topic is the top row stamps on the 1851 plates. As previously mentioned, they are not the expected true C reliefs found on the 1855-56 plates. For this reason, we are naming them T reliefs (T for top), despite the fact that some of them have the gash on the shoulder, and Dr. Chase therefore called them C reliefs.

Figure 19 illustrates one feature, a break in the outside oval line at the top of the T relief, and compares it to examples of the C and B reliefs. Both the T and C reliefs exhibit the same break (due South of the *left* part of the "O" of "POSTAGE"), which is more pronounced on the T relief. The characteristic break at the top on the B relief is in a slightly different location (due South of the *center* of the "O" of "POSTAGE"), a bit further to the right.

We do not have an explanation for why these 1851 plate top row stamps are not all C reliefs. It has been conjectured that what Chase called a B relief in the top row[9] may have actually been entered with a single relief transfer roll which had a different relief from those already discussed. Another theory is that a different 3-relief transfer roll may have been used to produce the 1851 plates than was used to produce the 1855-56 plates. It would have been possible for TCC&Co

to produce a second transfer roll in 1855 from the same laydown they had used to make the first transfer roll. While this may explain the slight differences between the top row C reliefs in the 1851 plates and the 1855-56 plates, it does not explain the pattern of different reliefs found in the top rows of the 1851 plates (a mixture of apparent A, B, C and T reliefs).

The authors suggest that many of these 1851 plate top row positions were strengthened by re-entry during the initial creation of the plates.[10] It seems unlikely that any "fresh entries" were made in the top row using the A or B relief from the 3-relief transfer roll, given what we know about guide reliefing. However, there was no necessity for the siderographer to use the same relief that was used to make the original entry when going back to deepen the entry. This may explain the presence of apparent A and B relief positions in the top row, but it still does not adequately explain why certain C relief positions lack the "gash on the shoulder." We leave the solution of this mystery to a future generation of philatelists.

Conclusion

We have documented for the first time a number of new ways of distinguishing among the three reliefs of the 3¢ Type I stamp. Furthermore, we are expanding on the work of Perry and are showing multiple instances where one relief rocked upon another relief position has "influence" on the plate position entry. This knowledge can be particularly useful when a stamp is poorly printed, or has key parts of the design obscured. Hopefully this article will be used as a reference by future platers as an aid in identifying the 3¢ reliefs.

Acknowledgments

The authors would like to acknowledge Keiji "KG" Taira, who has provided many of the ideas that are presented in this article, and Roy Weber, who provided editorial assistance.

Endnotes

[1]Carroll Chase, *The 3c Stamp of the United States 1851-57 Issue* (New York: H.L. Lindquist, 1938), Vol. I, p. xvii. All page references will be to the 1975 Quarterman reprint.

[2]The Type I re-entered plates (1^{I}, 1^{L}, 2^{L} and 5^{L}) will be omitted from discussion, because the re-entry of a plate does not necessarily follow the original guide relief methods. Re-entry patterns are an interesting subject in themselves.

[3]Die layout lines can be seen at the left, and less prominently, at top and bottom. These lines are also on the Roosevelt and Panama-Pacific proofs, but they are much fainter, apparently because the printer did not want them to show.

[4]Because the design lines on the transfer roll are raised ridges, any removal of unwanted lines is invariably done on the transfer roll, and not on the die.

[5]The top row stamps from the 1851 plates are markedly different from the top row stamps of the 1855-56 plates. Whereas the top row stamps from the 1855-1856 plates are all normal C reliefs, careful examination shows that most top row stamps from the 1851 plates are not normal C reliefs, and indeed, are not the standard A or B reliefs either. Many of these positions show characteristics generally consistent with the C relief but *do not exhibit a gash*. We do not understand at this time why these stamps are not all C reliefs. See the T relief discussion at the end of this article.

[6]Elliott Perry, *Pat Paragraphs* (Tacoma Park, Md.: Bureau Issues Association, Inc., 1981), pp. 77-78.

[7]One unusual thing about 96R6 is that it has a weak bottom frame line which was not recut, and this is shown in the detail in Figure 16. Other B10 stamps from plates 6 and 7 have strong bottom lines from the pure B relief.

[8]This variety occurred when plate 5 Early was reentered in 1855. Plate 5 Early originally had the normal B reliefs in the bottom row. For unknown reasons 18 of the 20 bottom row positions were reentered with the A relief instead of the B relief.

[9]Chase, p. 45.

[10]A re-entry was the placement of a transfer roll relief into an already-entered position on the plate and re-rocking to make the impression on the plate deeper.