

# Yesterday in Mekeel's:

## Notes on Perforations of the U.S. Stamps of 1857-'60

by Elliott Perry (From Mekeel's Weekly, August 24, 1918, with images added)

This most fascinating series is receiving so much attention from serious students of the old United States stamps that perhaps a few remarks for the benefit of the less advanced collectors, coupled with a suggestion or two that possibly may indicate a solution of the problems which still puzzle some of those who have given the subject much thought may be welcome.

The stamps of the series may conveniently be divided into two groups:

A) — Printed from plates made before February 1857, and previously used for imperforates.

B) — Printed from plates made during and after 1857 for perforated stamps.

Plates of the A group known or supposed to have been used for perforated stamps are these:

1¢ — Plate 1 (type IV only), Plate 2, Plate 3.

3¢ — Plate ? (type II only), one or more.

5¢ — Plate 1 (type I).

10¢ — Plate 1 (type I as now cataloged)

12¢ — Plate 1 (?) and/or Plate 2 (?)



Left, Sc. 23, Type IV, plate 1; right, Sc. 24, Ty. V



Above, Sc. 23, showing narrow spacing; Below, Sc. 24 plate block, wider vertical spacing, same narrow horizontal



Left, Sc. 25, Type I; right, Sc. 26, Ty. III



Above, Sc. 25 showing narrow spacing all around; Below, Sc. 26 showing wider vertical spacing



Some of these A plates seem to have been used chiefly as a stop-gap until the new plates (B) were ready, but others, such as plate 1 of the 5¢ continued to be used for several years. The A plates were not well suited for printing stamps which were to be perforated because of:

First—Insufficient space between the stamps.

Second—Irregular spacing, both as regards the intervals between the stamps and as regards the size of the engraved surface on the panes, comparing one plate with another.

When the new plates (B) were made, the second difficulty was corrected and these plates were so laid out that the outside dimensions of the engraved surface on each pane of every plate were approximately the same. In other words, the distance from the top of the stamps in the top row to the bottom of the stamps in the bottom row on each pane of all denominations was practically the same, as was also the distance from the outside of the stamps in the first vertical row to the outside of the stamps in the last vertical row of all the panes.

Each plate contained two panes of 100 stamps (10x10) placed side by side, and each pane was the same shape and nearly the same size.

As the designs of some of the denominations were taller and/or wider than others this new lay A block of four of Sc. 25 with unusual wide horizontal spacing at top

out could not give an equal distance between the stamp designs regardless of their denomination. For instance, there was more margin between any horizontal pair of the 5¢ stamps from plate 2 than



Left, Sc. 29, Type I; right, Sc. 30, Ty. II

between any similar pair of the 30¢ stamps, although a row of ten 5¢ stamps occupied just about the same distance as a similar row of 30¢ stamps. Neither did this lay out make the horizontal interval always the same as the vertical interval between the stamps on the same pane. Throughout the B plates the horizontal intervals are usually wider than the verticals.



Above, Sc. 29 showing narrow spacing all around; Below, Sc. 30, from a block of nine, showing wider vertical spacing

The first difficulty mentioned, that of insufficient space between the stamps on the A plates, was somewhat overcome on the B plates by increasing the horizontal intervals, but the vertical interval remained in most cases just as insufficient as on the A plates, for instead of rocking the stamp designs onto the plates farther apart vertically, the vertical distance from center to center of the stamp designs was *decreased*, thus bringing the designs even closer together, and in order to obtain space for the perforations it was necessary to cut away portions of the tops and bottoms of some of the designs. Hence the altered types found on the 1¢, 3¢, 5¢ and 10¢ denominations. In the case of the 1¢ stamps (type III) and the 5¢ stamps (plate 2), if not on others, this cutting away took place on the transfer rolls. Before being altered the reliefs on these 1¢ and 5¢ rolls were as close together as it was possible to get them.



Left, Sc. 33, Type III; right, Sc. 35, Ty. V

The reader will note that this presentation of the facts only partially agrees with the opinion generally held before the study of the stamps of this series became so widespread and



Above, Sc. 33 Ty III top pair, Sc. 31, Ty I bottom pair; Right, Sc. 35 Toppan Carpenter Imprint & Plate block showing wider vertical spacing

which perhaps is still held among collectors who accepted it without investigating to see if it was really so. This traditional opinion was that the altered stamps were from plates on which the designs were partly cut away “in order to make room for the perforations,” or were “spaced further apart” to effect the same result, or an opinion embracing both of these ideas. The traditional explanation entirely fails to explain why, if the design on the A plates were already too close together, the designs on the B plates (plates made expressly for stamps that were to be perforated), should have been placed even closer together from center to center vertically, and why the design of the 10¢ stamp, the *narrowest* of the series, should have been altered at the sides at all.

No wholly satisfactory explanation appears as to why the designs on the B plates were placed so close together vertically. Certainly the reason had nothing to do with considerations affecting the size of the printing surface available on the plates or the size of the plates which the presses would accommodate, for the printing surface (that is, the engraved surface) was no larger, and in most cases was smaller than on the A plates. To assume that the presses which would take the larger plates would

not take those that could have been only a trifle smaller is to imitate the genius who is said to have made two doors in his barn, a large one for the cat and a small one for the kitten!

The letter of the printers of these stamps quoted by Luff mentions only one perforating machine which, with the necessary machinery, they acquired for \$3,000. Quite obviously on the new B plates the designs would be so laid out as to permit stamps from any of these new plates to be perforated on this machine. This was simply a matter of convenience. A standard spacing between the rows of perforations was adopted and then the stamp designs were so laid down on the plates that any sheet of stamps, regardless of the denomination, could be perforated without changing the machine.

This standard spacing is approximately 25mm wide by 25mm high and apparently all the stamps printed from the B plates were intended to be perforated with this spacing. Most of the stamps from the B plates, including, of course, the 24¢, 30¢ and 90¢, actually were perforated in rows 21 by 25mm apart and the exceptions are traceable either to the machine getting out of adjustment or to other causes probably connected with the perforating of the stamps from the A plates.

The designs of the 1851-56 series varied in size on the dies of the different denominations and although the 1¢ design was often not fully reproduced on the plates, much the same variation in size is found between the different denominations of the stamps themselves. In order that the B plates should print stamps properly spaced for satisfactory perforating it was necessary either to space some of the designs wider apart or to reduce the size of those that were too large. If the desired result could have been obtained by erasing parts of the stamp designs on the plate, why was not such erasure made on the 5¢ A plate (type I) and a larger interval between the stamps thereby obtained instead of making the new plate (2) on which the vertical intervals, *after* the alterations were affected, are no greater and are hardly as great as we find them on the first plate?

The writer inclines to the opinion that some peculiarity of the perforating machine was the deciding factor in the decision to bring the centers of the stamps closer together vertically and remove parts of their designs instead of making the B plates suitable for printing perforated stamps by laying out the stamp designs on them with greater vertical as well as greater horizontal intervals. If the extreme distance from the outside set of pins at one end of the perforating machine to the outside set at the other



*Left, Sc. 36, plate 1; right, Sc. 36B, Pl. 3*



*Left, Sc. 36, plate 1, narrow spacing all around; Right, Sc. 36B, Pl. 3, with wider vertical spacing*

end of the machine was no greater than the distance from the bottom of the bottom stamp to the top of the top stamp on any pane of the B plates (about 10 inches), this limit of the size of a sheet which the machine could perforate would give us a satisfactory reason explaining why many of the stamps from the B plates are closer together from center to center vertically than the same denominations on the A plates.

No information as to what kind of a machine the perforator was, or how it worked, is available. The generally accepted idea is that the perforating device consisted of a cylinder of the required length having parallel rows of perforating pins set in it circumferentially at the proper intervals. If the position of the sets of pins could not be adjusted along the cylinder, two cylinders, one for horizontal

perforating and one for vertical perforating, would be required for each machine. If the sets of pins were adjustable, only one cylinder would be necessary.

Whether there was one machine or two, or one machine with two cylinders, or with only one adjustable cylinder, stamps with rows of perforations spaced too narrow or too wide either horizontally or vertically might sometimes be produced. Such freaks would happen whenever a sheet was run through the wrong cylinder or through any cylinder when it was not in proper adjustment for that sheet. Freaks with spacing either too narrow or too wide could also be made by a row of pins not set in the exact middle between the adjoining rows and this incorrect adjustment would produce a row of stamps too wide or too high adjoining a row too short too narrow. The number of possibilities is almost endless and genuine freaks of this kind are not of great rarity.

The defect in the suggested explanation regarding the arrangement of the designs on the B plates is apparent as soon as the stamps from the A plates are examined. It is quite impossible to reconcile the theory of one perforating machine whose extreme limit was ten inches with the spacing found on many of the stamps from the A plates. Either the short vertical spacing and alterations of the stamp designs as found on the B plates were not for the purpose of making the stamps from the B plates fit the perforating machine or else the machine must have been altered to increase the size of the sheet of stamps, (properly half sheet, or pane), which it could take. No other conclusion except that there was *another perforating machine*, of greater width, seems possible.

Stamps from the A plates could have been perforated vertically by the same machine on which the B plate stamps were perforated if this machine was adjustable, but the 5¢ stamps from plate 1 could not be well perforated horizontally on a machine whose limit was 10 inches. The type I five cent stamps are too tall. The average distance between the horizontal rows of perforations on the 5¢ type I stamps is fully 26 mm— one millimeter more than the standard spacing from top to bottom of the B plate stamps. One millimeter is not a great deal but multiplied by ten it becomes considerable, and if the first stamp in a row was perfectly centered a spacing one millimeter too short would bring the last row of perforations through the middle of the tenth stamp. In general, the spacing of the designs on the A plates made the use of perforations spaced 21 by 25mm out of the question. All the A plate 5¢, 10¢ and 12¢ stamps were too narrow and too close together horizontally and the 5¢ stamps were too high. Many of the 1¢ stamps were also too high.

From row to row of perforations the narrowest spacing is found on the A plate 5¢, 10¢ and 12¢ stamps and is about 19mm. The greatest vertical spacing is about 26mm. Assuming there were two perforating machines, one spaced to perforate rows 21 and 25mm apart and the other for rows 19 and 26mm apart, and allowing for the usual variation, all the various sizes and spacings of perforated stamps from both the A and B groups of plates could be pretty well accounted for. The narrow 5¢, 10¢ and 12¢ stamps would come from the 19 mm cylinder; some 1¢ A plate stamps and the type I five cent stamps would have been perforated horizontally on the 26mm cylinder; and the 10¢ type I and 12¢ stamps would have been perforated horizontally on the 25mm cylinder, the same as the stamps from the B plates, which latter stamps would have been perforated vertically on the 21mm cylinder of the same machine.

It should be noted that the standard B plate spacing of 21mm wide is considerably wider than the designs of the 1¢ type III, 5¢ plate 2, 10¢ type II and 24¢ stamps and that the standard height is only slightly more than the designs of these stamps, hence normally these stamps have wide margins at the sides and very slight margins, or none at all, at top and bottom. On a well centered normal copy of any perforated 5¢ from the first plate (type I) the perforations will barely clear the design on all four sides, but all normal 5¢ stamps from the second plate (incomplete types) have unnecessarily wide margins at the sides and are without appreciable margins at top and bottom. A 5¢ plate 2 with bare margins at top and bottom like those normally found at the sides simply cannot exist and the same applies with almost equal force to other B plate stamps. One is indeed perplexed to understand why the 10¢ design was altered at the sides since the complete 10¢ design is no wider than the 5¢ and is even narrower than the 12¢. Removing the outer line from the 12¢ would have but slightly altered its appearance.

The reprints of the 1857 series made for the Centennial Exhibition in Philadelphia were all perforated 12 and in this way can readily be distinguished from the originals. Luff states: "The reprints were the work of the Continental Bank Note Co. of New York. In 1874 probably about August there were sent to the latter company the original plates of the 5, 24, 30 and 90¢ stamps and the transfer rolls of the 1, 3, 10 and 12 cents. By means of the

latter, new plates were made for those four values. These plates had neither imprint nor plate number and contained one hundred stamps each.... On the new plates the stamps were set far apart, so that the sheets might be perforated by the machines then in use without damage to the designs, as would have happened had the original plates of these values been used."

Considerable variation in the spacing of the perforation for the reprints was necessary in order to obtain the result desired and as the 1¢ reprint contains the full design and is the largest design in the series, specimens of this reprint are larger than any of the others. The 5¢ reprint was printed from plate 2 and therefore shows the same seven varieties of the incomplete type in the same order as they are found in the original stamps from this plate. The same wide margins at the sides on the 5¢ and the 24¢ as are found on the original stamps are noted and the lack of margins at the top and bottom on both of these values is somewhat accentuated by the larger perforation holes.

*The above article was reproduced as it first appeared. In the 2008 Scott Specialized (and partially repeated in the 2009 book), Scott Editor James Kloetzel writes:*

**"The plates used for the [3¢] perforated types III and IV stamps, Scott Nos. 26 and 26A**

"In early 1857, experiments were conducted to perforate the stamps printed from the existing plates. These experiments were made using stamps made from the plates used for types I (no inner lines) and type II (with recut inner lines). In both, the perforations usually impinged on the design both vertically and horizontally. A decision apparently was made that perforated stamps would be issued made from existing plates (Nos. 25 and 25A), but new plates should be made allowing for larger margins.

"Consequently, Toppan, Carpenter & Company made new plates with more space between the horizontal and vertical images of the stamps to allow for the perforations. Part of this extra space was gained by eliminating the horizontal frame lines from the top and bottom of the designs. This was accomplished by removing these lines from the transfer rolls.

"Plates 9 through 28 were then made using the modified transfer rolls. Plates numbered 9 and 12-28 all show designs with vertical frame lines that run continuously from the top to the bottom of the plate on both the left and right sides of each stamp. Plates 10 and 11, however (both of which have an early, intermediate and late state) were made with the vertical frame line at left and right running only from the top to the bottom of each individual stamp design, being broken between stamps. There is no known documentation explaining why these two different styles were adopted for adding the side frame lines.

"Both of these types were combined in a single Scott listing until 1955, at which time the more common stamps with continuous vertical frames lines were made the major Scott number 26, while the less common stamps from plates 10 and 11 were listed as No. 26a (26A from 1958-61). Beginning in this 2008 U.S. Specialized catalogue, Scott once again is raising the 3¢ perforated stamps with no top or bottom frame lines and non-continuous side frame lines to major-number status as No. 26A."

*We invite readers to further bring this article up to date.*  
**JFD.**