Conclusions on Misplaced Digits Found in the Liberty Seated Dime Series

by

Gerry Fortin

Over the past ten years there has been an increased awareness that the Liberty Seated dime series contains a significant number of varieties with misplaced digits called MPD varieties. During the late 1970s, Kam Ahwash culminated his die variety research in the release of the Encyclopedia of United States Liberty Seated Dimes. In that important reference book, Ahwash listed only one MPD variety, an 1868 A-5 blundered proof die. This variety raised the awareness level in the collecting community that misplaced digits did exist for Seated dimes. LSCC members began the search for misplaced digits during the 1980s with the journal actively utilized to document each new discovery. With the release of Brian Greer's book, The Complete Guide to Liberty Seated Dimes, a consolidation of known MPD varieties was made available to collectors and dealers. This publication further fueled the investigation into this new phenomenon. Greer's book presented a total of twelve blundered dates including the 1868 A-5 variety discovered by Ahwash. Interestingly, the majority of misplaced digits listed by Greer were extra digits located on either Liberty's gown or in the base of the rock. Few listings of extra digits in the denticles were featured. But Greer's book added fuel in the hunt to discover latent misplaced date punches within the Seated dime series. Today, the MPD discovery list has expanded to 37 varieties with undoubtedly more to come as a result of the publication of the Misplaced Dates book by Kevin Flynn and supporting authors.

Many collectors have raised questions about the possible causes of blundered dies or misplaced digits in the Seated dime series. Several theories on how these varieties were created have been offered by LSCC members in recent years. Del Romines described the potential misuse of a date alignment jig for punching dates into production dies in Issues #56 and #57 of the journal. Chris Pilliod discussed the potential testing of die steel hardness with the date punch by a mint die sinker prior to the application of the final date punch into the obverse die in Coin World in August 1996. In order for the author to form an alternative or supporting theory on the source of blundered dies, it was considered necessary to develop a systematic analysis of the appearance of Seated dime misplaced digits over the entire series.

The occurrence of Seated dime misplaced digits is characterized through an Attributes Map shown in Table 1. The construction of an MPD Attributes Map allows for the efficient analysis of any patterns or systematic misplacement tendencies for stray date punches across all mintage years of the Liberty Seated dime series. Key attributes for each MPD variety were collected and assembled into the following categories:

1. Are the misplaced digits found on the main device, which includes Liberty's shield, gown and base or are they located in the denticles below the existing date?
2. Are the misplaced digits observable as the residual tops or residual bottoms of the digits in the date punch?
3. Are the misplaced digits found to be in a parallel alignment to the existing date in terms of position on the obverse die or are they shifted right or left with respect to the existing date?

The MPD varieties presented in this article include all known examples at the time of the preparation of the Seated dime chapter for the Misplaced Dates book. Each MPD variety was reviewed with pertinent observations recorded against the predefined categories of main device versus denticle location, residual tops versus residual bottoms of the stray punches and the position of the misplaced digit with respect to the existing date. The results were then organized and mapped against the mintage year of each dime. In Table 1, the reader will note that the MPD Attributes Map is separated into two sections. The first section lists misplaced digits occurring on the main device and the second section lists misplaced digits within the denticles. The extraneous digits are then tabulated under column headers that

Table 1

Liberty Seated Dimes - Misplaced Digits Analysis

On Main Device			Misplaced Digits Attributes Map					
			Shifted Left		Parallel To Existing Date		Shifted Right	
Date	Misplaced Digits	Flynn ID	MPD Top	MPD Bottom	MPD Top	MPD Bottom	MPD Top	MPD Bottom
1851	Extra 1 in Shield	MPD-001	1	.	.	.	.	.
1856	Extra 856	MPD-001	.	856	.	.	.	.
1856	Extra 8	MPD-002	.	.	.	.	8	.
1859	Extra 9	MPD-001	.	9	.	.	.	.
1868	Extra 1s	MPD-001	.	.	.	.	.	1
1872	Extra 2	MPD-001	.	2	.	.	.	.
1875	Extra 5	MPD-001	.	1	.	.	.	.
1875	Extra 8	MPD-003	.	.	.	.	.	8
1875	Extra 8 in base	MPD-004	.	8	.	.	.	.
1876-CC	Extra 76	MPD-001	.	76	.	.	.	.
1877	Extra 1	MPD-001	.	.	.	.	.	1
1883	Extra 8	MPD-001	.	.	8	.	.	.
1888	Extra 888 in Base	MPD-001	.	.	888	.	.	.
1888	Extra 8 in Shield	MPD-002	.	8	.	.	.	.
1888-S	Extra 8	MPD-001	.	.	8	.	.	.
1889	Extra 8	MPD-001	.	.	8	.	.	.
1890	Extra 8 or 9	MPD-001	9	.	8	.	.	.
1890	Four Extra Punches	MPD-002	90	.	80	.	.	.
1890	Extra 9 or 0	MPD-003	9	.	.	.	0	.
1890	Extra 90 in Shield	MPD-004	90	.	.	.	.	.
1890-S	Extra Punch	MPD-001	9	.	8	.	.	.
1891	Extra 1	MPD-002	.	.	.	.	.	1

first delineate the position of the MPD with respect to the existing date. Each of the columns is further broken down into whether the MPD exhibits the residual tops or bottoms of the original date punch.

Findings

The MPD Attributes Map clearly identifies trends in the placement of these extraneous digits. The most significant findings are as follows with reference given to the MPD identification in Kevin Flynn's new book on MPD varieties.

1. Seated dimes minted from 1878 to 1882 have yet to produce an example of a misplaced digit. More important however, is the observation that the placement of the misplaced digits is systematically different before and after this 1878 to 1882 delineation time frame. This is noted primarily for misplaced digits on the main device.
2. Most of the misplaced digits located on the main device from the years 1851 to 1877 are the residual bottoms of these digits while most of the misplaced digits discovered on coins minted from 1883 to 1891 are the residual tops of these digits. The two exceptions in the early years are the 1851 MPD-001 with the top of an extra 1 in shield and the 1856 MPD-002 with the top of an 8 in gown. For the later years, the two exceptions are the 1888 MPD-002 with the bottom of an

Table 1

Liberty Seated Dimes - Misplaced Digits Analysis

In Denticles

			Misplaced Digits Attributes Map					
			Shifted Left		Parallel To Existing Date		Shifted Right	
Date	Misplaced Digits	Flynn ID	MPD Top	MPD Bottom	MPD Top	MPD Bottom	MPD Top	MPD Bottom
1847	Extra 7	MPD-001	.	.	7	.	.	.
1873	Extra 3	MPD-001	3	.	.	.	.	.
1875	Extra 1	MPD-002	.	.	.	.	18	.
1876	Extra 18	MPD-001	.	.	.	.	18	.
1877	Extra 18	MPD-002	.	.	.	.	18	.
1877-CC	Extra 7	MPD-001	7	.	.	.	.	.
1883	Extra 8	MPD-002	8	.	.	.	8	.
1883	Extra 8	MPD-003	8	.	.	.	8	.
1885	Extra 18	MPD-001	.	.	18	.	.	.
1885	Extra 8	MPD-002	.	.	8	.	.	.
1886	Extra 8	MPD-001	.	.	8	.	.	.
1886	Extra 88	MPD-002	.	.	88	.	.	.
1890	Extra 8	MPD-004	.	.	.	.	8	.
1891	Extra 8 or 9	MPD-001	9	.	.	.	8	.
1891-O	Extra 89	MPD-001	.	.	89	.	.	.

extra 8 in shield and the 1891 MPD-002 with the bottom of an extra 1. For the 1891 MPD-002 however, one must question whether the extra 1 is from a Seated dime date punch.

3. Again the two time periods from 1851 to 1877 and from 1883 to 1891 demonstrate another important difference. For the earlier years, the bottoms of the misplaced digits are located in a shifted right or shifted left position with respect to the existing date. The height of the misplaced digits above the existing date appears to be random in nature. During the later years, the tops of the misplaced digits are either located parallel to the existing date or shifted left from the existing date. All of these misplaced digits are typically located in the gown, base of the rock or shield at an equivalent height above the date.
4. The misplaced digits located in the denticles presented limited commonalities. Interestingly, all misplaced digits in the denticles are residual tops of digits. During the later years, the majority of the misplaced digits within the denticles are aligned parallel to the existing date. This matches one of the two position modes for misplaced digits located on the main device.

Conclusions

The findings from the MPD Attribute Map reveal systematic characteristics that allow for speculation as to the origin of extraneous date punches. The consistency of these extraneous punches would support theories relating to erroneous equipment usage in the die preparation process. From considerable operational experience in semiconductor manufacturing, equipment related malfunctions or errors typically produce altered results that are fairly consistent and predictable over a period of time. The same could be expected for the die preparation process at the Philadelphia mint.

1. From the summarized findings, it can be concluded that different Seated dime die preparation methods were utilized for the period from 1851 to 1877 compared to the period from 1883 to 1891. We see a large number of blundered dies in the high mintage years from 1883 to 1891 with consistent tops of misplaced digits in the gown and shield area. These digits are either parallel to the existing date or shifted left relative to the existing date. Misuse of a date punch alignment jig should be further explored as a potential explanation for these blundered dies. This challenge will be left to other die variety specialists.
2. The theory that die sinkers tested the hardness of the die steel for a group of working dies prior to application of the full date punch to the die is difficult to support with the findings of this analysis. One would expect to see random occurrences in the positions of the misplaced digits if the testing occurred without a date alignment jig since any manual placement of a date punch on a die would be subject to significant human variation. Instead the findings from the MPD Attribution Map indicate a repeated pattern relationship for certain mintage years and do not easily support this theory.