



Attributing United States Coin Die Varieties

An Introduction

Areas of Variety Attribution

There are two basic disciplines of variety attribution with respect to US coins. Each requires a somewhat different set of skills.

- The first area pertains to dies produced using extensive hand punching of the lesser design elements. These include all of the Liberty Bust types coined from 1793 until the mid- to late 1830s. The presses of this period simply were not powerful enough to transmit the entire design in the die-making process.
- The second area concerns dies in which nearly the entire design was hubbed, leaving only the date and mintmark to be hand punched. Such coins were made from the late 1830s until fairly recently, but since 1990–91 all features of the die have been fully hubbed with almost no variation beyond that caused by the occasional double-hubbed die.

Attributing Varieties on Hand Punched Dies

On early US coins, only the central devices were impressed into the die using a hub. These typically included the bust of Liberty and the figure of an eagle.

Liberty's hair and the eagle's feathers were often touched up afterward with a graving tool to bring them out more fully. Small elements, such as the leaves and stems of the wreath, were then added with individual punches.

The placement of stars, legends, the denomination and the date was also done with hand punches. The engraver used a compass to inscribe a circle for arranging these elements as neatly as possible, but their relative positions always varied enough that a numismatist may distinguish one die from another.

Die Marriages

These early coins are attributed by each known combination of obverse and reverse die. For example, Overton variety 101 of the 1803 half dollar combined Obverse 1 with Reverse A, while O-102 used that same obverse die with Reverse B. This durable obverse was paired yet again with Reverse C to create O-103.

Such combinations of dies are known as die marriages, and each marriage is assigned a unique number for that date.

When a variation occurs within a particular die marriage, it is assigned a sub-letter. For example, O-102 is also known with a die crack on the reverse, and this is labeled O-102a.

Examples of Wreath Cent Varieties

Shown are two 1793 Flowing Hair, Wreath Cents that seem to be very similar. Closer examination reveals that only the portrait of Liberty is essentially identical, with just minor retouching by hand. The sprig of leaves and the date, however, were clearly punched separately of the main device and show differences in their relative shapes and positions. The coins are Sheldon variety 9 (left) and S-10 (right).



Reverses of S-9 and S-10

The reverse dies for Wreath Cents were very complex and required extensive hand punching of the small elements. Even the bow securing the wreath was hand punched and differs from one die to the other. This design was greatly simplified later in 1793 to eliminate so much post-hubbing work.

Sheldon varieties are sequential for the entire series and do not revert to the first number for each successive date. Other attribution systems, such as Overton's for early half dollars, begin anew with each date, so different dates will each have variety O-101.



Differing Die Elements

These two 1799 Eagles provide another instance in which the coins initially look identical, but closer inspection reveals that the coin on the left had its 13 stars applied with a larger punch than the one used for the coin on the right. As a result, the Large Stars variety has overlapping star points, while the Small Stars variety has its stars lined up point to point.

The punches used for the letters and numerals were the same for each die, though their relative positions vary a bit.



Die Marriages

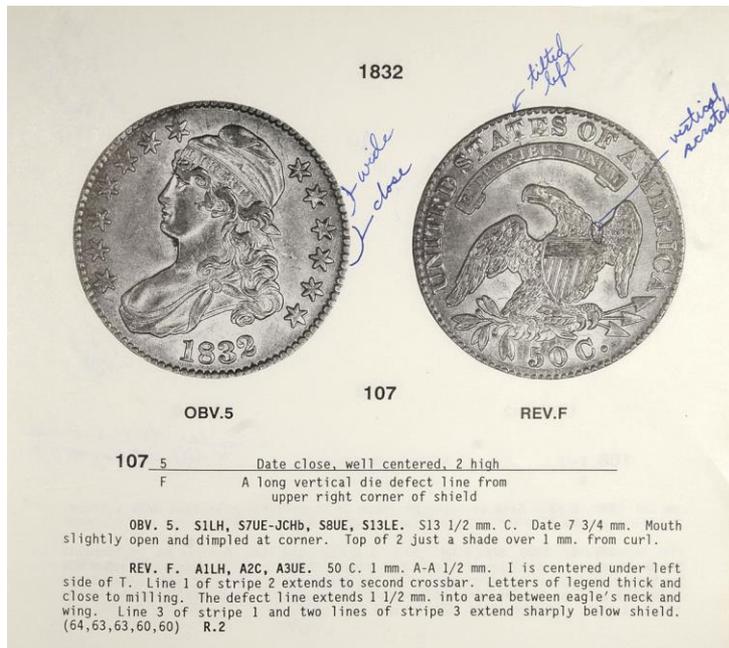
Overton varieties O-104a and O-105 for 1826 half dollars used a single obverse die but different reverse dies. Each Overton number identifies a separate die marriage.



Good Books Are Essential

Having the right book and learning how to use it is essential in attributing varieties. This is particularly true of early US coins, as very little of this information is available online.

Though some of these books are out of print and may be costly, a professional attributor has no choice but to mark them up with his notes. These make the attribution process far easier, and it's the only practical way to identify large numbers of coins quickly.



Attributing Varieties on Fully Hubbed Dies

By 1837, only the punching of dates and mintmarks was performed by hand. Even these features eventually became a part of the hub. The new coins series introduced starting in 1907 all included a date as part of the hub, and thus the position and style of the date never varied. This date was altered as needed each year by hand engraving into the master die for that year.

Starting in 1909, existing coin designs of older types had their dates punched fully into the master die. So, while they might vary a bit from year to year, there would be no variations within a single year. This signaled the end of Repunched Dates and Misplaced Dates.

Mintmarks, too, became a feature of the hub, starting in 1985 with proofs and extending to currency coinage during 1990–91. Today's coins vary only by accident, a goal that took 200 years to achieve.

Types of Varieties Found on Dies That Were Almost Fully Hubbed

Perhaps the most popular varieties are those concerning date placement. These occur when the date is punched two or more times. If punches bearing the same date were used, the resulting doubling is called a Repunched Date (RPD).

Repunched Dates



1857 / 57 Eagle Cent
FS-103



1866 / 1866 Shield Nickel
FS-302



1849/1849 Gold Eagle
Breen-6888

Overdates

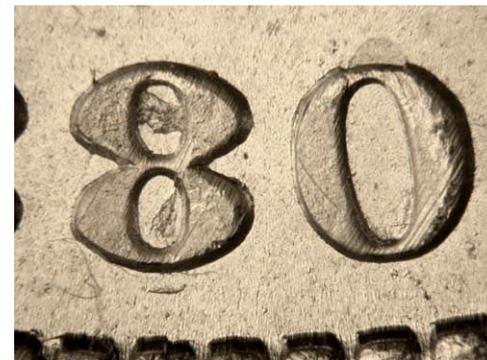
When a Repunched Date results from the use of different dates, it is known as an Overdate (OVD).



1858 / 7 Flying Eagle Cent
FS-301



1883/1882 Shield Nickel
FS-301



1880-CC 8/7 Morgan Dollar
VAM-6 (Low 7 Overdate)



1887/6 Morgan Dollar
VAM-2



1862 / 1 Coronet Quarter Eagle
FS-301



1881 / 1880 Coronet Half Eagle
FS-301

Misplaced Dates

When date numerals miss the target zone altogether, they are known as Misplaced Dates (MPD).



- 1897 Indian Head Cent FS-401
- 1872 Seated Liberty Dollar Breen-5491
- 1847 Coronet Half Eagle FS-302
- 1866-S Motto Double Eagle FS-1301

Repunched Mintmarks

Mintmarks continued to be punched into each working die with hand tools until late in the 20th century. Like dates, these were often punched two or more times, until the die sinker was satisfied with both their placement and depth. Below are several Repunched Mintmarks (RPM) and one Over Mintmark (OMM).



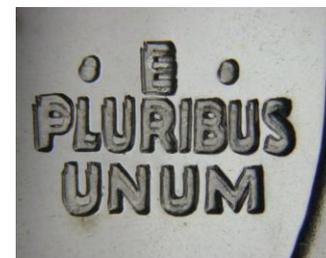
1956-D / D 1c FS-501, 1936-S / S 5c FS-501, 1959-D / Inv D 10c FS-501, 1877-S / Hor S 25c FS-501
1900-O / CC \$1 VAM-12, 1856-S / S \$1 FS-501, 1846-D / D \$5, 1915-S / S Panama-Pacific 50c FS-502

Doubled Dies

This is a catch-all term for any variety resulting from multiple hubbings of a die that do not match completely. Until the 1990s, the US Mint required two or more impressions from a hub to create a die. If the impressions were misaligned with one another, or the hubs were not identical, the result was a doubled image that transferred to each coin. Multiple images may appear, with as many as six being observed for some dies. These can be quite collectable.

With coin types introduced in 1907 and later, Overdates (OVD) sometimes resulted when the successive hub impressions carried different dates. This is because the dates were included in the hub and not punched into the die. Examples of this type of OVD include the 1918 / 7-D nickel, the 1942 / 41 dime and the 1909 / 8 Double Eagle.

Examples of Doubled Dies



1873 Closed 3 1c FS-101, 1955 1c FS-101, 1868 5c FS-106, 1916 5c FS-101
1873 10c FS-101, 1942 / 41 10c FS-101, 1942-D 25c FS-101, 1961 50c FS-801
1888-O \$1 VAM-4, 1878 7/8TF \$1 VAM-38, 1889 \$1 (UNL), 1909 / 8 \$20 FS-301

When Doubled Dies Are Not Doubled Dies

The most frequent error made by inexperienced variety enthusiasts is mistaking minor forms of doubling for true Doubled Die varieties. Learning to tell the difference is essential. Below are several examples of doubling that did not occur during the hubbing process:



Above, left: An extreme case of strike doubling (also called mechanical or ejection doubling)

Above, right: A more typical example on a 1964 quarter.

Left: An example of die erosion doubling that most would take for a true doubled-die obverse.

Clashed Die and Abraded Die Varieties

True die varieties occur during the die-making process, but there are other oddities that result from damage to a die or from the normal wear and refinishing that dies experience before being retired.

- **Clashed Dies** came together without a planchet between them and received inverted impressions of one another.
- **Abraded Dies** have been vigorously repolished to remove some flaw, such as die-clash impressions. They may be lacking some shallow features of the design that were removed by such polishing.

For the most part, Clashed Dies and Abraded Dies are considered routine states of a die and do not command much collector interest. There are some exceptions, however. Collectors of Buffalo Nickels seek coins that have had the Indian's shallow, small feather polished away, and collectors of Morgan and Peace Dollars have a particular fascination with Clashed Dies, even to the point of writing specialized books about them.

Clashed Dies



On this 1857 Eagle Cent, the reverse die clashed with the reverse die of a Seated Liberty Quarter! This is an instance in which the resulting coin is highly desirable (FS-901).



This 1913-S Type 1 Buffalo Nickel shows "chin whiskers" from a routine die clashing. It's common and has no added value.



Letter E of "liberty" from the obverse was impressed into the reverse die of 1888-O Morgan Dollar VAM-1A. It is highly desired.

Abraded Dies



- Perhaps the most famous of Abraded Die varieties are the very popular 1922 “No D” Cent and the 1937-D 3-Legged Nickel.
- Of some interest, but far lesser premium value, are the over-polished dies that produced the 1941 “No AW” Proof and 1966 “No FG” Special Mint Set Half Dollars.