

NOVA CONSTELLATIO

Identifying the First American Coin

The prototype for United States coinage can be determined by die states and documents written by those involved in its conception.

ON APRIL 2, 1783, Robert Morris recorded in his diary the delivery of “a Piece of Silver Coin being the first that has been struck as an American Coin.”

Morris, who was responsible for financing the Revolutionary War, had been appointed first Superintendent of Finance of the United States in 1781. Shortly after taking office, he set about devising a new system of coinage for the fledgling nation.

For nearly two centuries, North America had been a financial Tower of Babel. English law forbade the colonies from striking gold and silver coins, and the mercantile system operated in such a way that British coinage was scarce outside the mother country. Consequently, a hodgepodge of Spanish, French, British and Portuguese currency circulated in the New World. These coins were struck to different standards of weight and fineness, and the existing European monetary systems were forced to rely upon complicated fractional math that had been in use since the Roman Empire.

Morris determined that the highest common divisor among the money commonly encountered

throughout the former colonies was a quarter grain of silver. He established this as his basic unit, and—in a stroke of genius—abandoned fractions altogether and proposed the first monetary system based on decimal math in Western Europe and North America.

Alexander Hamilton visited Morris on April 9, and the two subsequently corresponded on “the subject of the Coin.” Morris then pressed Dudley to “produce the Coins to lay before Congress,” which the latter delivered on April 22. This set was then sent

to Congress, and later forwarded to Thomas Jefferson for his comments.

Hamilton and Jefferson became the principal architects of the U.S. monetary system, both advocating the adoption of Morris’ decimal structure. Over the next century and a half, the dollar would become the world’s reserve currency, and decimal coinage would supplant all other monetary systems completely by 1973.

Today, virtually every major financial transaction in the world is carried out using money that is



◀ **THE 1783** *Nova Constellatio* silver 500-unit quint with a plain obverse is unique.

Not Actual Size

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arguably descended from Morris' prototype.

Despite its influential role, Morris' coin was forgotten. While historians and numismatists have been aware of his diary entry since the 19th century, no researcher has ever attempted to determine exactly which piece of silver changed the nature of money and, consequently, the world we live in. What follows is the definitive identification of Morris' first American coin. The evidence needed to reach this conclusion can be found in the writings of Morris and Jefferson, the papers of the Continental Congress, and the forensic evidence contained within the coins themselves.

Background

On Thursday, February 21, 1782, Congress passed the following resolution:

That Congress approve of the establishment of a mint; and, that the superintendent of finance be, and hereby is directed to prepare and report to Congress a plan for establishing and conducting the same.

Morris immediately put mechanic Benjamin Dudley to work designing mint machinery. Dudley, who had been employed at a mint in Europe, was discovered in Boston by John Bradford, an agent of the Continental Congress. Bradford wrote to Samuel Huntington, the first president of Congress under the Articles of Confederation, suggesting that Dudley would be "an important acquisition to this infant nation." Huntington evi-

dently agreed with this assessment, as Dudley's contact information was passed along to Robert Morris, who convinced the mechanic to move to Philadelphia and brought him into the official employ of the U.S. government as soon as Congress had resolved to establish a mint.

Unfortunately, financial crises plaguing the nation delayed the project, and it wasn't until April 2, 1783, that Morris recorded having a significant meeting with Dudley: "I sent for Mr. Dudley who delivered me a Piece of Silver Coin being the first that has been struck as an American Coin."

After meeting and later corresponding with Alexander Hamilton about "the Subject of the Coin," Morris contacted Dudley at least twice more, pressing him to "produce the Coins to lay before Congress."

On April 22, "Dudley sent several Pieces of Money as Patterns of the intended American Coins" to Morris. This set was transmitted to Congress, where it remained until it was delivered to Thomas Jefferson the following year. Jefferson examined the coins and returned them to Secretary of Congress Charles Thomson, who kept two of the pieces, evidently dispersing the rest.

Set Composition

While Morris' records do not indicate the composition of the set, his monetary plan called for the following denominations: a silver 1,000-unit mark, a silver 500-unit quint, a silver 100-unit bit, an 8-unit copper and a 5-unit copper. The set remained with Congress until 1784. In March of that year, the



▲ **FOUR OF THE** coins included in the set delivered to Congress were (from left) the Nova Constellatio 5-unit copper, a 100-unit bit, a 500-unit quint and a 1,000-unit mark. (Morris' initial plan also called for an 8-unit copper.)

Not Actual Size

Despite the fact that both the first coin and the Congressional set were struck and delivered to Morris within a one-month period, two distinct obverse design types exist.

PHOTOS: PCGS COINFACTS



▲ **THE EYE AND RAYS** on the “Plain Obverse” design (left) are more elegant and exact than those found on the “With Legend” type, which also lacks paired rays.

Not Actual Size

copper 5-unit piece was sent via the ship *Pilgrim* to Samuel Curwen, a loyalist in London, who wrote the following in his journal:

Mr. Bartlett presented me with a medal struck in Philadelphia: in a round compartment stands, “U. S 5 1783” round “Libertas et Justitia;” on the other side, in the center, an eye surrounded by a glory; the whole encompassed by thirteen stars, with the legend “Nova Constellation” [sic].

In the letter enclosing the set of silver coins transmitted to Jefferson for examination, Morris suggested, “Suppose that we call the largest Piece a Dollar the smallest a Shilling and that the Shilling be divisible into an hundred Pence.”

Upon returning the set to Thomson, Jefferson recorded its value as “1.8 D.” This amount has been generally accepted to mean \$1.8 or 1,800 units. Given Morris’ recommendation to call the largest piece a dollar, this assumption appears to be well-founded. Thomson saved two of the coins in a

compartment in his writing desk—a 1,000-unit mark and a 500-unit quint. The only possible combination of silver coins including all three denominations yielding a total value of 1,800 units would be a mark, a quint and three bits.

Design Types

Despite the fact that both the first coin and the Congressional set were struck and delivered to Morris within a one-month period, two distinct obverse design types exist. One

type, now recognized in *A Guide Book of United States Coins* (the “Red Book”) as the “Plain Obverse,” is found on only one coin, a 500-unit quint. This version depicts the Eye of Providence surrounded by a glory of rays and 13 stars without any legend or motto. The other pieces—now known as the “With Legend” type—bear the words *NOVA CONSTELLATIO* above the Eye of Providence, glory of rays, and stars. (This nomenclature was adopted by the 2017 edition of the Red Book. Prior to that, the “Plain Obverse” was



▲ **CLOSE-UP VIEWS** of the rays found on the “Plain Obverse” type (top left) compared with those engraved on the “With Legend” coins reveal the precision with which the former is engraved compared to its cruder counterparts.



These variances clearly indicate that the obverse dies for the “Plain Obverse” and the “With Legend” quint were cut by different engravers.



Not Actual Size



PHOTOS: PCGS COINFACTS

▲ A COMPARISON OF the reverses of the “Plain Obverse” (top left) and “With Legend” (top right) quints reveals evidence of lapping in the size of the beads and thickness of the letters. Re-engraving of the original letter I (bottom left) in the word JUSTITIA can be seen clearly in its lower left serif (bottom right).

called Type 2, while the “With Legend” was known as Type 1.)

Known Examples

Today, surviving pieces from this first attempt at a coinage for the United States include a silver

mark, two silver quints, three silver bits and a 5-unit copper. Only one of the silver pieces—a quint—is of the “Plain Obverse” design. The remaining silver specimens—a mark, a quint and three bits—are of the “With Legend” type. It should be noted that a silver coin of one style, and a set comprising a mark, a quint and three bits of a different style are precisely what we would expect to find, based on Morris and Jefferson’s records.

Engraving Style & Die States

The engraving style of the “Plain Obverse” quint differs dramatically from “With Legend” specimens. The eye is cut in a more graceful, natural way, lacking the prominent, bushy eyebrow found on the other pieces. In addition, the rays are cut with precision, terminating in blunt ends with the longest rays arranged in pairs. The rays on the “With Legend” coins, however, are pointed and haphazard, with the longest rays unpaired. These variances clearly indicate that the obverse dies for the “Plain Obverse” and the “With Legend” quints were cut by different engravers.

Both the “Plain Obverse” and “With Legend” quints were struck using the same reverse die. A careful examination, however, reveals significant differences between the two.

The beads, letters and leaves on the “With Legend” quint are slightly smaller than those on the “Plain Obverse” specimen. The “With Legend” quint also has a hard, prooflike surface, while the “Plain Obverse” quint’s fields are unpolished. Die-polish lines are visible on the “With Legend” quint, but none are apparent on the “Plain Obverse” ex-



▲ THE BEADED BORDER on the obverse (left, top) of the “Plain Obverse” Nova Constellatio quint is similar to the beads on its reverse (left, bottom). The “With Legend” quint’s beaded border (right, top) has larger beads than those found on the “Plain Obverse” quint (right, bottom), suggesting it was created at a later date.

The obverse and reverse dies for the “Plain Obverse” quint were made at the same time, while the “With Legend” quint obverse die was produced at a later date than the reverse.

ample. Furthermore, re-engraving is visible on the “With Legend” reverse. It is most apparent at the lower left serif of the first I in JUSTITIA.

These features demonstrate conclusively that the reverse die used to make both coins was altered between striking the “Plain Obverse” quint and the “With Legend” specimen. Thus, the “Plain Obverse” coin was struck from an earlier state of this die, which means it had to have been made before the example that was delivered as part of the set presented to Congress on April 23.

Border Treatments

The beads on both sides of the “Plain Obverse” quint are of identical size and character, indicating that they were applied to the dies using the same punch, while the “With Legend” quint’s obverse has a border of square-shaped beads that are approximately two times the size of the beads on the shared reverse die. This suggests that the obverse and reverse dies for the “Plain Obverse” quint were made at the same time, while the “With Legend” quint obverse die was produced at a later date than the reverse.

The obverse and reverse borders also match on the 5-unit copper and the 1,000-unit mark, but similar to the “With Legend” quint, the obverse border for the 100-unit “With Legend” bit is composed of considerably larger beads than those seen on its reverse, suggesting that its dies might have been engraved at two different times as well. Interestingly, a side-by-side comparison of the “With Legend” quint’s obverse and the copper 5-unit piece shows an exact match of the beaded borders, suggesting that these dies were sunk at around the same time, using the same punches.

Two Engravers

The stylistic differences between the two design types, border variations and observations about die state are particularly revealing in light of the schedule of payments made by the government to the two Philadelphia engravers



▲ **THE BEADED BORDER** on the 5-unit “With Legend” piece (top) is similar to that on the “With Legend” quint (bottom), suggesting that these dies were sunk at around the same time with the same punches.

who finished dies for the project. On April 17, 1783, the government issued a warrant to Office of Finance Secretary John Swanwick, reimbursing him for his payment to David Tew for engraving two pairs of dies. On May 5, silversmith Abraham Dubois was paid for sinking and case-hardening an additional four pairs of dies. This being the case, we can ascribe the “With Legend” obverses, the 5-unit reverse die, and 1,000-unit reverse die to Dubois, as this group contains more than four dies that are stylistically consistent and used shared punches for the beaded borders. This leaves the 500-unit reverse die, the “Plain Obverse” quint die, as well as the 100-unit reverse (with smaller beads than the obverse) as products of Tew. The fourth die for which Tew was paid cannot be identified with certainty, but the mismatched beads on the 100-

◀ **THE DIES USED** to strike the “With Legend” quint were not the same size. The lip of metal around the reverse’s periphery (bottom) is caused by the larger obverse and gives the piece a capped appearance.

Not Actual Size



PHOTOS: PCGS COINFACTS

THE IMPORTANCE OF THE “PLAIN OBERVERSE” NOVA CONSTELLATIO

While the unique 1783 “Plain Obverse” Nova Constellatio quint is among the most historically significant of all United States coins, it also is one of the most important artifacts in the world. Nothing defines a nation and its society more than its coinage. Just as great documents like the Magna Carta or the Declaration of Independence established fundamental principles and tenets for Western culture, so does currency reflect a country’s most important ideals, becoming a primary vehicle for communicating its beliefs and values.

By examining the first coin of the United States and the new decimal monetary system that it ushered in, we gain valuable insights into the thinking of America’s Founding Fathers concerning the kind of society they wished to build. This first coin’s inscriptions and symbols had to contain the most important aspects of our fledgling democracy.

On the obverse, the central devices are:

- **The Eye of Providence**—symbolizing the Creator’s approval of our nation.
- **A circle of 13 stars**—a theme that has endured for 240 years and as an obvious reference to the new constellation formed by the original 13 colonies.

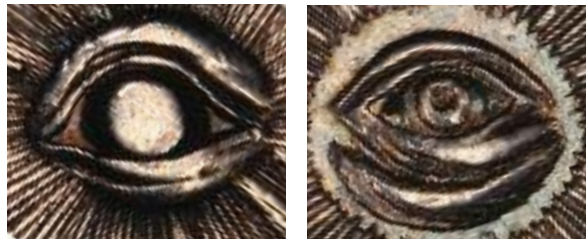
The reverse central inscription includes:

- **U.S.**—proclaiming our country’s name for the entire world to acknowledge.
- **The denomination**—in this case, 500 units or “quint.”

Along with the date, two of the most fundamental and defining principles for Americans then and now are prominently inscribed in Latin so all nations can understand:

- **LIBERTAS** (Liberty)
- **JUSTITIA** (Justice)

This coin, struck in precious silver, also was the first artifact to represent our nation’s adoption of a new decimal system for its currency. In fact, America was the first country in the Western world to use such a vital and enduring system.



PHOTOS: JOHN DANNREUTHER

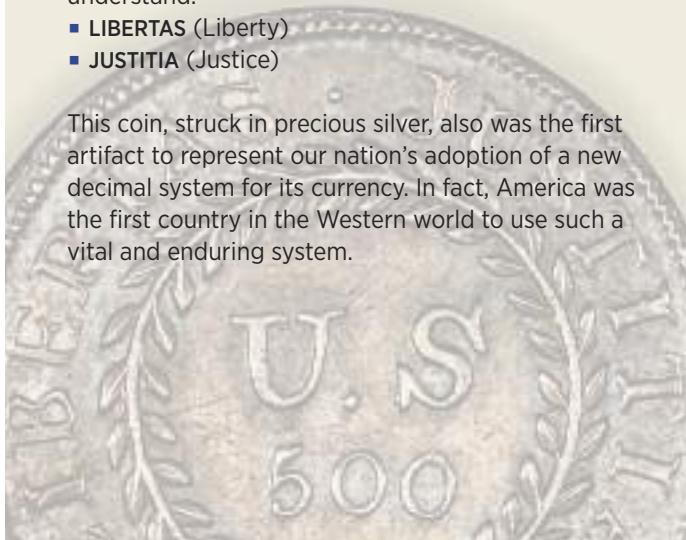
▲ **AFTER ROTATING** the eye on the “Plain Obverse” quint (top, left) to line up with the image found on the “With Legend” quint (top, right), John Dannreuther was able to match the size and shape of the irises, as well as portions of the surrounding rays, as evident in his overlay of the two images (bottom).

unit bit suggest that he might have engraved a 100-unit obverse die.

If Tew engraved four dies, including those used to strike the “Plain Obverse” quint, why would Dudley change artists after only four dies had been made, particularly when the single known obverse die engraved by Tew appears to be of a finer style than the other pieces? Genealogical research reveals that Tew’s young son, Thomas, died on April 1—the day before the first U.S. coin was delivered to Robert Morris. It appears as though the change in engravers and subsequent delay might have been caused by Tew’s tragic loss.

A Re-Engraved Obverse Die

Obviously, the “Plain Obverse” and “With Legend” quints do not share a common obverse design. However, there is physical evidence that the coins’ obverses were struck from a single die—albeit one that was extensively reworked between strikings. The “With Legend” quint exhibits a circular, convex area that roughly corresponds to the glory of rays found on the “Plain Obverse” quint. This feature suggests that the die may have been turned on a lathe to remove its design. In addition, a comparison of the obverse and reverse of the “With Legend” quint reveals that the dies used to strike it were two different sizes: the obverse die, ostensibly ground down and re-en-



graved, is visibly larger than the reverse die. The die face used to strike coins is often tapered, and if it were ground down, the diameter of its striking area would increase, resulting in precisely the sort of difference in circumference illustrated here.

While discussing this with numismatist and author John Dannreuther, I suggested that the central portion of the eye—which would be the die’s deepest point and is about the same size and shape on both coins—could be the only element of the original engraving left after the die was ground down. Dannreuther created a photo overlay of the coins to determine whether the areas were the same shape and size. After rotating the images, he was able to positively match the size and shape of the irises, subsequently identifying a pair of die defects that occurred on both coins. These defects later were confirmed by numismatist Andrew Lustig, who managed to locate a third shared defect, demonstrating that the “Plain Obverse” die had, in fact, been ground down and repurposed as the “With Legend” quint’s obverse die. In addition, Dannreuther discovered that portions of the rays found on the die’s “Plain Obverse” incarnation correspond to the “With Legend” quint’s rays. This is physical proof that the “Plain Obverse” quint must have been struck before the “With Legend” quint’s obverse die even existed.

Forged vs. Engraved Dies

In light of the existence of a re-engraved die, an examination of the payments made to Tew, DuBois and Eckfeldt is revealing. The new mint paid Eckfeldt to forge a total of five pairs of blank dies, while Tew and Dubois were paid to engrave a total of six pairs of dies. There were no additional payments for die steel, and, as this was the nascent mint’s first project, no discarded dies would have been on hand; therefore, two dies *must* have been ground down and re-engraved.

Planchet Weight Disparity

The “Plain Obverse” quint is the only coin in the group whose weight does not correspond to the standard established by Morris. The silver piece that was delivered to him on April 2 was ostensibly made to demonstrate that Dudley’s mint was capable of striking coins (rendering its weight irrelevant), while the examples sent to Congress were intended to be exact representations of Morris’ plan.

Conclusion

In a diary entry dated April 2, 1783, Robert Morris wrote that a “Silver Coin being the first that has been struck as an American Coin” was delivered to his office. On April 22, 1783, Morris

recorded the only other delivery of coins to the Office of Finance—a set of “Patterns of the intended American Coins” that he transmitted to Congress the following day. From Congress, the set was sent to Thomas Jefferson, who returned the coins to Charles Thomson in May of 1784.

Morris’ coinage system called for three silver denominations to be struck—a 1,000-unit mark, a 500-unit quint and a 100-unit bit, all of which are known today. Significantly, the 500-unit quint is the only denomination for which two distinct types have been identified, both of which share a common reverse. The “Plain Obverse” type (Type 2) has no inscription on its obverse, while the “With Legend” type (Type 1) bears the legend NOVA CONSTELLATIO.

Because the two quints share a reverse die, it is possible to determine which was struck first. The “Plain Obverse” quint’s reverse represents an earlier die state than the “With Legend” quint, therefore it must have been struck first. Furthermore, Dannreuther’s research demonstrates that the obverse die used to strike the “With Legend” quint was made by grinding down and re-engraving the die used to strike the “Plain Obverse” quint.

Consequently, the “Plain Obverse” quint had to have been struck before the die used to strike the “With Legend” quint had even been engraved. This indicates that the “Plain Obverse” quint was struck substantially earlier than the “With Legend” example, as grinding down and re-engraving the die would take some time. It also means that the “Plain Obverse” is the earlier design type, as both dies could not have existed simultaneously.

Thomas Jefferson’s account book records the composition of the Nova Constellatio set as 1,800-units. We know that the mark and “With Legend” quint were a part of this set, as they have unbroken provenance back to Charles Thomson. We can therefore conclude that the set must have comprised Thomson’s mark and quint, as well as three bits. This happens to be the total population of *all* known silver “With Legend” Nova Constellatio patterns.

The “Plain Obverse” quint could *not* have been a part of this set as it would have resulted in the set’s total value exceeding 1,800 units. The “Plain Obverse” quint must have been struck prior to the set, as it is of an earlier die state—and type—than the coin in the set. The only specimens delivered to Morris were the single “Piece of Silver Coin” and the Congressional set. Thus, the “Plain Obverse” quint must be the coin that Morris identified as “the first that has been struck as an American Coin.” ■