

E-Gobrecht

#### Liberty Seated Collectors Club

2024 Volume 20, Issue 10 October 2024 (Whole #237)

Stepping back in time to a bygone era of the Liberty Seated coin design period, both far and wide, and a little before & after...



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E-Gobrecht #237 - October 2024

# Liberty Seated Collectors Club

Uniting collectors of Liberty Seated coinage since 1973

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<u>Cover Photo</u>: An 1876-CC \$10 Gold Eagle, PCGS XF45, sold by Heritage October 6, 2022, lot 3263, realized \$15,600, contributed by Len Augsburger. Background by local photographer in MD.



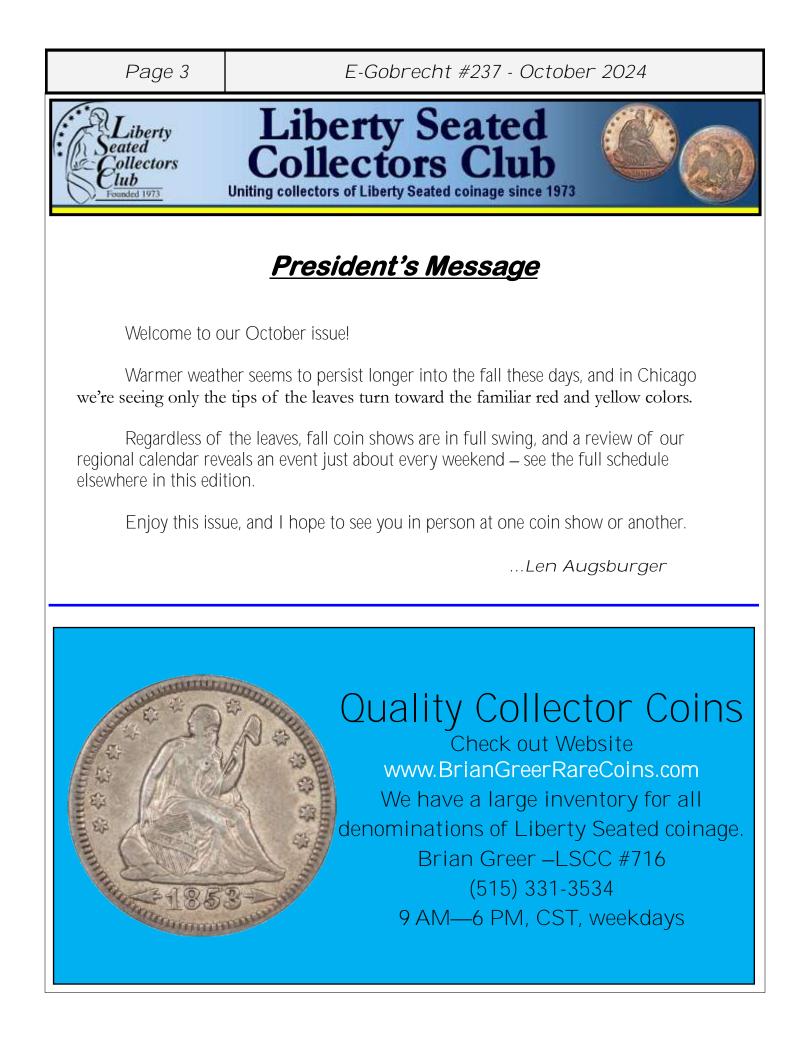
Welcome to the following new LSCC <u>Member(s) this month</u>:

> Lee McDonald Roy Kemp

There are currently <u>1493</u> active Subscribers to E-Gobrecht & counting including <u>355</u> local coin clubs across the country



The *E-Gobrecht* is an award winning informal electronic publication of the Liberty Seated Collectors Club (LSCC). The LSCC is a non-profit organization dedicated to the attributions of the Liberty Seated U.S. Coin series. The LSCC provides the information contained in this "electronic" e-mail newsletter from various sources "free of charge" as a general service to the membership and other subscribers with a numismatic interest. You do <u>not</u> have to be a LSCC member to benefit from this newsletter; subscription to the *E-Gobrecht* is available on a complimentary basis to anyone. All disclaimers are in effect as the completeness and/or accuracy of the information contained herein cannot be completely verified. Contact information for LSCC and this publication can be found on the last page.



## <u>Editor's View From the Rim</u>

# Life, Liberty & the Pursuit of Happiness



...РК

In November, Christian Gobrecht is getting well-deserved recognition by receiving a new grave marker at his gravesite donated by the Club in special honor of his memory and artistic contributions. The grave maker is being unveiled in an important, public ceremony at **Gobrecht's resting place near Philadelphia. Furthers details are provided on page 5 & 6.** Several dignitaries from the U.S. Mint, Gobrecht descendants, the press and individuals from all over the numismatic hobby are expected to attend. As a hobbyist and coin collector, you may not want to miss this important event if you happen to be in the area during the upcoming Whitman Fall Baltimore Coin and Currency Expo.

Location: Wednesday, November 13, 2024, 1 pm, Lawnview Cemetery, Rockledge, PA.

LSCC Member Application Form is at: <a href="http://www.lsccweb.org/LSCC\_Membership.pdf">http://www.lsccweb.org/LSCC\_Membership.pdf</a>



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## **Christian Gobrecht Grave Marker Unveiling**

Wednesday November 13, 2024, 1 PM

Lawnview Cemetery 500 Huntington Pike Rockledge, PA Lot 136, Section B, Grave 97

The Liberty Seated Collectors Club Leadership Team encourages all of our members and friends to join us in honoring <u>Christian Gobrecht</u>

at the unveiling of this new grave marker recognizing his contributions to American coinage.

# CHRISTIAN GOBRECHT

THIRD CHIEF ENGRAVER OF THE U.S. MINT (1840-1844)

> WIFE MARY DAUGHTER REBECCA SON CHARLES

IN GRATEFUL RECOGNITION THE LIBERTY SEATED COLLECTORS CLUB

Grave Marker Proof

<u>Special Note</u>: It is advised to not leave coins in your vehicle when coming to the grave site.

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## Liberty Seated Collectors Club to Unveil Christian Gobrecht Grave Marker

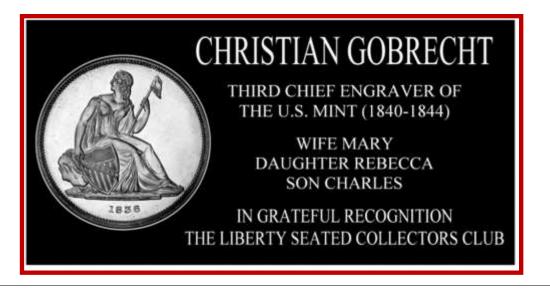
In conjunction with the Whitman Baltimore November show, the Liberty Seated Collectors Club will unveil a new headstone for the Christian Gobrecht family on <u>November 13, 2024, at</u> <u>Lawnview Memorial Park in Rockledge, PA on November 13 at 1 P.M.</u>

Although most often associated with Liberty Seated coinage, Christian Gobrecht (1785-1844) reworked the entire series of U.S. coinage during his brief tenure with the Mint, notably beginning with the Gobrecht dollar with 1836. Gobrecht further contributed the long-running Classic Head gold designs, in addition to the Braided Hair series of copper cents and half cents.

Originally interred at Philadelphia's Monument Cemetery in north central Philadelphia, the remains of Gobrecht and his family were moved in 1956, when the Monument Cemetery property was ceded by the city of Philadelphia to Temple University. Bill Bugert, writing in the July 2008 Gobrecht Journal, detailed his investigation into the location of the Gobrecht plot. The documentary trail, beginning with Monument Cemetery, eventually led to Bugert to Lawnview Memorial Park in Rockledge, PA.

There, Bugert discovered that the original Gobrecht family headstone had been discarded during the 1956 move of remains from Philadelphia to Rockledge, PA. A marker reading simply "GOBRECHT" now marked the family plot, hardly a fitting tribute to the third Engraver of the U.S. Mint.

Accordingly, <u>The Liberty Seated Collectors Club</u>, collectors of Gobrecht's Liberty Seated coinage, has sponsored a new, black granite marker for the Gobrecht family grave, and an unveiling ceremony will take place on <u>Wednesday</u>, <u>November 13</u>, at 1 P.M., just prior to the <u>Whitman</u> <u>Baltimore coin show</u>. For further information, contact Dennis Fortier (ricajun@msn.com), Vice-President of the Liberty Seated Collectors Club.





## **Regional News** by Ken Otto, Regional Team Director, LSCC #2674

## LSCC Regional Program to Heat Up in October & November

The LSCC activity level is ramping up in October and November with several upcoming regional shows and the Winter Whitman Baltimore show during this period.

The Regional team had planned to participate in the NCNA Coin Show & Convention which will be held on October 3-6 at the Cabarrus Arena and Events Center, 4751 Highway 49, Concord, NC 28205. Due to unforeseen circumstances, we will not be hosting a Club table this year, but intend to return to this show in 2025. <u>Note</u>: The coin show will still take place of course.

The LSCC team will also participate in the <u>Denver Coin Expo which will be held</u> <u>on October 10-12 at the National Western Complex</u>, 4655 Humbolt Street, Denver, CO 80216. This will be a new event for the LSCC regional team. Keith Poole and Ken Otto will host the Club table.

The Regional team will participate in the fall <u>Pennsylvania Association of</u> <u>Numismatists (PAN) Coin Show which will be held on October 17-19 at the</u> <u>Monroeville Convention Center</u>, 209 Mall Blvd., Monroeville, PA 15146. The LSCC has had a major presence at the fall PAN show for many years. John Frost and Greg Johnson will host the Club table. An education program is planned.

The LSCC team will participate in the <u>South Carolina Numismatic Association</u> <u>Annual Coin Show on October 24-26 at the Greenville Convention Center</u>, 1 Exposition Drive, Greenville, SC 29607. Ken Otto and John Lundsten will host the Club table.

The Regional team will participate in the <u>New Hampshire Coin and Currency</u> <u>Expo to be held on October 25-26 at the Doubletree by Hilton Manchester Downtown</u>, 700 Elm Street, Manchester, NH 03101. The Club table will be hosted by Joe Casazza, John Frost and Dennis Fortier. An education program is planned.

## **Regional News cont.**

The Regional team will also participate in the <u>Coin-X Coin Show on October 31 –</u> <u>November 2 at the Embassy Suites St. Charles</u>, Two Convention Center Plaza, St. Charles, MO 63303. The Club table will be hosted by Ed Terneus and Micah Uptegrove.

The Regional LSCC team will participate in the <u>Whitman Winter Baltimore Expo</u> to be held November 14-16 at the Baltimore Convention Center, One West Pratt Street, Baltimore, MD 21201. This is a major fall national show and the LSCC will have a major presence at this event. The Club table will be hosted by John Frost, Dennis Fortier, John Lundsten, Ken Otto, and likely other members.

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## The Curious Collector by Len Augsburger, LSCC #1271

The 1843 Half Dollar: Cracked Up About Die Cracks

Turning to half dollars this month, the 1843 is one of my favorite issues in the series. The Bill Bugert Register (available at <u>http://www.lsccweb.org/BillBugertBooks.php</u>, courtesy of Bill Bugert) is always the first source to check, and he has documented 18 obverse dies for this issue, 29 reverse dies, and 37 die marriages. If we divide into the overall mintage for the year (3.844 million pieces), we arrive at the figures of 213k coins per obverse die and 132k per reverse die. Both of these figures are typical for Seated coinage. The Mint had produced even higher numbers of Bust halves in earlier years, so the high production level by itself was not cause for concern.

Still, the coins themselves tell the story. The reverses come extensively cracked, so much so that the unique cracking patterns serve to attribute the reverse dies. Bugert writes "The cracking was likely caused by a combination of inferior quality die steel, poor annealing then hardening of the dies, and heavy stress on the anvil (i.e., lower) die. The years 1842 to 1844 are noted for these excessively cracked dies... and the die clashing which likely contributed to the shortened die life." The obverse dies are similarly cracked, though not to the same extent.

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The coin illustrated (image courtesy of Heritage Auctions, May 12, 2020, lot 23196, realized \$780) grades AU50 / Cleaned and resides in an ANACS holder. The piece appears to be attractively toned, but presumably betrays hairlines under a glass. In any case, the spider's web on the reverse is our main point of interest. The cracks match WB-26 (reverse die T), with reverse die lines through the letters (going clockwise) E, A, M, and F. The die is clearly deteriorating, and cracks are easily visible with the naked eye. This is not one of those coins where you have to strain with a glass to locate a faint crack that may or may not exist, even if the attribution guide claims it's there.

The Bugert Register presents a challenge without saying so. Can you collect all 29 reverse dies? Can you find one that isn't documented? Such a set would form a great exhibit for a coin club meeting or show, and hopefully Bill's work will serve to motivate an intrigued collector. Even for those who are satisfied with a single example, I'll suggest looking at every 1843 half you see at a coin show. In my opinion, the pieces with more extensive and advanced cracks should be worth a premium, and you may be able to acquire such examples without paying extra. The WB-27 variety is notable, as Bugert writes: "In a LDS [late die state] the die dramatically cracked. It is amazing that the Mint was able to strike half dollars with this die as it could not have lasted much longer. This reverse die is one of the most die cracked of any in the Liberty Seated half dollar series."

### The Capitol's Liberty Seated Monument (The Statue that Might Have Been) by Jeff Pritchard, LSCC #1759

Most numismatists are well acquainted with Seated Liberty's appearance on our early coinage. But few realize that our revered goddess holding staff and liberty cap was nearly a prominent feature in the U.S. Capitol Building.

In 1803, President Thomas Jefferson appointed friend and architect, Benjamin Henry Latrobe as Superintendent of Construction of the U.S. Capitol. This was a massive undertaking that would consume the next nine years of Latrobe's storied career. His first priority was completion of the Capitol Building's South Wing, known as the Hall of Representatives (Congress).

Due to a lack of talented sculptors, Latrobe consulted with Philip Mazzei, President Jefferson's confidante in Italy, to recruit skilled artisans who might come to America to carve the ornate columns and statues Latrobe envisioned. In Latrobe's initial letter to Mazzei on March 6, 1805, he wrote, "Sir: By direction of the President of the United States I take the liberty to apply to you for your assistance in procuring for us the aid of a good sculptor in the erection of the public buildings in this city, especially the Capitol."

In the same letter, Latrobe first raises the idea of a Statue of Liberty. He asked Mazzei if the most prominent sculptor of the time, Antonio Canova, based in Rome, might carve a nine-foot tall, "sitting figure of Liberty," in the Hall of Representatives. (Historians credit Mazzei with coining the phrase "all men are created equal," as it appeared – in Italian – in letters to Jefferson from Mazzei several years before the Declaration of Independence was drafted.)

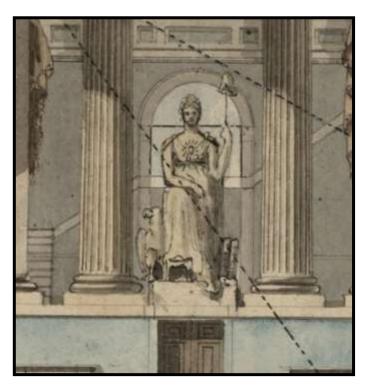
While Canova was unavailable, Mazzei successfully recruited 28-year-old Giuseppe Franzoni, a talented young protege. Franzoni, and his brother-in-law, sculptor Giovanni Andrei, immigrated to America in November of 1805 to work on the Capitol.



Latrobe viewed his seated Liberty as more than mere decoration. Placed behind the Speaker's chair, it would be the focal point of the great chamber. "The statue is essential to the effect of my architecture." Latrobe's only rendering of his planned Seated Liberty monument appeared in the Hall of Representatives architectural drawings delivered to President Jefferson prior to August of 1805.

Benjamin Henry Latrobe – c. 1804 Architect of the Capitol Portrait by Charles Willson Peale (Continued from previous page)

Latrobe's architectural rendering portrays the seated figure in a Greek-style, high-waisted gown, an ornament at her breast and wears a tiara. Her left arm holds a Phrygian-style liberty cap atop the staff of manumission. This drawing by Latrobe precedes illustrations by William Kneass, Titian Peale, Thomas Sully, and Christian Gobrecht made three decades later in their refinement of the Liberty Seated coin design.



By June of 1806, a full-size plaster replica of the statue was being created by Franzoni. This large replica was installed in early-1807 behind the Speaker's Chair in the great chamber. The plaster replica was intended to be replaced when Franzoni could carve the figure in Virginia marble. But that work was delayed.

B. Henry Latrobe's Seated Liberty (detail) Hall of Representatives 1804-1805 Source: Prints and Photographs Division, Library of Congress

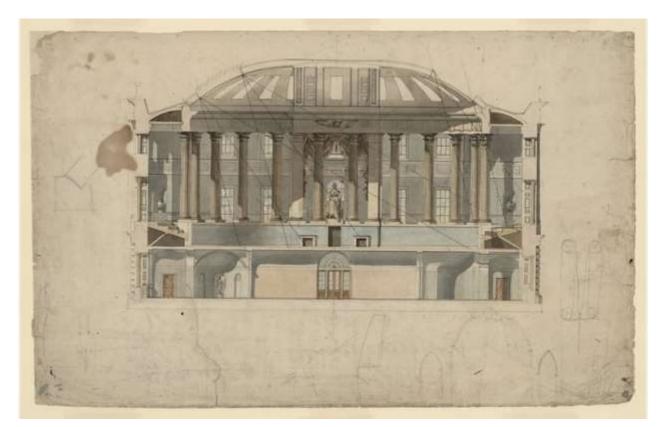
In Latrobe's report to Congress on November 22, 1807, he glowingly describes the temporary plaster statue. "The figure, sitting is 8' 6" in height. By her side stands the American eagle, supporting her left hand, in which is the cap of liberty, her right hand presents a scroll, the Constitution of the United States. Her foot treads upon a reversed crown as a footstool and upon other emblems of monarchy and bondage."

In a sad historical twist, even had Franzoni carved Liberty in stone as originally planned, she would still be lost today. The burning of the Capitol Building by British troops in 1814 generated such intense heat that the Capitol's marble columns were reduced to mounds of smoldering lime. Amid such an inferno, a marble Seated Liberty would have perished. The plaster version had no chance.

Franzoni died in Washington DC in 1815, and an artistically frustrated Latrobe resigned as Architect of the Capitol on November 20,1817. Despite his many accomplishments and complex redesign work, Latrobe never resurrected plans for the Seated Liberty monument. While fate intervened to curtail Latrobe's artistic vision, we can still enjoy the symbolic imagery of the goddess Liberty upon Gobrecht's beautiful coinage.

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B. Henry Latrobe's Hall of Representatives 1804-1805 (South-looking, east-west section of the Hall) Source: Prints and Photographs Division, Library of Congress

(END)

<u>Please Note</u>: Len Augsburger adds that the search for European artists was typical of the period. Thomas Jefferson wrote to Thomas Pinckney (2nd U.S. Ambassador to England) on June 14, 1792, in reference to hiring an Engraver for the Mint:

"Congress, some time ago, authorised the President to take measures for procuring some artists from any place where they were to be had. It was known that a Mr. Drost, a Swiss, had made an improvement in the method of coining and some specimens of his coinage were exhibited here, which were superior to any thing we had ever seen. Mr. Short [U.S. Ambassador to Netherlands] was therefore authorised to engage Drost to come over, to erect the proper machinery and instruct persons to go on with the coinage; and as he supposed this would require but about a year, we agreed to give him a thousand Louis a year, and his expences. The agreement was made, two coining mills, or screws, were ordered by him; but in the end he declined coming. We have reason to believe he was drawn off by the English East India company, and that he is now at work for them in England."

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## The Liberty Seated Coinage – A Revolution in U.S. Minting Technology by Craig Sholley, LSCC #1081

#### Introduction

While I have not been a serious collector of Liberty Seated coinage, as a former manufacturing engineer, the series has always interested me since the coins represent the single greatest leap in U.S. minting technology. From 1836 through 1840, the U.S. Mint transformed its die engraving, die sinking, and minting processes from a handwork "artisan" operation to those of a mechanized manufactory of the mid-industrial age.

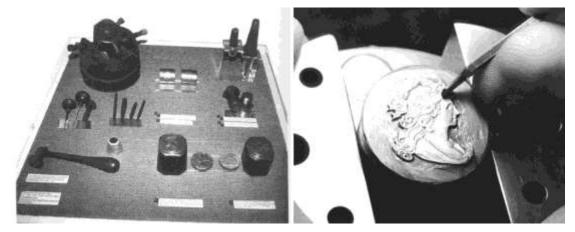
The series also presents two other important changes to U.S. coinage. First, the Seated coinage is the first design to break away from the old neo-classical look to present a more modern "Victorian-style" appearance. They also represent a critical change in monetary policy since, in 1853, the half dollars through half dimes became the first subsidiary coinage (coins whose intrinsic value are deliberately less than their face value).

This article, addressing die engraving and sinking, will be the first in a series discussing those changes. I hope you enjoy reading them as much as I enjoyed researching and writing them.

Engraving and Die Sinking, 1792 - 1835

To fully appreciate the engraving and die sinking improvements, it is necessary to have some understanding of the preceding processes. Of these, the most critical is the ability to hub full dies. The Mint had tried several times in the late 1790s, without success, to hub full half cent and cent dies. Each attempt met with a rather dismal failure. Fine details and the peripheral elements did not reproduce well, so each die had to be hand-strengthened and further attempts were abandoned.

To produce a die, the Mint engravers usually started by hand engraving a master hub (also called a matrix or punch) in relief by tracing a general outline of the central device (Liberty for the obverse and eagle or wreath for the reverse) on the face of a steel cylinder.



*Figure 1. Left, Engraving tools including vice, gravers, and punches. Right, hand-engraving a master punch.* 

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However, it should be noted that one engraver, Robert Scot, preferred to make an incuse master die first, raise the central device punch from that die, and touch-up as necessary. While it seems like unnecessary extra steps, Scot's method did have one advantage – if the master device punch broke in hardening or on its first use, another master punch could be made rather quickly.

Once the engraving was completed, this master hub was hardened and tempered, and then placed in a heavy screw press opposite a blank steel cylinder. The master hub was then impressed into the die blank by slowly closing the press, using it much like a vice.

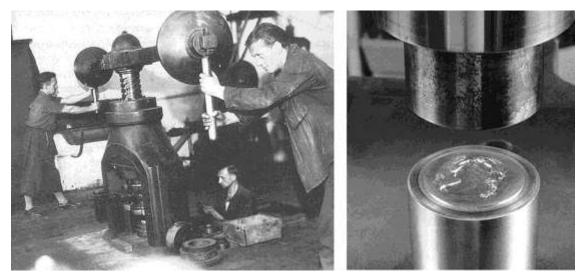


Figure 2. Left, hubbing with a screw press. Right, a hubbed die.

Franklin Peale, who was sent on a mint-sponsored trip to various European mints in 1833 to 1835 and wrote a report on his return, provides a vivid description of the sinking process stating that the hub was impressed into the die blank by "making a whole revolution of the press". His report also states that it took several of these "blows" to sink a die, which then likewise was hardened for use.

Hardening and sinking the master die were the two most critical processes. If the master hub broke during either of these, the engraver had to start over. Once the master die was successfully sunk and hardened, this could serve as a "backup" to raise new hubs if the master hub should break. Typically, several master dies were sunk as a safety measure.

Since the master die was too valuable to use to strike coins, "working hubs" were raised from the master die and "working dies" were sunk from these working hubs in a likewise manner. Since the working die still only contained the central device, they were then finished off by hand punching and hand engraving the date, lettering, shield lines, and other details.



Figure 3. Left, early U.S. dies. Right, hand-finishing a die.

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#### The New Hubbing Process

With Peale's return from the European mints in June of 1835, the situation began to change rapidly. The first change was the introduction of new die sinking practices enabling the hubbing of full dies.

Past researchers have offered differing explanations for the Mint's inability to hub full dies. Apparently thinking that the die steel or hardening processes used by the Mint were inadequate to the task, Don Taxay, in his "The U.S. Mint and Coinage" (page 84), opined that incomplete master dies were used to extend their life. While this may sound logical, a review of the historical records clearly shows this to be mistaken as the die steel and hardening processes used at the Mint were exactly the same as those used in Europe, but the Europeans were able to hub full dies whereas the Americans were not.

Walter Breen offered yet another explanation: the Mint's presses were not powerful enough to hub dies. On page 210 of his "Encyclopedia of U.S. and Colonial Coins", he states that only the new steam press was powerful enough to hub full dies. However, the historical records again directly contradict this assertion. In the first place, the aforementioned "Peale Report" shows that neither the French nor the British used their steam coining presses for hubbing; they used large screw presses. Secondly, the other "Mint records" also show that the Mint hubbed the dollar dies in late 1835 to early 1836, about four months prior to the arrival of the first steam coining press in late March, 1836.

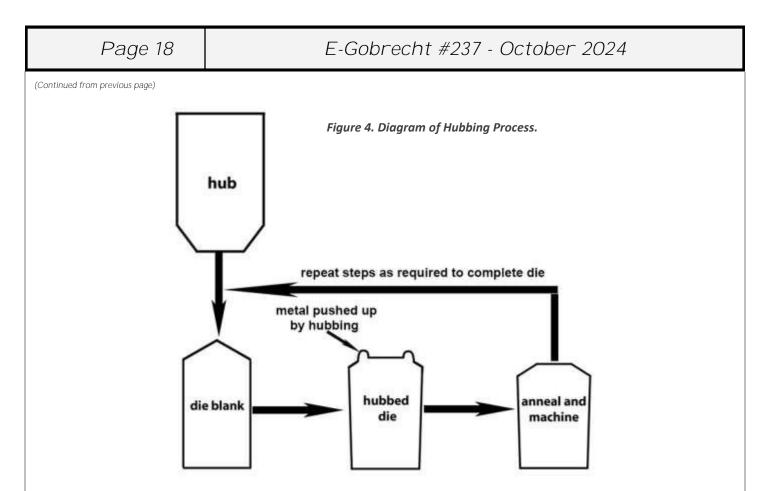
So, if the Mint's inability to hub full dies wasn't due to materials or equipment, what was the problem? The problem was, quite simply, lack of technique.

Most metals, including steel, get "harder" when they are worked (rolled, bent, stamped, etc.) at room temperature. This property, called "work hardening", causes problems when sinking a die since the steel gets harder and harder with each blow of the press. Furthermore, impressing the design into the die causes the metal to flow up and out from the impression much like pressing your thumb into a piece of clay.

As a result, the die ends up quite hard, and therefore resistant to further impression. Additionally, a "ridge" of metal rises up around the impressed design effectively creating a "dam" that even further restricts the metal flow. Denis Cooper, a former Chief Engineer of the British Mint, points out exactly these problems on pages 163 to 164 of his 1988 work "The Art and Craft of Coin Making," noting that, "Because the die steel rapidly became work-hardened it was not possible to strike more than most of the centre of the design into the cone [die] with the first blow, and this left a distorted rim [around the design] …"

With literally hundreds of years more experience in coining than the U.S., both the British and French had developed processes to eliminate these problems. And it is those processes that Peale brought back from Europe. On page 170 of his June 1835 report on the European mints, Peale noted the British technique for hubbing dies, "A single blow is given to the dye for sovereigns, one man making nearly a whole revolution of the press. It is then softened in an iron box buried in charcoal, and receives another blow, care being taken to brush it clean between each operation. The superfluous metal is then turned off and it is finished off by a light blow."

On page 209, Peale described the French process, "The dyes are warmed and then placed under the press, from which they receive a few blows, the number of which depend on the size of the dye that is being reproduced. They are turned round between each of the blows… The dyes for the five franc piece require that they be annealed twice, and those for lesser denominations only once."



Since various Mint records before 1835 do mention the annealing (softening) of dies, the part of the process that had eluded the Mint was the machining off of the ridge of metal pushed up during hubbing. Missing this simple step had prevented the Mint from hubbing full dies for over forty years!

#### A New Engraver and New Engraving Practices

With radically new processes and equipment being introduced, the Mint was in a bit of a bind with Chief Engraver William Kneass being quite ill and not up to the task. Needing a talented engraver, Mint Director Samuel Moore wasted no time and in early June of 1835 offered a position to Christian Gobrecht, who by this time had become widely regarded. [Shortly thereafter Kneass suffered a crippling stroke and though he later recovered some ability, he was really no longer capable of performing the full duties of chief engraver. In a show of great compassion and loyalty, Mint Director Patterson, who succeeded Moore, kept Kneass on as Chief Engraver until his death in 1840.]

Robert Patterson who succeeded Samuel Moore as Mint Director upon the latter's resignation at the end of June 1835, likewise realized the problem and continued to pursue Gobrecht. At first Gobrecht told Patterson that he was working for a banknote engraver and would have to give them six months' notice. A little later Gobrecht said that the company had found someone to replace him as engraver and that he would take the position. Several weeks then passed with no word from Gobrecht as to when he might arrive. As one might imagine, this threw Patterson into a bit of a panic; he had new processes and new equipment being made, but no engraver talented enough to use them!

Researchers have proposed various reasons for Gobrecht's lack of response - perhaps a bit of "payback" for being rebuffed in the 1820s when he sought an assistant engravership or stalling to see just how serious the Mint was. But this would be out of character for Gobrecht. More likely, his letter stating when he would arrive was simply lost. In any case, on Sept. 29, 1835 Patterson drafted a letter in (Continued on next page)

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which he tried to pressure Gobrecht into taking the position immediately. The letter was never sent, as Gobrecht almost literally arrived as it was being written, but it does illustrate just how desperate the Mint was:

"When I first spoke to you about accepting, without delay, the situation of an Engraver at the Mint, you mentioned to me that you were in the employment of [unintelligible] & Co banknote engravers, with whom there was a sort of understanding, not amounting however to any legal obligation, that you should give six months' notice before leaving their service.... You afterwards told me that you considered the difficulty to be removed as reason has been given you to believe the firm would withdraw their claims upon your services... Under these circumstances I made an application, on the 28th of Aug., to the government to permit me to engage you immediately, basing my application on the indisposition of Mr. Kneass, and the necessity of preparing, without delay, the dies for a new coinage.... Now I also insist upon the fulfillment of your engagement reached with me, and it becomes necessary therefore for you at once to make your election. I say this with all the respect which you know I have for you, but yet with a firm conviction of the right which the public have acquired to your services. You have led me to commit myself with the government - to get the President to anticipate the action of the Congress - and all this for the sake of having the dies for the new coinage prepared so that the proposed changes may be acted upon during the approaching session. If you do not begin work upon these dies immediately, you know that it will be impossible to prepare specimens of the coins in time for the essential object. Indeed, if your engagement at the Mint is to be interfered with I shall feel it my duty to communicate the circumstances to the government, and to ask for liberty to have a set of dies made in Paris..."

Patterson's "threat" to make the dies in France was, of course, ludicrous. Communicating the requirements and any design changes via letters carried back and forth on ships would have literally taken years. Not to mention that fact that the Congress would have never approved it in the first place. But the fact that Patterson even thought of making such a statement and the tenor of the rest of the letter does show his complete state of dismay over the possibility that Gobrecht might decline in the end.

Patterson did have good reason for being a bit anxious. Gobrecht was one of the few engravers in the U.S. who had the necessary talent. Not only was he a master engraver, but he also knew how to build and operate a medal-ruling lathe. And, it was the experience with a medal-ruling lathe that would come it particularly handy.

During his visits to the Paris mint, Franklin Peale saw the so-called portrait lathe. This machine lathe was quite important to the Mint's modernization plans since it partially automated the engraving process, similar to what the steam press did for the coining. In his aforementioned report, Peale described the lathe as follows:

"Attached to the Medal department is the Portrait lathe, a most beautiful and important instrument. It is used for copying and reducing to any desirable scale Dyes or Medals. It [sic] structure is such as to gain perfect facsimilies [sic] of the original in steel or any other metal..."

Peale did make drawings of the lathe, but this piece of equipment was quite a bit more complicated than a steam press. In the end, the Mint had to order one from the machine's designer, Mssr. Contamin (hence the name Contamin Portrait Lathe), in Paris. While the Mint ordered the lathe in the fall of 1835, it took quite a bit of time to build and would not arrive until April of 1837.

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In the meantime, the Mint was stuck with its old hand engraving practices, and this is where Gobrecht and the medal-ruling lathe became important. While not a true "engraving machine" like the portrait lathe, the medal-ruling machine was a type of pantograph that could produce a reduced etching in a die from an oversized model. There are no drawings of Gobrecht's medal-ruling lathe, but from its description on pages 187 and 188 of <u>A Manual of Gold and Silver Coins of All Nations by Jacob Eckfeldt and William Dubois</u>, the machine was a tracing pantograph capable of etching relief lines similar to those seen on maps.

With a medal-ruling lathe, the engraver's task was significantly easier. Rather than working in actual size directly on the die face, the engraver could now make an oversized wax or plaster model in relief, which was then used as a template for the medal ruling machine to produce a reduced "coin size" etching on the face of a steel cylinder. The engraver would then follow the etching to engrave the image.

While it is possible that the medal-ruling machine was used to produce an actual die (i.e., an incuse image), it's far more likely that the engraver continued to work in relief just as before, producing a "central device master hub" containing only the central device. This master hub would then have been used to sink a master die. Letters, numerals, stars, and dentils, which were much easier to punch or cut into a die than cut in relief on a hub, were then entered into the master die.

The master die was then used to raise "full master hubs" hubs via the improved hub and die process. The "full master hubs" could be used to either directly sink working dies, but more often they were used to sink "intermediate master dies, which were then used to raise the "working hubs" used to sink the working dies. While a bit more work, the "intermediate master" process did make the master punch, master die, and master hubs last longer.

Of course, at each step in the above process, the hub or die had to be touched-up by hand and then hardened and tempered prior to use. The hardening and tempering processes remained unchanged from the Mint's previous practice (in fact, it remains little changed today for this type of steel). The hub or die was first hardened by heating to a cherry red color and then rapidly quenched by plunging it into a vat of cold water or spraying it with a stream of cold water (both methods were used). While this made the steel very hard, it also made it far too brittle for use, so the hub or die was tempered by heating it thoroughly in boiling water and allowing it to cool normally.

The one "problem child" of the engraving process that remained was the shield lines. Due to the limitations of both the presses and die steel, tall and thin features, such as shield lines, did not reproduce well. While this didn't cause a problem with the low relief obverse shield lines for the Seated series, the high relief reverse shield lines were another matter and these lines were hand cut or strengthened in the individual dies until the relief was later lowered.

The foregoing engraving and hubbing processes were first used to create both the Reeded Edge half dollars and the Gobrecht dollars, with mint records strongly suggesting the hubs and dies for the 1836 Gobrecht dollar came first.

The new hubbing process proved especially handy. With the ability to hub full dies, the Mint could go back to any point (master hub, master die, etc.) and slightly modify the design or start over with the master punch and sink an entirely new master die.

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With the arrival of the Contamin portrait lathe in April of 1837, the engraving of the central device master hub became a bit more automated. Unlike the medal-ruling machine, the portrait late was a true engraving machine - it actually cut a reduced relief image of the oversized model into a steel die body. And, although the resulting hub required a good bit of hand finishing to remove machining lines and add fine details, the lathe did eliminate all of the "heavy work." In fact, in a June 30, 1837 letter to Treasury Secretary Levi Woodbury concerning the new dimes, Mint Director Patterson reported:

"To produce the original [i.e., master] die for the head of this coin, by the ordinary process, would have occupied our Engraver three months, and would have been a task requiring great skill and close labor. But by means of an instrument which I caused to be made at Paris, and which the French call a tour a portrait, the hubs for both the dime and half-dime were cut in an afternoon..."

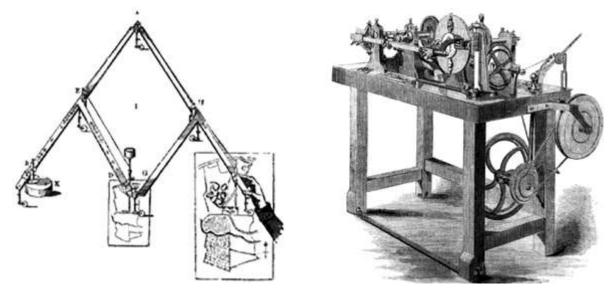


Figure 5. Left, pantograph. Right, Contamin portrait lathe.

While the portrait lathe did eliminate much of the heavy engraving work, it did have its limitations. Since the tracing point would "hang up" or "jump" trying to follow a feature with a tall straight side, it could not cut the stars, letters, numerals, or heavy reverse shield lines like those on Seated coinage. These elements still had to be hand punched or cut into the master die. On the other hand, given the machining lines seen between dentils, it does appear that they were in the master hub.

Despite its limitations, the addition of the portrait lathe, the Mint's engraving and die sinking practices were finally the equal of the best mints in Europe. However, the Contamin lathe was not the last improvement.

In 1840, Franklin Peale introduced Mortiz Jacobi's "galvanic process" for making electrotypes. This process vastly improved the mint's ability to produce the cast iron or brass model for the Contamin lathe. In a January 15, 1840 letter to Treasury Secretary Levi Woodbury, Mint Director Robert M. Patterson noted:

"I have the pleasure to send you, by the present mail, two medals with the head for Franklin, and of which I pray you to give to the President. We think the head the finest that has yet been executed at the Mint, but what gives it the principal interest is that the die – or [unintelligible] the hub – was formed, not by the tedious

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and exhaustive labor of an artist, but by a portrait lathe which I caused to be made in Paris, at the suggestion of Mr. Peale, and which, as I have before stated to you, we have employed, very advantageously, in making dies for the Mint. The original of our present work was a medallion head of Franklin, in burnt clay [terra cotta], of about five inches in diameter. From this, as a pattern, a casting was made in iron, at Boston, and was as smoothe [sic] and as perfect as the best kind of work done in Berlin. This casting formed the pattern to be placed in the portrait lathe, and enabled us to turn, in cast steel, a hub which was a reduced facsimile of it, and which needed only a slight retouching by the graver. The hub, being hardened, formed a tool with which the die, (and indeed any number of dies) may be made by the force of a powerful screw press. With the die, the medals are struck as usual."

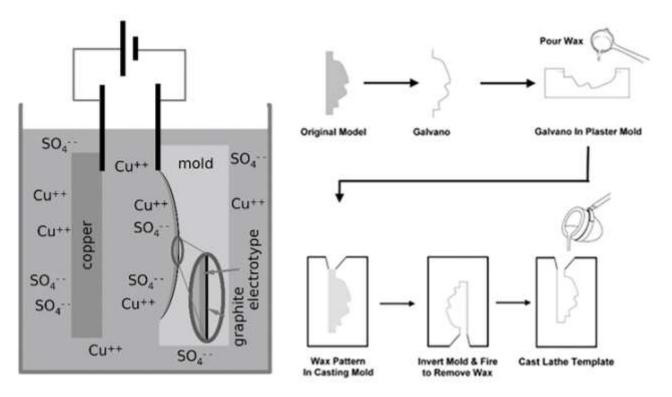


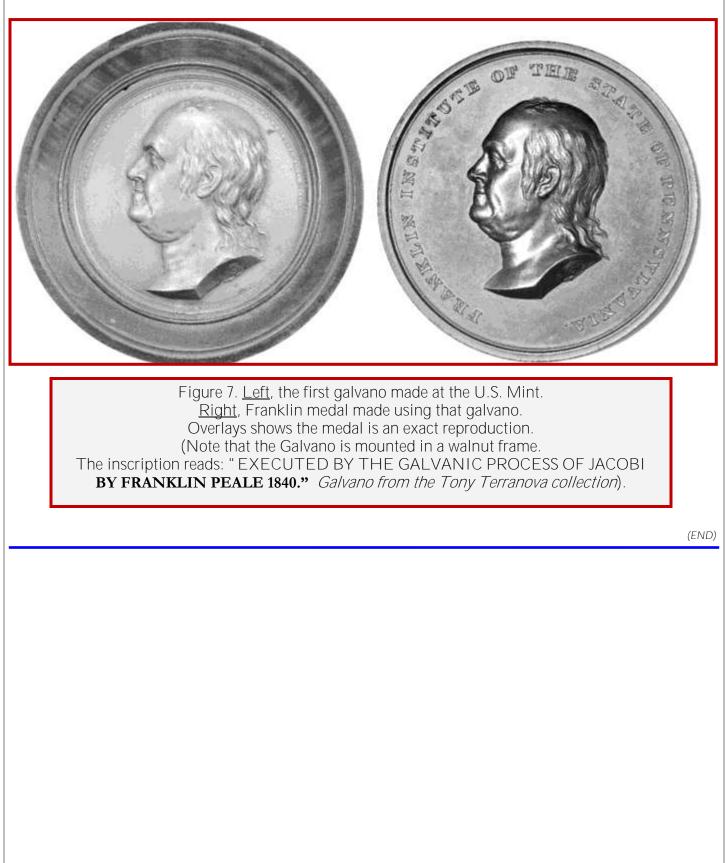
Figure 6. Left, electrotyping process. Right, making a lathe model from a galvano.

Interestingly, the first galvano made at the U.S. Mint, and the one referred to in Patterson's letter survives to this day. Peale had donated the plaque, mounted in a walnut frame, to the National Institute for the Promotion of Science in late December of 1840 or early January of 1841. A bulletin published in the institute's proceedings of January 22, 1841 noted the donation.

The introduction of the Galvano process was the final step in transforming the mint from and artisan -style hand-work shop into a fully mechanized manufactory. The mint would install improved reducing lathes in 1867 (the Hill lathe) and 1902 (Janvier), hydraulic presses were introduced for hubbing and the striking of medals in 1893 and 1902, and the coining presses would be switched-over to electric motors in 1902 and then to high-speed servo-motor actuated presses. However, those improvements are simply variations on the mechanization of the engraving and striking processes introduced in 1836 to 1840.

See first galvano and medal made from that galvano next page.

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#### Monthly <u>E-Gobrecht</u> Newsletter Advertising Rates

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NEWS BULLETIN: Very soon the current LSCC website will convert to the NEW website and renewals can only be paid online. A new LSCC website is going live soon. It was demonstrated at the ANA during the Club meeting. The new website can be accessed from the existing LSCC website (Membership/Payments) or <u>http://lscc.tempdevlocation.com</u>. The new website allows members to verify the expiration date of their LSCC membership, renew your membership, and receive instant verification.

As a LSCC member, you can explore 50% of the LSCC Gobrecht Journal articles that have been published over the last 50 years. The articles are organized by denomination and topic. You can even search for a specific date and mint mark, or varieties, or past collections that have been showcased. LSCC will be rolling this website out at any point and before the end of this year.

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Send Inquiries & Submissions to: <a href="https://www.science.org">lscc@lsccweb.org</a>

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## LSCC 2024 Regional Events Calendar

October 10-12 Denver Coin Expo (new event for LSCC), National Western Complex, Denver, CO - Club table hosted by Keith Poole and Ken Otto.

October 17-19 Pennsylvania Assoc. of Numismatists (PAN) Coin Show, Monroeville Convention Center (outside of Pittsburgh), Monroeville, PA - Club table hosted Greg Johnson and John Frost with a planned Education program.

October 24-26 South Carolina Numismatic Assoc. Annual Coin Show, Greenville Convention Center, Greenvill, SC - Club table hosted by Ken Otto and John Lundsten.

October 25-26 New Hampshire Coin & Currency Expo, Doubletree by Hilton Manchester Downtown, Manchester, NH - Club table hosted by Joe Casazza, John Frost & Dennis Fortier w/ Educ. Program.

October 31 - November 2 <u>Coin-X Coin Show</u>, Embassy Suites St. Charles, St. Charles, MO - Club table will be hosted by Ed Terneus and Micah Uptegrove.

November 14-16 <u>Whitman Winter Baltimore Expo</u>, Baltimore Convention Center, Baltimore, MD - Club meeting on Friday at 9 am, Educational program & Club table by John Frost, Dennis Fortier, John Lundsten and Ken Otto.

\*\*\* (More event details and addresses of show locations are in **Ken Otto's Regional Report starting on page 8. Also see** either or both the LSCC/BCCS websites.)







(END)



Christian Gobrecht

William Barber

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To encourage, promote, and dispense numismatic knowledge of Liberty Seated coins; to cultivate fraternal relations among its members and all those interested in the science of numismatics.

#### LSCC website: www.lsccweb.org LSCC email address: lscc@lsccweb.org

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<u>Articles, comments, or advertisements for publication</u> <u>in *The Gobrecht Journal*</u> magazine may be addressed to Greg Johnson, Gobrecht Journal Publication Editor.

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