

Modern Chinese Counterfeits of United States Coins

A collection of observations and tips to help survive the modern counterfeiting epidemic.

By: Thomas Walker

I've had several requests for me to do a writeup on detecting modern Chinese counterfeits of Chinese coins, so here we go.

In the past 2 decades, we have seen an influx of counterfeit US coins into the market to the scope of which we had never seen before. They are being mass-produced by Chinese counterfeiters in workshops dedicated to creating counterfeit coins of all types. Then these counterfeits are sold on wholesale sites (which I will not name so nefarious folks don't go there) and can be bought for \$1-2 (up to around \$100 or more!) apiece from very reliable sellers. This is a low risk, high possible reward scenario for criminals and scammers. The price indicates the level of quality of the counterfeits, ranging from crappy obvious fakes (which still screw ignorant people out of hundreds of dollars) to high-quality fakes that can fool dealers and possibly even the leading third-party graders. The Chinese counterfeiters are no longer casting their counterfeits; the vast majority are die-struck on heavy-duty coin presses. In addition, the majority are not magnetic as they are being made of non-ferrous materials, such as brass. Of paramount importance to know is that the Chinese have determined that no US coin is too cheap or common to fake, so the logic that "a coin has to be real since it is not worth faking" should be thrown out the window. If you don't believe me, here is a fake 1958 wheat cent that I bought directly from the counterfeiters. The hair details are very mushy and indistinct, the letters have a softness to them inconsistent with genuine coins, and the reverse has the diagnostic die chip on the left wheat ear (directly NE from the U in UNITED) that is present on nearly all counterfeit wheat cent reverses.



So what all is counterfeited? Well, here is a list:

- Nearly every date and mintmark of US coins

- Many different types of foreign coins
- PCGS/NGC-Slabbed coins
- Ancient Coins
- Error coins (common coins struck off-center being by far the most prevalent)
- “Hobo” coins (coins struck to look like they were engraved with artistic designs)
- Fantasy coins (two heads, two tails, etc.)
- Basically anything that can be sold for more than a few cents it costs to produce.

Here are some recent pictures of a counterfeiter’s workshop, published by the counterfeiters themselves! First is a couple pictures of a rack of fake dies of many different types, dates, and denominations.





And here is a picture of one of the coin presses they use to strike their counterfeits.



Here is a picture of a Castaing machine used to put edge lettering on the counterfeits.



And there are showrooms full of bins of counterfeit coins so merchants can pick whatever types/dates/mintmarks they need to fulfill a customer's order.





Are you worried? I hope so. That means I have hooked you and you will continue reading on! 😊 With the scope of the problem properly defined, we can delve into the “tells” I use to detect these fakes.

The very first thing I look at when authenticating a coin is its style and fabric. The style refers to how the devices are formed, shaped, designed, etc., “styled.” The “fabric” of a coin is rather difficult to describe, so I will use Forum Ancient Coins’ definition: “fabric refers to the flan characteristics: metal composition, thickness, edges, concave or convex faces, etc.” This can be done by carefully comparing a suspect coin to a known genuine one (say on PCGS CoinFacts) or by getting a “feel” for what a coin of a particular type is supposed to look like by handling hundreds or even thousands of genuine coins. This will make any fakes you come across really jump out. Here is a list of tells; every mass-produced Chinese fake I have seen has at least one of these tells (and often several or sometimes all). Don’t worry, I will go into each and every one in great detail.

- Errors in the design elements
- Incorrect Style
- Poorly-formed letters and numbers
- Errors in how the coin was manufactured
- Wrong metal alloy
- Out-of-tolerance weight
- Fake applied toning
- Random bumps (“blems”)

- “Lake effect”
- “Fuzzy” design elements
- Abrasive cleaning

An important aspect to discuss is how the cheaper counterfeits are made. The main counterfeit dies are often created using either a genuine coin or a high-quality replica (like a Gallery Mint piece). This transfer is then used to create a hub where the date is erased so that new dies can be created and new dates stamped into them. However, the original transfer dies are still used and can create somewhat-deceptive counterfeits that will match most (or all) of the diagnostics of genuine coins. However, the unaltered die transfers will likely be “extra” or missing stuff (die chips, die cracks, details) inconsistent with genuine coins or will have some of the diagnostics listed above (and described below), and these should raise suspicions. Often, the “spin-off” dies have a date that is of an obviously-incorrect style, which aids in detecting these counterfeits.

One of the more well-known examples of this is the 1804 C-6 half cent. It features a strong spiked chin and has much of the die deterioration that is present on genuine coins. I actually bought one of these from less-than-optimal pictures, and it was a hassle to return because the seller’s dealer called it genuine. The obverse had the fuzzy look of Chinese counterfeits, the edge showed it was struck in a collar (when it should not have been), and the coin was underweight by over a gram.



The C-6 dies were then used to create dies spanning the whole 1800-1808 date range. This produced some comical examples of non-1804 half cents with spiked chins. The spiked chins were eventually removed, even on the 1804, but there are still diagnostics of the 1804 C-6 that are transferred to the other dates. Knowing these diagnostics helps spot some of the die transfer fakes. Two examples, and 1803 and 1802, are shown below. Look at the last digits of the dates. It is obvious that they were struck from dies altered from an 1804, and they do not have the correct font style.



Another example is the 1818 B-10 quarter. In the pictures below, the left coin is a genuine 1818 B-10, while the right one is the counterfeit. Once again, the “1818” dies were used to create dies for all of the 1815-1828 issues without correcting the diagnostics. In this case, the most-obvious diagnostics are the spine out of the right point of the second star and the clump of three dentils below the first 1. Large-diameter capped bust quarters of any other date which have these characteristics can automatically be assumed to be fake.





The two above coins are not overly valuable, so it makes sense that the die-transfer technique was used. However, there are examples of cheap counterfeits of high-grade and expensive types which show evidence of being created through die transfers. Additional research showed that these fakes were created from Gallery Mint replicas and modified to fit their needs (namely, remove the COPY stamp). I discovered this with a fake 1787 Connecticut copper. The above coin is the Chinese fake, and the lower one is a Gallery Mint copy. Close examination shows that the Chinese example is definitely a die-transfer (albeit a low-quality one) of the Gallery Mint replica.





Errors in the design elements

This tell is one of the most obvious ones that jumps out to experienced dealers and collectors who are familiar with a particular type/issue/variety. Some are blatantly obvious, while others are more subtle. One of the easiest errors to spot is an anachronous mule, such as on this 1796 Half Dime. The reverse features an eagle that was only used in 1794 and 1795 with the Flowing Hair design, not in 1796 with the Draped Bust design. In addition, the lettering, rims, and denticles are a completely wrong style, and the die breaks on Liberty's face and neck do not match any known variety.



Another obvious example is this 1808 Large Cent. The head style is that used on half cents, not on large cents, the lettering is the wrong font, and the leaf veins are unnaturally-sharply defined. Of particular

note is the fact that this counterfeit is beat up. It is a somewhat common practice for a nefarious seller to beat up and wear down these cheap counterfeits to make them seem more realistic and thus more passable. I've seen examples worn down to the AG level, so be careful.



Another example is this 1839 large cent, which sports the incorrect head style for 1839, and the font of the date and UNNITEED STATES OF AMERICA bears no resemblance to the small-size font used on the genuine dies.



Incorrect Style

Some of the counterfeit series are not die-transfer counterfeits, or transferred designs are modified to make them look nicer. The former could have been accomplished in several different ways, such as a master engraver creating the designs by hand or using 3-D scanning technology to create a computer model of the dies that will be computer engraved. The 1808 large cent above is an excellent example of a non-die-transfer counterfeit. Exactly how it was made is unknown, but I suspect that individual components were created, scaled, and modified and then put together to produce a rough semblance to the genuine article.

As of late, there is a new generation of cheap counterfeits which I call the “enhanced” counterfeits. These are well-made, but the designs have been enhanced to make them look nicer/sharper than genuine coins! The 1847 O half dollar below is an example of one of these. On the obverse, the stars and the hair are sharper than I have seen on any genuine seated half. On the reverse, the feathers are extremely bold and have very poor blending compared to genuine seated halves. In addition, the talons are scrawnier than they should be. I have 6 different examples of these enhanced seated halves (1847 O, 1850 O, 1853, 1854, 1870, and 1879). Apart from the dates, mintmarks, arrows, motto, and rays, all of the halves feature the exact same devices with the aforementioned style problems. The added features (date, mintmark, arrows, rays, motto) all have a believable font and style, which makes me believe that they were mapped onto a CAD model using genuine coins as templates. This particular development is quite concerning as computer technology becomes more sophisticated.



Another example of an “enhanced” counterfeit is this 1799 eagle. Apart from the rims which make it plainly obvious that this coin was struck in a collar, the obverse is quite well-rendered. The reverse, however, displays strong enhancements in the feathers that are almost cartoonish in comparison with genuine coins.



One more example is this 1833 half cent. The star sharpness far exceeds that of any half cents produced by the US mint in 1833, even for proofs. The hair detail is also far sharper than is typical. Some EAC collectors noted that the reverse die variety was not that used in 1833 (I don't know which one it was at the moment), and the star/dentil relationship does not match the C-1 die pair, the only one used that year. However, the date font and position is exactly correct. The discrepancies lead me to believe that the obverse was not created using a die transfer (though the reverse might have been), and the obverse was likely created using a CAD program of some sort.

I posted this coin without context to see how deceptive it was, and I received multiple unsolicited offers for it.



Poorly-formed letters and numbers

When the Chinese counterfeiters don't have the exact letter punches or fonts used for genuine US coin dies, the resulting lettering can look very cartoonish and lifeless. This is usually just seen on the dates, but all of the lettering on this 1796 quarter has the poor cartoonish font, among a host of other issues (use of a 1794/5 design on the reverse which was never used on the quarter denomination, misspelled UNITED, etc.).



That was an extreme example. The lettering on the reverse of this "enhanced" counterfeit 1838 Eagle also has an incorrect font style, but it is much more subtle.



Sometimes the shape of the lettering was poorly transferred during the die-making process. For example, on this fake 1878 CC Morgan dollar, the borders on IBUS UNUM lack definition and have a smeared look to them. This is also seen on the stars below UNUM.



As stated above, when dateless (or semi-dateless) hubs are used to create more dies of different dates, the counterfeiters must put in dates on the new child dies. This can range from just the last digit being changed (as with the 1804 half cent example above) to the entire date being added. In nearly every case, the style of the added digits is noticeably different from that of genuine coins. On this counterfeit 1910 half eagle, the 0 is out of round. Such a mistake would have never left the US Mint. This is an example of the last digit being altered.



Another example is this 1852 D gold dollar. The host coin for the type I gold dollars was an 1853. Apparently, the entire date was erased from the hub as every digit in 1852 is of the wrong style when compared to genuine coins. The stroke look sloppy and uneven. In addition, there is an extremely heavy die clash on the obverse and a massive bisecting die crack on the reverse. Due to the small mintage of 1852 D dollars, the die marriage has been extensively studied, and there is no evidence that either of these diagnostics were ever extant on the genuine dies. This simple observation would have immediately outed this coin as a counterfeit.



Errors in how the coin was manufactured

One of the things I look for in pre-1836 coinage is to see if there is any evidence on the edge that the coin was struck in a collar. Prior to the introduction of the steam press in 1836, US coins were not struck in collars. As a result, all coins were “broadstruck,” or struck without any constrain in diameter. This caused the diameter of the coins to vary a little. In addition, the edge would be somewhat rounded, and not completely flat from rim to rim. This is the case for coins with plain, reeded, and lettered edges.

Below is a genuine 1796 large cent. Notice how wide the dentils are along the upper rim. Early US dies were created this way to account for the variations in centering and planchet width resulting from being broadstruck. The dentils were designed to go beyond the predicted edge of the coin so that they would go smoothly off the edge of the coin instead of abruptly ending.



Imaged by Heritage Auctions, HA.com

Below is a pair of 1818 quarters. The upper one is genuine while the lower one is a fake. Notice the flat, machined texture of the fake edge versus the genuine edge.



Here is a fake 1803 Half dollar with a collar-restrained edge. It has a machined flatness with beveling at the corners.



A knowledgeable EAC collector once gave me the advice that genuine pre-1836 large cents (and all other broadstruck coinage) would not stand on their edge on a flat surface. While this test would work for low-grade coins, it could be rather dangerous for high-grade coins.

The fake errors that the Chinese produce often are not made the same way that genuine errors happen. Take this off-center 1951 D cent for example. The off-center portion has a clear raised rim, meaning it was struck in a collar. Off-center strikes happen out-of-collar, which means this was impossible to produce legitimately. I believe the dies were created with the off-center image on them.



Wrong metal alloy

All of my fakes that are supposed to represent silver and gold coins are composed of a non-magnetic base metal. Some are plated with silver/gold or metals that look silver/gold. Most of the modern fakes

use non-ferrous materials so that they pass the magnet test, but there are still some being made that will stick to a magnet. Here is a fake 1792 Half Disme that was poorly silver-plated, resulting in the plating coming off and revealing the brass core underneath.



The metal alloy can be easily tested using a Sigma Metalytics Precious Metal Verifier (PMV). This device provides a non-intrusive test that can work through non-metallic holders, such as slabs. It works by using a wire coil with a current running through it to create a magnetic field. This induces a current within the coin/bar, which thus causes the coin/bar to produce a magnetic field. The intensity of this magnetic field is measured by the PMV and compared to the expected result from the indicated alloy. Very small differences in alloy create very measurable differences in the magnetic field. This device has a very high up-front cost, but it would look very worth it in hindsight if you get fooled by a fake gold 1oz coin or bar.

Out-of-tolerance weight

I have bought and handled many different Chinese counterfeit US coins, and I noticed that very few had the correct weight. Many of these can be felt just by feeling the coin in your hands (your fingers are sensitive to differences of less than a gram), but a properly-functioning scale leaves no doubt. The weight discrepancy is most likely due to using the wrong metal alloy, but for coin like the large cents, the correct-ish alloy is used, but the planchet thickness is incorrect, resulting in an incorrect weight.

However, if a coin has the correct weight, that is not enough to call it genuine. There are many fakes on the market which are designed to have the correct weight. This can be due to using the correct metal alloy (90% silver, 90% gold, etc.), using a base-metal (tungsten, etc.) core to increase the weight without drastically increasing the intrinsic price of the planchet, or even just making the planchet thicker. If you want fakes of the proper alloy, the counterfeiters are more than happy to oblige if you pay them enough money. The tungsten cores are mainly used on fake gold coins or hollowed-out genuine gold bullion. The added thickness trick is mainly used on silver dollars, but that does not mean that they won't try it on other types.

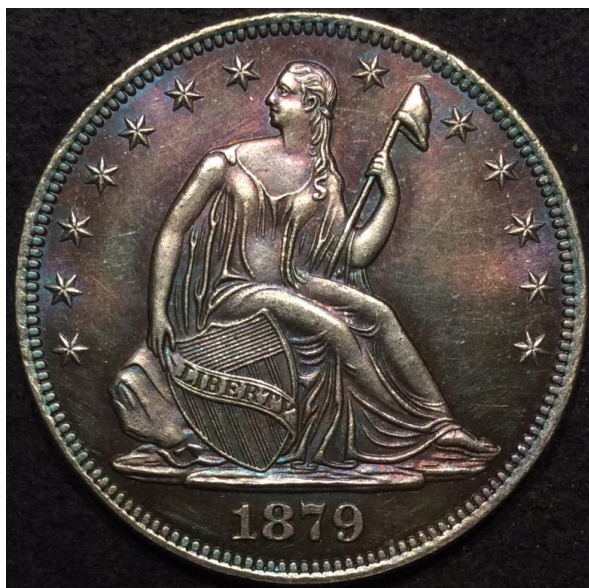
Fake applied toning

Many of the “circulated” Chinese fakes have the same “patina” pattern, which generally consists of a pale grey base with a darker peripheral toning and darker toning in the cervices of the devices. This is an attempt to produce the “circulation cameo” effect seen on many circulated silver coins. A couple very typical examples are shown below.



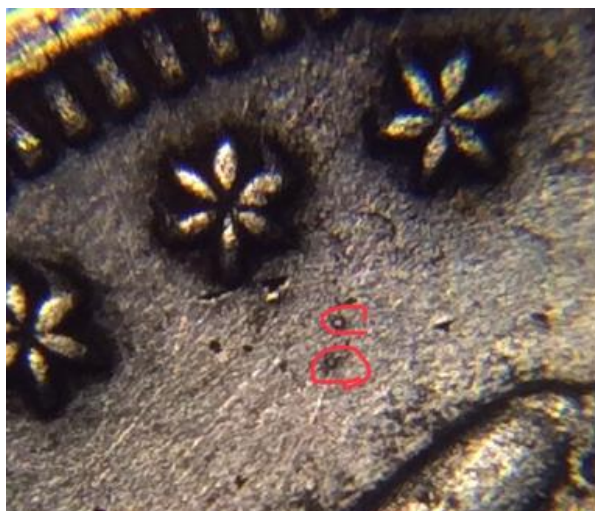


For the “uncirculated” coins, you can specifically order them with vibrant toning. However, they look woefully artificial and should not be remotely convincing. Here is a fake 1879 Half dollar as an example:



Random bumps (“blems”)

When I see any of the above characteristics (If I am not already 100% convinced the coin is fake already), I search for tiny raised bumps on the coin’s surface. These are called “blems” or “pimples.” They can result from poor treatment of the die, interference during the die transfer process, or some other possible scenarios. Nearly every Chinese fake I have handled has had these blems somewhere on the surface, usually in the fields. Here are a couple examples of the random raised bumps on a counterfeit 1886 quarter and a counterfeit 1794 dollar.



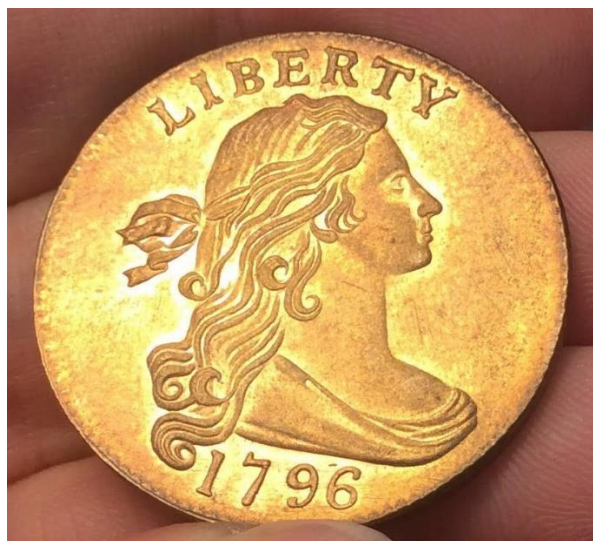
However, the presence of raised bumps does not immediately mean that the coin is counterfeit. There are several genuine die varieties in large cents and Draped Bust dollars (convenient, huh?) which have random raised bumps. For example, myself and several other members of the Dark Side Facebook counterfeit coin discussion group analyzed a 1798 dollar. It initially looked suspect due to the odd surfaces, many random bumps, and toning reminiscent of the applied circulated patina mentioned above. However, the edge indicated that the method of manufacture consistent with genuine coins. Analyzing known die varieties proved that it was the BB-105 variety. The BB-105 die pair, by the time it reached the terminal die state, had many randomly-placed chips that caused several raised bumps to appear in the fields. Every bump matched, leading several to believe that coin was actually genuine with altered surfaces. The top coin is the suspect coin, and the lower coin is a known genuine 1798 BB-105 Terminal Die State.





"Lake effect"

"Lake effect" is best described as unnatural flat voids in the design where fine or low-relief detail is missing. This is often a result of a poor die transfer in which the pressure was too low to adequately get all of the details transferred to the counterfeit dies. As a result, the relief of the design as a whole is generally too low. On high-grade counterfeits, the lake-effect areas will shine and unnaturally pop out of the design, such as on these two coins below.



Here is one that a seller tried to pass off to me in a lot of dozens of genuine (low-value) coins. The pictures were poor, so I didn't notice any red flags when bidding. Upon receiving this coin in hand, my eye was immediately drawn to the lake-effect void over the ear. This made me suspicious, and a short time later I had die-matched this coin to a known Chinese fake.



However, be aware that there are exceptions where genuine dies had voids from where the engraver simply neglected to engrave detail in a particular area. A notable example is the 1794 S-26 large cent.



"Fuzzy" design elements

During the Chinese counterfeiters' die creation/preparation process, the surfaces of the die generally become microscopically porous, which causes the surfaces of the coin (mainly the devices) to become fuzzy and grainy. This fuzziness can cause the design elements to lack clarity and become "mushy". This microscope image of a fake coin shows the roughness of the surfaces which cause this fuzziness:



Here is a fake 1886 Seated quarter which also has the grainy appearance of the devices.



This 1853 D half eagle has a general fuzziness that extends into the fields



Here is an 1897 O quarter whose lettering has been severely affected by a large buildup of the grainy texture. This buildup is seen on many Chinese fakes.



When a genuine US die becomes rusted, it can produce a look somewhat similar to what is seen above. To differentiate between the two requires specific knowledge of the coin issue in question. For example, there is an 1876 CC dime pair which became severely rusted, and example of one of these coins is shown below.



Abrasive cleaning

The counterfeiters often clean their high-grade fakes to look nice or to get rid of any grime gathered from the manufacturing process and conditions, such as with this 1794 dollar:



Some good advice is to treat all abrasively-cleaned coins with suspicion as the cleaning could be hiding something devious, like an altered date or mintmark or even a repair. The vast majority of abrasively-cleaned coins are genuine, which can easily desensitize someone if they aren't careful. I pay particularly close attention to key dates that have been abrasively-cleaned.

Counterfeit Slabs

While the main grading services have helped a lot with regards to providing safety and security with regards to counterfeits in the market, they have made the market complacent with their trust. The Chinese counterfeiters have taken advantage of this and started producing fake PCGS and NGC slabs in 2008. Despite their existence in the market for over 11 years, MANY collectors are simply not aware that fake slabs exist, and they are at risk of sinking a ton of money into a counterfeit simply because it is slabbed.

How does one protect yourself from these fake slabs? The most important thing you can do is LEARN HOW TO GRADE! Not only can this skill help you in many, many other ways, but it will allow you to determine if the coin in the holder matches the grade on the holder. Most of the time, the grade of the counterfeit and the grade on the holder are off by at least 10 points, sometimes more. The grading services, even some of the second-tier ones like PCI, would not make such an error. Usually the

counterfeit in the holder looks much nicer than the assigned grade, which makes it attractive to people hoping to make a big profit by resubmitting it.

Another thing you should do is examine the coin and see if it has any of the attributes of Chinese fakes discussed above. This will protect you from counterfeits which match the grade on the slab. I know of one dealer who paid thousands of dollars for a fake VF bust dollar in a fake slab. He did not check the coin for diagnostics of counterfeits, even though a closer inspection after the purchase showed that it was obviously a fake. He showed it to many other dealers at a show, and several made offers to buy it as a genuine coin because they assumed that the holder was genuine, and thus the coin was genuine.

Another thing you should do is educate yourself on the style of the holders. This includes the style of the plastic holder itself, font size and style, positioning of the lettering, the barcode, the color pattern of the label, the style of the hologram on the back of the slab, and agreement between the label/holder style and the insert holding the coin in place. It wasn't until relatively recently that the inserts had prongs, so a new-style holder with an old-style insert should immediately raise suspicion. Keep in mind that the holder might be different due to the rehousing services that the grading services offer. To my knowledge, the serial number stays the same, but the holder changes. Therefore, the focus should be on comparing the coin and not necessarily the holder (unless the suspect coin is currently in an old-style holder and the genuine coin is pictured in a new-style holder). This education comes with experience, namely handling many genuine slabs of different types. This can be done at a show.

If you are still not sure, type in the coin's information (Type, date, mintmark) and the slab's serial number into a search engine such as Google. The Chinese counterfeiters generally copy slabs which they have pictures of and from sources that they can data mine easily, such as on Heritage. Data mining is when someone quickly runs through inputs on a website and records the outputs. In this case, the inputs would be a coin's type/grade and the output would be the grading company and the serial number. Heritage is popular because they have a very structured title format that allows for easy categorization (e.g. "1825 50C PCGS AU-55" with the serial number in the description). This means that the internet search would likely yield a picture of the genuine coin in the genuine slab, and you can compare the suspect coin with the known genuine one. If there is a mismatch, then the suspect coin is not genuine. It is then responsible to notify the grading service that the serial number has been compromised so that they can update the verification page (NGC does this, but I do not now about PCGS).

NGC has taken steps to prevent data mining of their websites by requiring knowledge of the coin's date, denomination, mintmark, grade, and serial number before you can search and verify a coin. They also have (low-quality) pictures of every coin they have certified, so the coin in question (if in an NGC slab) can be compared there. PCGS does have the TrueView service, but they don't take pictures of each and every coin like NGC does.

Pictured below is an example of a fake coin in a fake slab (on the left) compared to the genuine coin from Heritage (on the right). As you can see, the fake coin would grade at least MS-65, but it is in an AU-58 slab. Also, the label color and the font style are incorrect, and the suspect holder is an old-style

holder while the genuine coin is in a new-style holder. Lastly, comparing the two slabs shows that the coin is clearly not the same.



In conclusion, I've found that one's gut instinct is the best line of defense against these counterfeits. If something feels off, it probably is. If something seems wrong about the seller and the transaction, there probably is. In addition, ALWAYS BE VIGILANT!! Complacency is your worst enemy. The counterfeits are everywhere now, and they will show up when you least expect them. Never assume that something is okay since it is slabbed or "too common to fake." The best education about these counterfeits is to handle and study them in hand. You can read about the diagnostics above all you want, but nothing beats seeing them with your own eyes so that you can recognize them in the future. All of the tells and tips outlined in this article will help and empower you against the counterfeit onslaught, but you must practice and study to keep yourself one step ahead.

A potential next step could be a dealer-wide digital black cabinet of struck counterfeits, similar to Forum Ancient Coin's "Fake Coin Reports". I'm sure many collectors would love to have a database of fake coins to compare theirs to.