

## 19th Century American Mint Marks

**Acid Test** – a chemical method used to determine the metal composition of a coin, often applied when grading 19th-century silver or gold pieces. Related terms: Chemical assay, metal purity, spot test. The test involves applying a drop of nitric acid to a discreet area of the coin; a reaction indicates the presence of base metals, while a lack of reaction suggests higher purity. In practice, numismatists use the acid test to confirm authenticity of early U.S. Silver dollars that may have been altered with lower-grade alloys. A challenge arises when the coin's surface has been cleaned or polished, which can obscure the reaction, leading to false negatives. Modern grading services generally rely on non-destructive methods such as X-ray fluorescence, but understanding the acid test remains essential for field verification and for assessing the impact of prior treatments on a coin's grade.

**Barber** – the surname of Charles E. Barber, chief engraver of the United States Mint from 1869 to 1892, whose designs dominate many 19th-century coin series. Related terms: Seated Liberty, Barber design, coinage portrait. Barber's work includes the Seated Liberty dime, quarter, and half-dollar, as well as the Barber silver dollar series. Recognizing Barber's design elements—the flowing drapery, the shield on the reverse, and the distinctive lettering—helps graders identify die varieties and assess wear patterns. For example, a heavily worn Seated Liberty quarter may still retain Barber's characteristic "M" mint mark placement, aiding in its identification. Graders face challenges when Barber's designs intersect with later modifications, such as the 1873 "Trimes" trial pieces, where subtle differences can affect the coin's rarity and thus its grade.

**Carson City Mint (CC)** – the short-form designation for the United States Mint branch that operated in Carson City, Nevada, from 1870 to 1893, producing gold and silver coins marked with the double-letter CC. Related terms: Mint mark, CC over C, Nevada mint, gold eagle. Coins bearing the CC mint mark include the \$20 gold double eagle, \$10 gold eagle, and silver dollars such as the Seated Liberty and Morgan series. The CC mark is highly prized because of the mint's limited production run; a 1878 \$20 gold double eagle with a CC mint mark in MS-65 can command premium prices. Practical application involves confirming the authenticity of the CC mark, as counterfeiters sometimes alter other mint marks to mimic Carson City issues. Challenges include distinguishing genuine CC strikes from restrikes and identifying die varieties like the "small CC" versus "large CC" that affect grading decisions.

**Capped D** – a die variety where the letter D (Denver mint mark) appears with a small horizontal line (cap) over its top, typically seen on 19th-century silver coins struck at the Denver Mint. Related terms: Mint mark variation, capped letter, die pair. The capped D first appeared on the 1866–1867 Seated Liberty dollar and is a key indicator of a particular die set. Graders use the presence of the capped D to differentiate between higher-mintage varieties and rarer, lower-mintage issues. For example, a capped D on the 1875 \$5 half-eagle may increase the coin's desirability, impacting its final grade. The principal challenge lies in detecting the subtle cap on heavily worn pieces; magnification tools and high-resolution imaging are often required to confirm the variety without damaging the coin's surface.

Denvers (D) – the abbreviation for the Denver Mint, which began striking coins in 1866 and used the single-letter mint mark D on the obverse of its issues. Related terms: Denver mint, D over O, D over S. The D mint mark appears on a range of denominations, from the 1866–1878 Seated Liberty dollar to the 1880–1900 Morgan silver dollar. The location of the D typically sits beneath the date on the obverse, though on certain varieties it may be displaced, creating “off-center” mint-mark errors that are valuable to collectors. Practical grading considerations include evaluating the sharpness of the D imprint; a crisp D often indicates a higher mint state (MS-65 or above), while a softened or abraded D can lower the grade. Challenges arise when the D has been altered by cleaning or when counterfeit pieces mimic the Denver mint mark, requiring careful visual and analytical verification.

Edge lettering – the inscriptions or designs applied to the edge of a coin, frequently used on 19th-century U.S. Gold pieces to deter clipping. Related terms: Reeded edge, edge inscription, security feature. Notable examples include the “In God We Trust” motto on the edge of the 1877–1907 \$20 double eagle and the “E Pluribus Unum” legend on certain silver dollars. Edge lettering can be a decisive factor in grading because wear may erode the inscription, revealing the coin’s degree of circulation. Graders assess the completeness and clarity of edge lettering; a fully legible edge on a Morgan dollar may support a higher grade, whereas a partially missing inscription suggests heavy wear and a lower grade. The main challenge is that edge lettering is often invisible without rotating the coin, and cleaning agents can cause edge damage that is difficult to restore, complicating the grading process.

Fine (F) grade – a numerical designation on the Sheldon grading scale representing a coin in the range of 40–49, indicating moderate wear but still recognizable details. Related terms: Mint State, Extremely Fine (EF), Very Fine (VF). For 19th-century American coins, an F grade might be applied to a Seated Liberty half-dollar that shows clear major design elements while the lower portions of the reverse are worn. In practice, assigning a Fine grade requires balancing visible design integrity against surface imperfections; a coin with strong luster but heavy wear on the high points may still achieve an F. Challenges include subjectivity in distinguishing between F and EF grades, especially when the coin’s condition falls near the boundary. Consistency in grading demands familiarity with the standard wear patterns of each denomination and mint mark.

Gold Coin Mint Marks – the letters denoting the mint of origin on United States gold coinage, primarily CC (Carson City), D (Denver), S (San Francisco), and P (Philadelphia, often unmarked). Related terms: Gold eagle, gold double eagle, mint variation. The presence and style of the mint mark affect both rarity and grade. For instance, a 1884 \$10 gold eagle with a D mint mark in MS-66 is considerably more valuable than its Philadelphia counterpart, which lacks a mark. Graders must verify the authenticity of the mint mark, as counterfeiters sometimes add a D to a Philadelphia strike to inflate value. The principal challenge is that gold coins develop a patina that can obscure mint marks; careful lighting and magnification are essential to discern the letters without causing damage.

Hardness testing – a non-destructive technique that measures a metal’s resistance to indentation, used to confirm the alloy composition of 19th-century coins. Related terms: Durometer, metallurgical analysis, metal density. By applying a calibrated indenter to a small, inconspicuous area, graders can differentiate genuine 90% silver from counterfeit silver-copper alloys. In practice, hardness testing assists in authenticating

Morgan dollars, where a hardness reading of approximately 50–55 on the Shore scale confirms proper silver content. The challenge lies in avoiding surface deformation on high-grade coins; modern instruments are designed to exert minimal force, but improper use can still mar a coin's surface, potentially lowering its grade.

**Inverted Mint Mark** – a mint-mark error where the letter is struck upside-down, a rarity that can significantly increase a coin's value. Related terms: Mint-mark error, die misalignment, error coin. Notable examples include the 1869–1870 "inverted D" on the Seated Liberty dollar and the 1875 "inverted S" on a San Francisco half-dollar. When grading, the presence of an inverted mint mark is documented separately from the overall condition; a coin may be graded MS-65 overall but receive an additional premium for the error. Identifying the inversion requires precise observation, often under magnification, as the error may be subtle on worn pieces. Challenges include distinguishing a true inversion from a printing flaw or a modern alteration, necessitating provenance research and expert authentication.

**Mint Mark** – a letter or symbol placed on a coin to indicate the mint facility where it was struck; in 19th-century America the primary mint marks were P (Philadelphia, typically unmarked), D (Denver), O (New Orleans), S (San Francisco), and CC (Carson City). Related terms: Mint identification, die pair, mint-mark variety. Recognizing the correct mint mark is essential for accurate attribution, pricing, and grading. For example, a 1875 Morgan silver dollar bearing a S mint mark is assigned to the San Francisco Mint, influencing its market value relative to a Philadelphia issue. Practical application involves cross-referencing the mint mark's position with known die varieties; certain varieties shift the mint mark's location slightly, creating "off-center" errors. The main challenge for graders is that heavy wear or aggressive cleaning can obliterate the mint mark, requiring reliance on die characteristics and provenance to infer origin.

**New Orleans Mint (O)** – the United States Mint branch operating in New Orleans, Louisiana, from 1838 to 1909, most famously producing the "O" mint mark on early 19th-century silver dollars and later on the 1870–1889 "O" half-dollar. Related terms: O mint mark, New Orleans dollar, mint-mark rarity. The O appears on the obverse, typically positioned beneath the date on the left side. A notable variety is the "large O" on the 1869–1878 Seated Liberty dollar, which can command a premium when found in high grades. Graders must evaluate the sharpness of the O and any wear that may have softened its edges; a crisp O in MS-65 suggests minimal circulation. Challenges include counterfeit pieces that have had an O added post-production, requiring microscopic inspection of the mint mark's depth and surrounding metal flow.

**Obverse** – the front (or "heads") side of a coin, typically featuring the portrait of the reigning monarch or, in U.S. Coinage, the national emblem or motto. Related terms: Reverse, portrait, die strike. For 19th-century American coins, the obverse may display the Seated Liberty figure, the portrait of President Lincoln, or the "In God We Trust" legend. Grading focuses on the condition of the obverse because design details such as hair strands, clothing folds, and lettering are key indicators of wear. An example: A 1875 Morgan silver dollar in MS-66 will show crisp details on Liberty's hair and the "M" mint mark, while a heavily worn obverse may obscure these features, lowering the grade. Challenges arise when the obverse has been altered by cleaning or polishing, which can remove original metal and affect the authenticity of the grade.

**Proof (PR) coin** – a specially struck coin produced with polished dies and planchets, resulting in a mirror-like finish and pronounced design details; in the 19th century, proofs were often struck for collectors and

officials. Related terms: Proof set, proof die, proof strike. Proof Morgan dollars, for instance, exhibit frosted relief on the obverse and a brilliant field on the reverse, with sharply defined mint marks. Graders assess proofs separately from circulation strikes, using criteria such as "Proof-like" surface, absence of wear, and presence of "proof" markings like small "PR" incuse letters. The practical challenge is that some proofs have been heavily cleaned, diminishing their original luster and complicating the assignment of a proof grade (e.G., PR-65). Additionally, counterfeit proofs exist, requiring experts to examine die characteristics and metal composition for verification.

Quarter (Q) – while primarily a 25-cent denomination, the term also references the quarter-dollar series produced in the 19th century, such as the Seated Liberty and Barber quarters. Related terms: Quarter dollar, mint mark, die variety. The mint mark on a quarter indicates its origin; for example, a 1878 Barber quarter with a D mint mark originates from Denver. Grading a quarter involves evaluating the sharpness of the "Seated Liberty" or "Barber" portrait, the condition of the "E PLURIBUS UNUM" legend, and any mint-mark anomalies. A common challenge is the "off-center" mint-mark error, where the mint mark appears shifted from its usual position, creating a collectible variety that may increase the coin's value despite a lower overall grade.

Reverse – the back (or "tails") side of a coin, usually bearing the denomination, national symbols, or commemorative designs. Related terms: Obverse, reverse legend, reverse design. In 19th-century American coinage, the reverse of the Morgan dollar features an eagle with outstretched wings, while the reverse of the Seated Liberty half-dollar displays a wreath and the denomination. Graders focus on the reverse to assess wear on high points such as the eagle's talons or the wreath's leaves, as these areas lose detail first. An example: A 1889 Morgan silver dollar in MS-64 retains clear eagle feathering, whereas a lower grade may show feather loss. Challenges include distinguishing intentional design alterations from damage caused by cleaning, as polishing can smooth out fine details, potentially misrepresenting the coin's true condition.

San Francisco Mint (S) – the United States Mint located in San Francisco, California, operating since 1854 and using the single-letter mint mark S. Related terms: S mint mark, San Francisco dollar, mint-mark variety. The S appears on a broad range of denominations, from the 1854–1859 "S" silver dollars through the 1878–1900 Morgan silver dollars. A notable variety is the "large S" on the 1866–1878 Seated Liberty dollar, which can be identified by the broader strokes of the letter. Graders evaluate the sharpness of the S mint mark, as a well-struck S in MS-65 indicates minimal circulation. The primary challenge is that many San Francisco issues have undergone aggressive cleaning, which can erase the mint mark's edges and compromise the grade; careful visual inspection and, when necessary, microscopic analysis are required to confirm authenticity.

Struck – the process by which a coin is formed by pressing a planchet between two engraved dies under high pressure; in the 19th century, striking was performed on manual or steam-powered presses. Related terms: Minting, die, pressure. The quality of a strike influences the sharpness of design elements, including mint marks. For example, a well-struck Morgan dollar will display crisp relief on Liberty's hair and a clean S mint mark. Grading considerations include the "strike quality" component of the overall grade; a coin with excellent preservation but a poor strike may be downgraded. Challenges arise when a coin was restruck or

when a weak strike leads to weakly defined details that can be mistaken for wear, requiring graders to differentiate between strike deficiencies and actual surface damage.

Variety (mint-mark variation) – a recognized deviation from the standard mint-mark design, placement, or size that creates a distinct sub-type within a coin series. Related terms: Error, die variety, mint-mark variation. Examples include the “large CC” versus “small CC” on Carson City dollars, the “capped D” on Denver issues, and the “off-center O” on New Orleans half-dollars. Such varieties are cataloged in specialized references and can dramatically affect a coin’s market value. Graders must note the specific variety in the descriptive portion of the grade, as it informs collectors of the coin’s rarity. The challenge lies in accurately identifying subtle differences, especially on heavily worn pieces where the mint mark’s size or shape may be obscured; high-resolution imaging and comparison with reference specimens are essential tools.

West Point Mint (W) – a United States Mint facility established in 1937 in West Point, New York; while primarily a 20th-century institution, a few 19th-century private medals and experimental strikes bear the W mark. Related terms: Military mint, experimental issue, private medal. For the purposes of a 19th-century mint-mark glossary, the W is included to illustrate the evolution of mint-mark usage. Graders encountering a 19th-century medal with an W should verify its provenance, as many such pieces are later 20th-century productions or reproductions. The challenge is distinguishing authentic 19th-century private issues from modern replicas, which often require metallurgical testing and historical documentation.

Weight and Diameter – the physical specifications of a coin, expressed in grams (or troy ounces) and millimeters, respectively; these measurements are critical for confirming authenticity of 19th-century American coins. Related terms: Coin specifications, tolerance, metal content. For instance, a 1878 Morgan silver dollar weighs 26.73 G and measures 38.1 Mm in diameter; deviations beyond accepted tolerances may indicate clipping, counterfeiting, or alloy substitution. Graders use precise scales and calipers to record weight and diameter, incorporating these data into the overall grade. Practical application includes detecting “light” coins that have been illegally shaved, which can lower both the grade and market value. The main challenge is that cleaning agents can slightly alter weight, and wear can reduce diameter, requiring graders to consider both measurements in context.

Wear patterns – the characteristic areas of a coin that lose detail first due to circulation, typically high points such as portrait hair, rim lettering, and mint-mark locations. Related terms: Abrasion, circulation, grade criteria. Understanding wear patterns helps graders assign consistent grades across a series. For example, on a Seated Liberty half-dollar, the hair on Liberty’s head and the “M” mint mark are among the first elements to wear; a coin retaining these details is likely to receive a higher grade than one where they are eroded. Practical grading involves comparing the observed wear to known patterns for each denomination and mint. Challenges include differentiating genuine wear from artificial loss caused by cleaning, as the latter can produce irregular, non-uniform abrasion that misleads the grader.

Year of Issue – the date stamped on the obverse of a coin, indicating the year the coin was authorized for production; in 19th-century America, the year often coincides with the mint-mark location. Related terms: Date, mintage, chronological series. Accurate identification of the year is essential for assigning the correct catalog number and evaluating rarity. For example, a 1876 Morgan silver dollar with a S mint mark is part of

a higher-mintage year, whereas the 1889 S issue is scarcer, influencing its market value. Graders must verify that the date's numerals are fully present and not partially worn or altered; missing numerals can lead to misidentification and grading errors. The challenge arises when severe wear obliterates the date, requiring reliance on other design elements and mint-mark position to infer the year, which introduces a degree of uncertainty into the grade.

**Mint State (MS)** – the highest condition category on the Sheldon scale, ranging from MS-60 to MS-70, denoting a coin that has never been circulated and retains its original mint luster. Related terms: Uncirculated, proof, grading scale. For 19th-century American coins, achieving an MS-70 requires flawless preservation of design details, including sharp mint marks, crisp lettering, and a mirror-like surface. An example: An MS-68 1885 Morgan silver dollar with a pristine CC mint mark and flawless eagle feathering is considered exemplary. Practical application involves detailed visual inspection, often aided by magnification and specialized lighting, to confirm the absence of any marks, scratches, or polishing. The primary challenge is that many coins have undergone cleaning, which can erase evidence of original surface condition, making it difficult to verify a true MS grade without destructive testing, which grading services typically avoid.

**Counterfeit Detection** – the systematic process of identifying forged or altered coins, employing visual, analytical, and historical methods. Related terms: Authentication, metallurgical analysis, provenance. For 19th-century American mint marks, counterfeit detection focuses on verifying the authenticity of the mint-mark style, depth, and placement. For instance, a fake CC Carson City double eagle may exhibit a shallow mint-mark impression inconsistent with genuine strikes. Graders use tools such as magnifiers, digital microscopes, and X-ray fluorescence (XRF) to assess metal composition and mint-mark characteristics. Practical steps include comparing the suspect coin to known authentic examples, checking for anomalies in weight and diameter, and reviewing provenance documentation. Challenges include sophisticated forgeries that mimic correct alloy composition and weight, requiring expert knowledge of subtle die-pair differences and historical mint-mark usage to uncover inconsistencies.

**Die Pair** – a set of matching obverse and reverse dies used simultaneously during the striking process; each pair produces a unique combination of design details and mint-mark characteristics. Related terms: Die variety, die state, die wear. In the 19th-century United States Mint, multiple die pairs were employed for a single year, resulting in distinct varieties. For example, the "large CC" and "small CC" Carson City dollars arise from different die pairs. Graders reference die-pair catalogs to identify the specific variety of a coin, which can affect both its rarity and grade. Practical application includes noting die-pair identifiers in the descriptive portion of the grade, such as "large CC". The challenge lies in recognizing die-pair differences on heavily worn coins, where only subtle die-specific traits—like minor engraving nuances—remain discernible.

**Denomination** – the monetary value assigned to a coin, such as the \$1 (dollar), \$0.50 (Half-dollar), or \$0.25 (Quarter) in 19th-century United States coinage. Related terms: Face value, nominal value, series. Understanding denomination is essential for correctly identifying the appropriate mint-mark placement, as certain denominations feature distinct mint-mark locations. For instance, the mint mark on a Seated Liberty dollar appears below the date on the left side, while on the half-dollar it is positioned beneath the wreath on the reverse. Graders must verify that the denomination matches the design elements; a mis-matched mint mark can indicate a counterfeit or an altered piece. Challenges arise when denominations share similar

designs across years, such as the 1875 Seated Liberty dollar and half-dollar, requiring careful comparison of size, weight, and design details to avoid misgrading.

**Design Elements** – the individual components of a coin’s artwork, including portraits, legends, wreaths, and decorative motifs, each of which contributes to grading assessment. Related terms: Obverse design, reverse design, die engraving. In 19th-century American coins, design elements like the Seated Liberty figure, the eagle on the Morgan dollar, or the “In God We Trust” legend on the \$20 double eagle are scrutinized for sharpness and completeness. Graders examine these elements to determine the degree of wear; for example, a well-preserved Morgan dollar should retain distinct feathering on the eagle’s tail. Practical grading involves scoring each major element and integrating the results into an overall grade. The main challenge is that cleaning and polishing can artificially enhance design clarity, masking underlying wear and potentially leading to inflated grades if not properly accounted for.

**Edge Types** – the various treatments applied to a coin’s rim, including reeded, plain, or inscribed edges, each serving specific functional or aesthetic purposes. Related terms: Reeding, edge lettering, security feature. 19th-century American gold coins often featured reeded edges to deter clipping, while some silver dollars carried edge legends such as “E PLURIBUS UNUM.” Graders assess edge condition as part of the overall grade; a fully intact reeded edge with sharp ridges supports a higher grade, whereas a damaged or worn edge can lower the grade even if the faces appear pristine. Practical applications include using edge condition to verify authenticity—counterfeit pieces may lack proper reeding. Challenges arise when cleaning agents erode edge details, making it difficult to distinguish between original wear and cleaning damage.

**Historical Context** – the broader economic, political, and technological circumstances surrounding the production of 19th-century American coins, influencing mint-mark usage and design choices. Related terms: Civil War, westward expansion, industrialization. For example, the establishment of the Carson City Mint in 1870 was driven by the discovery of gold in Nevada, leading to the distinctive CC mint mark on gold eagles. Understanding this context helps graders appreciate why certain mint marks appear on specific denominations and years, informing more accurate grading and provenance evaluation. Practical use includes referencing historical mint-mark introductions when dating a coin or explaining rarity to collectors. The challenge lies in integrating historical knowledge with technical grading criteria, ensuring that subjective historical significance does not unduly influence objective condition assessment.

**Incuse Mint Mark** – a mint-mark that is struck below the surface of the coin, creating a recessed impression; this technique was commonly used on 19th-century U.S. Coinage. Related terms: Recessed, mint-mark depth, die engraving. The incuse S on San Francisco Morgan dollars, for instance, appears as a shallow, sunken letter that can be difficult to read on heavily worn pieces. Graders evaluate the depth and clarity of the incuse mark; a well-defined incuse indicates a strong strike and contributes positively to the grade. Practical application involves using angled lighting to highlight the recessed area, aiding in identification. Challenges include differentiating an incuse mark from a counterfeit that may have been added post-strike with a different technique, requiring close examination of surrounding metal flow and die marks.

**Metal Composition** – the specific alloy percentages constituting a coin, such as 90% silver and 10% copper for most 19th-century U.S. Silver coins; accurate knowledge of composition assists in authentication and grading. Related terms: Alloy, purity, metallurgical analysis. For example, a Morgan silver dollar should

contain precisely 90% silver; deviations may indicate a counterfeit or an altered piece. Graders employ non-destructive tools like X-ray fluorescence (XRF) to confirm composition without damaging the coin. In practice, confirming metal composition helps validate a coin's authenticity before assigning a grade, especially for high-value mint-mark varieties. The challenge is that some legitimate restrikes were produced with slightly different alloy ratios, and cleaning can slightly alter surface composition, requiring careful interpretation of analytical results.

**Mint-Mark Position** – the standard location where a mint mark is placed on a coin, which can vary by denomination and year; consistency in position aids in identification and grading. Related terms: Placement, offset, mint-mark error. On most 19th-century silver dollars, the mint mark appears beneath the date on the left side of the obverse. However, certain varieties, such as the "off-center O" on New Orleans half-dollars, shift the mint mark slightly, creating a recognized error. Graders must note any deviation from the standard position, as it may affect the coin's rarity and value. Practical application includes documenting mint-mark position in the descriptive grade. The main challenge is that heavy wear can obscure the original placement, requiring reliance on die characteristics and historical references to infer the intended position.

**Numismatic Certification** – the process by which a professional grading service evaluates, grades, and authenticates a coin, issuing a certificate that details condition, provenance, and any notable features. Related terms: Grading service, slab, certification number. For 19th-century American mint-mark coins, certification provides an objective assessment of mint-mark clarity, overall wear, and any varieties present. A certified Morgan silver dollar with a CC mint mark in MS-66 will include a detailed description of the mint-mark size, style, and any die-pair information. Practical benefits include market confidence and protection against fraud. Challenges arise when the certification process itself may include cleaning or handling that could affect the coin's surface, and graders must balance the desire for a high grade with the preservation of original patina.

**Obverse-Reverse Alignment** – the relative orientation of the obverse and reverse designs when a coin is flipped; in the United States, the standard is "coin-type" alignment, where the obverse and reverse are upright when rotated 180 degrees. Related terms: Alignment, rotation, minting standard. In the 19th-century U.S. Minting, all denominations used coin-type alignment, which aids graders in confirming authenticity. For example, a Morgan silver dollar should display the Liberty portrait upright on the obverse and the eagle upright on the reverse when the coin is turned over. Mis-aligned pieces may indicate a mint-error or an altered coin, potentially increasing rarity. Practical grading includes verifying alignment as part of the overall condition check. The challenge is that mis-alignment can be subtle, especially on worn coins, and may require magnified comparison with reference images.

**Patina** – the natural surface oxidation that develops on metal over time, often giving coins a desirable brownish hue; in 19th-century American coins, patina can range from light to deep brown, affecting visual appeal.