

# The Cincinnati Numismatist

Volume XCI, Issue III

March 2021



*The next meeting of the Cincinnati Numismatic Association will be held at 7:30 p.m. on Friday, March 12th. You will be able to attend this meeting from the comfort of your home through the Zoom application. Members will receive an email invitation and meeting password.*

## Inside this issue:

Numismatic Artificial Intelligence, AI Grading Now and In The Future—Part I	3
Mint Medals, Didn't Used to Cost a Mint	6
Club News	7
Redbook Pre-order Form	8
Membership Form	9
Numystery	10
Coin Show Schedule	10

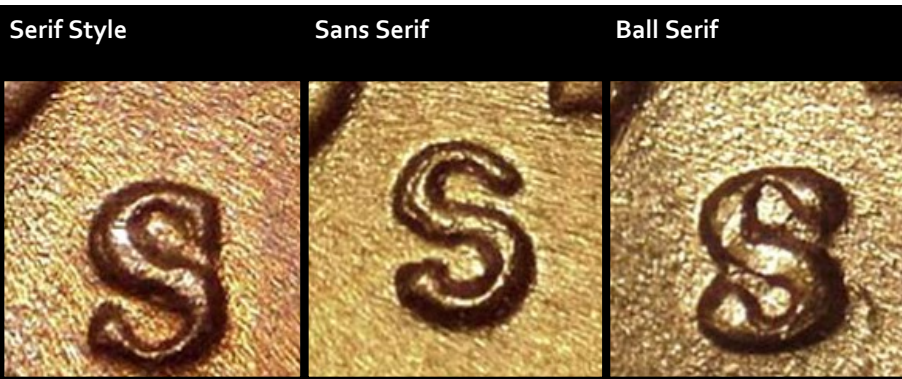
## 1946: A Good Year For San Francisco Varieties

By Richard Giedroye

The year 1946 appears to be pretty mundane. Coins of that year are relatively common. The Roosevelt design replaced that of Winged Liberty or 'Mercury' on the dime. The so-called French bronze composition cent returned following wartime metal adjustments involving first zinc and then later shell case bronze for

don't grab much attention when compared to the 1943 copper cent.

What isn't well known is that there are three varieties of the San Francisco mint mark S. Each of these varieties appears on the cent, nickel, dime, and quarter for 1946.



the cent. The nickel resumed its pre-war copper-nickel composition, having been temporarily substituted with a silver mix during World War II. Off metal strikes of both the cent and nickel are known, but

The three fonts used as an S mint mark are Serif, Sans Serif, and Ball Serif. The serif font appears as a small line or stroke at the end of a larger letter stroke. Sans Serif fonts display a lesser stroke width variation than do serif fonts. San

## 2021 Meetings

Date	Presenter	Date	Presenter
February 12th Friday	Open	July 9th Friday	Open
March 12th Friday	Open	August 13th Friday	Open
April 16th Friday	Open	September 10th Friday	Open
May 14th Friday	Open	October 8th Friday	Open
June ??th Friday	Open	November 12th Friday	Open

Serif fonts appear to suggest simplicity and minimalism. Ball Serif fonts are reasonably self explanatory, due to the pronounced ball involved. This Ball Serif font variety is sometimes referred to as Trumpet Tail or Knob Tail among coin collectors.

The 1946-S Trumpet Tail cent is the scarcest for that denomination, however it is the 1946-S/D variety that gets any collector's attention. The true rarity among the cents is the 1946-S Trumpet Tail Inverted Mint Mark sub-variety, a coin that can be distinguished by the bulb of the mint mark appearing at the top rather than the bottom of the serif where it would resemble a trumpet had it not been inverted.

There are also 1946-S/S re-punched mint mark cents as well as Doubled Die Obverse or Reverse varieties. The re-punched mint mark coin displays a strong secondary mint mark north of the primary mint mark. The reverse doubling appears at the upper wheat ears, then spreads towards the center, legend, and dots.

The same three fonts were used to identify the nickels issued in San Francisco during 1946. The Ball Serif variety likely represents 10 percent of the total mintage. In addition, there is an Obverse Doubled Die nickel of which to be aware.



**1946-S 5C Doubled Die  
Obverse, FS-101, MS66 PCGS**  
Image courtesy of Heritage Auctions

The Roosevelt design dime was introduced in 1946. For that reason production was high, totaling more than 255 million dimes struck at Philadelphia, Denver, and San Francisco. This high production volume resulted in several varieties issued by each of these minting facilities. At San Francisco, the same three fonts were used as the mint mark.

There are also four major 1946-S/S dime varieties. Likely the best known is the Reverse Doubled Die variety, easily identified due to the pronounced doubling.

There are two 1946-S/S Obverse Doubled Die dime varieties as well, both known as 1946-S/S North due to the placement of the re-punched mint marks. The doubling is moderate on Liberty, appearing lightly and less pronounced on In God We Trust and on the Roosevelt profile on the first variety; the doubling being more subdued due to being a later die state from the same die for the other variety.

The fourth variety is known as the 1946-S/S West due to the placement of the mint mark and its re-punched twin.

An excessively rare 1946-S/S/S Ball or Trumpet tripled mint mark dime also exists.

The same varieties appear on the 1946-S Washington quarters. All three fonts were used as the mint mark. It appears the Ball Serif variety may be the scarcest.

In addition, there are four repunched mint mark sub-varieties. Three of these are known as West varieties due to the placement of the repunched serif. There is also a North sub-variety, again the description being due to the placement of the secondary serif.

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“San Francisco struck coins for 1946 are plentiful and seldom examined in as much detail as perhaps they should be.”

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There were just over a half million 1946-S Booker T. Washington Memorial half dollar coins struck, all of them produced late in the year. How many dies and S mint mark fonts were used does not appear to have been studied. Considering the availability of these coins perhaps this coin could yet be studied to learn if all three fonts were employed.

San Francisco struck coins for 1946 are plentiful and seldom examined in as much detail as perhaps they should be. Check your collection. You may have some of the more unusual varieties.

# Numismatic Artificial Intelligence

## AI Grading Now and In The Future—Part I

By Jonas Denenberg (Age 14)

*A shortened version of this article was originally published in the Virginia Numismatic Association's newsletter. The full version is published here with permission of the author.*

For over thirty years, people have been working to digitize coin grading. Compugrade (now defunct) first did it in the late 1980s. PCGS also attempted to do it in the early 1990s and made another attempt to do it more recently. Although we know that these exist through patents and press releases, there isn't a single AI grading tool available to the public today, and it's uncertain if there are any in operation for private use. In this article, we'll create our own, simple AI grader (you'll even be able to test it online), and we'll also look at what has been done in the past and what could be done in the future.

### What do we mean when we say AI?

For our purposes, an "AI Grader" is any tool that can determine a grade without much human input. [Editor: AI stands for "artificial intelligence".]

### Technical Terms:

I've tried my best to write this article using the simplest terms possible. However, there are a few more advanced computer terms I used, that you may want to be aware of:

**Algorithm** - A process or set of steps used to solve a problem.

**Function** - Outputs a single answer given an input.

**Operator** - Performs operations. Adding and subtracting are examples of some simple operations.

**Pixel** - A pixel is a small block on a screen that can display a single color. Screens are made up of multiple, often thousands, of pixels. Images are displayed on a screen using pixels.

**Resolution** - The size of an image. Images with higher resolution are more detailed and cover more pixels than those with lower resolutions.

### Starting Out

We'll need to choose an image to grade. Let's use this Barber Dime image that I took. Before we begin our quest to find this coin's grade, we'll need to collect a



small amount of input from the user. We'll need them to crop the image down to just the coin for us (this could be automated, but it would get messy if there were multiple coins in the photo) and we will need them to tell us the coin's series (for later use).

### Deciphering the Image



Our first image from above cropped

The most important challenge we must solve is how a computer will understand our image. You and I can easily see that this is a fine coin, but how can a computer tell? The computer just sees a group of pixels, and it's definitely unable to decipher it from an XF-40 coin or an MS-67 coin. How can we transform our image into something that can be easily read by a computer? To answer this question, we can look back to a technique that's been used for hundreds of years.



Coin rubbing is a technique that is used to "transfer" the likeness of a coin onto a sheet of paper without the need for a photograph. This technique was commonly used by dealers to show off inventory before cameras became widespread. A rubbing is created by placing a coin under a sheet of paper and gently rubbing a pencil over it. This generates a grayish heatmap - where the edges of the coin appear dark and the fields appear light. Using



this technique, someone can get a pretty good idea of a coin's grade without seeing it in person. The best thing about this is it can be replicated by a computer.

## Processing the Image

The Prewitt Operator is used in image processing algorithms to find an image's edges. In simple terms, it looks for gradients in an image and uses them to determine where an edge lies. When we apply this to our barber dime image it is transformed into what you see below - it looks close to the coin rubbing, however, it does not solve our original goal of creating an image that can be easily read by a computer. Although it looks great at first, as you look closer you may notice that it's a big, blotchy mess with hundreds of different colors. How can we further simplify it?

Thresholding is a method for creating binary images. When you apply thresholding to an image, the image is converted into just two colors – black and white.



Furthermore, a threshold can be implemented when thresholding. The higher the threshold is set, the darker a pixel needs to be in order to be drawn black. If you look at the image above with the Prewitt algorithm applied, you'll notice that the boldest edges on the dime have the darkest splotches in the generated image. Could there be a correlation between this and the image thresholding? Of course!

We can threshold the Prewitt algorithm image at multiple different levels. In the next column is a sampling of 4 different levels (out of 26 that I generated in total) - I've superimposed the original image over the black part so that you can more easily see the details of the coin. Each time that the threshold is raised, more of the Prewitt algorithm image is selected. Lower thresholds make sure that only the darkest parts are selected, while higher thresholds allow lighter parts of the image to be selected too.



Bad



Good



Bad



N/A



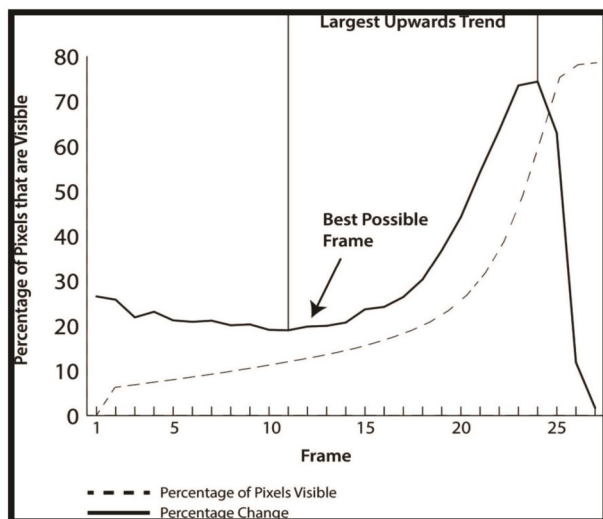
Now that we've created a frame for each level, we can combine them into a heatmap - luckily this doesn't involve any complicated algorithms. A red color can be superimposed over each frame – frames with lower thresholds are darker while frames with higher thresholds are the lightest. We can then place each of the frames over each other, starting with the last frame and ending with the first frame. Although it looks similar to the Prewitt algorithm image - it has only 26 colors, unlike the Prewitt image which can have hundreds of thousands of possible colors.



## Making Sense of our Image

We've figured out how to create a digital heatmap of our image, just like a coin rubbing. Now, how can we actually determine a grade? Although our heatmap is pretty cool (and a nice proof of concept), we'll need to go back to looking at our 26 frames to begin the process. To begin grading, we'll need to find the frame that shows as much of the coin's details as possible without showing parts of the field.

Doing this is a bit of a complicated process, but I'll try my best to explain. First, the number of pixels in each frame is counted. Next, the percentage change between the number of pixels in each frame is calculated. We can then compare each percentage of change figure to the one before to determine whether it was an increase or decrease over the previous figure. Using this, we can look for upward trends in the data. Finally, we can look for the largest upward trend and select the first frame in the upwards trend. Below is a graph to help explain:



At first, there's no intuitive reason as to why something like this would work. However, when this process is repeated multiple times - a trend starts to appear. For most coins, there will be a large jump in percentage change of pixels visible at the first frame. Following this, the percentage change will slowly decrease as most of the coin's edges become visible. Once the edges are all visible, parts of the field will begin to quickly become visible, causing there to be a large increase in percentage change. At the end of this large increase, the percentage change makes a huge drop as the last few remaining pixels become visible. The algorithm described works to identify the frame that shows the most edges but has little of its field visible.

## Grading the Image

We just found the best possible frame to grade! Now, how can we determine a grade? To be continued next month in Part 2...

[Article courtesy of the I.A.Y.C. Club Newsletter, January 2021, Vol. 2, No.1]

## Classic Commemorative Coins Online Resource Debuts on Money.org

A new online resource produced by the American Numismatic Association (ANA) highlights the U.S. Mint's early silver commemoratives (1892-1954), providing detailed images and information for all 50 coins in the series as well as the broader historical perspective surrounding each coin.



Image courtesy of Heritage Auctions

The U.S. Mint's classic commemorative era started strong with the World's Columbian Exposition half dollar in 1892. By the 1930s, however, collectors had reached a saturation point. (An astonishing 21 different half dollars were struck in 1936 alone.) After a hiatus of several years, the last coin in the series, the Carver/Washington half dollar, was minted from 1951 to 1954.

"Commemorative coins exist to familiarize people with a specific event, person or place in history," said Rodney Gillis, ANA education director. "They are excellent teaching tools." Gillis spent months gathering the stories behind each of the coins and the subjects they represent.

The classic commemorative coins online tool can be viewed at [money.org/commemorative-coins](https://money.org/commemorative-coins). Additional numismatic resources are available at [money.org](https://money.org).



# Mint Medals, Didn't Used to Cost a Mint

By David G. Heinrich

If you read *Coin World* you may have seen William T. Gibbs recent articles about the U.S. Mint's price increases for their series of bronze medals. As a society we are used to price increases but imagine if you stopped at your local grocery to find the same gallon of milk that you paid two dollars for last week in now eight dollars. How about eight to ten dollars for a gallon of gas or over sixteen dollars for your morning grande skinny vanilla latte at your local coffee shop. Well if they followed the mint's lead that's what you would be paying.

The 400% price increases were announced last fall and took effect on January 1st of this year. So a three inch New Frontier Bronze Medal, like the one below, now costs \$160 verses the \$39.95 it cost just a couple of months ago.



3 inch Monuments Men Bronze Medal



the price of the 1.5-inch bronze medals was raised from \$6 to \$7.95. The mint then lowered the prices in March of 2012 to \$39.95 and \$6.95 respectively.

Maybe after a period of time the mint will think better of the decision and lower the prices to something more reasonable. Until then the best idea might be to watch the secondary market and see where the prices go.

An eBay search found a three inch President James Garfield with a buy it now price of \$24.75 and free shipping. Also found on eBay was a one point five inch Monuments Men bronze medal for \$11.99, again with free shipping.

The mint stated that a review of the medals program revealed that it was losing money. If sales drop to near zero, the program won't be producing income either. Let's hope that further review will reveal that some lower price point can conserve the series and still prevent losses for the mint.

Images courtesy of the U.S. Mint



I agree with Gibbs, this is a sure way to kill the program. The last time the mint increased prices for the medals was in January of 2011.

The price for a three inch bronze medals was raised from \$42 to \$44.95 and

1.5 inch Doolittle Tokyo Raiders Bronze Medal

## Club News

Many local and national coin shows have been cancelled. Check the show schedule on page eight.

Our next meeting is on Friday March 12th. Members will receive an email invitation and meeting password.

We don't know when we will be able to have in-person meetings again but the current schedule assumes that by December we will have our Christmas dinner and charity auction back in our downtown location.

Our hope is that we will be able to resume in-person meetings sometime before December. If we can, we should make that first meeting a celebration. Do you have an idea of how we should mark the occasion? Bring it up in a zoom meeting or send an email to [cincycoins@gmail.com](mailto:cincycoins@gmail.com).

Suggestions from the February meeting were, Zablong pizza or Chipotle delivered to the meeting for dinner. Another thought was a special toast maybe possibly with the bourbon from the bottle that was auctioned off for the benefit of the Ronald McDonald House during our December Christmas meeting.

If we can resume in-person meetings by our scheduled October 8th meeting it will be a special one. Two days before, the 6th, will mark the 150th anniversary of the dedication of the Tyler Davidson Fountain. An estimated 20,000 people were in attendance at that dedication. We will probably have a few less than that at our meeting.

We will take special note of this since we have adopted the fountain for our club medals etc. Look for more on this theme in the coming months.

2022 75th-edition Redbooks are available for pre-order. The personalized bookplate will have the same copper seal as last year. The price remains the same, just \$15 plus \$3 for delivery by media mail. There is an order form on page 6.



Members can purchase copper examples of the 90th-anniversary medal for \$10 each including postage. Send a check for \$10 for each medal to:

Dave Heinrich/CNA  
P. O. Box 446  
Miamitown, OH 45041

Checks and money orders should be made out to the Cincinnati Numismatic Association.

Extra copies of the 90th-anniversary issue of *The Cincinnati Numismatist* are also available for \$7 each including postage. Send orders to the same address as the medals and Redbooks.

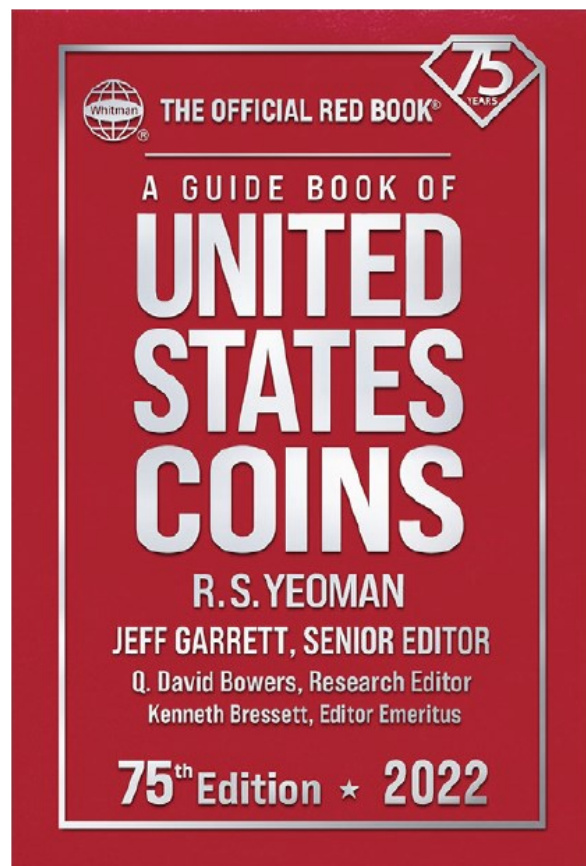
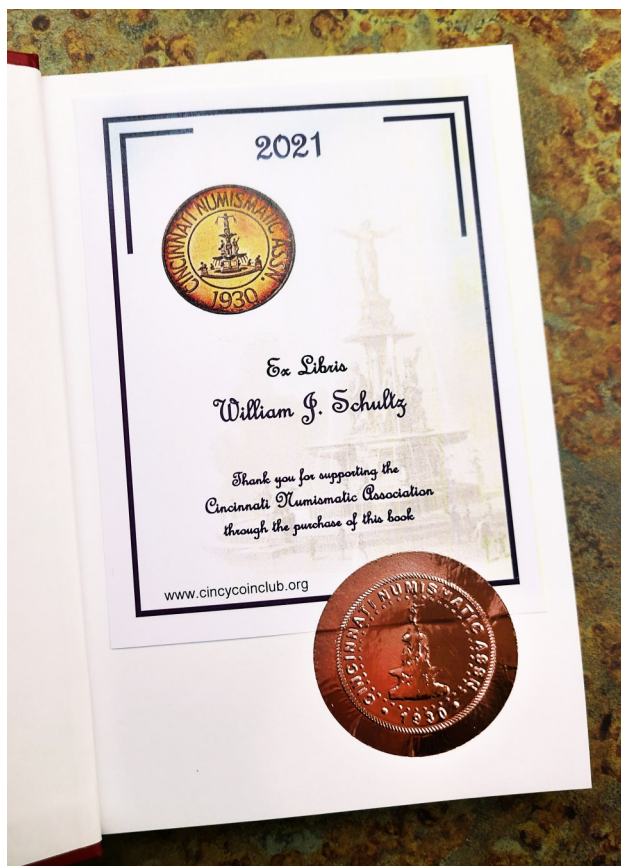
If you accepted the challenge of writing an article for the newsletter by taking a challenge envelope and are having difficulty identifying the item or researching it, don't hesitate to ask for some help. Send an email to the editor, David Heinrich, and he will assist you.

### CORRECTIONS:

It has recently come to the attention of the editor that beginning with the August 2019 issue of *The Cincinnati Numismatist* the post office box number for the club on the back cover contained a typo and was incorrect. The correct box number is 446. Corrections have been made to all of the editions in the club archives. Apologies to all who had any mail returned by the post office.







Purchase the new 2022 75th edition Redbook ([and or the 2022 Bluebook](#)) through the Cincinnati Numismatic Association with a personalized bookplate and help support the club's educational programs. The hand embossed seal is real copper. The cost is the same as last year, only \$18 including delivery. The Redbooks will ship in April. Use the form below and mail it in. Why not order copies as gifts for friends or relatives!

## PERSONALIZED REDBOOK PRE-ORDER FORM

Please Print Clearly

Name as you want it to appear on the bookplate \_\_\_\_\_

Shipping Address if Applicable: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Email: \_\_\_\_\_

☒ ~~Picked up at meeting \$15~~ Currently no in-person meetings are scheduled

☐ Delivery by U.S. Mail \$18

Make checks payable to the Cincinnati Numismatic Association

Mail order form and payment to:

C.N.A.  
P.O. Box 446  
Miamitown, OH 45041



# Membership Application

Pass this Membership Application on to a friend!

Since 1930, the Cincinnati Numismatic Association has been the gathering organization for coin collectors and other numismatic related specialists in the Cincinnati area. Its purpose has remained the same, to foster knowledge of numismatics and a fraternal spirit among those who pursue the study of coins, currency, tokens, medals, and exnumia.

The organization meets once a month, on the second Friday at 7:30 pm. The meeting location is at Coins +, 225 East 6th Street, in downtown Cincinnati on an upper floor of the building.

Our meetings consist of numismatic presentations given by numismatists from among our membership and from other experts in their fields from around the country. Show and tell and light refreshments are also part of our meetings.

We have a group dinner held at a local restaurant every April. December marks our annual Christmas dinner meeting and charity auction benefiting local children's charities.

Club dues for adults are \$10 annually. Dues for Juniors are just \$3 a year. This is certainly one of

the best values in numismatics.

Membership in the Cincinnati Numismatic Association includes a subscription to its monthly publication, The Cincinnati Numismatist. In 2006, 2007, 2016, 2017, 2018 and 2019 the publication received first place in the ANA's competition for Outstanding Local Numismatic Publication.

The Cincinnati Numismatic Association has its roots in its long history, but strives to serve the needs of the collectors of the future. Give us a try!

*I hereby make application for membership in the CNA and agree to abide by the constitution and bylaws of the said association.*

☐ 3 year membership (\$29)

☐ Life membership (\$175)

☐ 1 year membership (\$10)

☐ 1 year Junior member (\$3)

Print Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Phone: \_\_\_\_\_ (home)

\_\_\_\_\_ (work/cell)

Email: \_\_\_\_\_

Signature: \_\_\_\_\_

Sponsor (optional): \_\_\_\_\_

Signature: \_\_\_\_\_

*(DO NOT FILL OUT THE FOLLOWING LINES)*

Member Number: \_\_\_\_\_ Date Paid: \_\_\_\_\_

BOG Approval: \_\_\_\_\_ BOG Approval: \_\_\_\_\_

Make checks payable to the Cincinnati Numismatic Association.

Mail application and payment to: CNA, PO Box 446, Miamitown, OH 45041

## CINCINNATI NUMISMATIC ASSOCIATION

President/Editor: David G. Heinrich  
Vice President: Bill Bennett  
Recording Secretary: Deborah Lewis  
Assistant Editor: Isaiah Hageman  
Treasurer: David G. Heinrich  
Webmaster: Tom Lanter



ANA  
Member  
Club

### Newsletter contact:

David G. Heinrich  
PO Box 446  
Miamitown, OH, 45041  
cincycoins@gmail.com

### Dues & Membership Contact:

David G. Heinrich  
PO Box 446  
Miamitown, OH 45041  
cincycoins@gmail.com

The Cincinnati Numismatic Association was founded in August of 1930 and consisted of thirty-five members including numismatic notables such as B. Max Mehl and Farran Zerbe. The first CNA President was Herbert A. Brand. The CNA was founded for the purpose of hosting the 1931 American Numismatic Association convention. Since then, the CNA has hosted the ANA convention three times, in 1942, 1980, and 1988. The CNA also hosted the 1998 ANA Spring show.



*The Cincinnati Numismatist*  
is an ANA award-winning publication

## Numystery

By: Colonel Green

### This month's Numystery:

Which US coins feature a drum as part of their design?

### Numystery answer:

*The 1976 Bicentennial Quarter Dollar and the 1995 Civil War Battlefield Preservation Half Dollar*

## Coin Show Schedule

### Monthly

Cincinnati Greenhills Classic Coin, Currency, Stamp, Jewelry & Watch Show, American Legion Hall, 11100 Winton Rd, Cinti, OH  
Last Sunday, 10:00 am - 3:30 pm  
numismaniaofohio@gmail.com

### Monthly

Columbus Coin, Stamp & Card Show, Makoy Center, 5462 Center St., Hilliard, OH 10 am - 4 pm  
Third Sunday, over 18 \$2 admission  
drich@columbus.rr.com

### Editor's Note

**This schedule was accurate at the time of printing but as you know things continue to change. Check other sources for the most up to date information.**

### March 11th-13th

**Phoenix 2021 National Money Show Officially Cancelled.** The American Numismatic Association (ANA) Board of Governors voted on Dec. 16 to officially cancel the Phoenix National Money Show®, scheduled for Mar. 11-13, 2021, due to heightened coronavirus concerns. The vote was 7-2, with the majority of the Board expressing concerns about the Association's inability to assure the safety of its members, dealers, staff and visitors.

Because of Arizona's current restrictions on indoor gatherings, the show would have been significantly smaller had the Board voted to move forward. The bourse would have been reduced in size, and educational programming and meetings would have moved online. The Phoenix Convention Center informed the ANA the day after its Board meeting that all events through February 28, 2021, would be cancelled, leaving events such as the Association's National Money Show in mid-March in an uncertain situation.

### March 25th-27th

Whitman Coin & Collectibles  
Baltimore Expo **has been canceled**

### April 21st-24th

Central States Numismatic Society Annual Convention. Renaissance Schaumburg Hotel and Convention Center. 1551 North Thorau Drive, Schaumburg, IL 60173  
Hours: Wed 3-6, Thu 10-7, Fri 10-6, Sat 10-5  
Contact: Larry Shepherd  
Phone: (719) 464-8801  
Email: [Convention@centralstatesnumismaticsociety.org](mailto:Convention@centralstatesnumismaticsociety.org)

### Want To Be Published?

If you have an article that you would like to have published in the newsletter, **PLEASE** mail it to; C.N.A., PO Box 446, Miamitown OH, 45041 or email to [cincycoins@gmail.com](mailto:cincycoins@gmail.com)