COUNTERFEIT DETECTION

a reprint from The Numismatist

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In this book are reprinted all of the significant articles on counterfeit detection that have appeared in "The Numismatist" from 1977 through 1982.

To make this material as useful as possible the articles have been organized in date and denomination sequence. A few outdated facts have been eliminated, and the text has been edited for clarification.

Not intended to be a complete text book on numismatic counterfeit detection, rather, this volume is a handy guide to those pieces, both counterfeit and genuine, that are of the greatest concern to collectors.

It is our sincere hope that publication of this material in convenient inexpensive form will serve the hobby well in the suppression of these and all similar counterfeit and altered pieces.

Detection and elimination of such items require constant attention and concern by everyone. If you have further questions about any suspected counterfeits please contact The American Numismatic Association Certification Service.

Table of Contents

A Coin's Journey Through ANACS

What happens to a coin when it arrives at ANA Headquarters for certification? As a coin owner perhaps you have wondered what tests your investment undergoes during the ANACS procedure. To better acquaint you with the process of certification, this report traces the route a coin follows, from its submission to ANACS to its authentication, grading and subsequent return.

The ANA Certification Service receives approximately 250 coins daily, most of which are submitted by the coins' owners at ANA Headquarters or delivered by the U.S. Postal Service. If received by mail, the coin is unpackaged and checked against the accompanying ANACS request form. The coin and its original holder are then inserted in a poly bag, which in turn is placed in a 2½-inch square plastic flip. Original holders that do not fit in the plastic flip are removed and returned to the submitter. This initial process is always conducted by at least two members of the ANACS staff who carefully transfer the coin from its original container to the plastic flip, always working above the protective surface of a padded jeweler's tray.

Following the coin's transfer to the plastic flip, an ANACS identification number is assigned to both the coin and its request form. The information appearing on the request form is entered and stored in an ANACS computer file.

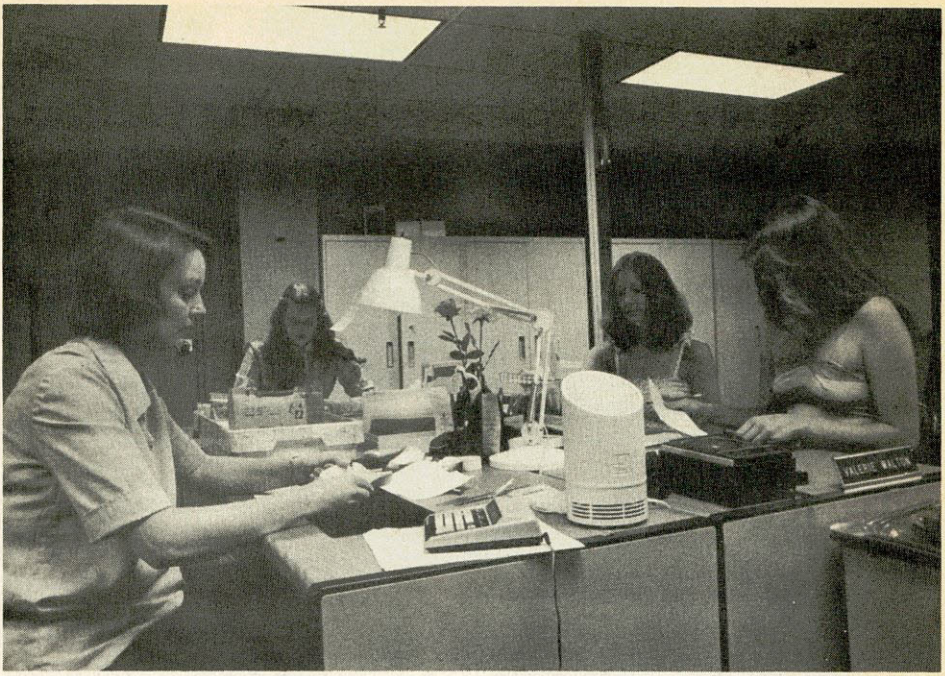
A U.S. Postal Service delivery is accepted by an ANACS staff member.

An ANACS authenticator accepts a coin for certification at ANA headquarters.

After the coin is recorded, it is placed in a box with other coins submitted for certification and sent to the photography department. A black-and-white photograph of the coin is produced immediately for use on the final certificate, a practice that protects not only the ANA but the coin's owner as well.

Upon its return from the photography department, the coin is weighed on an electronic balance that accurately registers the coin's weight to one ten-thousandth of a gram. Through the use of a bar code system, the weight is automatically entered into the coin's computer record. For the owner's information, the weight is also recorded on the coin's plastic flip. Extreme care is taken to ensure that the coin sustains no damage during any phase of certification; the scale's balance tray is padded for the coin's protection. After weighing, the coin is moved to a storage vault to await authentication and grading.

ANACS employs three techniques in authentication, either alone or in combination. The most frequently used method involves close inspection of the coin with the aid of a stereo microscope, which magnifies the coin's details up to 80 times its original size. If a coin's authenticity is questioned, it is tested to determine its specific gravity. By suspending the coin in distilled water, an authenticator can measure the ratio of the weight of the coin to that of an equal



As each piece of mail is received, it is opened and recorded. Coins are placed in poly bags and flips.

REQUEST FOR ANACS CERTIFICATION

Use separate form for each item. Please send coins in easy access holders.

Name _____ ANA No. _____
(Print or type) (Last) (First)

Address _____ Phone ( ) _____

City _____ State _____ Zip _____

Issue Certificate to: _____
(Indicate personal name or company trade name)

SERVICE REQUESTED:

☐ Authentication only ☐ Authentication and Grading

☐ Grading of previously authenticated coin.* ☐ Reexamination*

☐ Special photographic service (enclose instructions).

*Original ANACS certificate MUST be enclosed

ITEM:

☐ Coin
☐ Paper Money
☐ Medal
☐ Token
☐ Other

Issuing Country _____

Date of item _____ Mint Mark _____

Denomination _____ Variety _____

Owner's Valuation $_____ This MUST be recorded. ANACS fees and insurance are based on this value.

Comments/instructions _____

I understand and acknowledge that any opinion rendered by the ANA Certification Service on the authenticity or condition of the item submitted herewith represents a considered judgment by the examiners employed by the ANA. Authentication does NOT, however, constitute a guarantee that the item is genuine, and neither authentication nor grading by ANACS guarantees that others will not reach a different conclusion. The item will be examined with nondestructive testing techniques available to the Service and will be judged by examiners based upon information available to them, but no warranties are expressed or implied from any opinion rendered in consequence of this application. Permission is granted for ANACS to photograph and use information gained from this piece for educational purposes.

DATE _____ SIGNATURE _____

☐ Send additional ANACS forms. ☐ Send information on ANA membership.

DO NOT WRITE IN THIS SECTION

Item number _____

Diameter _____ Sp. Gr. _____

Wt. _____

Gen. _____ Alt. _____ Cft. _____ ND _____

Replica _____ Other _____

Grade-Obv. _____ Rev. _____ N/O _____

D/O Grade _____

Date Ret. _____ RC No. _____

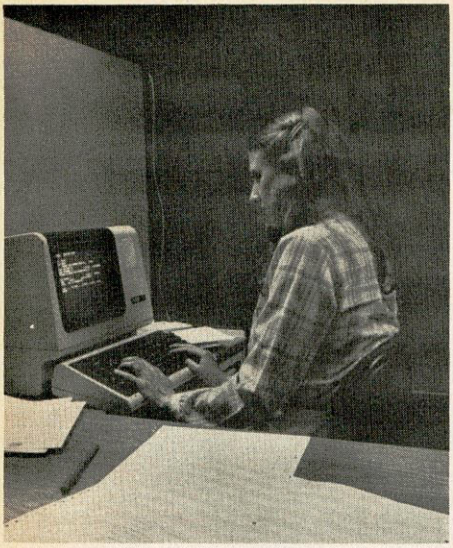
Reg. No. _____

FEES PER ITEM

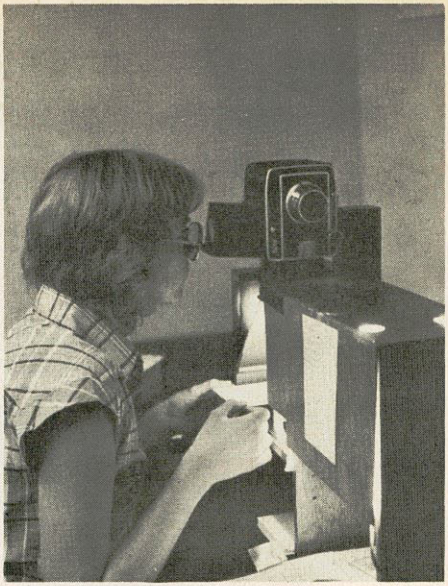
(See reverse for fee schedule)

Authentication fee	$_____
Grading fee	_____
Custom Photography	_____
First Class Return Postage	_____
Registration fee	_____
TOTAL (this form only)	$_____
TOTAL PAYMENT ENCLOSED	$_____

Make check payable to ANACS.
Fees are per item—postage may be grouped.



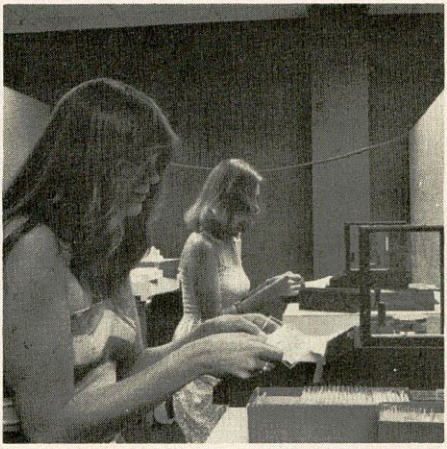
Data about each coin is entered on one of many ANACS computer files.



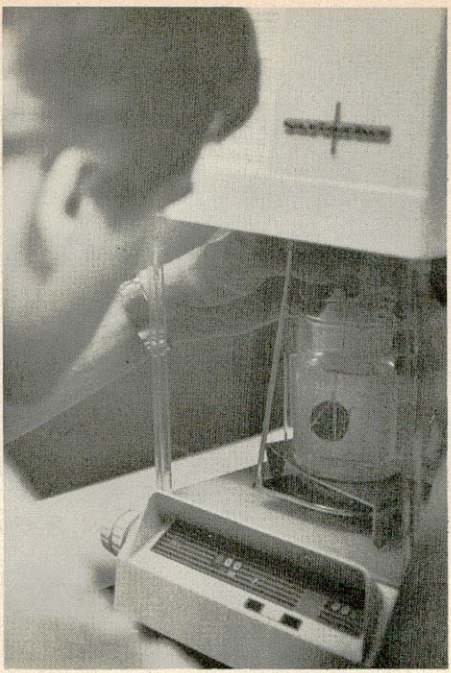
The obverse and reverse of each coin is photographed, using great care not to handle the coin's surface.

volume of water—thus establishing the coin's metal content. To remove any impurities deposited on the coin's surface during the test, the coin is rinsed with trichlorofluoroethane, a neutral solvent that cleans without affecting the coin's toning or lustre. If some doubt remains about the coin's authenticity, it is studied with the ANA's scanning electron microscope (SEM), a recent acquisition that has greatly sophisticated the authentication process. The SEM magnifies the coin up to 20,000 times its original size by scattering a beam of electrons over the coin's surface. The resulting image is displayed on a cathode ray tube screen, on which the authenticators can spot minute alterations.

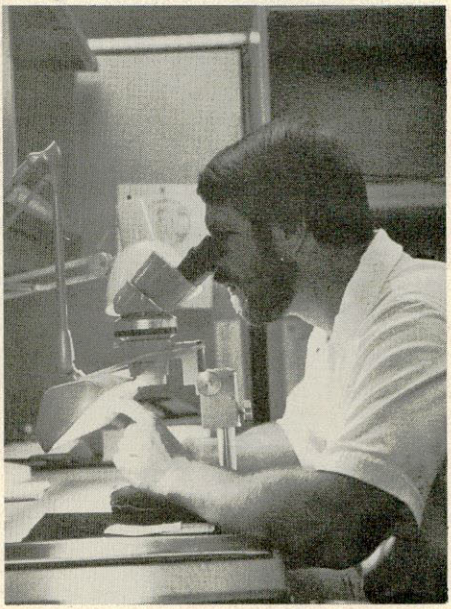
If requested by the submitter, the coin is graded following authentication. Four or more authenticators scrutinize the coin under incandescent light, using no more than 7X magnification. Should the authenticators fail to concur on the grade assigned to the coin, the coin is examined by all ANACS authenticators or submitted to outside experts for their consensus. When a grade is determined, it is recorded on the request form and entered on the coin's computer record.



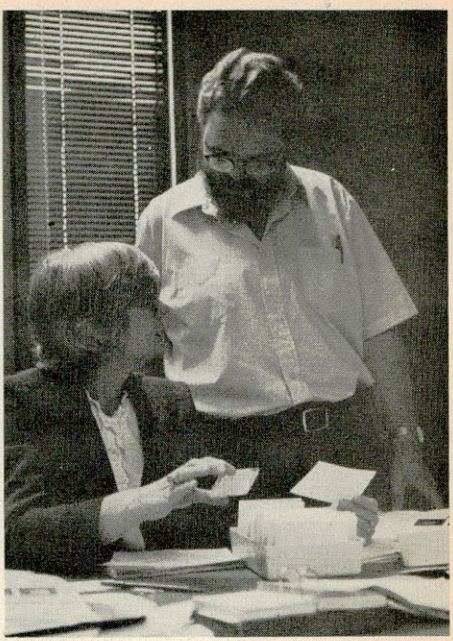
Determined by an electronic balance, the weight of a coin is automatically entered in the coin's computer record.



Testing for specific gravity is often required to determine a coin's authenticity.



A stereo microscope, the device most often used in authentication, provides invaluable assistance to ANACS.

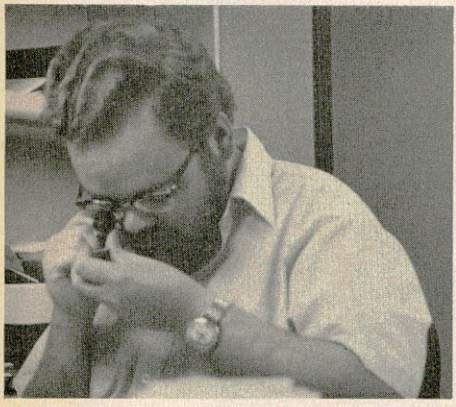


ANACS staff members confer about a coin's assigned grade.

Once the coin is found to be genuine, a label attesting to the coin's authenticity and grade is printed by the computer. The labels are then sent to the photography department, where they are affixed to the photograph that was taken shortly after the coin's arrival at ANA Headquarters. The official ANA certification seal is then embossed over the label and photograph. If the coin exhibits important characteristics, photomicrographs—sections of a coin photographed through a microscope—might be taken for later use by the authenticators in coin identification, counterfeit detection or instruction.

The completed photo certificate is returned to the certification department where it is matched with the coin and packaged for return to its owner. As with all phases of certification, several members of the ANACS staff are involved in this process. If the coin can not be identified accurately from its certificate because of the quality of the photograph, the coin is returned to the photography department, rephotographed and relabeled. Once the coin is

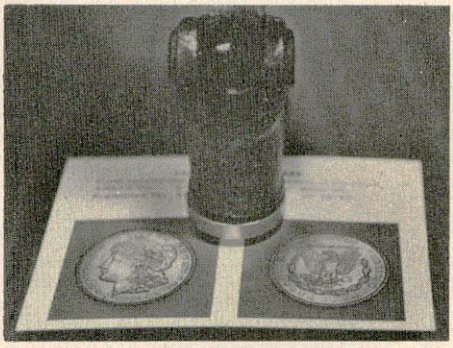
The image of a coin is flashed on the viewing screen of the scanning electron microscope. The SEM allows the authenticator to spot alterations.



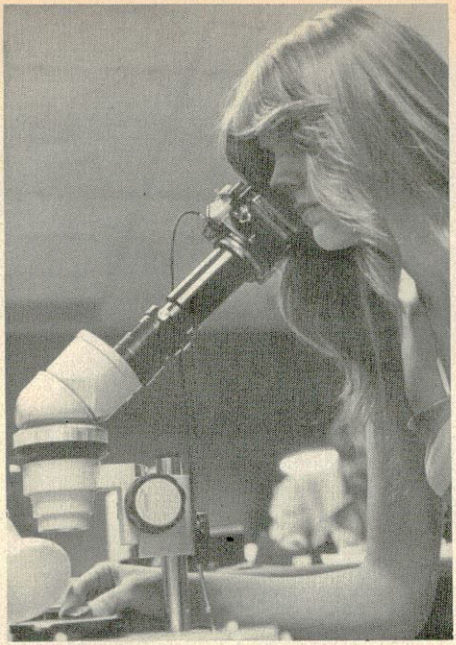
Close inspection of a coin helps to determine its grade.

Each photo certificate includes a computer generated label.

Phototechnicians carefully apply computer labels to certificates.

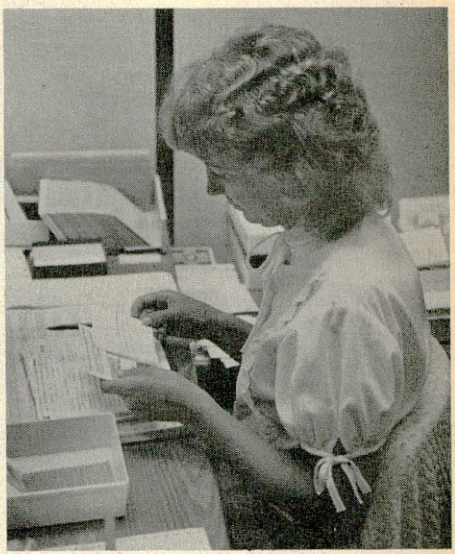


As a security measure, the official ANA certification seal is embossed over the label and photograph on the certificate.

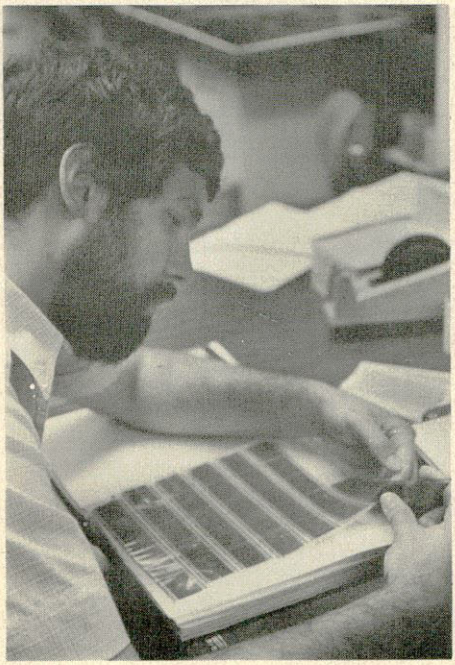


35mm photomicrographs are taken of a coin that displays important diagnostic characteristics.

Photomicrograph negatives are inspected for quality.

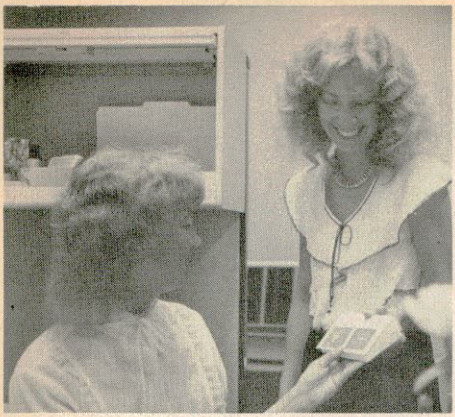


Before the coin is returned to its owner, certificates are carefully matched and checked.



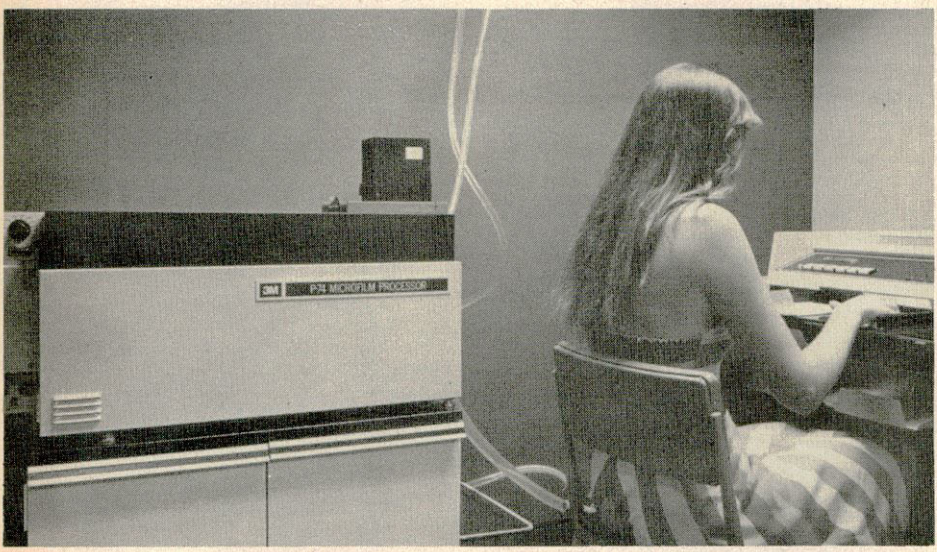
Photomicrograph negatives are consulted to aid in the identification of another coin.

Coins and certificates are prepared and packaged for return to owner.



Completed photocertificates are examined one last time before being issued.

Countless requests for information by phone and mail are answered daily.



Original requests for certification are placed on microfilm for future reference.

packaged, it is sent to the submitter by mail or held for pick-up at ANA Headquarters.

If the owner wishes to know the results of the ANACS findings before the coin's return, he may call ANA Headquarters during office hours, Monday through Friday. Most findings are entered in the coin's computer record and can be recalled from the computer within minutes.

The final phase of certification involves one last photograph. For future reference, the original request form and any attached instructions are placed on microfilm and stored in ANACS files where a permanent record of each coin is maintained.

Bressett Joins ANA Staff

Kenneth Bressett, former vice president of numismatics at Kagin's Numismatic Investment Corp. of Des Moines, Iowa, has accepted the position of Director of Authentication Services at the American Numismatic Association. As Director of ANACS and Education, Bressett has brought together his years of experience as a professional numismatist, collector, dealer and educator to oversee the ANA's expanding programs of seminars, authentication and grading. In response to his appointment, Bressett indicated that his goal will be to bring greater harmony to the industry and hobby by building a better understanding of the ANACS grading service through educational programs.

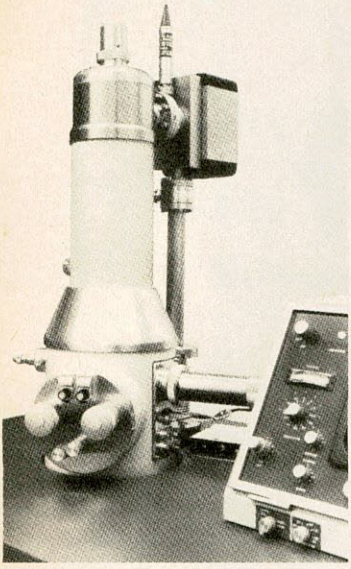
In addition to reference work, Bressett has written many articles for the coin collecting hobby, served as managing editor of the Whitman Numismatic Journal from 1964-1968, and has done extensive research on Early American coins. In 1977 he coordinated the editing and publishing of the American Numismatic Association's grading standards book, and each year serves as an instructor at the ANA's summer seminar program.

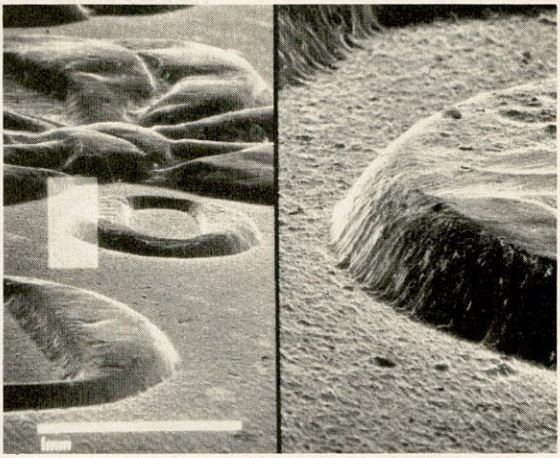
He is a devoted member of the hobby, speaking at coin club meetings around the country. Bressett is a life member of both the American and Canadian Numismatic Associations, a Fellow of the American Numismatic Society and the Royal Numismatic Society of England. President Johnson appointed him to the United States Annual Assay Commission in 1966 and he was the 1978 recipient of the ANA Medal of Merit Award.

ANACS Director Kenneth Bressett and Martha Hodges examine certificates in the vault. Bressett brings to the position years of experience as a professional numismatist, collector, dealer and educator.

Donald Kagin, president of Kagin's, said that although Bressett's leaving the company was a genuine loss, it is a move in the direction of the company's policy to promote education and betterment of the hobby.

ANACS Acquires
Scanning Electron Microscope





Using a similar model to the scanning electron microscope seen at left, ANACS personnel can now obtain photographic records detailing a coin's surface magnified from 5-X to 300,000-X. Featured above is the mintmark of a New Orleans Silver Dollar.

Some of the most highly sophisticated magnification equipment in existence is used by the ANA Certification Service. A scanning electron microscope (SEM) with a continuous zoom magnification from 5-X to 300,000-X was built for ANACS by Advanced Medals Research Corp. (AMRAY) of Bedford, Mass., and is housed in a room specially constructed for its use in the ANA headquarters basement.

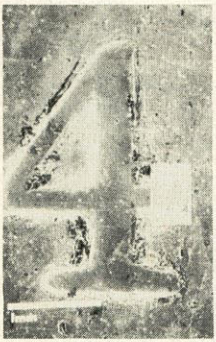
The power and potential use of this equipment is indicated by the example that at 3,000-X magnification it gives a range of fine definition 300 times greater than is possible through the finest optical microscope. "For example," explained Ed Fleischmann of the ANACS' staff, "to examine a suspicious mintmark, the most expensive optical microscope, even set at 60-X and focused sharply on the face of a coin's mintmark, will show the surrounding field as blurred. Or, if you focus the optical microscope upon the adjoining field, the face of the mintmark will be blurred.

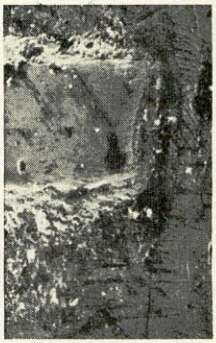
"Use of the SEM will augment the reliability of our decisions regarding the authenticity of coins, especially of cleverly altered coins of which more are seen as time passes. In other words, it can be used to supply irrefutable evidence to support our expert opinions."

Photographic records made of coins examined by this equipment will enhance ANACS' growing "rogues' gallery" kept on file.

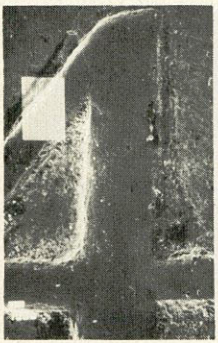
Capabilities of Scanning Electron Microscope Explored

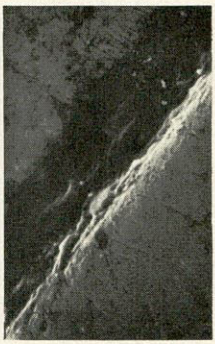
ANACS' AMRAY 1200B Scanning Electron Microscope (SEM) is capable of magnifications up to 300,000-X, dual magnifications where the right half of the picture is 5 times the enlargement of the left half, split image magnifications, and examination of coins at a variety of angles from zero to 90 degrees from horizontal.





25-X, 125-X, 34° tilt.



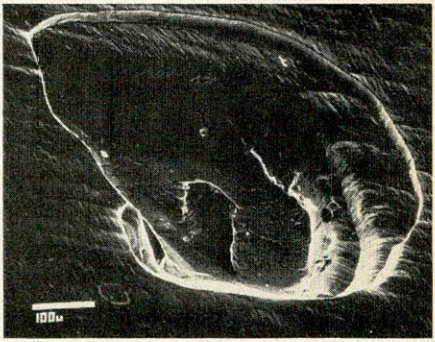


50-X, 250-X, 34° tilt.
1804 $1, Altered from 1800 (Bolender 4).

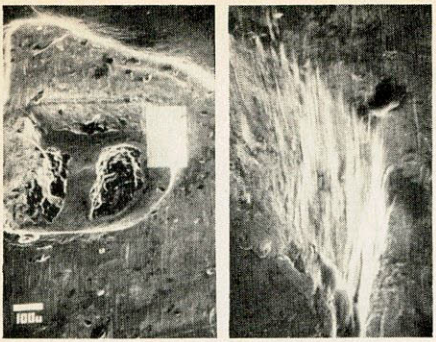
Another important feature is the selection of the type of electron beam used during the examination. Secondary electron selection results in a picture that is very similar to a home TV. Back-scatter selection results in a view that almost gives the illusion of being 3-

Genuine, 1921-D 50¢ 50-X, back-scatter, 8° tilt.

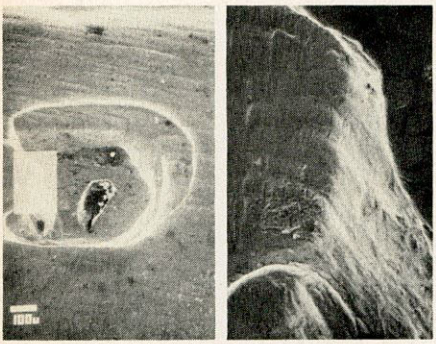
1921-S 50¢, altered from 1941-S, 50-X, back-scatter and secondary beam, 8° tilt.



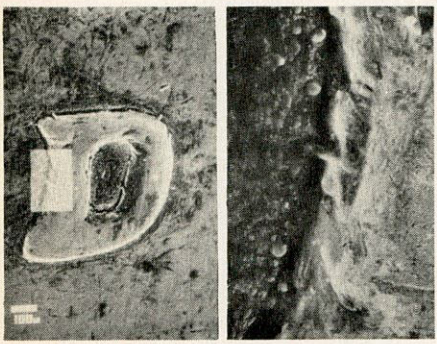
Genuine, 1932-D 25¢, 170-X, 50° tilt.



Genuine, 1916-D 10¢
80-X secondary electron beam, 50° tilt.



Genuine, 1932-D 25¢, 70-X, 350-X, 40° tilt.



Added D, 1932 25¢, 70-X, 350-X.

dimensional, or both secondary and back-scatter can be selected to incorporate the best features of both.

While magnifications of 50,000-X can be attained, such high magnifications are of little use because at almost any power setting above 8-10 thousand the crystalline structure of the metal dominates the image and no relationship can be made to the part of the coin being examined. For all practical purposes magnifications in the range of 50 to 500 are the most useful in counterfeit detection.

The operation of the SEM is frightening at first because there are a number of "no-no's" that must be carefully avoided if you don't wish to do permanent harm to the SEM or make it necessary to call in the repairman. However, once the machine is installed and the Service Engineer has aligned the SEM (explaining the operation as he goes along), things begin to fall in place and sitting down at the console is not the formidable, dreaded task it was first imagined to be. Joe Gulliver, of AMR, did an outstanding job of training us in the operation of the SEM, and though speed and proficiency will improve with experience, we are able to provide the ANACS authenticators with photographs taken on the SEM that can prove beyond the shadow of a doubt that a coin is either genuine, altered or an outright counterfeit.

As for the future, there are a few items that we hope to eventually add onto our SEM to make it even more efficient and versatile. There is an Energy Dispersive X-ray Analysis unit which gives the SEM the capability of determining precise metallic alloys by the percentages of each of the elements that make up that alloy. There is a Gamma unit which reduces the contrast between light and dark areas, allowing you to see into those extremely tiny crevices underneath added-on mintmarks and dates. Last, but not least, a 35mm roll film attachment would allow us to take photographs on film which can be kept indefinitely and used both for photographs and slides, versus the standard Polaroid attachment. Or, if you want to think really big, the addition of a 4x5 film back would allow wall-sized enlargements of tiny portions of a coin... Imagine a mintmark that covers an entire wall and yet retains almost perfect resolution!

Photography:
An Important Tool in Coin Authentication

Photography is one of the most important tools used at ANACS, providing a basis for comparison of the coin being examined with others of the same type that were checked at some previous time.

The negatives and photographs also provide a readily available record of dies used to strike the various coins and allow us to determine die wear over a period of time. The old saying "a picture is worth a thousand words" is at least as pertinent in coin photography as anywhere else.

Coin photography, however, requires much more than simply putting a coin under a camera lens and clicking the shutter. Careful consideration must be given to the selection of the film, the lighting conditions and methods employed in the darkroom to develop the negatives and transfer the image to paper.

The actual equipment used to photograph coins is probably less important than the way that equipment is used. However, the better the equipment, the more satisfactory the results will be. Excellent results have been obtained with a simple box camera that had one or two extra lenses taped in front of the camera lens itself. Of course, that box camera was fitted with good quality lenses. They did not introduce any distortion in the field of view, nor was any appreciable amount of light reflected back-and-forth between the surfaces of the various lenses. Poor lenses would have introduced distortion and, since such lenses are seldom coated, light loss would have resulted in grossly underexposed pictures.

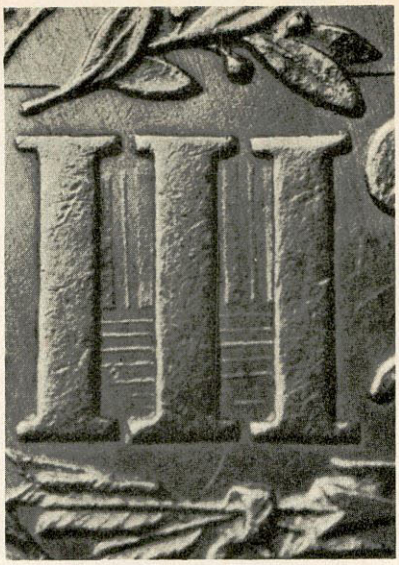
Once the equipment to be used has been selected, the next consideration is the lighting of the subject. Extreme close-up photography does not necessarily mean that extremely bright or hot lights are required. Very often a simple high intensity Tensor lamp is all that is necessary. If that does not provide sufficient light, a 75 watt photoflood can be used. Ideally, the light source will be shunted through a rheostat so that light intensity can be controlled, depending on the reflectance of the object to be photographed.

Counterfeit 1909-S Indian Head Cent.

Genuine 1837 Large Cent.

Genuine 1915-S/S Pan.-Pac. Commemorative 50¢.

The film used should be as slow as the



Genuine 1862 Three Cent Silver, Clashed Dies.

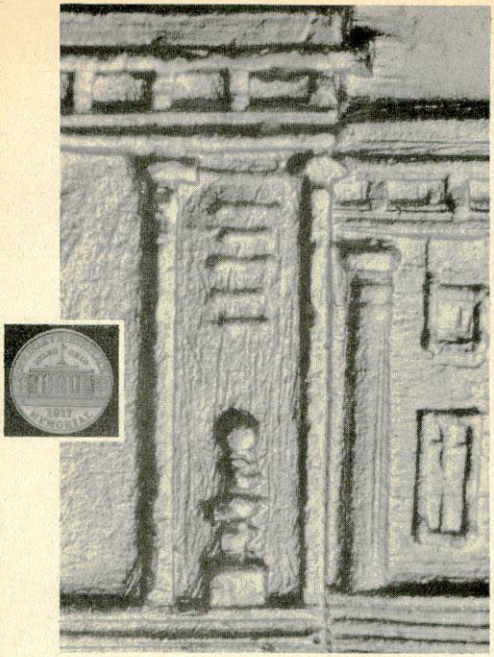
Genuine 1868-S Quarter Dollar, Clashed Dies.

lighting will allow. Slower films will result in less graininess in the final print. However, when the photography is performed through a microscope, light loss might dictate use of a faster film.

Most professional photographers would recommend that a slow-speed film such as Kodak Panatomic-X or Plus-X Pan be used. To overcome the loss of light in the microscope, it might be necessary to go to a higher speed film, such as Tri-X Pan. Then, to overcome increased graininess of the Tri-X film, a diluted developer should be considered. The slower developing time resulting from diluting the developer will normally result in grain fineness approximating the slower speed film.

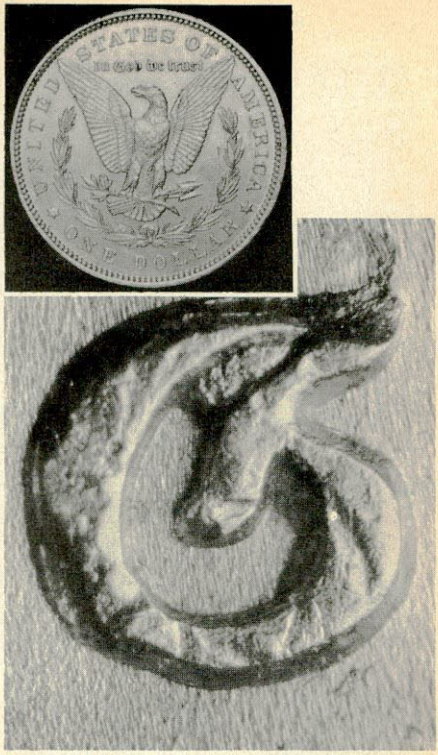
Most developers can be mixed with one to three parts water but you should consult the data books for actual dilutions and developing times. . .and then experiment on your own, both with time and with amount of agitation. Agitation of the developer is very important because of its effect on the tonal quality of the negatives.

As with camera equipment, a darkroom can be simple or elaborate. A satisfactory darkroom can consist of nothing more than a light-proof changing bag.



Genuine 1917 McKinley Gold Dollar, Die Polishing Marks.

Genuine 1910 S/S Ten Dollar Gold.



Genuine 1894 Dollar.

Film can be loaded onto the spools inside the changing bag and placed inside a daylight developing tank. The changing bag, tank, spools, developer and other chemicals all fit into an attache case. Of course without an enlarger, the negatives must be sent out to be printed commercially.

When the ANACS offices were moved to Colorado Springs from Washington, D.C., one of the important advantages from an economic point of view was access to the darkroom equipment in ANA Headquarters. This equipment allows ANACS staff to do all of the photographic work in house without the need to have prints made commercially, thus providing better quality control. New ANACS equipment also allows maintenance of a photo file of all coins submitted to the department.

Detailed photographs can be important to everybody, particularly in cases of question or dispute, when ANACS can often supply photographic evidence of the coin in question. ANACS will photograph coins for members at a nominal fee, a service that provides collectors with a complete photographic record of their collections.

Genuine or Counterfeit?
Coinage Specification Table

One of the basic tools needed to make a determination as to whether a coin could be genuine or not is the knowledge of coinage weights, sizes, composition and tolerance limits specified by law. The following table of the specifications of U.S. coins is reproduced through the courtesy of *Coin World*.

This table gives the legal or actual weights, weight tolerances, diameters, compositions and specific gravities of regular issue U.S. coins, and the dates in which the coins were issued to those standards. In most cases the gram weights are only the approximate equivalents of the legal weights expressed in grains, with the exception of the post-1873 silver which was legally specified in grams. The silver in the pre-1873 gold was required by law, but the actual percentages used are unknown and are presumed to be very small.

ANACS would be pleased to be informed of any officially published information about any of the "unofficial" data shown in this chart. In almost every case this unofficial data was obtained directly from coins in the very best condition available.

COIN/DATES OF ISSUE	GRAMS WGT.	TOL.	GRAINS WGT.	TOL.	DIAMETER (mm)	COMPOSITION	SPECIFIC GRAVITY
HALF CENT							
1793-1795	6.739		104.000		23.50*	Pure copper	8.92
1795-1836	5.443		84.000		23.50*	Pure copper	8.92
1840-1857	5.443	0.227	84.000	3.50	23.50*	Pure copper	8.92
LARGE CENT							
1793-1795	13.478		208.000		28.50*	Pure copper	8.92
1795-1837	10.886		168.000		28.50*	Pure copper	8.92
1837-1857	10.886	0.454	168.000	7.00	28.50*	Pure copper	8.92
SMALL CENT							
1856-1864	4.666	0.259	72.000	4.00	19.30*	88 Cu, 12 Ni	8.92
1864-1873	3.110	0.259	48.000	4.00	19.05	95 Cu, 5 Zn & Sn	8.84
1873-1942	3.110	0.130	48.000	2.00	19.05	95 Cu, 5 Zn & Sn	8.84
1943	2.689/2.754	0.130	41.500/42.500***	2.00	19.05	Zinc coated steel	7.80
1944-1946	3.110	0.130	48.000	2.00	19.05	95 Cu, 5 Zn	8.86
1947-1962	3.110	0.130	48.000	2.00	19.05	95 Cu, 5 Zn & Sn	8.84
1962-1982	3.110	0.130	48.000	2.00	19.05	95 Cu, 5 Zn	8.86
1982-	2.500	0.100	38.581	1.54	19.05	97.5 Zn, 2.5 Cu****	7.17
TWO CENTS							
1864-1873	6.221	0.259	96.000	4.00	23.00*	95 Cu, 5 Zn & Sn	8.84
THREE CENTS (Cu-Ni)							
1865-1873	1.944	0.259	30.000	4.00	17.90*	75 Cu, 25 Ni	8.92
1873-1889	1.944	0.130	30.000	2.00	17.90*	75 Cu, 25 Ni	8.92
FIVE CENTS							
1866-1873	5.000	0.130	77.162	2.00	20.50*	75 Cu, 25 Ni	8.92
1873-1883	5.000	0.194	77.162	3.00	20.50*	75 Cu, 25 Ni	8.92
1883-1942	5.000	0.194	77.162	3.00	21.21	75 Cu, 25 Ni	8.92
1942-1945	5.000	0.194	77.162	3.00	21.21	56 Cu, 35 Ag, 9 Mn	9.25*
1946-	5.000	0.194	77.162	3.00	21.21	75 Cu, 25 Ni	8.92
TRIME (Silver)							
1851-1853	0.802	0.032	12.375	0.50	14.00*	750 Ag, 250 Cu	10.11
1854-1873	0.746	0.032	11.520	0.50	14.00*	900 Ag, 100 Cu	10.34
HALF DIME							
1794-1795	1.348		20.800		16.50*	900 Ag, 100 Cu	10.34
1795-1805	1.348		20.800		16.50*	892.427+ Ag, 107.572 Cu	10.32
1829-1837	1.348		20.800		15.50*	892.427+ Ag, 107.572 Cu	10.32
1837-1853	1.336	0.032	20.625	0.50	15.50*	900 Ag, 100 Cu	10.34
1853-1873	1.244	0.032	19.200	0.50	15.50*	900 Ag, 100 Cu	10.34
DIME							
1796-1828	2.696		41.600		18.80*	892.427+ Ag, 107.572 Cu	10.32
1828-1837	2.696		41.600		17.90*	892.427+ Ag, 107.572 Cu	10.32
1837-1853	2.673	0.032	41.250	0.50	17.90*	900 Ag, 100 Cu	10.34
1853-1873	2.488	0.032	38.400	0.50	17.90*	900 Ag, 100 Cu	10.34
1873-1964	2.500	0.097	38.581	1.50	17.91	900 Ag, 100 Cu	10.34
1965-	2.268	0.091□	35.000	1.40□	17.91	75 Cu, 25 Ni on pure Cu	8.92

COIN/DATES OF ISSUE	GRAMS WGT.	TOL.	GRAINS WGT.	TOL.	DIAMETER (mm)	COMPOSITION	SPECIFIC GRAVITY
TWENTY CENTS							
1875-1878	5.000	0.097	77.162	1.50	22.50*	900 Ag, 100 Cu	10.34
QUARTER DOLLAR							
1796-1828	6.739		104.000		27.00*	892.427+ Ag, 107-572 Cu	10.32
1831-1837	6.739		104.000		24.26*	892.427+ Ag, 107.572 Cu	10.32
1837-1853	6.682	0.065	103.125	1.00	24.26*	900 Ag, 100 Cu	10.34
1853-1873	6.221	0.065	96.000	1.00	24.26*	900 Ag, 100 Cu	10.34
1873-1947	6.250	0.097	96.452	1.50	24.26	900 Ag, 100 Cu	10.34
1947-1964	6.250	0.194	96.452	3.00	24.26	900 Ag, 100 Cu	10.34
1965-	5.670	0.227□	87.500	3.50□	24.26	75 Cu, 25 Ni on pure Cu	8.92
1976	5.750□	0.200□	88.736□	3.09□	24.26	40% silver clad**	9.53
HALF DOLLAR							
1794-1795	13.478		208.000		32.50*	900 Ag, 100 Cu	10.34
1796-1836	13.478		208.000		32.50*	892.427+ Ag, 107.572 Cu	10.32
1836-1853	13.365	0.097	206.250	1.50	30.61*	900 Ag, 100 Cu	10.34
1853-1873	12.441	0.097	192.000	1.50	30.61*	900 Ag, 100 Cu	10.34
1873-1947	12.500	0.097	192.904	1.50	30.61	900 Ag, 100 Cu	10.34
1947-1964	12.500	0.250	192.904	4.00	30.61	900 Ag, 100 Cu	10.34
1965-1970	11.500	0.400□	177.472	6.17□	30.61	40% silver clad**	9.53
1971-	11.340	0.454□	175.000	7.00□	30.61	75 Cu, 25 Ni on pure Cu	8.92
1976	11.500	0.400□	177.472	6.17□	30.61	40% silver clad**	9.53
1982	12.500	0.400□	192.904	6.17□	30.56	900 Ag, 100 Cu	10.34
DOLLAR							
1794-1795	26.956		416.000		39.50*	900 Ag, 100 Cu	10.34
1796-1803	26.956		416.000		39.50*	892.427+ Ag, 107.572 Cu	10.32
1840-1935	26.730	0.097	412.500	1.50	38.10	900 Ag, 100 Cu	10.34
1971-1978	22.680	0.907□	350.000	14.00□	38.10	75 Cu, 25 Ni on pure Cu	8.92
1971-1976	24.592	0.984□	379.512	15.18□	38.10	40% silver clad**	9.53
1979-1981	8.100	0.300□	125.000	5.00□	26.50	75 Cu, 25 Ni on pure Cu	8.92
TRADE DOLLAR							
1873-1883	27.216	0.097	420.000	1.50	38.10	900 Ag, 100 Cu	10.34
GOLD DOLLAR							
1849-1854	1.672	0.016	25.800	0.25	13.00*	900 Au, 100 Cu & Ag	17.16
1854-1873	1.672	0.016	25.800	0.25	14.86*	900 Au, 100 Cu & Ag	17.16
1873-1889	1.672	0.016	25.800	0.25	14.86*	900 Au, 100 Cu	17.16
QUARTER EAGLE							
1796-1808	4.374		67.500		20.00*	916.667 Au, 83.333 Cu & Ag	17.45
1821-1827	4.374		67.500		18.50*	916.667 Au, 83.333 Cu & Ag	17.45
1829-1834	4.374		67.500		18.20*	916.667 Au, 83.333 Cu & Ag	17.45
1834-1836	4.180	0.008	64.500	0.13	18.20*	899.225 Au, 100.775 Cu & Ag	17.14
1837-1839	4.180	0.016	64.500	0.25	18.20*	900 Au, 100 Cu & Ag	17.16
1840-1873	4.180	0.016	64.500	0.25	17.78*	900 Au, 100 Cu & Ag	17.16
1873-1929	4.180	0.016	64.500	0.25	17.78*	900 Au, 100 Cu	17.16
THREE DOLLARS							
1854-1873	5.015		77.400		20.63*	900 Au, 100 Cu & Ag	17.16
1873-1889	5.015	0.016	77.400	0.25	20.63*	900 Au, 100 Cu	17.16
FOUR DOLLARS (Pattern issue)							
1879-1880	7.000*		108.026*		21.59*	857 Au, 43 Ag, 100 Cu*	16.67*
HALF EAGLE							
1795-1829	8.748		135.000		25.00*	916.667 Au, 83.333 Cu & Ag	17.45
1829-1834	8.748		135.000		22.50*	916.667 Au, 83.333 Cu & Ag	17.45
1834-1836	8.359	0.017	129.000	0.26	22.50*	899.225 Au, 100.775 Cu & Ag	17.14
1837-1840	8.359	0.016	129.000	0.25	22.50*	900 Au, 100 Cu & Ag	17.16
1840-1849	8.359	0.016	129.000	0.25	21.54*	900 Au, 100 Cu & Ag	17.16
1849-1873	8.359	0.032	129.000	0.50	21.54*	900 Au, 100 Cu & Ag	17.16
1873-1929	8.359	0.016	129.000	0.25	21.54*	900 Au, 100 Cu	17.16
EAGLE							
1795-1804	17.496		270.000		33.00*	916.667 Au, 83.333 Cu & Ag	17.45
1838-1849	16.718	0.016	258.000	0.25	27.00*	900 Au, 100 Cu & Ag	17.16
1849-1873	16.718	0.032	258.000	0.50	27.00*	900 Au, 100 Cu & Ag	17.16
1873-1933	16.718	0.032	258.000	0.50	27.00*	900 Au, 100 Cu	17.16
DOUBLE EAGLE							
1850-1873	33.436	0.032	516.000	0.50	34.29	900 Au, 100 Cu & Ag	17.16
1873-1933	33.436	0.032	516.000	0.50	34.29	900 Au, 100 Cu	17.16

* — Unofficial data.

** — Consists of layers of 800 Ag, 200 Cu bonded to a core of 209 Ag, 781 Cu.

*** — Cents struck on steel planchets produced in 1942 weighed 41.5 grains, while those struck on planchets produced later in 1943 weighed 42.5 grains.

**** — Consists of a planchet composed of 99.2 percent Zn and 0.8 percent Cu, the whole plated with pure copper.

□ — Not specified by law, established instead by the Director of the Mint.

Au = Gold; Ag = Silver; Cu = Copper; Mn = Manganese; Ni = Nickel; Sn = Tin; Zn = Zinc.

Specific Gravity:
Useful Tool in Counterfeit Detection

One of the most useful and probably least used tools for the detection of counterfeit coins is specific gravity testing. The equipment involved is neither high-priced nor highly sophisticated, and the procedure is relatively simple to follow.

Specific gravity is a measurement of the density of a mass. It is based on the principal which states that alloys of different pure metals displace varying amounts of water, depending on the density of the metal and the proportion of each metal used in the alloy. Specific gravity of the mass is determined by measuring the volume of water displaced by the coin being tested.

The concept of specific gravity dates back to ancient times in Greece, and has changed but little during the ensuing centuries. It is the oldest and still one of the best methods for quickly and accurately determining the probable composition of an alloy.

Unfortunately, many of those who could use specific gravity to the greatest advantage are deterred by the mistaken belief that it requires expensive and sophisticated equipment, complicated laboratory techniques, and the mathematical skills of an Einstein. Not so! Even when done under field conditions, the basic equipment and mathematics are within the reach and comprehension of everyone.

The accuracy and the repeatability of the test result will quite naturally be more accurate and dependable if the equipment is extremely sensitive and is housed in a temperature-controlled and draft-free environment. However, since accurate test results are more dependent upon the care exercised by the person doing the testing than on any other single factor, ideal laboratory conditions are not essential.

We will assume that ideal conditions are not available to most people. The procedure outlined on the following pages will be predicated on field conditions and must be recognized as having limitations imposed by those conditions. The test results probably would not survive a court challenge, but will be accurate enough to give an indication of whether or not a particular coin could possibly be composed of the proper alloy, or if it is more likely to be composed of something entirely different.

The following are pointers that should enable the average person to obtain accurate test results under less than ideal conditions.

PREPARATION

1. Observe good laboratory techniques as much as possible under the existing conditions. Work slowly, carefully and accurately at all times.

2. Place the scale on the most stable surface available. A solid desk is less susceptible to vibrations than a folding table.

3. Eliminate stray air currents as much as possible. The scale can be housed in a cardboard box or other suitable container. A piece of plastic draped over the opening of the box can very effectively cut air currents that could affect the accuracy of the scale.

4. Use pure water whenever it is available. The best is steam distilled deionized water. Add a drop or two of a good wetting agent such as PhotoFlo 200 or a liquid household detergent. This helps prevent the formation of air bubbles, which normally form on the coin or on the suspension device.

5. Always be certain that the scale has been zero balanced before and after any weighing operation or at any time that the scale has been moved from one location to another.

6. Always depress the right end of the beam after making adjustments for zero balance or after moving the poises (weights).

7. Do not allow yourself to jump to any conclusions that might cloud your judgement about the coin being tested.

8. Above all, remember that specific gravity testing is neither an exact science, nor the final word in determining the authenticity of a coin. It is simply one more tool to be used along with visual examination under a good stereo microscope and measurements of diameter and thickness made with the vernier calipers.

TEST PROCEDURES

1. Zero balance the scale exactly and carefully.

2. Place the coin to be checked on the lower pan. Try to stop the swaying of the pan, though it is not essential that the pan be absolutely still.

3. Move the balance poises on the beam to the right until the beam remains at exact zero balance. Start with the heaviest poise and work forward until you reach absolute zero using the smallest of the four poises.

4. Read the combined total weight of the poises. This is the weight of the coin in air, or the dry weight. Mark that weight on a slip of paper.

5. Without moving the poises, remove the coin from the lower pan and place it on the suspension device. Slowly immerse the coin in the water, being careful that there are no air bubbles trapped on the coin or on the suspension device itself.

6. Move the poises back only far enough to return the beam to zero.

7. Read the new total weight of the poises. This is the weight of the coin in water, or the wet weight. Mark this new weight immediately below the dry weight (step 4) on your slip of paper.

8. Subtract the wet weight (step 7) from the dry weight (step 4) and divide the difference into the dry weight. This is the specific gravity of the coin.

A word of caution: anytime the test results indicate a suspect coin, repeat the test several times until you are absolutely certain that you have not made a mistake. When you are satisfied that you have eliminated any possibility of operator error, consult the reference books to check the specific gravity of the coin being tested. The sizes, weights and compositions of all coins are printed in any number of books and periodicals, though it often takes some effort to locate the proper data.

Comparison of that data with your test results, along with the conclusions reached as a result of examining the coin under a good stereo microscope and measuring its size and thickness with vernier calipers, are usually sufficient to accept or reject the coin. However, bear in mind that specific gravity testing, like weight, is subject to tolerances. Also, your test results are subject to variances because of the conditions under which the testing was done, as well as limitations within the scale itself.

If your test results are less than 0.5 above or below the nominal figure for a given alloy, consider the test results to be normal. If test results are more than 0.5 above or below the nominal, first be suspicious of the test results itself rather than of the coin. Do the testing over one or more times to see if you arrive at the same result each time.

The procedures as outlined here are very basic. They will have limitations for that reason. For more accurate results corrections must be made for water temperature and volume and for the area of the suspension device immersed in water. These factors are explained by Robert Kriz on page 1481 of the July 1975 issue of *The Numismatist.*

If you know the composition of a particular alloy and want to determine the alloy's specific gravity, simply multiply the specific gravity of each metal by the percentage of that metal in the alloy and add the results to get the specific gravity of the alloy. For example, suppose the alloy consists of 77.5 percent silver, 12.5 percent copper and 10 percent zinc. Consult a table of specific gravity of the elements, convert the percentages to decimals and set up the problems as follows:

10.49 x .775 = 8.12975 (silver)
8.92 x .125 = 1.11500 (copper)
7.13 x .100 = 0.71300 (zinc)

9.95775 = specific gravity of the alloy

Gold is the one metal that does not lend itself to this method of calculating the specific gravity of an alloy. An intermolecular interaction occurs when gold is alloyed with copper. As a result, the sum of the two metals in alloy is slightly less than the sum of the individual parts.

It is also wise to bear in mind that the various tables of pure elements, as presently published, do not always agree on the specific gravity figures of some elements. If a coin is quoted as having a specific gravity that does not agree with your tables, figure the specific gravity as outlined above using your tables.

Bullion:
How Much in a Coin?

Frequently ANACS receives inquiries about the amount of bullion in a coin. The answer is relatively easy using the following table. Multiply the weight of the coin by the purity of the alloy and multiply that figure by the appropriate conversion factor from the table.

BULLION CONVERSION FACTORS

To Convert	Into	Multiply By
Grains	Grams	0.0647989
Grains	Pennyweights	0.4166667
Grains	Ounces (Troy)	0.0020833
Grains	Pounds (Troy)	0.0001736
Grams	Grains	15.4323563
Grams	Pennyweights	0.6430148
Grams	Ounces (Troy)	0.0321507
Grams	Pounds (Troy)	0.0026792
Pennyweights	Grains	24.0
Pennyweights	Grams	1.5551740
Pennyweights	Ounces (Troy)	0.05
Pennyweights	Pounds (Troy)	0.0041667
Ounces (Troy)	Grains	480.0
Ounces (Troy)	Grams	31.103481
Ounces (Troy)	Pennyweights	20.0
Ounces (Troy)	Pounds (Troy)	0.0833333
Pounds (Troy)	Grains	5760.0
Pounds (Troy)	Grams	373.24177
Pounds (Troy)	Pennyweights	240.0
Pounds (Troy)	Ounces (Troy)	12.0

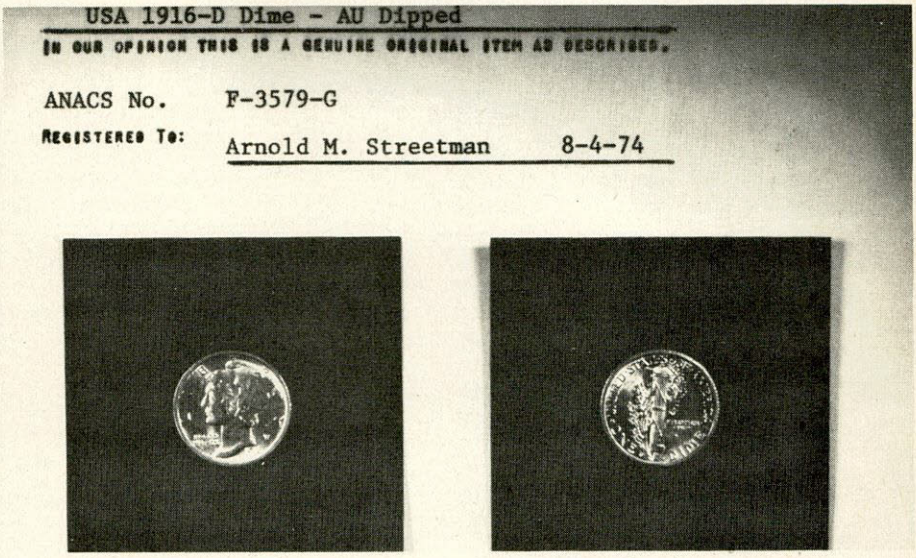
Coins Certified as Genuine by ANACS Always Include Photo Certificate

A number of reports have been made to ANACS that coins are being offered for sale bearing an ANACS number but without photo certificates. The seller usually tells the buyer that the papers were lost or misplaced, but that ANACS will gladly issue new ones. When the buyer writes or phones ANACS, and after the number is checked, we have the unpleasant task of informing the buyer that the papers have never been issued because ANACS had determined that the coin was not genuine.

Every coin submitted to ANACS for certification is routinely assigned a number, and is photographed and weighed for the record. Only after the coin has been examined, and only if it has been determined to be genuine, is a photographic certificate ordered. Whether genuine or not, the number originally assigned to the coin always remains with that coin. The number is neither withdrawn nor ever assigned to another coin.

So, if you are offered a coin as having been certified by ANACS but the seller can't supply the papers that exactly match the coin, ask the seller to obtain the papers from ANACS *before* making the purchase.

Counterfeit ANACS Certificate



Beware of 1916-D Dimes sold with ANACS Number F-3579-G. The coin and certificate submitted for re-examination not only had an added mintmark on the coin, the ANACS certificate is a counterfeit that bears only a very superficial resemblance to the genuine document. Whoever made the fake went so far as to emboss a seal in the space between the photos of the obverse and reverse. The seal is entirely different than the ones used on the genuine certificates and the maker of it realized that the wording would be a tip-off to the

forgery so they simply rubbed the back of the certificate to obliterate the letters. In addition, the coin does not match the photos.

Anyone buying an ANACS certified coin should compare both the coin and the certificate with the same magnifying glass. If the buyer is not completely certain that the coin and photos match two alternatives should be considered—ask the seller to forward the coin and certificate to ANACS for re-examination or refuse to buy the coin.

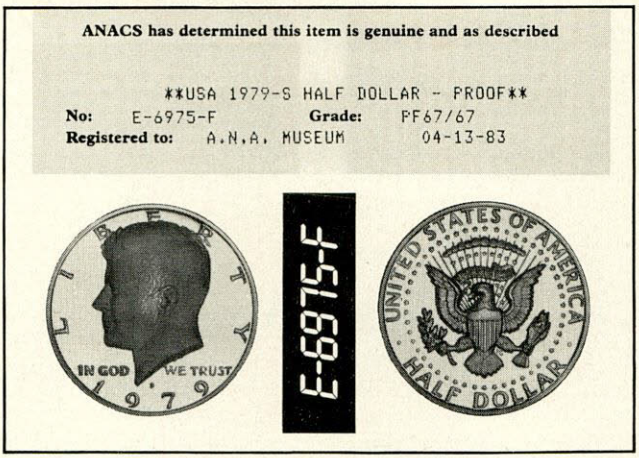
ANACS Re-examination Policy

Beginning collectors and new ANA members are reminded that ANACS has a "re-examination" policy. If you feel that ANACS has overlooked something on your coin, or if you feel that a mistake was made, don't hesitate to return the coin under its original number along with the photo certificate (if any) plus return postage and registered mail fees, but without additional authentication and grading fees. Include the reasons why you think a mistake was made. The staff will re-examine your coin, with particular attention given to the reasons you have outlined and, in the majority of cases, send the coin to a consultant for an outside opinion. If the staff and consultants find any reason to change the original opinion, a revised certificate will be issued and the postage and registered mail fees will be refunded in full. If, however, ANACS remains convinced that the original opinion was correct, the postage and registry fees will be used to return the coin. Unfortunately, ANACS cannot make a formal report on each coin because of staff limitations, but if you wish to know why a particular decision was made, give us a phone call and we will try to answer all questions.

Submission of Proof Sets

Submission of Proof sets has frequently caused problems for members when making out request for certification forms and in figuring the fees. Older Proof sets that were not sold in government sealed packages must be submitted as individual coins rather than as a set and must be accompanied by one form and a fee for each coin. Newer, mint packaged sets require only a single form and single fee for which only one coin (such as large over small date 1960, or the No S nickels and dimes) will receive a certificate.

Grading Considerations



A coin submitted for grading must also be submitted for authentication, unless the coin has previously been certified by ANACS. In this case the original certificate must be returned to ANACS along with the coin in question, and the coin will be returned to the owner along with the new certificate. Coins cannot be graded from old certificates or any other type of photograph.

The reasons for requiring authentication along with grading are that this eliminates the possibility of a grading certificate so issued being misconstrued as a certificate of authenticity, and enables the next owner of the coin to be sure that the coin graded on the certificate is the same as the one pictured on the certificate.

After a coin submitted for grading is photographed, weighed and determined to be authentic, it is given a grade by three authenticators on the ANACS staff. Once this is done, some coins are sent on to various consultants, each a specialist in one or more series of U.S. coins. The rest are given a final grade by a fourth authenticator.

At present ANACS uses approximately 100 grading consultants, both dealers and private collectors. Each of the consultants is well known for his knowledge in his own particular field, though for reasons of security and privacy we do not reveal the names of any of the collector or dealer consultants.

Upon return of the coins from the consultants, the consultants' grades are recorded on the "request for certification" forms along with the preliminary grades of the ANACS staff. If the staff and the consultant are in agreement or near agreement, a final grade is then recorded. If not, the coin is sent to a second or even a third consultant. Rarely have the staff and three consultants been unable to arrive at a grade. If the staff and consultants cannot reach a decision as to the numerical grade within the uncirculated grade range, for example, then a divided opinion is issued. In this case D/O* appears on the front of the certificate, and the grade range is shown on the back of the certificate as a minimum and maximum.

In cases where the ANACS staff and consultants cannot reach a conclusion as to whether a coin grades AU or Unc, for example, the coin is returned to the owner as a no opinion and N/O* will appear in the grade space.

Currently the ANA grades only genuine regular issue U.S. coinage and U.S. commemoratives as outlined in the *Official ANA Grading Standards for U.S. Coins*. Therefore, if someone should request ANACS to authenticate and grade Colonial coinage, coinage from a

foreign country, a medal, token or other exonumia, the piece would be authenticated but the grading portion of the fee would be returned and N/A would appear in the section reserved for grade. N/A implies that grading is either not applicable or not requested.

Under no circumstances does ANACS ever include statements such as Full Head, Split Bands or Full Steps in either the description or the grading of a coin, since such fine distinctions are not considered to be a part of the purpose of this office. Likewise we will not use the term Proof-like to describe or grade a coin.

It might be noted here that this office has seen coins that have had "Split Bands" or been "Proof-like" without being in Mint State condition, the unfortunate owners having assumed, incorrectly, that the presence of one or the other quality insured that the coin had not seen circulation. In actuality these and other similar qualities have absolutely no relation to grading.

A determination of whether a coin is Proof or not, however, is included in the basic authentication fee, regardless of whether grading is requested. If grading of a Proof is then desired, a grading fee must accompany the coin. Proof coins are graded using the same numerical grades as business strike coins, only with the letters PF before the numbers rather than MS, AU, EF, etc. Examples of this would be PF-60/60, PF-50/50, PF-40/40, etc.

Each grade is given in the form of one or two initials for the grade (except Poor and Fair, which are spelled out) and two numbers separated by a / sign, the first number referring to the grade of the obverse and the second to the reverse grade. In most cases the two numbers will be the same, though in some cases they will differ by two or more points. In cases where the differences between the two sides are significant, different letter grades may also be applied.

Such split grading will be done whenever applicable, though it seems to apply more to the higher grades where finer distinctions are possible.

Morgan dollars continue to be the coin most frequently submitted for grading, with Peace dollars close behind. Gold coins submitted for grading tend to be common-date type coins, while lower denomination coins tend to be key dates such as 1909-S VDB and 1922 "No D" cents, the latter piece being particularly hard to grade due to the poor striking quality of the coins as issued. Early silver and copper coins are also received in steady though not large numbers.

Complaints concerning the Grading Service have generally concerned our refusal to include such striking characteristics as were mentioned earlier. Nevertheless a few people have sincerely questioned the grades assigned their coins, and in these cases the same re-examination policy applies as to all coins sent to ANACS.

This policy simply states that any person who is unhappy with the ANACS opinion of his coin, whether it relates to authenticity or grading, may submit that coin for re-examination by sending us the coin, the certificate, and return postage for the coin. Should ANACS' determination of either the authenticity or the grade change after additional consultants have examined the coin, a new certificate will be issued and the return postage fee refunded. If no change is made the coin and the original certificate (if any) will be returned to the owner.

Some Thoughts About Grading: The Other Side of the Coin

The recent controversy surrounding the role of the ANA Certification Service in grading is one that bears comment from those of us who fulfill that role. Some often-heard statements can be helpful in establishing our principle position: "The grades of coins put on ANACS certificates are just opinions;" "You're paying good money expecting a professional opinion" and "The ANACS grade is an opinion—it is not the final right or wrong say-so."

The key word in all three statements is the word *opinion*, and that same word is repeated in the disclaimer on the back of every ANACS certificate. When a coin is sent to ANACS to be graded, ANACS renders an opinion about the condition of the coin. No one on the ANACS staff believes that the numbers assigned to a coin are the final word and that there won't be someone who disagrees. What we do believe, though, is that the grade we assign is a well thought-out, unbiased, professional opinion. After all, unlike the buyer and seller, ANACS has no vested interest in the coin.

The staff must follow the *Official A.N.A. Grading Standards for United States Coins*; we are not allowed to deviate from those printed words, nor are we allowed the luxury of passing on a coin without grading it simply because we may not like the coin. Buyers and sellers can deviate in grading and can refuse a coin without explanation. Yet the guideline interpretations can lead to a grade that "glorifies" a coin. As one dealer complained, "When you grade lower than I do, you've got your hand in my pocketbook." True, but he could have gone on to explain that when he grades a coin higher than a potential buyer, he has his hand in that buyer's pocketbook!

A popular misconception in grading is subscribed to by many people. That misconception is that those coins that are better than average for a particular year and mint should be graded several points higher than the grading standards allow simply because they are the best quality known. For example, all other things being equal (bagmarks, luster, etc.), an 1892-O Morgan Dollar would grade MS-67 while an 1881-S Morgan, identical except for date and mintmark, would grade MS-65.

Another misconception is the sometimes voiced belief that some members of the ANACS staff are not experienced numismatists. Such was the opinion expressed by a dealer in a newsletter to his customers: "That is their major problem: incompetent help. I felt that only one member of the ANACS staff was qualified to be there. The others were severely lacking in numismatic knowledge." As a matter of fact, the seven ANACS authenticators have a total of more than 150 years experience in numismatics, and that figure does not include the experience of other ANA staff members and consultants.

Indeed, some of the ANACS staff has less experience in buying and selling coins than do some of those who question the qualifications of the staff, but it is equally true that all of the staff has more experience than do many of the detractors. Those who were determined by that one dealer to be "incompetent," share a sincere dedication to rendering an *unbiased* opinion about the condition of the coins examined.

Some collectors have suggested that ANACS relax its grading standards to more closely match the standards that are "accepted practice in the marketplace," instead of following the book. If

that were to happen, it wouldn't be long before the "marketplace practices" were again relaxed and we'd be back to square one.

Others believe that each authenticator should specialize in particular types of coins. Many collectors and dealers have specialties; they can direct most of their efforts toward the peculiarities of that one design as far as how strike, die wear and subsequent handling affect present grade. Because the number of staff members is limited, ANACS cannot afford the luxury of specialization. Staff members cannot authenticate and grade only one type of coin. Each person on the staff must take the coins as they come, in the same order they are received. Yet although the ANACS staff does not have the opportunity to specialize, we do have on our staff some of the most knowledgeable specialists assembled—our consultants. Any time a disagreement as to grade or authenticity arises, one or more of our consultants is available to offer still another unbiased opinion.

We hope that the foregoing has given you some insight into both sides of the problems regarding ANACS grading that have been the target of so many letters and editorials in the numismatic press, on the teletype circuits and in dealers' newsletters. What about the solutions?

The simplest solution of all would be to allow the Grading Service to revert to what it was originally conceived to be... an arbitration panel that would attempt to resolve any grading disputes that might arise between buyers and sellers. Another simple solution to most of the problems would be to eliminate all of the numeric grades and let ANACS simply determine that a coin is Uncirculated, About Uncirculated, Extremely Fine, etc. That solution would put the monkey right back where it properly belongs. . .on the back of the buyers and sellers; they would have to arrive at a price that is agreeable to both.

We could change the official grading guide to reflect all of the things, besides wear, that rightfully affect the value of a coin. . .strike (full or weak), luster (original, dulled, non-existent), bagmarks, (severity, number, location), toning (attractive or ugly tarnish), etc. All have an impact on how desirable a coin is and thus on how much it should be worth relative to another coin from the same mint and the same year; yet some of these criteria are dealt with only summarily.

Some intermediate grades are defined for Uncirculated grades but not for the lesser grades. Yet there are coins in both groups that fall between the specified standards. Those "in-betweens" must be put into the next lower grade, very effectively decreasing their values. There is no valid reason for the failure to include intermediate grades in the Circulated grades except that the price spread is so much less than it is in the Uncirculated grades that those responsible for putting the descriptions in the grading guide elected to leave out those intermediate grades. Yet there are collectors who are not wealthy enough to collect only the Uncirculated coins and would like to have intermediate grades for those coins that do not comfortably fit into the presently prescribed grades.

If you don't agree with a decision, send the coin back for re-examination. All it will cost you is postage and registered mail fee. If we change our decision, we will refund those fees and the re-examination will have cost you nothing. Please tell us why you disagree and we will look at the coin with that thought in mind.

Proof or Treated?
ANACS Examines Methods of Coin Alteration

Altered coins take many forms, usually involving the addition or deletion of a date or mint mark. However, ANACS has seen several examples of another form of alteration, namely coins mechanically and or chemically treated to resemble proof issues. This is not a new problem, though the specimens recently seen are of somewhat higher quality than before. Illustrated here are samples of three different methods of alteration, though it should not be assumed that there are not other methods.

The crudest specimen is a 1907 Liberty Head $20 gold piece. In this case a normal business strike coin, possibly circulated, was heavily polished on both sides, and then the head and the eagle were mechanically etched with a fine brush to simulate frosting. The brush may have been attached to a rotary power source such as a motorized drill, but this cannot be absolutely proven.

Coins so treated can be easily detected by the fact that the isolated raised characters such as the date, letters and stars are not frosted (unless they are individually treated) and are in fact somewhat eroded by the initial polishing. Also, there will usually be a few areas where the etching brush will have slipped down onto the polished field, or else where the polished surface of a raised area will have been missed by the brush. On a genuine Brilliant Proof coin of this era the frosting on the relief areas should go all the way down to the field and no further, though of course there are exceptions on certain coins such as copper-nickel three and five cent pieces.

The second example is a 1904 Barber half dollar, which actually was a Proof (although damaged) coin before it was treated. On this piece the head on the obverse has been chemically etched to hide the damage and refrost the coin, probably using an acid solution of some sort. It appears as though the acid had been applied with a fine (perhaps camel's hair) brush, and again there are areas where the treatment either did not reach or exceeded the outlines of the design. Under a stereo microscope the etched areas of the field can be seen to be slightly recessed below the level of the field, evidence that metal was removed from the coin.

The third specimen is most unusual, in that it is an 1879-O dollar once offered as a branch Mint Proof. Here a so-called "Proof-like" coin (which already had naturally frosted devices) was selectively polished in the fields, in an attempt to disguise several bag marks the coin had acquired in normal non-proof handling. Once again the machinist overstepped his bounds, his polishing tool brushing up against the edges of the devices on both sides and completely erasing the frosting on the wreath and most of the lettering. Most of the frosting on the devices remained intact, however, making the appearance of the coin very deceptive to the unwary.

It is the policy of ANACS that a determination of whether a coin is Proof or not is included in the basic authentication fee, and that payment of a grading fee is not required if the submitter merely wishes to know if a coin is a Proof. Only if a specific Proof grade (such as PF-60/60 or PF-65/65) is desired does a grading fee have to be paid.

ANACS will not attempt to determine if a coin is what is commonly referred to in the hobby as "Proof-like," as there are too many conflicting definitions of this term and no official one. All we can mention at this time is that the "Proof-like" characteristics of a coin, whatever they may be, have nothing to do with grading.

Whizzing

Two questions frequently asked of the ANACS staff are: "Is my coin whizzed?" and "Just what is whizzing?" We hope we can provide some insight into this very perplexing problem even though the detection of whizzed coins is not strictly within the scope of ANACS efforts. We also know full well that, if any dozen collectors are asked to define whizzing, at least a dozen different answers would be given.

Some collectors contend that whizzing is confined to those coins that have had their surfaces buffed by a wire brush. Another school of thought attributes whizzing to any type of polishing; be it done with a wire brush, an abrasive, a polish, or a corrosive agent.

The ANACS staff interprets whizzing as any process that moves metal on or over the surface, or removes metal from the surface of the coin in a deliberate attempt at raising the grade of the coin. For example: if a Very Fine coin is whizzed, it might be passed off as Extremely Fine or Almost Uncirculated.

Our interpretation, as you can see, is both more general and more specific than most. We have broadened the actual processes that accomplish whizzing to include any method used to upgrade the coin, but confine the purpose to a deliberate attempt at increasing the value. Admittedly, our definition of whizzing allows for some "gray" areas. When the upgrading is done innocently, such as polishing a coin for wearing as jewelry, we cannot condemn the person doing the polishing. Technically, the coin is whizzed, but since it is not for

sale, there is no intent to defraud.

The actual methods used to whizz coins are as varied as the persons doing the whizzing. Pencil erasers are an old standby but the result is easily detected. Motor-driven brass brushes both with or without a dip are often used to polish coins. Done slowly and carefully, the results are harder to detect, but the "mint luster" is unlike any that comes from a striking inside the mints. If the coin is held against the brush too hard, or if the brush has stiff bristles, the coin will take on a rippled appearance, often with a slight wave adjacent to design elements.

Corrosives will certainly make a coin look brighter, but since they remove metal in the process, the coin will often have a slightly rough, porous look similar to a cast piece. The amount of porosity will depend to a great extent upon the type of acid used, temperatures, and length of time the coin was immersed in the corrosive agent.

Polishes can be used to give a coin an artificial shine after the coin has lost its mint lustre through circulation wear. Polishes include the popular coin dips, liquid and paste cleaners, etc. Sometimes jeweler's rouge is used to "proof-up" a coin.

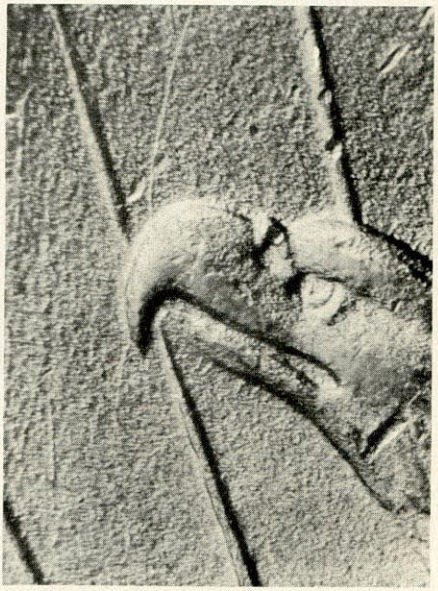
Whatever method is employed to whiz a coin, the final result will be an artificial surface, an unnatural appearance. So our con artist must take further steps to make the result more readily acceptable to collectors. Retoning, or recoloring, can be accomplished in a number of ways.

1811 $5: *Genuine. Bag marks.*

Bright sunlight over an extended period of time will accomplish toning. Artificial toners and coloring agents will do the job much faster, though some of them result in a coloration that is very unlike natural toning. Judicious heating can turn coins to shades of blues, reds and purples. It has also been stated in print a number of times that tobacco smoke can create an artificial toning on coins that have been whizzed. Coins can also be painted with a gunmetal bluing. Obviously, many methods we've never even heard of, or have heard referred to only vaguely, do exist.

We doubt that we have been able to explain exactly what whizzing is, but hope that we have created at atmosphere that will make collectors ask themselves questions about the hows, whys and wherefores of whizzing. If everyone adopts a questioning attitude, fewer collectors would get "burned" by whizzed and altered coins.

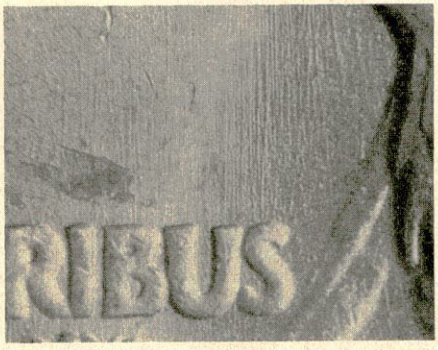
One last thought about whizzing. . . why was that particular word used? We wish someone could come up with a self-explanatory word that would be more exact and more descriptive.



1924-S $20: *Genuine. Normal Surface and evidence of metal flow.*

1853 Half Dime with arrows: *Genuine. Chipped die.*

1$ Gold: *Genuine. Die polishing.*



Walking Liberty Half Dollar: *Genuine. Die Polishing.*

1906 5¢: *Genuine. Badly corroded.*

Genuine. Severely whizzed Lincoln Cent reverse. Note the metal build-up on letters.

Replica Fee Schedule Reduced

Coin replicas that are not marked in accordance with the Hobby Protection Act are a constant source of irritation for everyone. The new collector can easily be fooled by them because he has no knowledge of the genuine pieces to use as a basis for comparison.

Unmarked replicas have proliferated to such a degree that ANACS has revised its normal fee schedule to the extent that replicas will be checked for the minimum fee only, plus return postage and registered mail fees. If ANACS finds that the coin might be genuine, the full fee will be quoted before proceeding with the more sophisticated testing that will be necessary for that particular coin. At that time the owner can decide if the coin is worth the investment of the added fee.

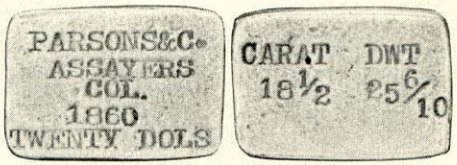
ANACS is trying to save collectors some money. After all, who would be happy to be charged almost $400 to have a pewter 1776 Continental Dollar (Redbook value $14,000 in Unc.) checked, only to be told that it was a replica that had absolutely no numismatic value? This way the owner receives the information needed without a large investment.

Replica, 1850 Baldwin & Company $10.

We often wonder what happens when the replica is returned to the owner. Naturally that person is disappointed to learn that the coin won't pay off any mortgages. But, beyond that, we wonder if that person retains the replica for comparison with others that he might be exposed to in the future. If so, in that one respect at least, replicas would serve a worthwhile purpose.

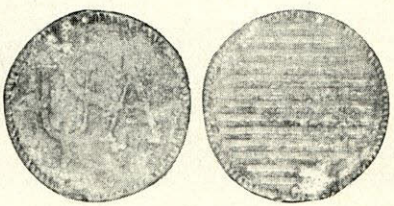
Of course, when we talk here of replicas, we mean unmarked pieces. Those that are properly marked could be construed as having some educational value even though they are not essential to any collection.

Replica, U.S. 1776 Continental Dollar.



Replica, 1860 Parsons & Co. $20 ingot.

Replica, 1776 Pine Tree copper.



Replica, U.S. Bar Cent.

"The innocence of the intention abates nothing of the mischief of the example"

ROBERT HALL, ENGLISH CLERGY, 1764-1831

Everybody, at one time or another, has opened a book or newspaper and read a story that immediately made the reader want to loudly and publicly castigate the author and the publication that saw fit to print the article. However, once rational thinking takes over from the emotional reaction, we realize that any such rash writing would be an exact parallel to the misguided intentions that set us off in the first place.

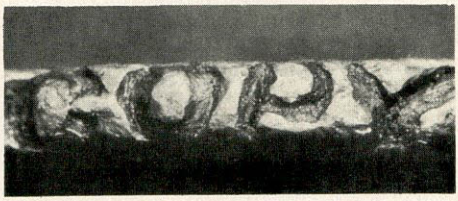
When ANACS recently read the article "Difficulty of Pricing is Woe of Modern Fake Coins," our initial reaction was to fire off a scathing diatribe that would have questioned the intelligence of the author and his antecedents and the journalistic intentions of the paper that allowed the misinformation to get into print.

Upon further, and much cooler, reflection we decided that the author was simply attempting to fill space and that the paper that carried the story just hadn't thoroughly considered the potential problems the article could create for the hobby by those who might assume that the laws that prohibit counterfeiting and altering coins had been changed, or by those who have always considered

Tatham copy of 1652 Pine Tree shilling.

Copley restrike of 1776 New Hampshire half penny replica.

Copley restrike of 1776 Massachusetts Pine Tree copper.



Designation on edge of many replicas.

Counterfeit 1907 high relief twenty-dollar gold piece showing extensive tooling.

Counterfeit 1907 $20 showing tooling on reverse between M and E of AMERICA.

1909-S one-cent with added mintmark.

selling such things an easy route to some fast money.

ANACS has spent more than a decade, and a great number of others have worked even longer, trying to educate people that not only is the deliberate acquisition of counterfeits to be frowned upon, but that the buying and selling of such material is contrary to law. Vast sums have been spent in trying to reduce the problems created by those who deliberately market counterfeit and altered coins, so we cannot condone anything that even hints at such material having a premium value. We are not naive enough to believe that the problem will ever be eliminated, but we certainly will not sit quietly by while the problem is being escalated.

We will concede the "innocence of intention" and hope we have helped to "abate the mischief of the example."

Lead cast counterfeit of 1935 fifty-cent piece.

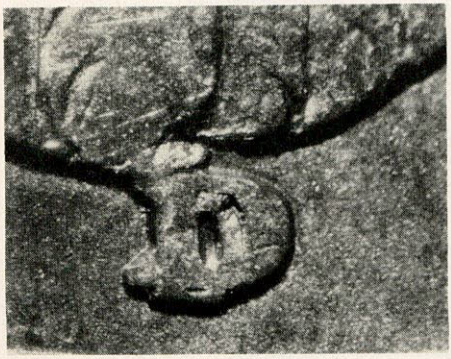
Replica of 1787 New Jersey copper.

Doubled Die Variety Studies

Since its inception, ANACS has encouraged collectors to take a good hard look at their coins. Watchful numismatists who consistently inspect their holdings discover new varieties every day. Although most discoveries constitute only minor varieties, some surface as potential rarities.

Two prime examples discovered by close inspection are shown here. ANACS has seen only two specimens of the Large D over Small D 1916-D Barber quarter, and just one sample of the 1937 doubled die obverse Washington quarter. Presumably there are more to be found, but how many?

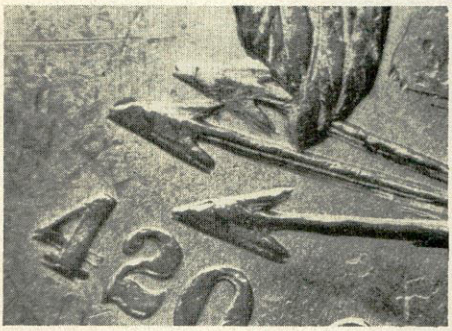
Die variety studies are very useful in authentication, as exemplified by the 1878-S doubled die reverse Trade Dollar. This dollar is a fairly common coin, however, the 1878-P Trade Dollar is a scarce coin issued only in Proof. If an attempt is made to alter the 1878-S by removing the "S", study of the die variety will expose the modification regardless of how well it was done. For this reason, ANACS not only studies the scarce issues, but also those coins that are easily altered.



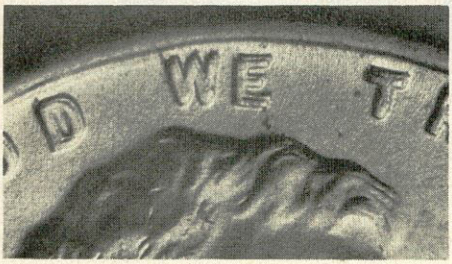
1916-D Barber Quarter: *Genuine. Large D over Small D. The wrong mintmark punch was used first, then partially effaced by the correct mintmark punch. Interestingly, the Small D mintmark punch was also used for the 1916-D dime.*

1937 Washington Quarter: *Genuine. Doubled die obverse illustrates very obvious doubling on the motto and the date. This variety is very similar to the 1934 doubled die obverse Washington quarter.*

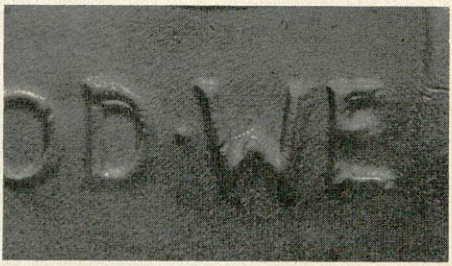
1936 Washington Quarter: *Genuine. Doubled die obverse shows obvious doubling at date and* LIBERTY.



1878-S Trade Dollar: *Genuine. Doubled die reverse displays doubling on all lettering. Doubled dies in the Trade Dollar series are relatively common. ANACS has recorded five different doubled dies, and several more varieties no doubt exist.*



1936 Lincoln Cent: *Genuine. Doubled die obverse with strong doubling at date.* LIBERTY *and* IN GOD WE TRUST.



1934-D Peace Dollar: *Genuine. Doubled die obverse shows obvious doubling on the motto and Liberty's profile.*

The study of die varieties is one area of the hobby that appeals to almost all numismatists, irrespective of age or income. ANACS staff often hears the lament that coin collecting is becoming a prohibitively expensive hobby, but all the dates shown here are relatively common and inexpensive. Many major varieties remain unnoticed for years simply because the coins are so ordinary. Perhaps if the appetites of numismatists were whetted, more new varieties would be discovered. All it takes is a keen eye, a little luck and perseverance.

Certified Errors

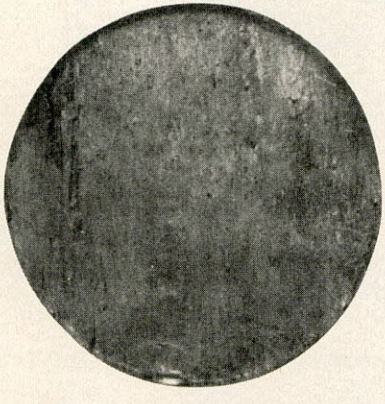
For a number of years ANACS authenticators have helped teach the ANA Summer Seminar class in Counterfeit Detection. Each year we stress our personal belief that error collectors are a big step ahead of collectors of normal coins when it comes to detecting counterfeit coins.

We hold this belief because the error collector must study the minting processes in order to explain (to himself at least) how the errors came into being inside the Mint rather than being faked after the coins got out into circulation. This focus on what dies can and will do to metal during the striking gives the error collector a head start when counterfeits are encountered.

Error and variety collectors also learn to inspect their coins more closely than most other collectors. As a result, they have a much higher chance of spotting that scarce variety and possibly adding some money to their pockets, too! After all, just check the price difference between a 1972 cent and a variety 1 1972 cent with doubled die obverse; or a 1937-D five cent and the 1937-D three-legged buffalo nickel.

Bill Fivaz often concludes his articles in *Error Trends Coin Magazine* with "To err is human, to collect them is fun;" to which we would add, "and will increase your knowledge."

1898 Indian Head Cent Double Struck.



Wartime Silver 5¢ Blank, Type 2.

1830/29 10¢ Flipover Double Strike.

No Date Mercury 10¢ Struck on Damaged Blank.

Spark Erosion Counterfeits

1803 1¢ S-260:
Counterfeit.

The ANA Certification Service has now seen four examples of what could well be an extensive series of die-struck counterfeit U.S. type coins. The pieces seen so far include an 1803 large cent (illustrated), two cent pieces dated 1865 and 1872, and an 1811/09 dime.

In each case the dies seem to have been copied from a genuine coin via a spark erosion process, a rather crude method that leaves numerous lumps and depressions on the dies. These new markings are then transferred in opposite relief to the coins struck from these dies, along with any other markings caused by damage to the model coin.

On the 1803 large cent (an S-260, the most common variety of that year), the counterfeiter tried to remove some of these markings from his die, leaving a series of raised, vertical tooling marks on Miss Liberty's throat. On the 1811/09 dime the dies came out much better, with only a few raised patches of metal in the field opposite Miss Liberty's chin and inside the eagle's (viewer's left) wing. However, the counterfeiter could not duplicate the reeded edge of the latter piece, his attempt consisting of nothing more than a series of shallow cuts that overlap in places.

An interesting sidelight of this counterfeiter's activities, if indeed these pieces were all done by the same person or group, is that he is simulating pattern and/or error coins as well. The 1865 two cent piece seen was struck on a .900 fine silver planchet, while the 1872 two cent piece was first struck normally and then struck a second time off center. If these coins are an indication of things to come, then collectors of type, pattern and error coins should each be on the alert.

Counterfeits of Common Coins

Counterfeit coins recently examined by ANACS include an 1864-L triple struck Indian head cent, an 1878 Indian head cent struck four times, normally struck 1909-S Indian head cents and some 1909-S Lincoln cents. ANACS speculates that errors from these same counterfeit dies will show up in the numismatic market, if indeed they have not already.

The counterfeit 1872 two cent pieces,

1872 Two Cent: *Counterfeit. Double Struck.*

1872 Two Cent: *Counterfeit.*

1864-L Indian Head Cent: *Counterfeit. Triple Struck.*

both normal strikings and error strikings, can be spotted most easily by watching for a depression on the top edge of the ribbon at the upper left of the G of GOD. Another diagnostic clue is the defective 2 in the date.

The 1864-L Indian head cent has noticeable depressions on the hair, ribbon and at the tops of the beads on the Indian's neck.

The 1878 counterfeit cents have a defect attached to the upper left corner of the shield; the outer end of that defect resembles a volcano, a raised lump of metal with a hole in its center. There is also a diagonal ridge of metal attached to the end of one of the denticles just to the left of the upper left corner of the shield.

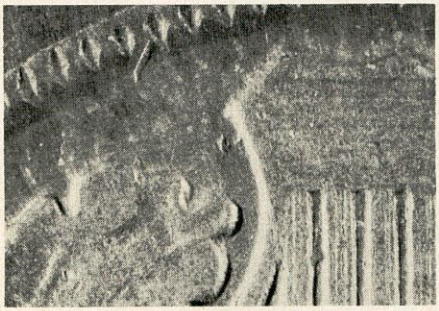
Perhaps the crudest in appearance is the counterfeit 1909-S Indian head cent.

There are numerous raised blobs of metal attached to the edges of most of the letters.

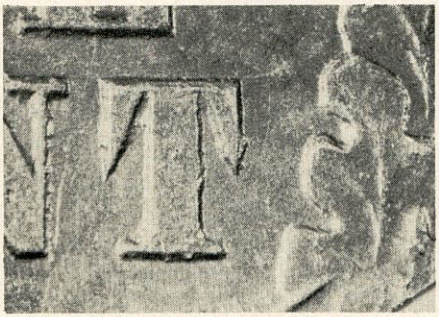
Rivaling the 1909-S Indian in crudity of appearance is the 1909-S Lincoln counterfeit. What appear to be attempts at correcting defects are easily seen as tooling marks on the base of the bust, front of the coat, the field between the date and coat and on the raised rims.

All of the coins mentioned have the same sandy textured, "porous" surfaces. Those examined so far by ANACS look good enough to fool many collectors; if anything, they look too good to be genuine!

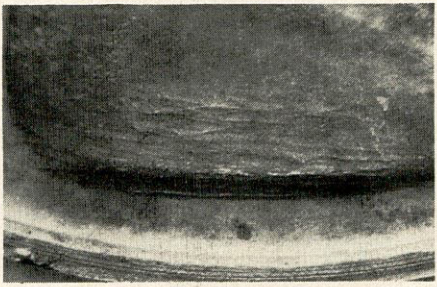
Among the new counterfeits to be watching for are: 1803 cent, 1858 cent, 1864-L cent, 1867 cent, 1868 cent, 1878 cent, 1908-S and 1909-S Indian head cents, 1909-S Lincoln cent, 1909-S VDB cent, 1865 two cent, 1872 two cent, 1811/09 dime and 1806/5 quarter. Based on overall appearance, ANACS speculates that all of these coins were made by the same manufacturer and that they may be the first of an entire type set of counterfeit coins to be discovered.

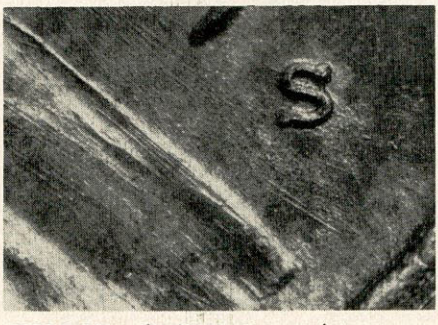


1878 Indian Head Cent: *Counterfeit. Struck four times.*



1909-S Indian Head Cent: *Counterfeit.*

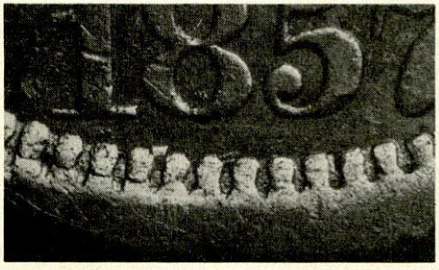




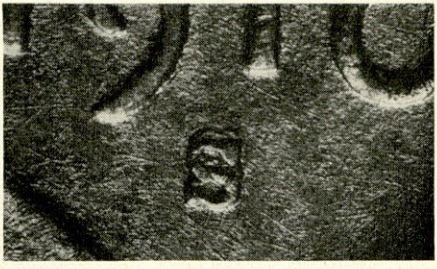
1909-S Lincoln Cent: *Counterfeit.*

1850 Large Cent: *Genuine. Repunched 1, Newcomb 2.*

1857/857 Flying Eagle Cent: *Genuine. Repunched date, first date low.*



1857 Large Cent: *Genuine. Newcomb 1. Top of extra 18 below 8 in denticles.*



1910-S/S Lincoln Cent: *Genuine. First S punched high.*

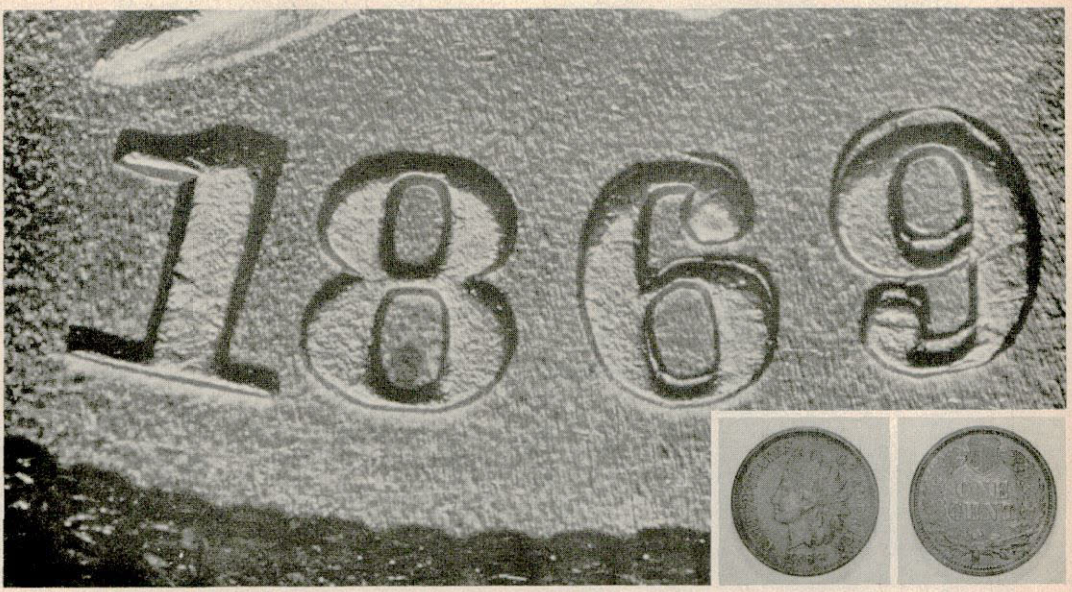
"New" Varieties Discovered by Authentication

The close examination of coins necessary to check for authenticity pays off in more ways than simply avoiding the purchase of a counterfeit coin—it often leads to the discovery of varieties in coins. When ANACS staff members conduct a counterfeit detection seminar, one of the points that is stressed is that those in attendance will no longer be content with just making certain that a coin has a particular set of date digits and a mintmark. Instead, they will begin to look beyond those characteristics, to examine the texture of a coin's surface for die scratches, polishing marks and other signs of normal mint activity, as well as to check for recurring depressions that can be evidence of a possible counterfeit.

This kind of close and careful examination often leads to the discovery of new and little known varieties that can enhance the value of those coins, making possible a much greater return on the investment for the owner, and in the case of a newly discovered variety, a large measure of pride (maybe even a little fame) for having found something that has escaped others for years.

Although neither new nor little known, the 1869/69 cent (so called 1869/68) has long been a collectible variety. Comparison of the date area of the 1868 cent with that of the 1869/69 cent shows many dissimilarities, including a different style 1, as well as an 8 with a larger base than top. Actually, the ball on the base of the 9 on the 1869/69 cent is readily apparent on many high grade examples.

1868 1¢: *Genuine.*

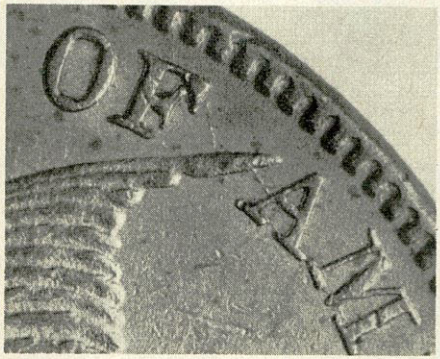


1869/69 1¢: *Genuine.*

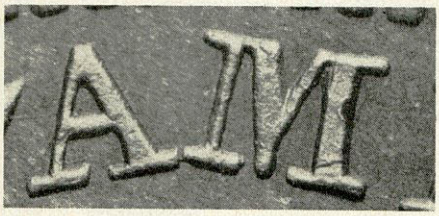
Variety of 1857 Flying Eagle Cents Discovered

With the passing of time new information that alters previously accepted ideas is constantly being discovered in all fields of study.

Studies of several high grade 1857 cents, in conjunction with numerous microphotos from our files, have revealed a number of obverse die similarities that were believed to be unique characteristics of 1856 Flying Eagles. Among the details noted on this new variety of 1857 cents were that the serifs of the A and M of AMERICA are fully separated and appear, because of the tilt of the A, to have been punched into the master die at different heights. This contrasts with the arched shape of the 1858 Large Letters variety or the separated but level serifs of the 1858 Small Letters.



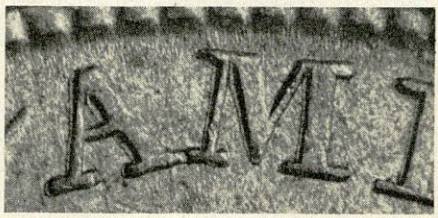
1857 1¢: *Genuine. Obverse of 1856. The center of the O in OF is rectangular. Serifs of the A and M of AMERICA are separated, at different levels and at different angles.*



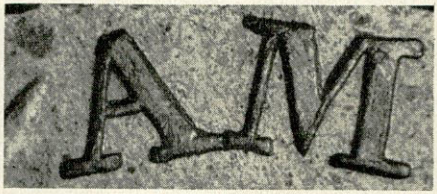
1856 1¢: *Genuine. Serifs of the A and M of AMERICA are separated, at different levels and at different angles.*

In addition, the inside of the O in OF is more rectangular in shape when compared to the normally oval shape of the O that is found on most 1857 and all 1858 Flying Eagle cents. Thus, the only reliable way to differentiate between the 1856 Flying Eagles and those of 1857 and 1858 is by the date.

The date punch used in 1856 seems to have been unique to that one year, with the most obvious feature the unusual configuration of the 5. The 5 used on all known genuine 1856 Flying Eagle cents has a chip missing from the upper right portion of the ball, and the ball seems to

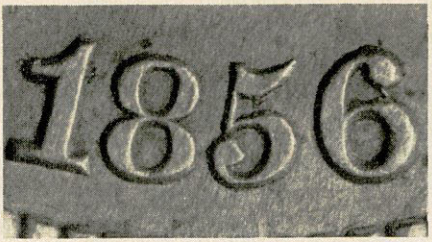


1857 1¢: *Genuine. Normal Die. Serifs of A and M of AMERICA are joined and slightly arched.*

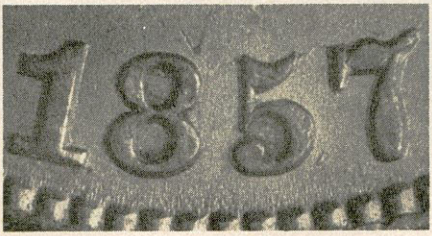


1858 1¢ Large Letters: *Genuine. Serifs of A and M of AMERICA are joined and slightly arched.*

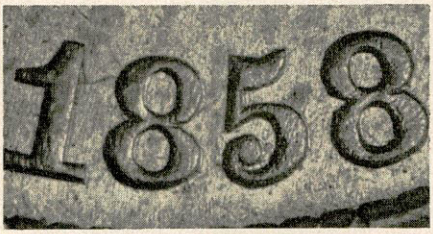
1858 1¢ Small Letters: *Genuine. Serifs of A and M in AMERICA are widely separated.*



1856 1¢: *Genuine. Broken ball of the 5 sits on top of the lower curve, back of the 5 is slanted and points to a spot left of center of the ball.*

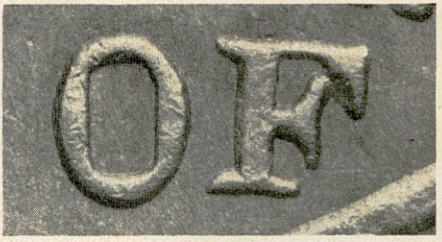


1857 1¢: *Genuine. Round ball of the 5 appears to sit on left end of the lower curve. Back of the 5 is almost vertical and points to a spot left of center of the ball.*

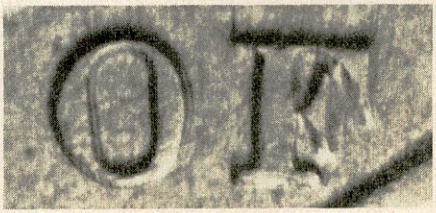


1858 1¢: *Genuine. Round ball of the 5 appears to sit on right side of a curled lower curve. Back of the 5 is almost vertical and points to left side of the ball.*

be perched on the top of the end of the lower curve, rather than extending out from the left end of the curve as it does on both the 1857 and 1858 dates. The back of the 5 used in 1857 is almost vertical and the lower end points to just left of center of the ball. On both varieties of the 1858 Flying Eagles the back of the 5 is slightly slanted, like on the 56s, but the lower end of the back points at the left edge of the ball.

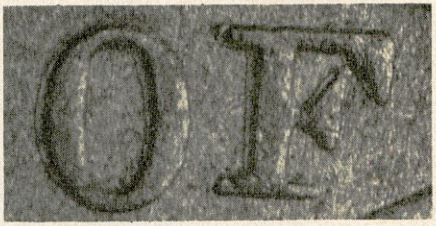


1856 1¢: *Genuine. Center of O in OF is rectangular.*



1857 1¢: *Genuine. Normal Die. Center of O in OF is oval.*

1858 1¢ Large Letters: *Genuine. Center of O is oval, roughly "D" shaped.*



1858 1¢ Small Letters: *Genuine. Center of O is oval, roughly "D" shaped.*

How rare is this variety? Do Flying Eagle cents exist with an 1857 date repunched over a previously dated 1856 date? Only time and further study will tell.

Counterfeit 1867 and 1868 Cents Exhibit Common Reverse

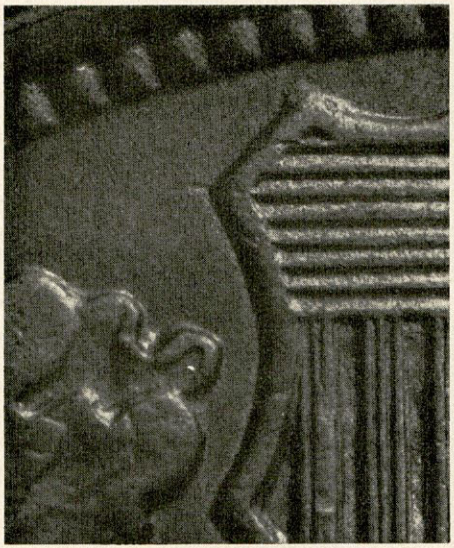
Counterfeit. *Common Reverse.* *Counterfeit.*

Two different dated counterfeit Indian Head cents examined by the ANACS staff must be considered among the most frightening of counterfeit coins. They are frightening to us not because they are so well made, but because they are relatively common dates, the type of coins that would be among the first coins acquired by newcomers to coin collecting. These 1867 and 1868 cents are usually a rich chocolate brown that is very attractive to the inexperienced eye. Any single coin by itself probably would not arouse suspicion, but when several of the reverses are examined side-by-side, common defects can be easily noted.

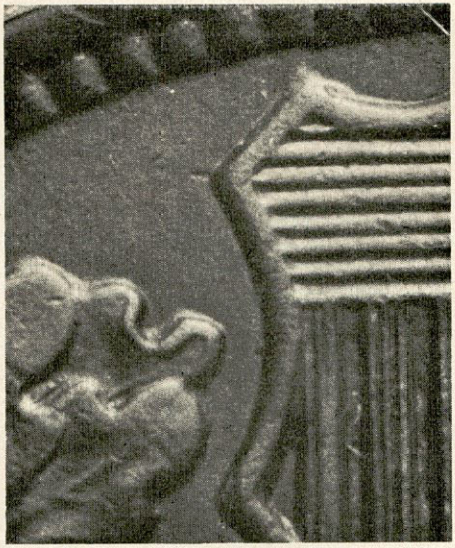
Among the more obvious are a series of depressions between the wreath and the denticles on the left side of the reverse, a single horizontal depression off the lower point of the upper left corner of the shield, and what appear to be tooling marks on the field at the right of the crossbar of the T in CENT. Close examination of the rest of these reverses will reveal other identical marks, but the ones listed are the most easily seen.

1867 1¢: *Counterfeit.*

1868 1¢: *Counterfeit.*

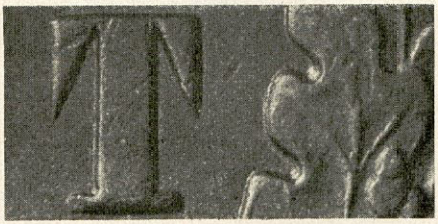


1867 1¢: *Counterfeit.*



1868 1¢: *Counterfeit.*

Depressions on coins are normally the result of damage, and no two depressions should be identical even though they could bear some resemblance to each other. A common depression as the result of damage to a hub during the die manufacturing operation is conceivable, but the odds against having several identical depressions, on two dies from different years, is just too astronomical to be believable on genuine coins. On the other hand, a counterfeiter will normally cut corners wherever possible, and one of the most economical ways would be to use the undated die with any number of dated dies in an effort to cut his manufacturing costs. The odds are that dates other than 1867 and 1868 will also show up with these common defects.



1867 1¢: *Counterfeit.*

1868 1¢: *Counterfeit.*

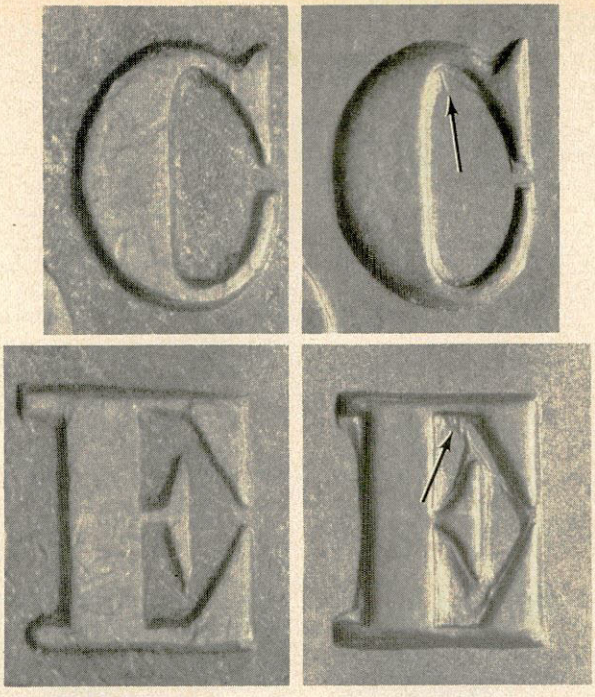
Counterfeiters Leave "Fingerprints" Behind

Of the large number of fake 1877 Indian Head cents sent to ANACS most have some "fingerprints" that can be easily spotted by most collectors, even in a poorly lit bourse area.

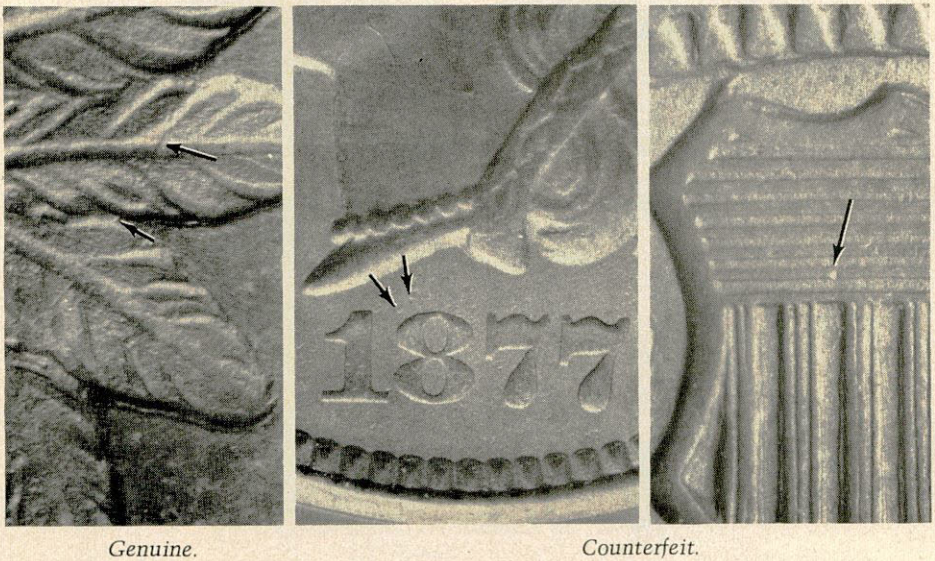
We publish those "fingerprints" hoping that when such a coin is spotted it will be sent to ANACS before it is purchased. We hasten to point out that nobody can be certain that some genuine coins do not have these same diagnostic characteristics, though we have yet to see a genuine coin that does have them. However, when numerous examples show the same flaws, it is strong evidence that all are counterfeits.

Genuine. *Counterfeit.*

All of the fakes examined to date with these characteristics were well within weight tolerance limits though slightly heavier than most genuine coins. Perhaps the



Genuine. *Counterfeit.*



Genuine. *Counterfeit.*

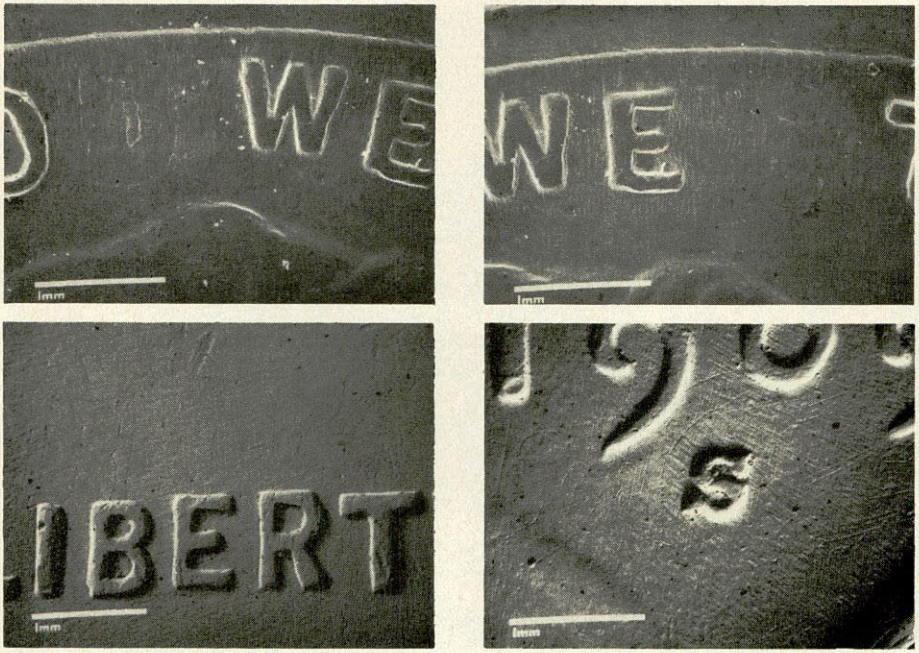
most peculiar thing about the weight of the fakes was that they fell within a much narrower weight range than did the genuine coins; 3.170 to 3.183 grams. Normal weight is 3.110, plus or minus 0.130.

The Counterfeiter's Pursuit of a Better Mousetrap

The counterfeiter's ingenuity in devising new methods of deception seems boundless, as attested by a 1909-S VDB cent created by overstriking a genuine 1960 cent with counterfeit dies.

The dies for this counterfeit 1909-S VDB were remarkably well made. However, even at first glance something is not quite right, although no specific flaw is immediately apparent. Under closer examination with a stereo microscope, however, remnants of the 1960 Philadelphia strike are evident, not quite obliterated by the 1909-S dies. A collector at a show could easily take a cursory look at a 1909-S VDB cent and agree with the seller that the coin is a "real beauty" and (most probably) a bargain at the price, only to get home where the newly acquired gem is subjected to a much closer scrutiny under ideal lighting conditions, and discover the tell-tale strike of the 1960 dies.

Those tell-tale markings will first be noticed as a flattened out LIBERTY. On the coin we examined, LIBERTY of the original strike shows up immediately above the LIBERTY struck by the fake dies, but on other coins struck by the same set of fake dies, the flattened out words and numerals may be in other positions simply because the coins are overstruck. The next most prominent clue was the 6 of the original 1960 date, the D of GOD and the W of WE.



1909-SVDB Lincoln 1¢: *Counterfeit. Struck Over 1960 Lincoln Cent.*

Two 1909-S VDB Lincoln Cent Counterfeits

It is not unusual for ANACS to see counterfeit coins of different dates struck from a common reverse die. The relatively high cost of making or buying a counterfeit die makes this an economic necessity to the counterfeiter, who, after all, is in business to make a profit.

Counterfeit.

Just recently, however, we have seen two new counterfeits of the 1909-S VDB Lincoln cent that are particularly interesting because they were struck from a common reverse die but different obverse dies. The implications of this muling are ominous—the counterfeiter used one of the obverses for so long that he wore it out. A more hopeful explanation is that the obverse simply broke, necessitating its replacement.

In any event the reverse die is easily identifiable, and the coins struck from it can be spotted with a good hand-held glass. The major characteristics should even be visible after attempts to artificially circulate the coins, as appears to have happened on one of the two coins seen by ANACS.

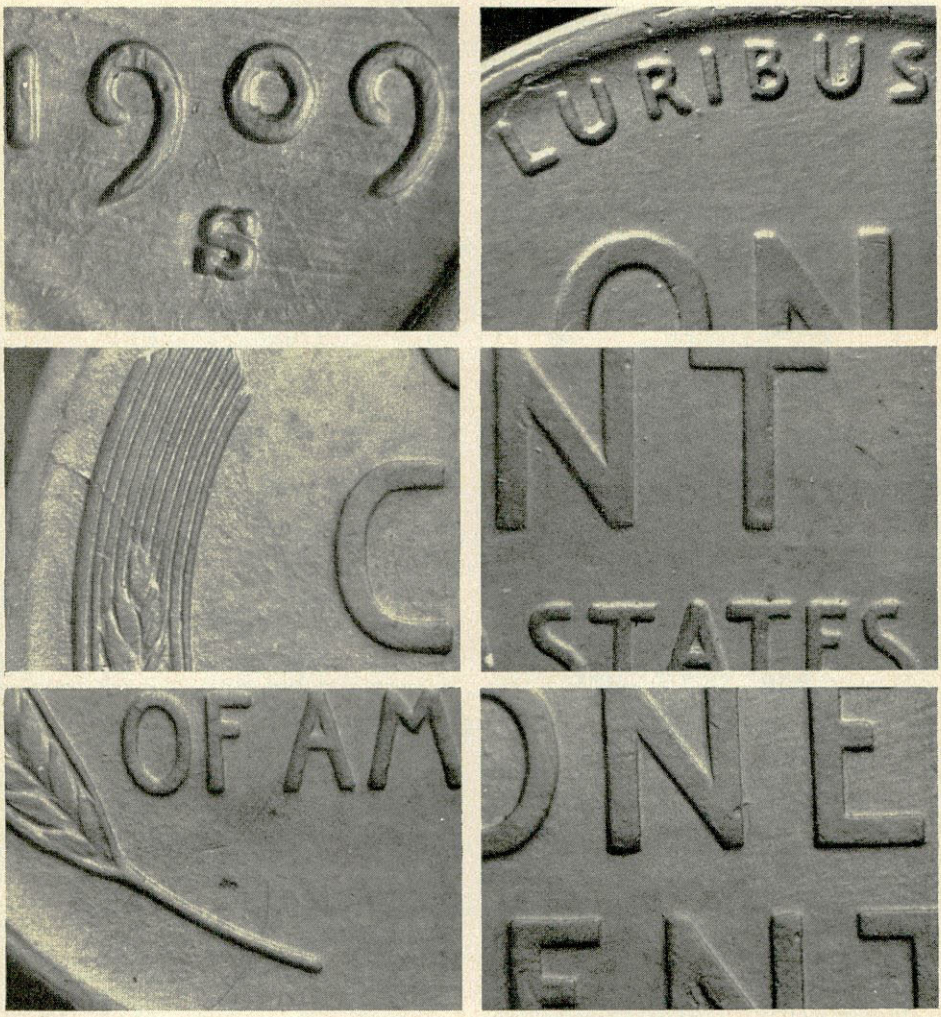
The most obvious diagnostics are single depressions on each of the Ns of ONE CENT, near the lower right corner of the upper N and the upper right corner of the lower N. In each case the depressions are near the right edges of the letters and presumably represent bag marks found on the coin used for the counterfeiter's model. Hub characteristics show this model coin to have been a 1909 VDB cent.

The N of CENT also shows a dent on the left upright of the letter, on the right side of this upright just below where it joins the diagonal. Though this factor is somewhat obscured on the artificially circulated coin, a bulge in the right side of the upright caused by the dent on the model coin is still evident. A pimple of raised metal shows in the field between the upright and the diagonal, about one-third of the way down from their juncture.

Other characteristics include pimples of extra metal above the R of PLURIBUS and to the left of the O of OF. Die cracks connect the wheat stalks to the rim, but it is not known if these appear on all coins struck from these dies or if they appear on genuine 1909 VDB coins as well. The crack on the left begins at the top of the uppermost kernel of wheat, while the one on the right begins at the right kernel of the second pair of kernels down from the top.

Both of the obverse dies appear to have been copied from the same model coin, which was a Philadelphia Mint striking to which an S had been added! Because of this the mintmark is not correct for a 1909-S VDB cent—similar to the genuine in shape but lacking the proper details.

Numerous tooling marks appear around and below the date and mintmark, on one of the dies, and a particularly heavy die scratch can be seen in the space between the edge of the lapel and the rim. What appear to be very faint die cracks between the N and G and G and O of IN GOD can be seen under high magnification, along with two angled lines positioned like the top two



1909-S VDB 1¢: *Counterfeit.*

parts of the fraction ½ above and to the left of the first T in TRUST.

On the second die a dot of metal is seen in the field below the R of LIBERTY, about three times the height of the R below it. The field above and to the right of the second T of TRUST seems bulged upward a bit, but a second specimen would be necessary to prove that this is not the result of a random planchet flaw.

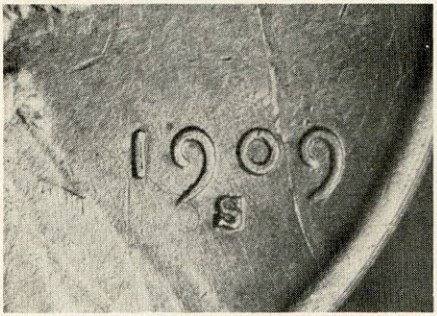
Deceptive 1909-S VDB Cent

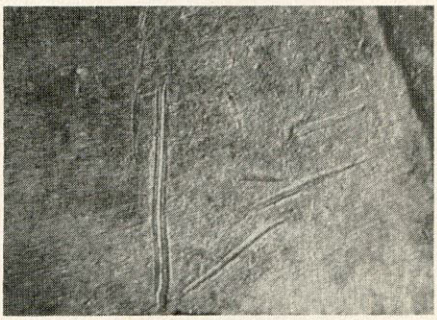
ANACS has had the opportunity to examine what might easily be one of the more deceptive counterfeit coins presented for authentication. After an exhaustive study of a 1909-S VDB Lincoln cent, ANACS found it impossible to conclusively determine if the coin is genuine. An examination of several more of these cents will be necessary to prove ANACS' suspicions.

Diameter, width, thickness and specific gravity are all within, or very close to, tolerance limits. The coin weighs 3.24 grams (50.04 grains), while normal weight for this cent is 3.11 ± .13 grams. The coin measures 19.15 to 19.20mm in diameter against a nominal diameter for the 1909-S VDB Lincoln cent of 19.05mm. A worn collar could account for the minor difference. Specific gravity was somewhat low (8.045 against a norm of 8.92), but not low enough to condemn the coin.

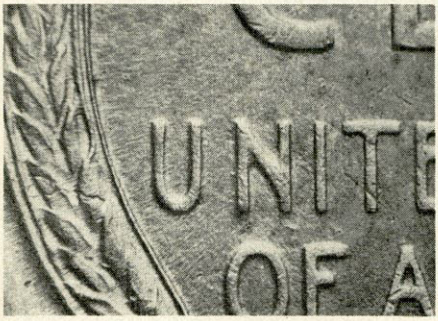
Some of the characteristics of this coin include an extremely flat edge that appears to have been polished, a weak rim in some areas, some raised lumps of metal, diecracks and depressions. Specifically, the following have been noted:

1. A faint line from the upper back of the head, downward and forward across the front of the eye, down the nose, across the field between the O and the last 9 to the rim at the lower right of the mintmark.
2. Another faint line branching off the first one but downward through the ear, onto the field at the lower back hair and ending at the top of the R of LIBERTY.
3. A third faint line downward from the jaw, across the collar, following the lapel to the rim.
4. A very large raised plateau of metal between the D of GOD and the WE.





5. Two imperfections just inside the rim, one above RU and the other above S of TRUST.
6. Four small raised lumps on the obverse field. Two of them are in front of Lincoln's face, one behind the head midway between the BE of LIBERTY and the I of IN.



7. A faint line along the underside of the diagonal bar of the N of CENT, through the right side of the first T of STATES and then through the IC of AMERICA.

8. A diecrack through the TES of STATES, across the lower right wheat ear to the rim. The diecrack starts out as a very faint line that gets progressively stronger as it crosses the lower third of the wheat ear.

9. A small, easily overlooked, lump of metal below the E of CENT.

10. A very faint, apostrophe-like lump above the left end of the crossbar of the T of UNITED.

11. A tiny depression at the right of the last A of AMERICA.

12. A shallow diagonal depression below the RI of AMERICA.

13. A small depression between the rim and the extreme end of the left wheat ear.

14. Numerous depressions that could be scratches on this coin, but which could also be damaged areas on the original coin that were transferred to the counterfeit dies.

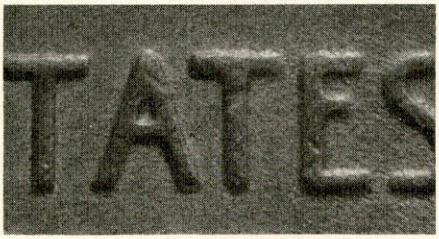
Absolute conclusions based only one coin are not made by ANACS, so we hope numismatists will be on the lookout for further examples of this coin that might help prove if it is indeed a deceptive counterfeit.

Counterfeit 1909-S Lincoln Cent

Has a counterfeiter ever made a coin so good that it defies detection? Probably not, but some of them are so good that they can fool most of us for a short period of time. A case in point is a particularly deceptive 1909-S Lincoln cent. This coin is high grade, extremely nice looking, die struck, and has all the characteristics we associate with genuine coins.

During our preliminary examination of this piece we noticed the "scratches" at the right of the date, inside the rim from TRUST to the date and on the lower part of Lincoln's lapel. At first we passed over them as simply damage to the coin. Then, continuing the examination, we saw some markings on the reverse that made us think twice about those on the obverse. It was the kind of gut feeling that is acquired only from long experience in examining coins and knowing that any one of them can be counterfeit.

Collectors who have attended ANACS seminars will remember that we invariably make the point that no mystery is involved in the detection of counterfeit coins. To be a good authenticator you must develop a memory for details and then keep accurate records of the coin's minute details seen under close examination. Once we got that gut-feeling that something was wrong, it remained only to pin down where we had seen it before. An ANACS authenticator remembered seeing that same reverse on a 1914-D cent and, in checking our records, found that the reverse was identical to the one published in the April 1979 issue of *The Numismatist*, pages 756-757.



1914-D 1¢: *Counterfeit. Depressions on TAT of STATES.*

The reverse die used for that coin had been muled with a 1909-S obverse to create this new counterfeit 1909-S Lincoln cent. Among the most obvious characteristics are:

1. Die damage that looks like scratches above and to the right of the date.

2. Die damage inside the rim from TRUST to the date area.

3. Tooling marks on the lower portion of the lapel and vest.

4. Die damage on and out to the left of the O of ONE.

5. Die damage on the outside of the lower right part of the O of ONE.

6. Diagonal depression inside the top of the N of ONE.

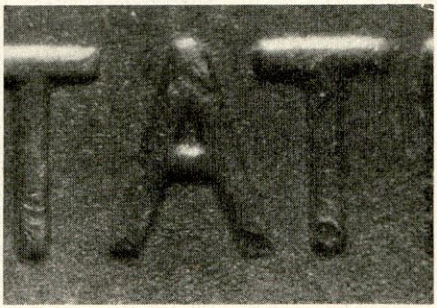
7. Two depressions inside the top of the N of ONE.

8. Diagonal depression near the bottom of the left leg of the M of AMERICA.

9. Depression on the end of the left leg of the last A of AMERICA.

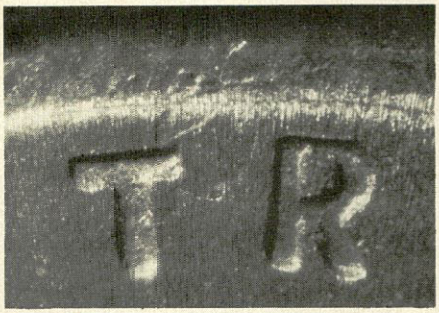
10. Two die damage marks just inside the rim at the bottom of the reverse.

That same reverse die could easily have been muled with other dated obverses, or the 1909-S obverse used for this counterfeit could have been used with a different counterfeit reverse die.

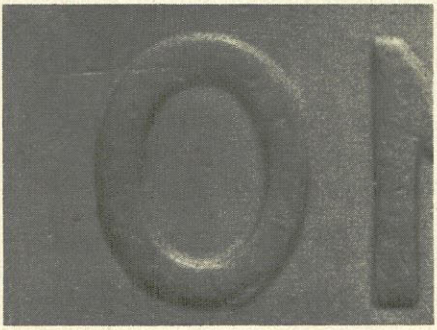


1909-S 1¢: *Counterfeit. Depressions on bases of A and second T of STATES, with several depressions just above the base of the first T and more depressions near tops of A and second T.*

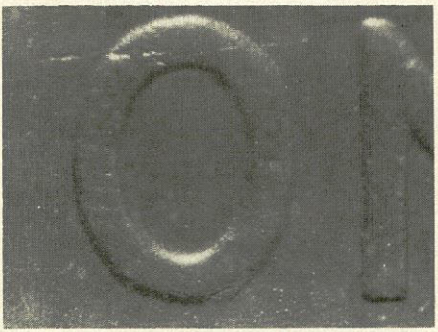
This is a graphic illustration of the need to study coins closely and then keep careful records of their individual characteristics.



1909-S 1¢: *Counterfeit. Large flat raised area of metal between rim, the upper right bar of the first T and the second T of TRUST.*

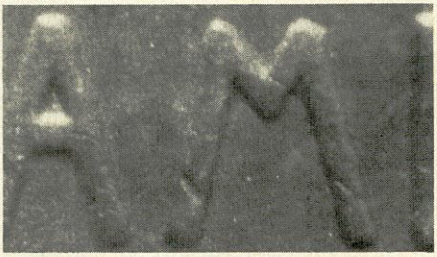


1914-D 1¢: *Counterfeit. Die damage at upper left and lower right of O of ONE.*

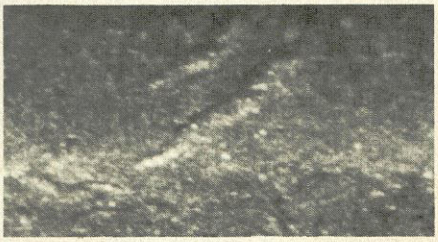


1909-S 1¢: *Counterfeit. Die damage at upper left and lower right of O of ONE.*

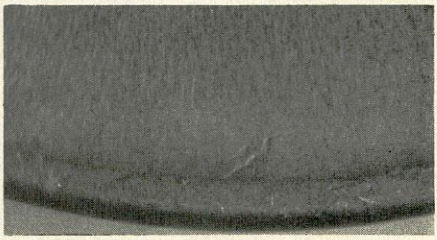
1909-S 1¢: *Counterfeit. Diagonal depression on raised rim above E of WE.*



1909-S 1¢: *Counterfeit. Large diagonal depression above base of left leg of M of AMERICA.*



1909-S 1¢: *Counterfeit. Two diagonal depressions on bottom of reverse at 6:00.*



1914-D 1¢: *Counterfeit. Two diagonal depressions inside reverse rim at 6:00.*

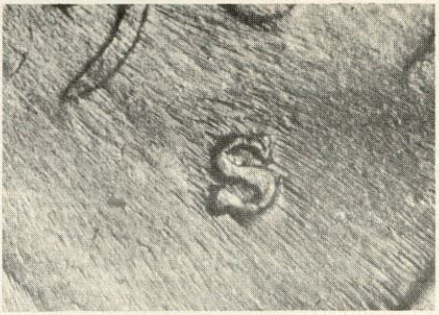
Genuine and Altered Cents

1909-S VDB 1¢.
Genuine.

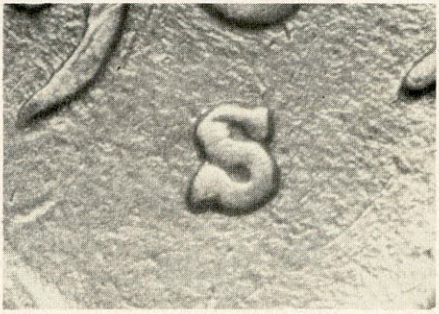
Authenticating coins involves no mystery, nor is sophisticated and expensive equipment an absolute requirement. Everybody possesses the most important tools used in authentication—logic and common sense! While a good stereo microscope is very helpful, and a good magnifying glass is essential, the most important item of all is recording the identifying characteristics of coins, especially those of the genuine one.

It is wise to bear in mind that any time clues are given to recognize genuine coins, all genuine coins may not fit those characteristics. So, if you compare your coin without finding the diagnostic points shown, do not automatically conclude that your coin is a counterfeit or an alteration. The die polish marks we often use are a good example. The die did not have them when it was first put into service. Those markings were acquired only after a technician worked on the die in an attempt to prolong its useful life. However, if you make the comparison and find the characteristics mentioned, you can be pretty well assured that your coin is genuine. Keep in mind also that coins are often cleaned and that cleaning can hide or change some of these diagnostic points to varying degrees.

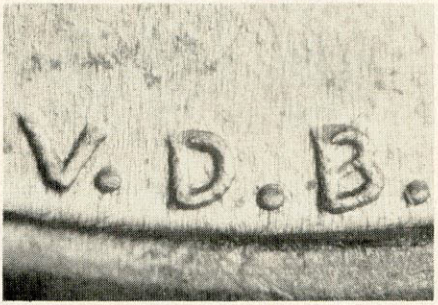
The VDB cent mintmark usually has a tiny lump nestled in the lower back curve of the upper loop. Most of the added mintmarks examined so far have a normal upper serif, but have a diagonal lower serif that is somewhat diagonally rounded and much larger than the upper serif. That same genuine mintmark punch was used on other coin dies, including the 1915-S Pan-Pac $50 round.



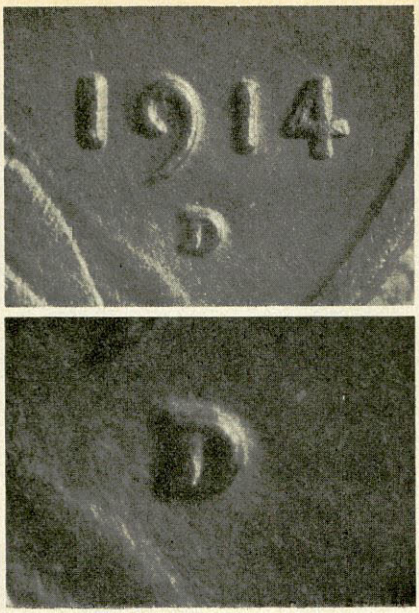
1909-S VDB Cent. *Genuine. The mintmark punch used for the San Francisco dies had equally sized serifs that were vertically parallel to each other, often with a tiny groove in the upper serif.*



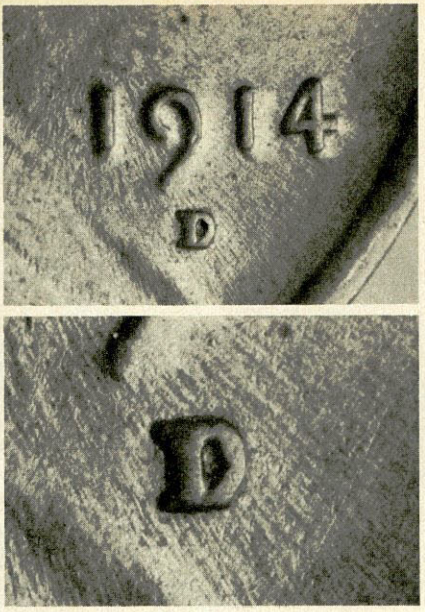
1909-S VDB Cent. *Altered.*



1909-S VDB Cent—Designer's Initials: *Genuine. The center and bottom bars slope downward diagonally to the left. The tops of the initials are sometimes weakly struck, almost non-existent, and one or more of the periods may be missing.*



Genuine.



Altered.

1914-D Cent: *Genuine. Very few counterfeit 1914-D cents are seen by ANACS. By far, the greatest number have mintmarks added to Philadelphia products. Generally, the field shows signs of having been buffed, and the mintmark itself appears different than the metal of the coin.*

1931-S Cent: *Altered. Here is another one that is seldom counterfeited but often altered. The particular coin we show here was altered from a 1936-S cent by simply "chasing" the six and reshaping it as a 1. This one was rather poorly done, leaving traces of the original 6 and having the 1 at a slight angle.*

Genuine.

Altered.

Counterfeit Cents Show Added Mintmark

Counterfeiters are just as interested in saving money as everyone else these days. This is vividly illustrated by the two Lincoln cent counterfeits shown here. Rather than go to the expense of purchasing high quality examples of a 1909-S cent and a 1931-S cent, this counterfeiter made his dies from common 1909 and 1931 cents. He then manufactured an 'S' mintmark punch and punched an 'S' into his dies. The style and shape of his 'S' is not correct, but it is close enough to fool the average collector.

Both of these coins can be easily identified with nothing more than a 5 to 10 power hand glass. The 'S' mintmark is thin and "snake like," with a shelf of raised metal inside the curves. At first glance, the 'S' appears to have been added to the coin. However, close examination proves that the mintmark flows into the field, and is definitely part of the coin.

The obverse die of the 1909-S counterfeit was extensively retooled. All the digits in the date were strengthened by tooling, the front of Lincoln's coat shows several long thin tool marks, and the lower edge of the shoulder was heavily retooled. All these tool marks appear as thin raised lines on the coin.

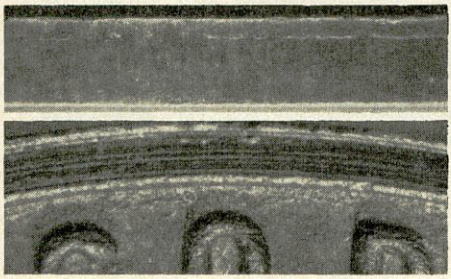
Diagnostics for the reverse of the 1909-S include a tool mark slanting up through the center of the C in CENT, a lump of raised metal on the lower right corner of the N in ONE, more tiny lumps in the field above the left top of the E in ONE, and a very prominent raised lump above the tip of the wheat stalk stem.

Examination of the edge of any coin is always important in determining its authenticity. Both of these counterfeits have very sharp, squared-off rims and edges. The 1909-S has a sharp wire rim around both sides of the coin caused by the counterfeiter's use of a higher striking pressure than normally used by the Mint. Counterfeit Indian and Lincoln cents often have this type of edge. The higher pressure probably is used in an attempt to hide weaknesses in the counterfeit dies. Normally, however, the opposite is true, and the counterfeiter only succeeds in making his product easier to detect.

1909-S 1¢: *Counterfeit. Tool marks on the digits in the date.*

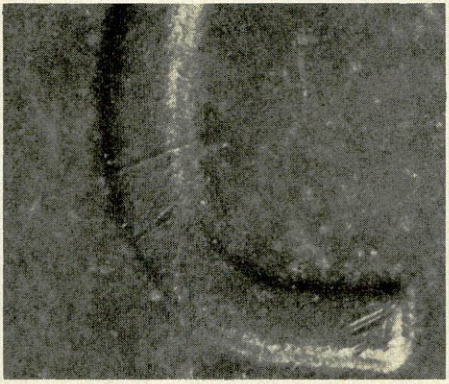
1909-S 1¢: *Counterfeit. Tool marks on the front of the coat.*

1909-S 1¢: *Counterfeit. Large "pimple" above tip of left stem.*

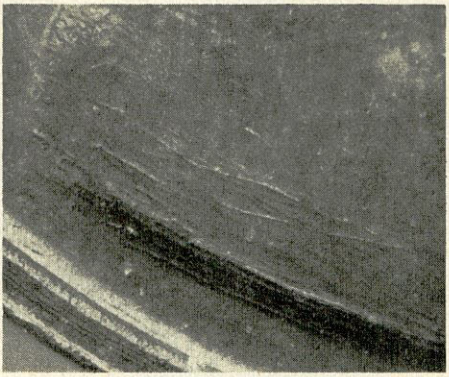


1909-S 1¢: *Counterfeit. Sharp, squared-off rim and edge.*

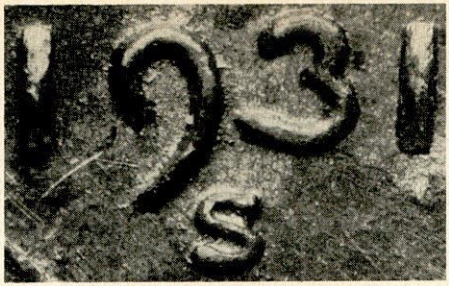
1909-S 1¢: *Counterfeit. Raised lump on lower right corner of N and lumps above left edge of E.*



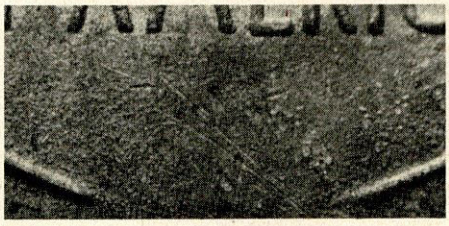
1909-S 1¢: *Counterfeit. Slanting line through the C in CENT.*



1909-S 1¢: *Counterfeit. Heavy tooling on Lincoln's shoulder.*



1931-S 1¢: *Counterfeit. Extra-long tail on 3 in date. Homemade 'S' with "shelf" of metal inside curves.*



1931-S 1¢: *Counterfeit. Raised lumps in field above tip of right stem.*

Diagnostics for the counterfeit 1931-S cent include an extra-long tail on the 3 in the date, the same style 'S' mintmark as on the 1909-S, and a patch of tool marks in the field below Lincoln's chin. On the reverse numerous raised lumps appear in the field to the left of the O in ONE, and more can be found above the tip of the right wheat stalk stem.

An excellent possibility exists that other counterfeits will surface with this same style 'S'. Good candidates are 1909-S VDB, 1923-S and 1926-S Lincoln cents. In each instance a clever counterfeiter can easily and inexpensively obtain a high quality Philadelphia Mint example to which he can apply his own mintmark. Counterfeiters are notoriously capitalistic in their thinking—if they think they can make something extraordinary out of the ordinary, they'll give it a try.

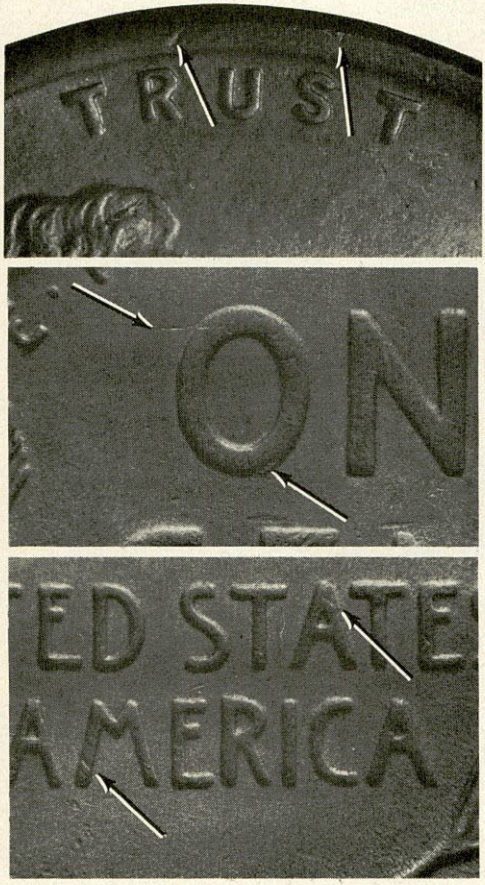
1931-S 1¢: *Counterfeit. Tool marks in field below chin.*

1931-S 1¢: *Counterfeit. Raised lumps in field to left of O.*

Alert Dealer Unmasks Counterfeit 1914-D Cents

Coin dealers and collectors often make ANACS' job much easier by alerting us to counterfeits that appear in the numismatic market. Norman Pullen of South Casco, Maine, has alerted ANACS to some extremely deceptive counterfeit 1914-D cents. Examining several specimens side by side, common depressions, scratches and other aberrations were found.

Among the depressions noted were those on the rims of the coins above the letters R, S and the last T of TRUST on the obverse. The reverses also showed a number of identical depressions.

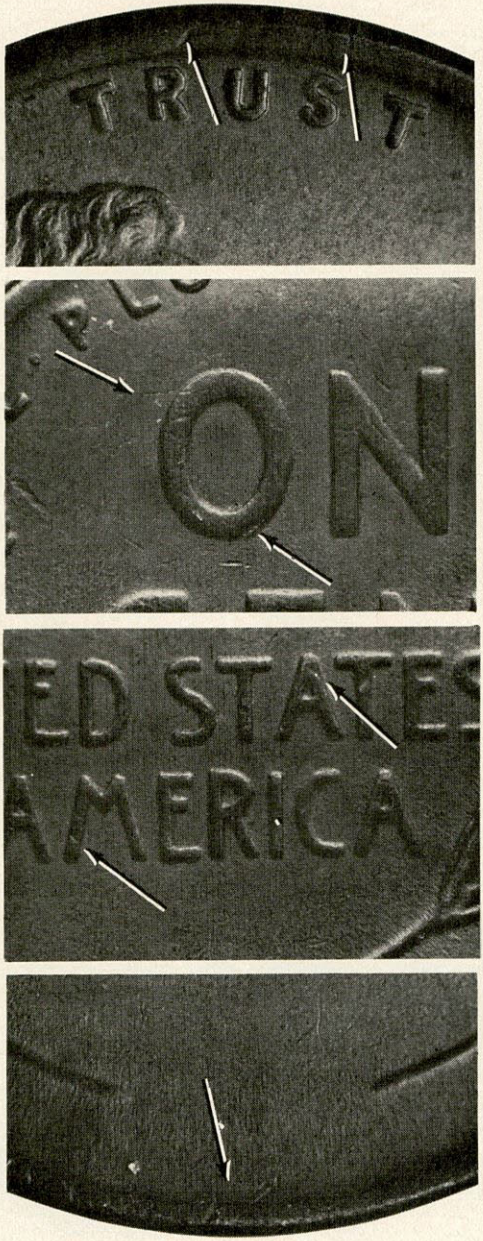


Coin 1.

Among the most easily spotted are a horizontal "scratch" on and out to the left of the O in ONE with a die gouge on the outside of the lower right part of that O, a diagonal depression inside the top of the N of ONE, two depressions on the stem of the T of STATES, a diagonal mark on the top of the A of STATES, and a number of identical depressions on the letters of AMERICA. Last, but not least, several marks can be seen on the rim and field at 6 o'clock on the reverse.

These are only a few of the identical flaws noted in comparing several coins, and all of them can be easily seen with nothing more than a 10-x glass and average lighting. While it must be remembered that dies will produce identical aberrations during striking if something has happened to that die, the only way a depression can be produced is if something is on the die, such as a piece of dirt or metal fragment. However, if there was a bit of dirt or metal on the die, that fragment would flatten out under succeeding strikes, and while the depressions left on the coins would be similar, they would not be identical. On the other hand, a counterfeiter would have to use a coin as a model to produce the counterfeit dies. If that coin had any bagmarks or damage, and if the counterfeiter hoped to fool most numismatists, his dies would pick up the damage that was on the coin. That damage would be reproduced on all of the products of those dies, unless the counterfeiter attempted to remove them, a process that would most probably leave evidence of tooling.

1914-D 1¢: *Counterfeit.*



Coin 2.

1922 "No D" Cent Die Study

The 1922 "No D" cent presents an unusual challenge because its authentication requires that a subjective judgement be made. All genuine 1922 "No D" cents were struck from extremely worn dies that, when new, produced normal 1922-D cents. The presently accepted theory is that a combination of die deterioration, die filling and die polishing created the "No D" varieties.

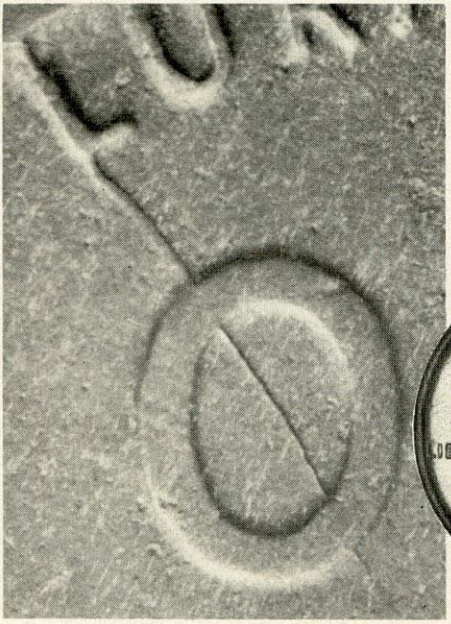
Two theories pertaining to this variety have been advanced in the past, both of which are subject to debate. One of the theories contends that a die intended for the Denver Mint was never punched with the D mint mark. This theory can be easily refuted by the fact that no genuine "No D" cents are known to have been struck from a new obverse die with normal details.

The second theory is based on Allen D. Craig's excellent research, published in *Coin World* in the August 30, 1967, and September 6, 1967, issues. Craig believes four varieties exist using three obverse and four reverse dies. However, his varieties 1 and 4 appear to be different states of the same die pair (our number 3). It is also very unlikely that the obverse of our die pair 2 produced "No D" cents *before* it was reworked and matched with a new reverse die. Despite being well worn, this obverse die is still stronger than any other "No D" die.

Our die pairs 1 and 3 are the result of die deterioration and die filling. Apparently the mintmark on the die filled with "grease" (a combination of lubricating oil, dirt and metal filings), and these dies were used to produce "No D" cents. This filling compressed with continued use, and the same dies eventually produced "Weak D" or "Shadow D" cents. This process of deterioration was repeated more than once, and consequently dies became more and more worn, alternately producing "No D" and "Weak D" cents. For this reason, any coin from die pairs 1 or 3 should be examined carefully for traces of a D or signs of alteration in the mintmark area.

The method usually employed by ANACS to determine "Weak D" or "No D" involves holding the coin approximately 12 inches from a 60 or 75 watt incandescent light and inspecting the coin without magnification. If the coin shows discernible traces of a D, it must be called a "Weak D".

Die pair 2 evolved in a different manner. A pair of dies producing normal 1922-D cents clashed together, shattering the reverse die, and a new reverse die



"Straight" Die Crack: *Genuine. Only on normal 1922-D cents. Crack runs from edge of L straight through O in ONE.*

Normal 1922-D Cent: *Genuine. All digits in date are of equal strength and sharpness. IN GOD WE TRUST is sharp and distinct, as is LIBERTY.*

Die Pair 1: *Genuine. Second 2 in date is weaker than first 2. First T in TRUST is smaller and more distinct than the other letters. WE is very mushy. Reverse is very weak, usually with no lines in the wheat ears.*

Die Pair 2: *Genuine. Second 2 in date is sharper than first 2. All letters in TRUST are sharp. WE is only slightly mushy. Reverse is sharp.*

"Jogging" Die Crack: *Genuine. Appears on die pair 1. Crack runs from left half of L to upper edge of O, then "jogs" downward and continues on through the inside of the O. Appears on both "No D" and "Weak D" cents.*

was put into service. The obverse die, though worn, was still considered usable, and was taken out of the press, reworked and polished, and put back into service. This procedure removed sufficient metal from the die to erase any trace of the mintmark. Every coin examined by ANACS from this die pair has been the "No D" variety.

All genuine "No D" cents show weak, mushy lettering on IN GOD WE and LIBERTY. Other characteristics vary depending on which die pair produced the coin. The so-called "jogging" die crack that appears on die pair 1 is not a conclusive diagnosis of "No D" cents as is visible on both the "No D" and "Weak D" cents. However, the "straight" die crack appearing in the same area only occurs on normal 1922-D cents. Any 1922 "No D" cent with the "straight" die crack has been altered.

Grading 1922 "No D" cents involves more than just checking for fine points such as lines in the wheat ears and hair details. Lustre or the lack of it, actual wear and circulation marks in the fields are the most important considerations. Keep in mind that with the exception of the reverse of die pair 2, the dies that produced the "No D" varieties are extremely worn. ANACS has seen Uncirculated 1922 cents with full mint lustre that had the overall detail of a Very Good or Fine coin.

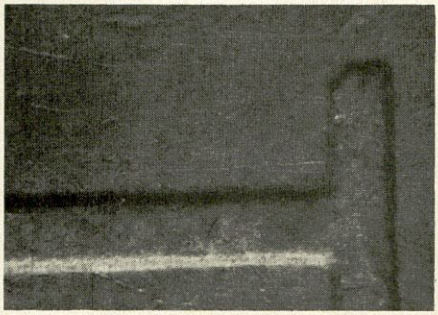
While such conclusions are the result of examining hundreds and hundreds of 1922 cents over the years, it is still, for the most part, speculation rather than proven fact. Unfortunately, we cannot travel back in time and find out exactly what the Denver Mint was up to in 1922. ANACS welcomes any additional information on this variety.

Die Pair 3: *Genuine. Second 2 in date is weaker than first 2. TRUST is weak but sharper than IN GOD WE. Lower left part of O in ONE begins to spread into the field as the die deteriorates.*

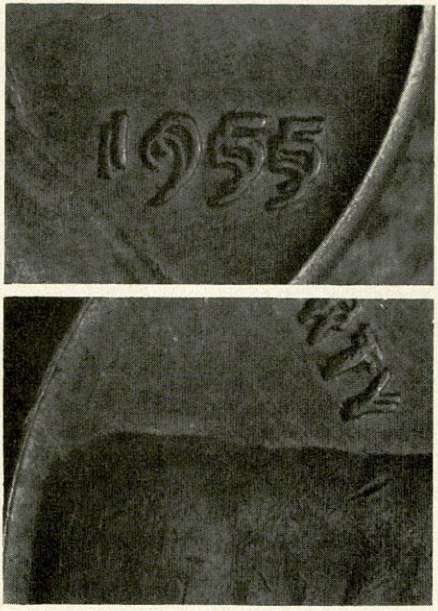
Die Characteristics of Some Counterfeit 1955 Doubled Die Cents

ANACS receives a great number of 1955 Doubled Die cents every month. While most of those received are genuine, the counterfeits seem to give many collectors a great deal of trouble because die characteristics are often memorized for only one or two of the known variations. Here we show you diagnostics of five different counterfeit die pairs as well as the most important diagnostic of the genuine 1955 Doubled Die cents.

GENUINE: There are two very fine die polish marks that extend downward parallel to the left side of the T of CENT, from the crossbar. They appear to converge about one-third of the way down the T, forming a tall X. When looking for these fine marks, you must be certain that the light is directed from either the right or left at 90 degrees to the stem of the T, so that the light creates the highlights and shadows necessary to spot the lines. It may be next to impossible to see the die polish lines with anything less than a good 10 power glass so, if you are among those still using the 2-X or 3-X single lens glasses, you should seriously consider purchasing a 10 or 16 power doublet or triplet lens so that some of these finer details aren't overlooked when examining coins. Of course, the ideal tool for checking coins is a good stereo microscope.

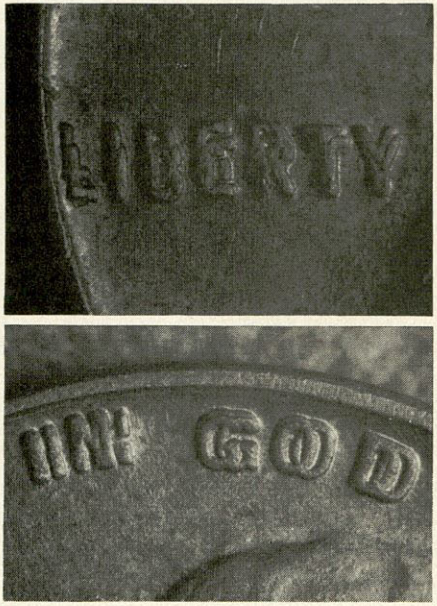


Genuine.



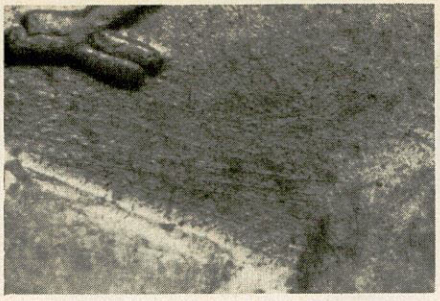
Obverse 1, Reverse 1. Counterfeit.

A tiny spike of metal sticks upward from the left end of the top of the first 5 and some odd looking tooling marks appear on the lower back of Lincoln's shoulder.



Obverse 2, Reverse 2. Counterfeit.

This die pair has a pimple on the field below the B of LIBERTY and a broken right vertical bar of the N of IN.

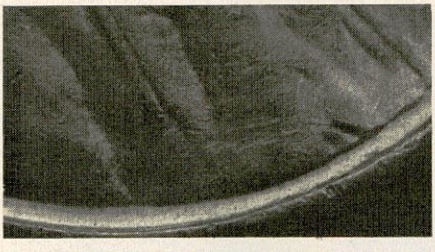


Obverse 3, Reverse 3. Counterfeit.

A depression in the very end of the right wheat stalk and some rather heavy die polishing behind Lincoln's shoulder and neck are diagnostic.

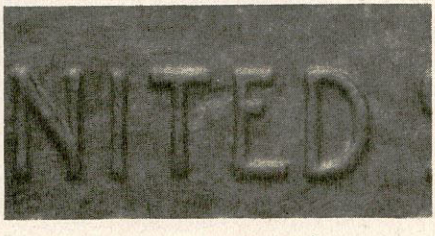
Obverse 4, Reverse 4. Counterfeit.

Odd shaped lumps appear on the obverse, one between GOD and WE and the other on the field behind Lincoln's head above the Y of LIBERTY.



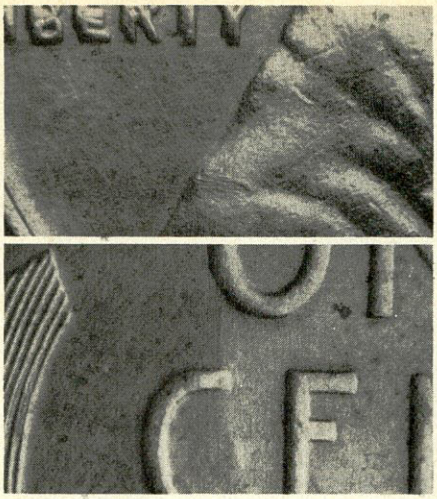
Obverse 5, Reverse 5. Counterfeit.

An area of tooling marks can be seen on the bottom of the lapel on the obverse and a spike of metal inward from the rim below the end of the right wheat stalk.



Obverse 6, Reverse 6. Counterfeit.

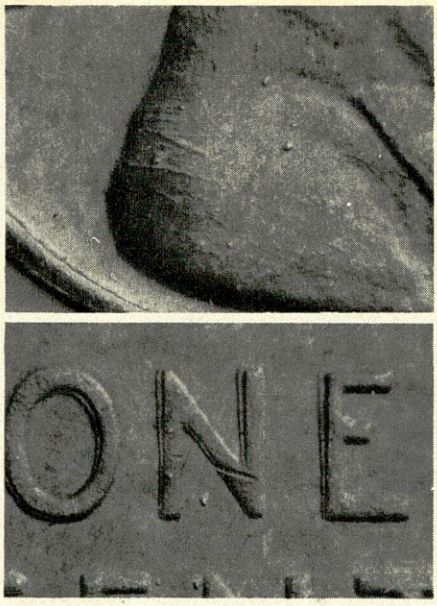
Wormy line on, and at the right of, the O in ONE. Another wormy line appears above the T of CENT. There is a depression between the upper portions of the T and E of UNITED.



Obverse 7, Reverse 7. Counterfeit.

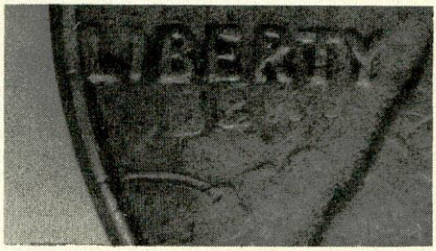
A small area of tooling marks appears on the upper part of the shoulder of Lincoln's jacket. A depression is on the center bar of the N of IN. Odd-looking lines occur from the lower left corner of the O of ONE, downward through the top of the C and curved toward the base of the E of CENT. Another similar mark appears between the base of OF and the end of the left wheat stalk.

Three distinct dates, three distinct words LIBERTY and at least two letters for each word of IN GOD WE TRUST appear on these counterfeits. These dies were made by impressing a genuine coin between two sheets (or blocks of either copper or aluminum, releasing the pressure and turning the coin slightly before impressing it again into the metal. When the pieces are separated, each contains a die-like image with two impressions. When another coin is placed between the two pieces and pressure is applied, the coin acquires the softened images that were in the metal of the homemade dies. The images look entirely different than the doubling that is the result of a doubled die because they are usually so very much softer and more widely separated. The doubling that is the result of multiple striking shows on the field only as outlines of the original strike, because the field portions of the dies have flattened the raised image areas that overlapped those parts of the dies.



Obverse 8, Reverse 8. Counterfeit.

Short, vertical, tooling marks occur inside the rim at the lower right of the date. Pimples and tooling marks show on Lincoln's shoulder. The tooling marks are similar to those of obverse 7, but are lower on the shoulder. Numerous pimples can be seen on the reverse with slight doubling of most of the letters on the upper one-third of the reverse, as though the coin had been double struck.



1955 One Cent: *Counterfeit. Triple struck by homemade dies.*

Variety Attribution for Certification — Not Evaluation

The ANACS staff is often asked to attribute and evaluate coins. Since we do not have enough help to determine what a coin is supposed to be, and since it would not be fair to everybody to set ourselves up as authorities on values, we are forced to decline such requests.

However, in the course of checking coins for authenticity, it is often necessary to determine varieties. In that one respect, and to that extent only, we are attributing coins and possibly influencing their values. The photographs accompanying this article illustrate just such a case.

A single 1960 Proof cent and one in a Mint selected package were received for authentication. They were submitted as being large over small date Proof cents. In order to be absolutely certain that they were both genuine, it was necessary to locate other examples of the same coins.

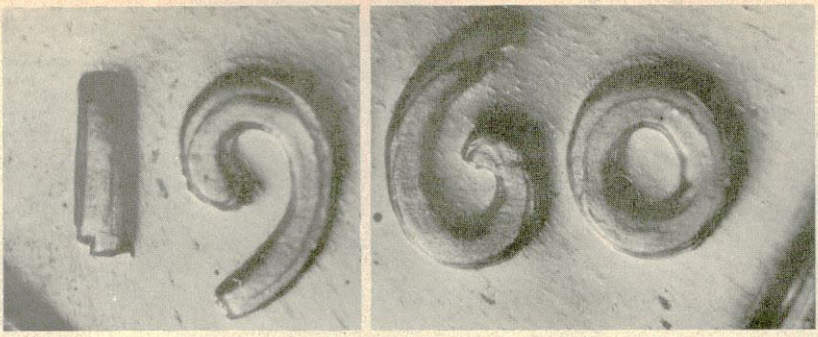
We called on Jay Jackson of Indianapolis for help because we knew that Jackson had made a specialty of these three different varieties of the overdates of the 1960 Proof cents. We also knew that he had a file of articles on the subject, including the extensive series by Don Keys that was published in *Coin World's* Collectors Clearinghouse during February and March of 1966.

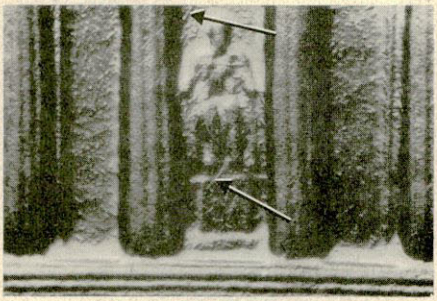
Our preliminary examination of the coins had convinced us that both were probably genuine but that they were different from each other. We felt that issuing a certification which merely stated that the coins were large over small date Proof cents would not be enough. We wanted to be able to certify them by variety.

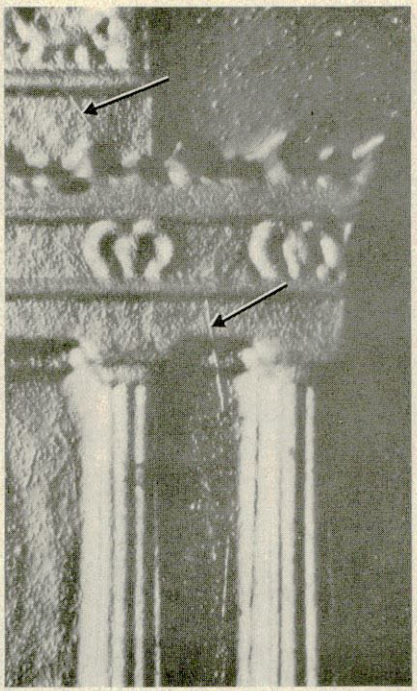
With the help of the Proof coins and the articles that Jackson was kind enough to send us, we were able to determine beyond a doubt that the single coin was a Variety II 1960 large over small date Proof cent. Unfortunately, because of the deterioriated condition of the packaging material, we were unable to be certain that the cent in the Proof set package was the Variety III that we think it is.

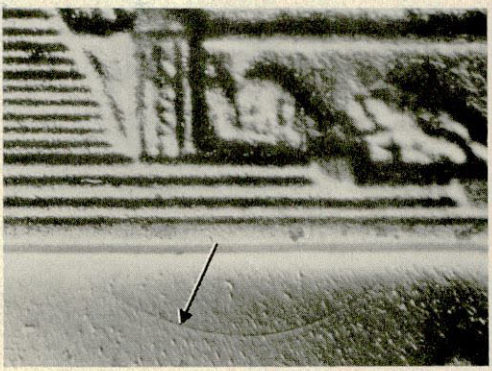
If you are asking yourself why the

Variety II. Genuine large over small date.









determination of variety is so important to us, let us point out that such in-depth studies of little-known varieties probably has very little importance right now. We are thinking of some time in the future when the value of one variety could well increase far beyond that of the other varieties.

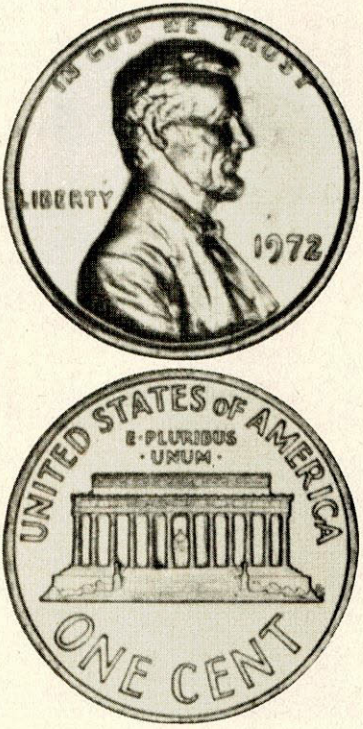
Then someone, somewhere, is going to be tempted to "upgrade" one of the lesser varieties to resemble the more valuable one to increase its value. It is at that time that the value of the studies being done now will prove their worth. We will have documented the die characteristics long before someone is tempted to fleece an unsuspecting collector. Though such studies are time consuming, they will make the authenticator jobs of the future much easier.

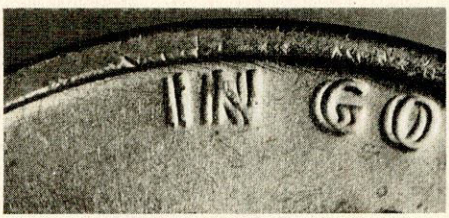
Not present on all Var. II examples.

Counterfeit 1972 Doubled Die Cent Discovered

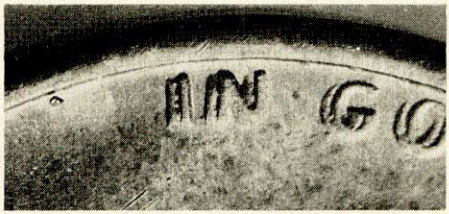
The appearance of a counterfeit 1972 Doubled Die cent came as no surprise to the ANACS staff. With the ever increasing values placed on varieties, it was just a matter of time before a counterfeiter decided to fill the demand. While this new counterfeit is not one of the better attempts at duplicating coins, it could fool newcomers to coin collecting.

The photographs accompanying this article show specific details of the counterfeit, and matching photos show the corresponding areas of the genuine coin. Generally, the counterfeit has an overall weakness of detail, quite a large number of lumps all over the obverse and reverse and a few raised "wormy" lines that are seldom seen on genuine coins. These points cannot be used as diagnostics of counterfeit coins in general, but should be used to detect this particular counterfeiter's product.

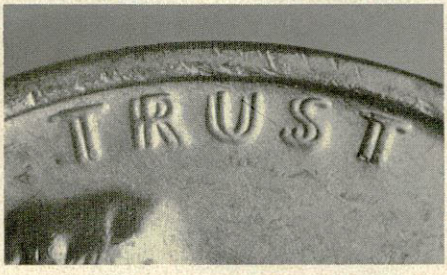


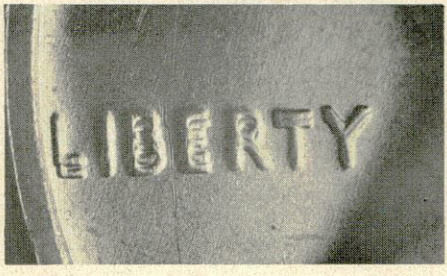


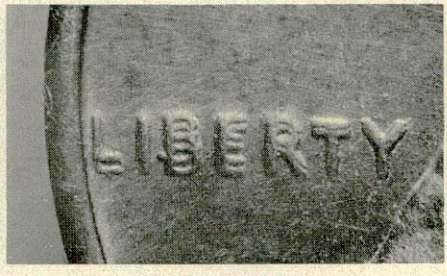
1972 Cent: *Genuine. Doubled die.*



1972 Cent: *Counterfeit. Doubled die.*

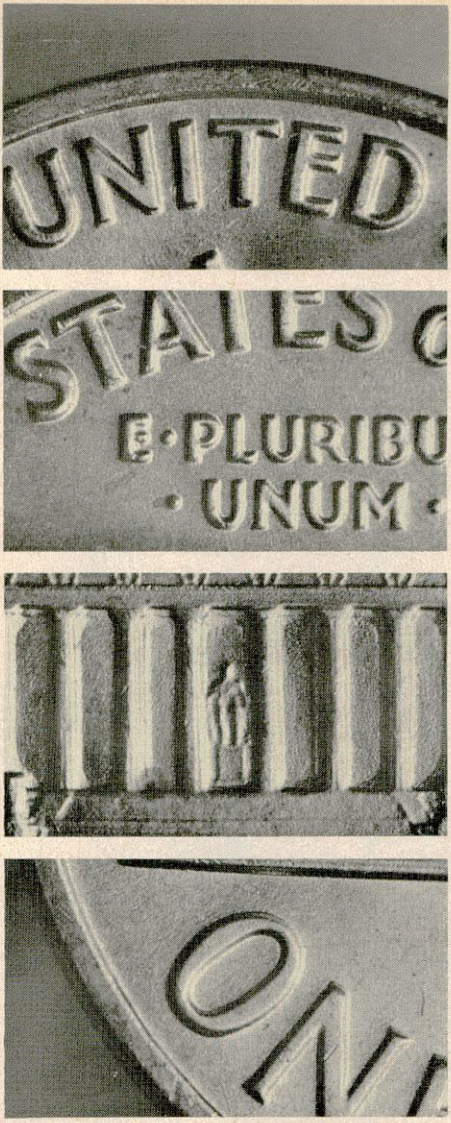




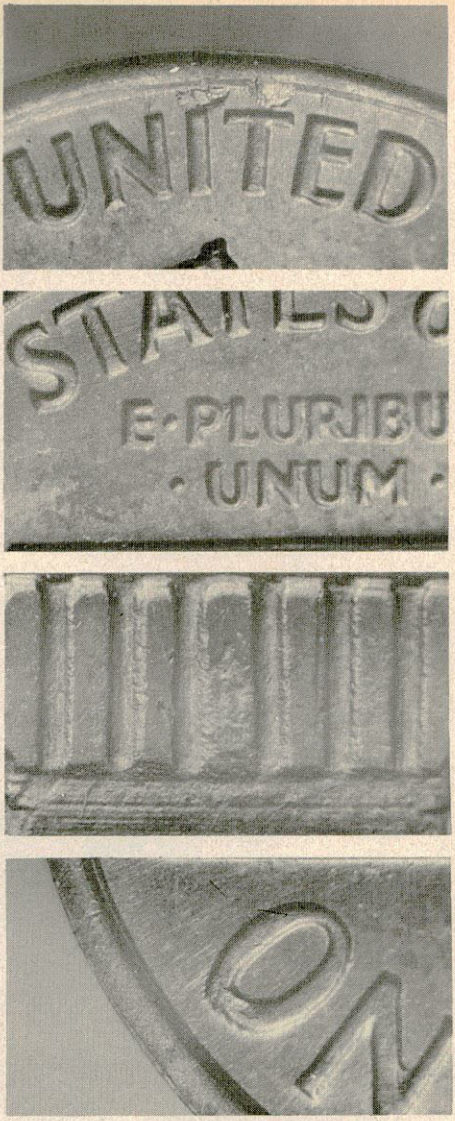


1972 Cent: *Genuine. Doubled die.*

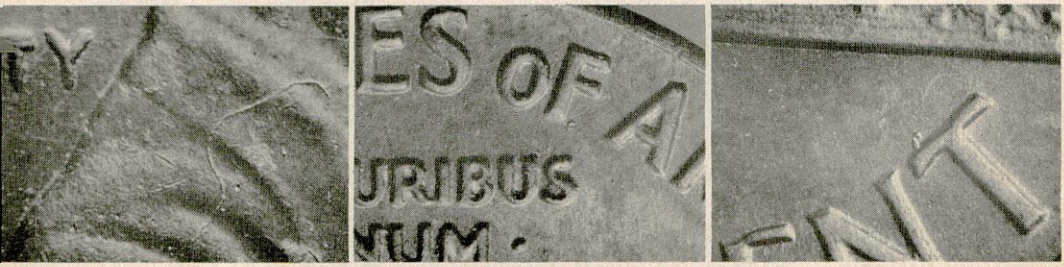
1972 Cent: *Counterfeit. Doubled die.*



1972 Cent: *Genuine. Doubled die.*



1972 Cent: *Counterfeit. Doubled die.*



1972 Cent: *Counterfeit. Doubled die.*

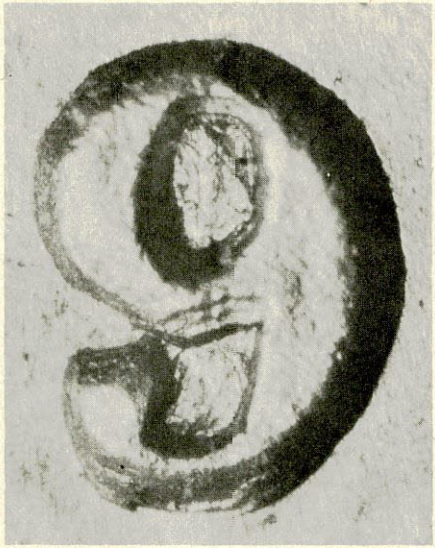
Overdate or Repunched?

Ever run into a coin that apparently refuted all of your previously held theories, a coin that caused you to wonder if you had reached an incorrect conclusion about some other coin?

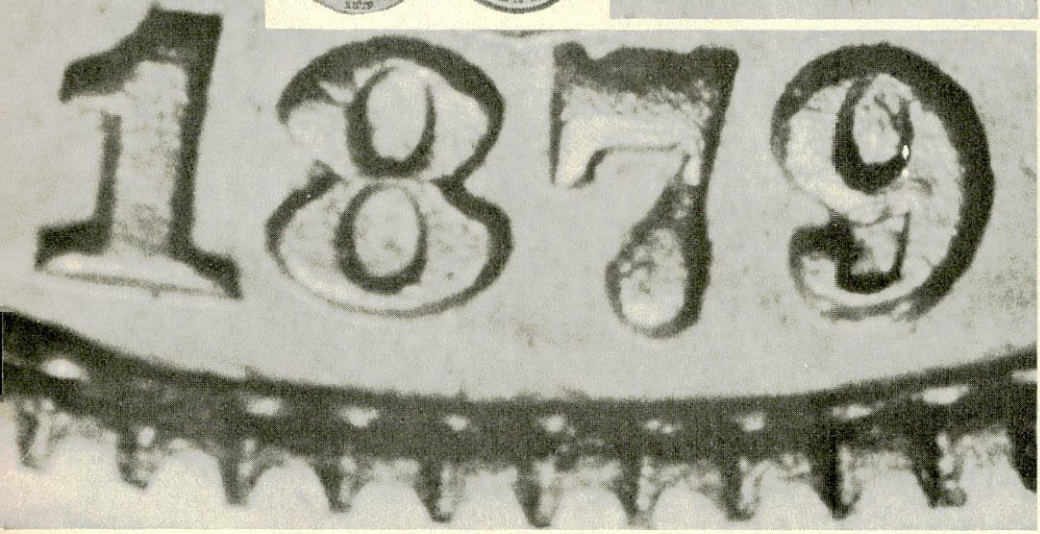
The coin that is the prime subject of our article this month is an 1879 genuine proof nickel that fits that category exactly. While there is no question about it being an overdate, there is cause to wonder just what that overdate actually is.

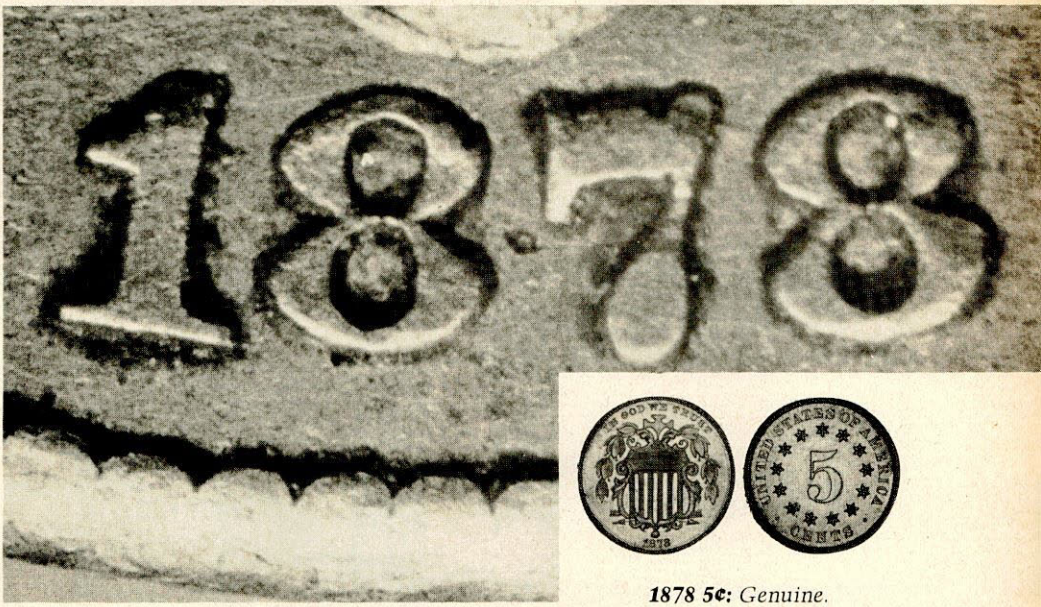
Is the overdate a 9 that was punched into the die over a previously punched 9, or is it really a 9 punched over an 8? A good case can be made for either assumption.

If it is indeed 1879 over 9, what is the circular mark inside the lower loop of the 9? On the other hand, if the overdate is a 9 over an 8, why isn't there some evi-



1879/8 Proof 5¢: *Genuine.*





1878 5¢: *Genuine.*

dence of the lower loop of the previously punched 8 around the outside of the lower loop of the 9?

It would seem to be remarkably coincidental that all of the remnants of the 8, except that circular mark, had been completely eliminated. This seems even more incredible when the lower loops of both an 8 and a 9 are compared, they do not match at all. It seems equally coincidental that, assuming it is indeed a 9 over another 9, there should be the circular mark inside the lower loop of the 9 that seemingly matches the lower loop of an 8.

This brings us to the point when we begin to wonder about that other coin mentioned in the first paragraph. That coin is the genuine 1869 cent that is so often traded, bought and sold as an 1869 over 8 variety. We've been calling that one (the so-called "9 over 8" variety) an 1869 over 69.

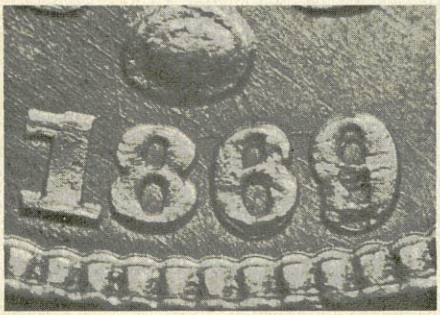
If this 1879 nickel is indeed a 9 over 8, is it possible that the 1869 cent really is a 9 over 8 also? Admittedly, the fact that on the cent the 6 is also repunched in the same direction and to the same degree as the 9 lends credence to our conclusion that it is a 9 over 9 rather than a 9 over 8, but it does make us hesitate just a little bit. If, however, the circular mark in the 9 on this 1879 nickel is a die gouge or something of that nature, then we were right about the cent all along.

Is there an answer to our problem? Certainly. But the answer lies in other coins, those that exhibit details of both earlier and later die use. We hope collectors can provide that evidence.

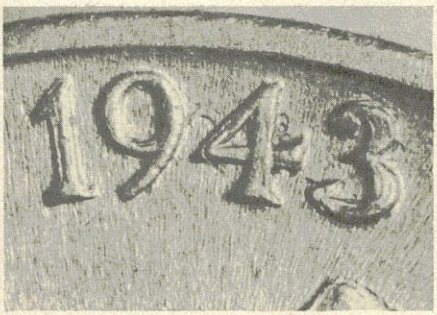
New or Little Known Varieties

How often have you heard collectors complain that there is nothing left to collect that carries a reasonable price tag, or that is available from circulation? This problem was recently addressed with the publication of the discovery specimen of the 1943/1942-P nickel. That overdate variety became even more significant when a BU specimen was later examined and found to have a doubled die obverse and a tripled die reverse!

1794/4/4 Five Cents: *Genuine.*



1869/1869/9 Five Cents: *Genuine.*



1943/42-P Five Cents: *Genuine. Doubled Die Obverse. Tripled Die Reverse.*

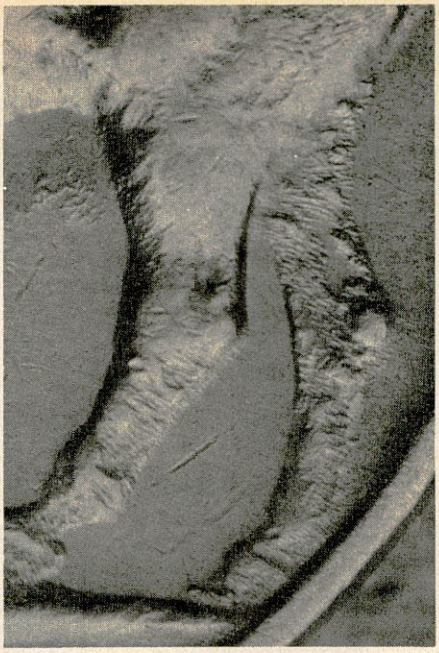
1926-S Five Cents: *Genuine. In this case, the added S seems to simply sit on top of the surface instead of flowing into the surface as the genuine mintmark does. Also, while the serifs of the genuine mintmark are vertically parallel to each other, the serifs of the added mintmark are not and are also slightly rounded instead of straight.*

1918/7-D Five Cents: *Genuine. Many, but not all genuine coins have a die crack forward from the Indian's braid, just above the knot.*

1954-S Five Cents: *Genuine. Doubled Die Reverse.*

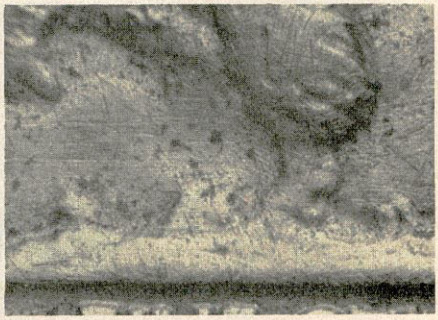
The study of varieties does become a very important part of authentication because many varieties are so finely detailed that a counterfeiter would be hard pressed to duplicate them. We have just barely scratched the surface, and for those who take the time to study them, untold varieties of both U.S. and foreign coins are just waiting to be discovered.

1937-D 3-Legged Buffalo Nickel: *Genuine. Most collectors know the genuine 3-legged Buffalo nickel dies were extremely well worn, resulting in a very ragged appearance of the Indian's chin and of the Buffalo's hind leg and back. Less well known is the difference in separation between the Buffalo's back and the* P ☯ U *OF PLURIBUS UNUM. Note also that the letters themselves are much thinner on the genuine coins than they are on coins that have had the Buffalo's front leg removed.*



1937-D 3-Legged Buffalo Nickel: *Genuine. The die was very, very worn. The Buffalo's hind leg is extremely ragged looking, as is the Indian's jaw and back of neck.*

Genuine.



Altered.

1795 Half Dimes:
Crude Counterfeits Surface

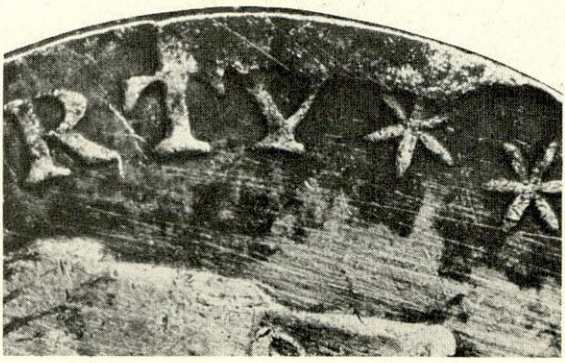
Periodically, batches of coins make their appearance in the numismatic market. Sometimes they are genuine coins from previously undisclosed hoards; more often they are counterfeits. The most recent group seems to be some rather crude 1795 half dimes.

We would suspect that these counterfeits wouldn't normally get very far because they are not at all deceptive, except during a very cursory examination. The most likely explanation for their seemingly wide distribution is that the offered prices are low enough so that those who might normally be cautious decide to "take a flyer on this tremendous bargain."

Collectors who own an accurate balance or scale can weed out most of these counterfeit 1795 half dimes on weight alone. The nominal weight of genuine 1795 half dimes is 1.348 grams (20.80 grains). The counterfeits that we have examined so far average 0.15 grams (2.31 grains) overweight.

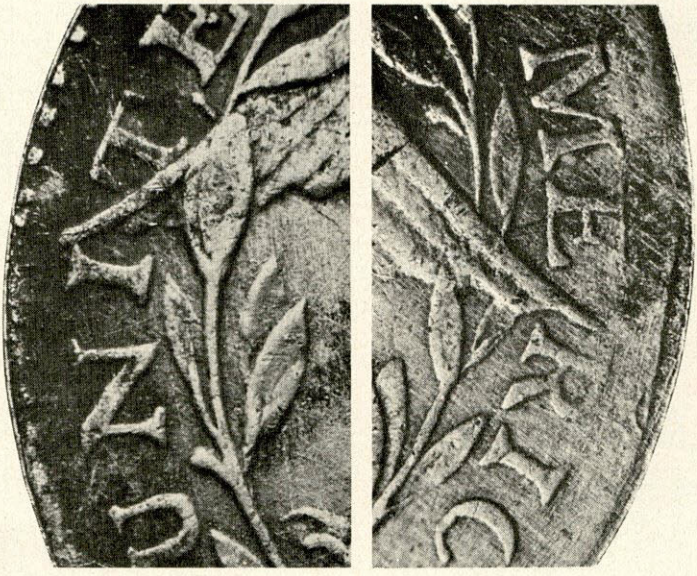
Some of the checkpoints for these counterfeits are:

Counterfeit.



- Very heavy raised lines of tooling on and around the date area.
- An overall weakness of the lower portion of the 5 of the date.
- A depression on the right point at the top of the 7 of the date.
- A number of depressions on the letters of the word LIBERTY. Note that the area of raised metal above the TY and star at right of the Y is a "cud," a piece of metal that broke out of the die. The cud was on the coin that was used as a model for the counterfeit. Do not use the cud as a diagnostic point when checking these counterfeits.
- Stars that are misshaped and incomplete but which are not the result of a design weakness or lower than normal striking pressure.
- A large lump near the rim above the IT of UNITED.
- A depressed line above the ER of AMERICA.
- Depression on the I of AMERICA.

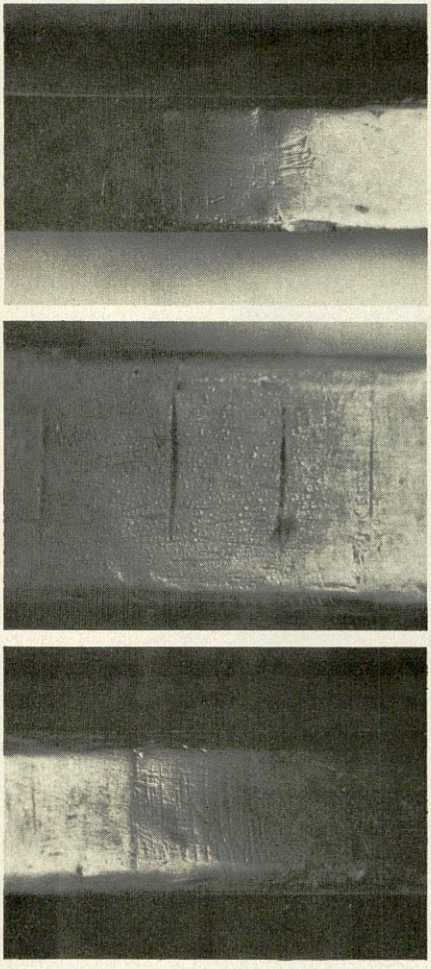
These counterfeit 1795 half-dimes seem to have made their appearance at about the same time, and in about the same eastern U.S. locations, as a group of 1799 silver dollar counterfeits. We are unable to determine that they came from the same source but lean toward the belief that they are not, because the surfaces of these 1795 half dimes are not as pleasing as those of the 1799 dollars. Perhaps they were made by the same factory but the dollars represent an improvement over the half dimes.



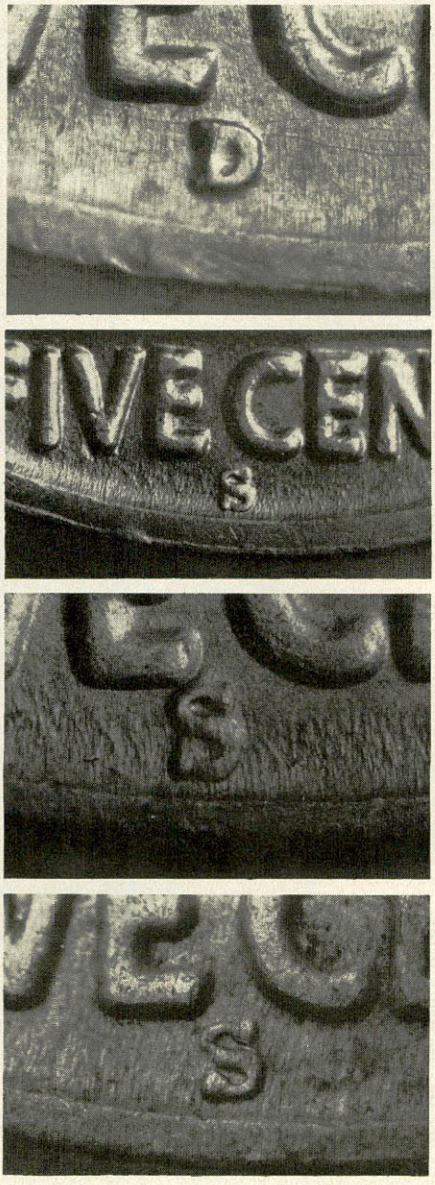
Embossed Mintmarks: The Newest Wrinkle in Altering Coins

Bob Patterson of Los Angeles, California, recently sent a large number of high-grade Buffalo nickels to ANACS with the advice that the mintmarks had been added by "pushing the mintmark out from the inside of the coin and then filling the hole with lead." That conclusion was reaffirmed by Jack Beymer of Santa Clara, California.

After exhaustive study of the coins by ANACS, including the examination of the coins on our Scanning Electron Microscope, we were able to confirm that the mintmarks had indeed been pushed out from the inside (embossed). We believe that a hole was drilled into the edge of the coins at the mintmark position with a tool resembling a dental drill. Then, using another tool which we



Examples of edges that have been filled and filed down.



Further examples of embossed mintmarks.

Embossed mintmark from the outside on the field (below).

envision as being much like a needle-nosed pliers with a mintmark on the inside of one jaw and either plastic or hard leather on the inside of the other jaw, the jaw with the mintmark is pushed into the hole and the handles squeezed, applying the pressure needed to raise the mintmark on the surface of the coin, literally embossing the mintmark from the inside of the coin. The hole was then filled with solder and the edge filed down to remove most of the evidence of filling.

While only Buffalo nickels and one 1909-S VDB cent have been examined to date, we believe that the same method of alteration can be or already has been used to add mintmarks on any denomination. This method of adding mintmarks to coins is frightening because the original surface of the coin is not disturbed. There is no seam at the juncture of the mintmark and the field, and the weight and specific gravity of the coins are not noticeably changed.

Close studies of the mintmarks on genuine coins will reveal some very slight differences between the embossed mintmarks and the genuine ones. On the altered coins you will find that the mintmarks are just a little softer and more rounded in appearance, they are not exactly correctly shaped, and evidence of die erosion (metal flow) is more evident on the highest points of the embossed mintmarks than on the genuine ones.

Embossed S mintmark as seen from the inside of the coin.

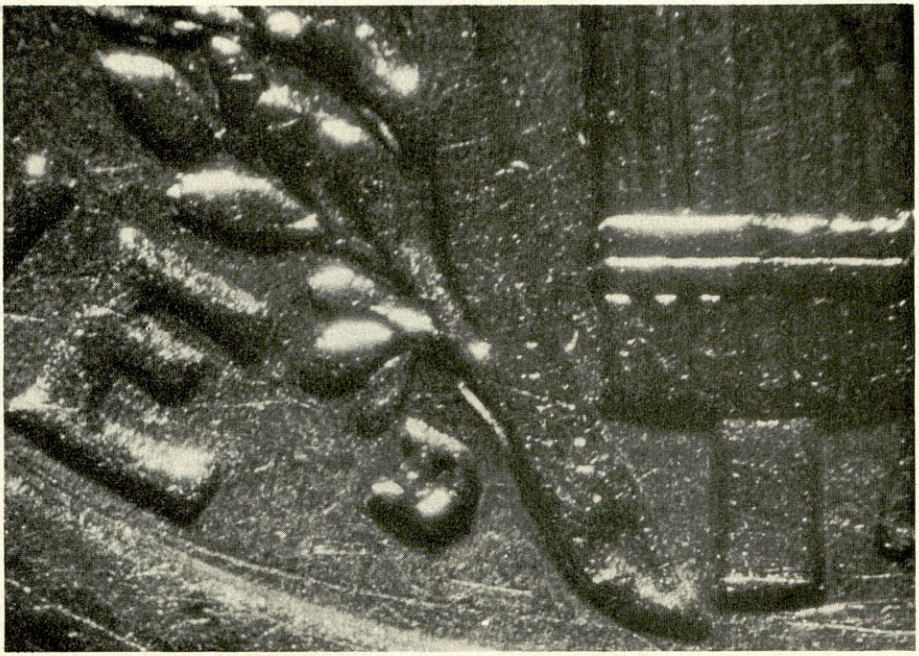
Die Study of 1916-D Dimes

Thorough study of mintmark punches and positions is one of the more important considerations in the detection of counterfeit and altered coins, because counterfeiters so often use coins of different dates to manufacture their dies. An example would be a 1916 Philadelphia obverse used with a D-mint reverse from the 1940s. Those who add mintmarks are seldom able to form the letters with exacting accuracy or place them on the coins in the correct positions.

ANACS has been able to definitely identify four different mintmark positions for 1916-D dimes. All of the dies for this coin have a very distinctive mintmark. The bottom of the D is absolutely straight, meeting the lower back curve at a sharp angle. The center opening has a pointed bottom with the inner back curve consisting of two almost straight lines that appear to form a triangle.

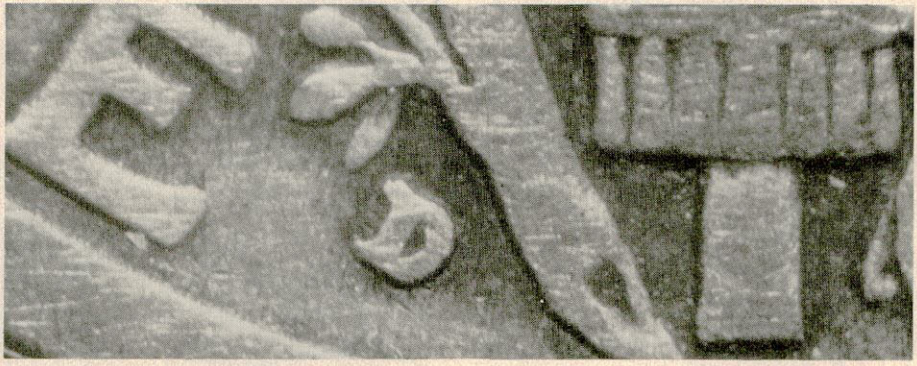
We have arranged the dies in the same order that we believe Bert Harsche had the photographs arranged in his book *Detecting Altered Coins.*

Dies 1 and 4 have the most prominent mintmarks of the four dies. The mintmark punch was sunk slightly deeper into these dies than on either die 2 or 3. As a result the mintmarks on dies 1 and 4 seem to be a tiny bit larger than the others even though the same mintmark punch was used for all four dies. All four of the Ds tilt more to the right than does the E of ONE.



DIE NO. 1: *High, tilts right. Top of D in line with center of top crossbar of E of ONE. Bottom of the D is even with bottom of center crossbar of the E. The D is closer to the leaf than to the branch stem. This is the highest of the known mintmark positions.*

DIE NO. 2: *High, more vertical. D is double punched. Top of the D is even with an imaginary line just below the center of the top crossbar of the E. Bottom of the D is just below the bottom of the center crossbar of the E. D is very close to the leaf.*



DIE NO. 3: *Medium high. D is double punched but different than die no. 2. The top of the D is just above the bottom of the top crossbar of the E. Bottom of the D is even with bottom of center crossbar of the E. D is almost equidistant between leaf and branch stem, ever so slightly closer to the leaf.*

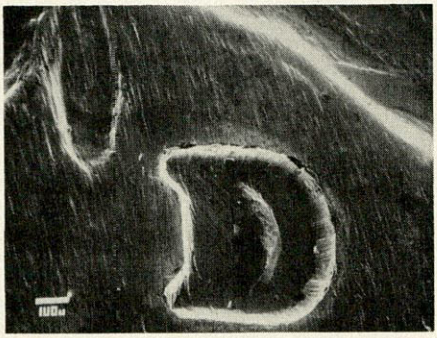
DIE NO. 4: *Low. Top of the D is in line with center of space between top and center crossbars of the E. Bottom of the D is in line with center of space between center and bottom crossbars of the E. D is slightly closer to leaf than to branch stem. This is the lowest of the known mintmark positions.*

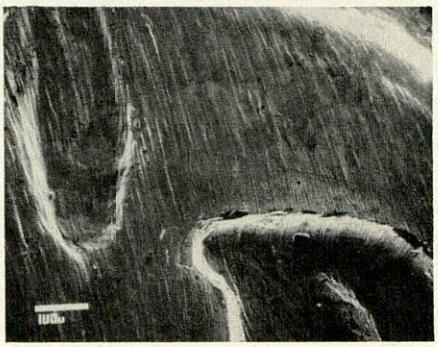
1916-D Dime Shows Tooled Flowlines on Added Mintmark

Those who attempt to separate the unwary collector and his money just never give up. As ANACS continues to inform more and more collectors and investors how to avoid altered and counterfeit coins, the fakers are forced to change manufacturing methods to disguise their work. The newest wrinkle in altering coins is the tooling of "flowlines" on the edges of an added mintmark, as we've seen applied to a genuine 1916 dime from the Philadelphia Mint.

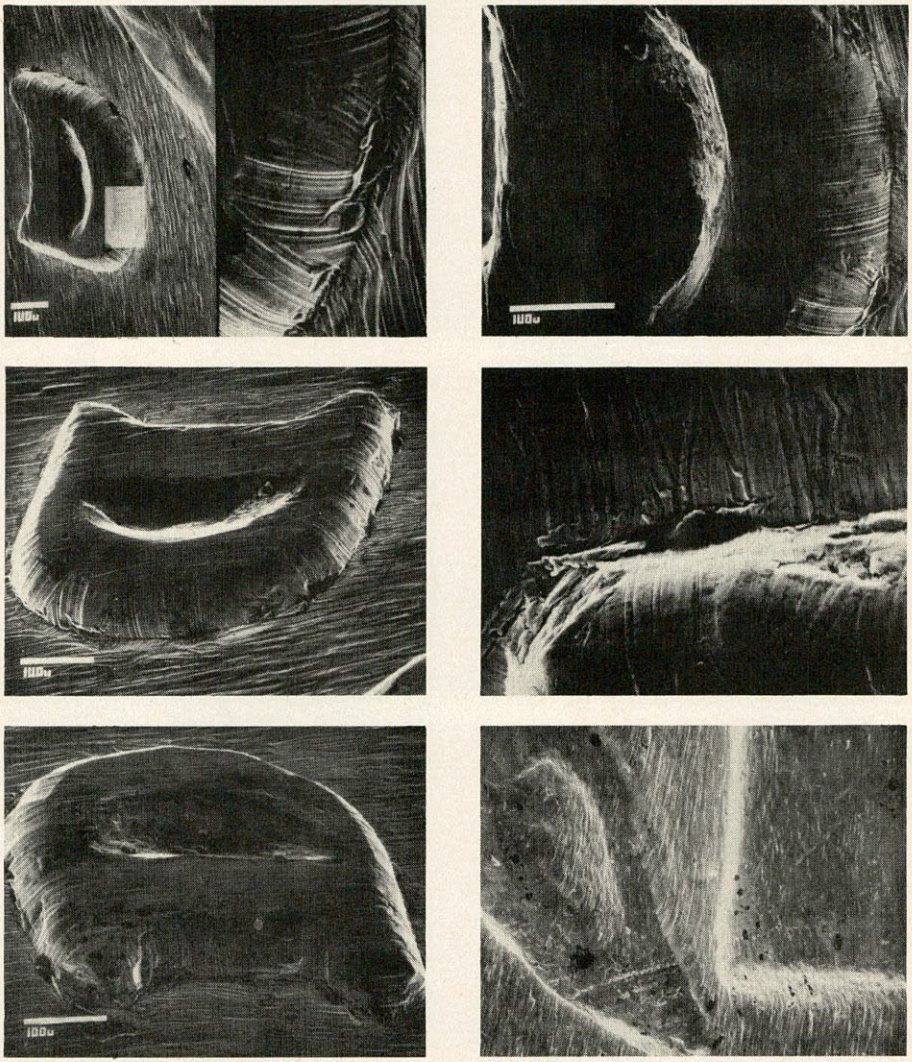
We suspect that most people using a hand-held glass would have bought the coin without hesitation. However, once we put the coin under our optical microscopes, we were certain that the mintmark had been added and that "flowlines" had been tooled onto the edges of the mintmark in an attempt to hide the addition. The added "flowlines" just didn't have the same character as the genuine flowlines elsewhere on the coin.

The final proof, at least in our estimation, came when we put the coin in our newest counterfeit detection tool, the Amray 1200B Scanning Electron Microscope, and enlarged portions of the mintmark as much as 700 times. The tooled flowlines were seen to run only at right angles to the edges of the mintmark, while the flowlines elsewhere on the same coin ran in paths radiating outward from the center of the coin. Under the optical microscopes we thought we could see a seam where the mintmark had been added; under the scanning electron microscope we could posi-

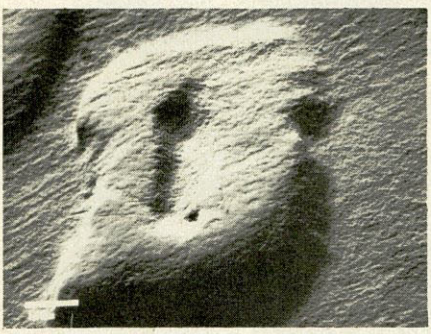


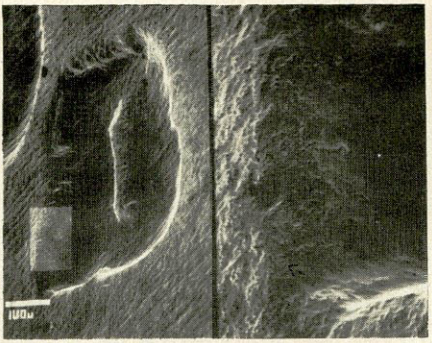


Altered – Added D

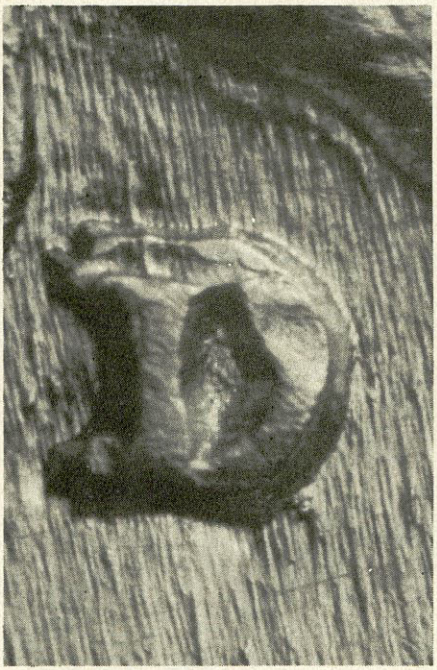


tively see (and photograph) that seam. The scanning electron microscope also showed us a few other things. Gouged metal at the juncture of the mintmark edges and the field, for instance. And some of the flowlines on the field next to the mintmark didn't follow the same pattern as the flowlines that were created by the dies when the basic coin was struck because those odd flowlines were the result of tooling in an attempt to hide the addition of the D.





1916-D Mercury 10¢: *Altered from 1916-S.*



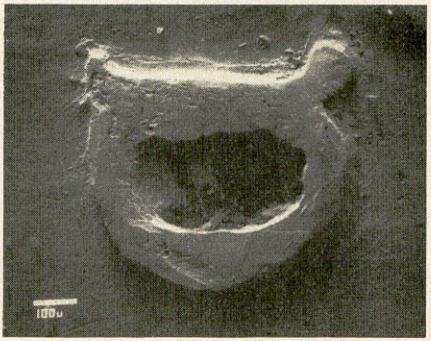
1916-D/D Mercury 10¢:
Genuine.

ANACS often sees Denver mintmarks added to genuine Philadelphia 1916 Mercury dimes. We were quite surprise when we examined a 1916-D dime and found ourselves looking at an S mintmark that had been chased to resemble a D and then the entire coin whizzed in an attempt to hide the alteration. Metal had been moved from the center bar to fill the openings of the upper and lower serifs and, maybe, a bit of metal added to complete the job. However, the top and bottom of the D still retained the indentations of the serifs of the original S mintmark.

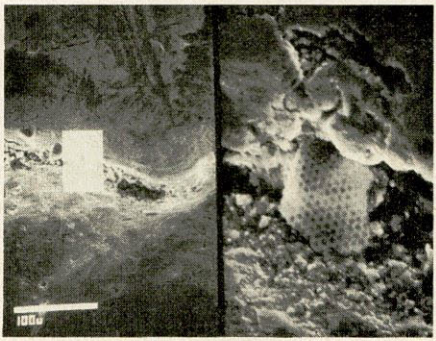
Speaking of Ds being added to genuine 1916 dimes...Dr. Joe Parker, after listening to us describe the genuine mintmarks at one of our recent "mini-seminars," decided to check his coin when he got home. Joe found that the D on his specimen was incorrectly shaped and donated it to the ANA's reference collection so that it could be used to edu-

cate others. We show the mintmark from his coin just to illustrate how obvious the mintmarks really are when the punches used in the dies are examined closely. Too bad ANACS wasn't around for Joe 25 years ago.

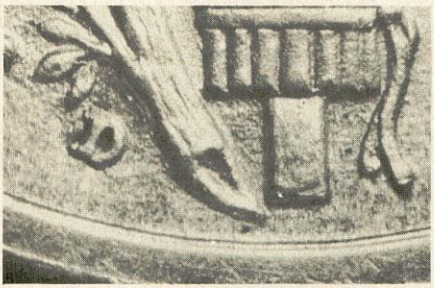
Also shown here is a photo of a genuine D and one of a genuine 1916-D dime which, when examined with a scanning electron microscope, revealed a skeletal structure or foreign matter of some kind. The "skeleton" is under the left end of the lower serif of the D. Can anyone identify it?

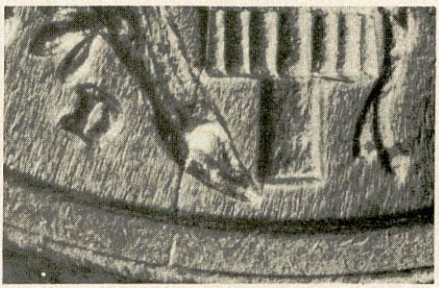


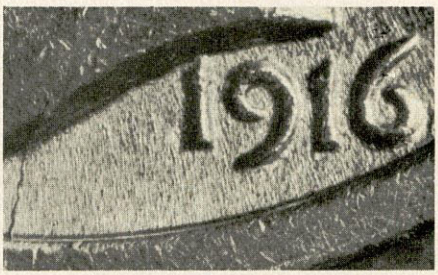
1916-D Mercury 10¢: *Added D.*



1916-D Mercury 10¢: *Genuine, with Foreign Substance! ! !*







Early Die State. ***1916-D 10¢:*** *Genuine.* *Late Die State.*

Characteristics of Genuine Dimes

1921 and 1921-D 10¢: Altered coins have a closed loop on the 9 and an odd shaped 2 when compared to genuine dimes. Quite often the field in and around the 2 shows evidence of another numeral having been removed.

Genuine.

Genuine.

Altered.

1942-D 10¢: This is a slight departure from the genuine vs. altered or counterfeit coin theme since both of these coins are genuine products of the Denver Mint. However, one of them is an overdate, while the other is simply the product of extremely worn dies, which is sometimes mistaken for the overdate coin. Under the extreme pressures required to form the image, the flow of the metal of the blank over the face of the die erodes the die. More erosion is evident toward the outside of the design details than on the inner edge of those same details, and it does resemble the 1942 over 41 overdate.

Genuine.

1942-D Dime: *Genuine. Worn Dies.*

1942/1941-D/D Dime: *Genuine. Overdate.*

1942/41 Dime: When a 1 is added to a 1942 dime, or a 2 added to a 1941 dime, the alteration often looks as obvious as it does in these photographs. The genuine overdate is sharp and crisp in appearance. Many of the genuine overdates have a tiny dash-like die gouge between the upper portion of the 9 and 4, and occasionally have several fine die polish marks running diagonally downward to the left of the 9 and 4. The 4 has a well-defined squared-off notch at lower right.

1942/41 Dime. *Altered.*

1942/41 Dime. *Genuine.*

1942/1941-D/D Dime: Genuine. All overdate dimes from the Denver Mint have a double punched mintmark in addition to doubling on all of the date digits.

Counterfeit 1796 Quarter Surfaces at Convention

An excellent cast counterfeit 1796 quarter was presented to ANACS for examination at the Boston Convention. Several of these counterfeits have surfaced thus far, all evidently modeled from a low-grade coin, which helps to disguise identifying characteristics. After manufacture, the counterfeit coins were artificially circulated and toned to produce a more natural appearance. Only after careful side by side comparison were these coins positively identified as counterfeits.

A basic rule in counterfeit detection is that no two genuine coins can display identical damage. Scratches, depressions and other surface marks that are identical from one coin to another indicate that the marks were produced by the dies or casting mold. Damage to a genuine die would result in *raised* marks on the coin, not depressions and scratches. The repeating "damage" illustrated here reinforces our opinion that these coins are not genuine.

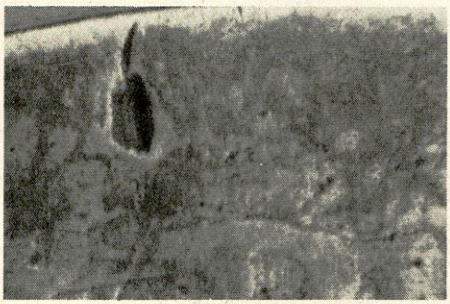
Marks that identify this particular counterfeit include two parallel scratches in the right obverse field, depressions on the obverse denticles at 11:30 and 2:30 o'clock, and a large horizontal scratch on the reverse above the eagle's head. Other diagnostic characteristics are present but are not as prominent as those described.

Counterfeit coin No. 1.

	WEIGHT (grams)	SPECIFIC GRAVITY	DIAMETER (mm)
Genuine 1796 Quarter	6.25 to 6.50	approx. 10.32	approx. 27.5
Counterfeit No. 1	5.66	10.18	28.4
Counterfeit No. 2	5.67	10.21	28.4
Counterfeit No. 3	6.71	10.20	28.2

Test results for the three counterfeit specimens show considerable variance. Genuine circulated early quarters weigh between 6.25 and 6.50 grams, have an approximate specific gravity of 10.32, and measure approximately 27.5mm in diameter. As illustrated in the chart below, the counterfeits range from 5.66 to 6.71 grams in weight, show slightly lower specific gravities, and are slightly larger in diameter.

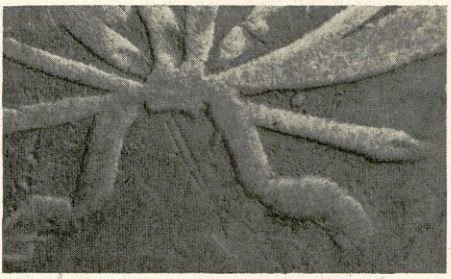
Scratches in right obverse field and depression touching inside point of twelfth star.



Large depression above IB of LIBERTY.

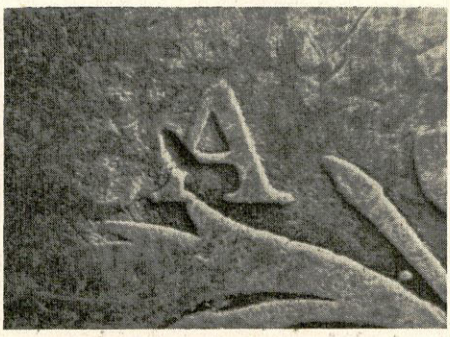
One large horizontal scratch above eagle's head and numerous small depressions in field.

Long thin scratch from lower left field up through eagle's breast. Note shallow scrape from left leg to lower edge of right wing.



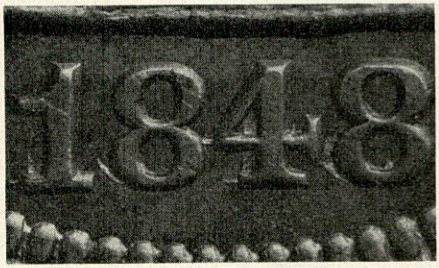
Several scratches directly below ribbon bow.

Depression above ER of AMERICA.



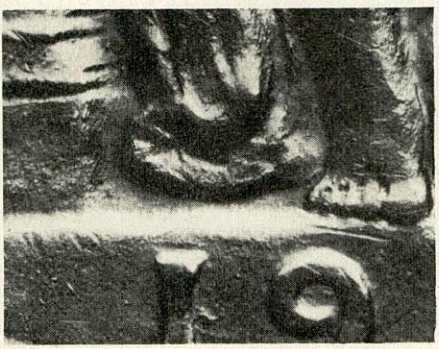
Depression on last A of AMERICA.

Characteristics of Genuine Quarters

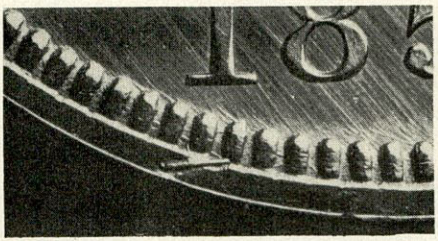


1848/1848/1848 Quarter: *Genuine.*

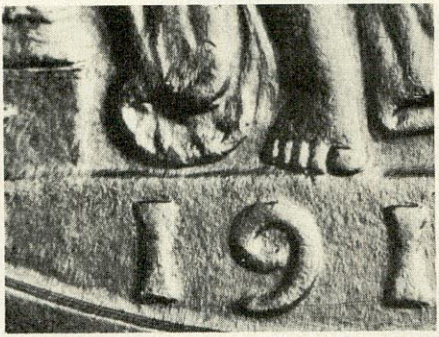
1876/1876-CC Quarter: *Genuine.*



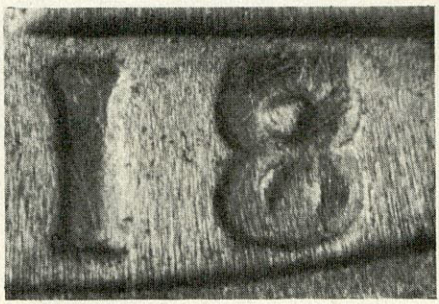
1916 Quarter: *Genuine. The lower fold of Miss Liberty's gown is diagnostic. It is slightly rounded, almost flat across the bottom.*



1850 Quarter: *Genuine. Base of extra 1 on rim.*



1917 Quarter: *Genuine. The lower fold of the drapery is an almost perfect oval on type one. On type two, and all later years of Standing Liberty quarters, the lower fold of the gown is diagonal.*

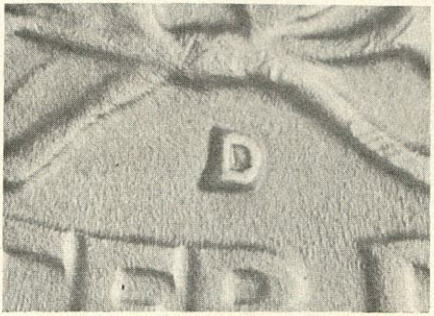


1918/7-S Quarter: *Genuine. The top of the 8 looks flat, the lower right portion of the upper loop is diagonally flat, and the lower loop is split by the tail of the 7.*

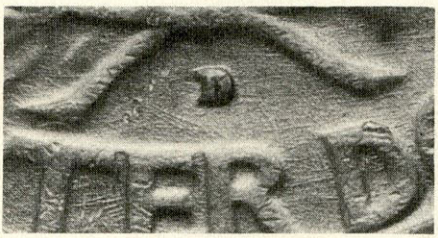
1932-D Quarters: *Altered 1932-D quarters generally have an improperly shaped mintmark that lacks one or both serifs. The genuine D, even though "smeared" by worn machinery doubling, does have rather square formed serifs. A distinctive characteristic of one state of one die is the three die polish marks above the E of QUARTER. On many of the coins, the D seems to sit down in a depression.*

Genuine.

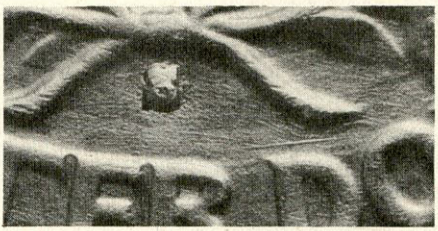
Genuine.



Altered.



1932-D Quarter: *Genuine. A general rule of thumb for 1932-D and 1932-S quarters is that if the mintmark looks bad it is probably good, and if it looks good it is probably bad. The mintmarks often appear to sit in a depression.*



1932-S Quarter: *Genuine. The serifs are vertical and parallel to each other and the mintmarks often sit in a depression.*

Genuine Half Dollar Varieties

1847/47 50¢: *Genuine.*

1853 50¢: *Genuine. Doubled Die Reverse.*

1848 50¢: *Genuine. Repunched 18.*

1877-S/S 50¢: *Genuine.*

1850/0 50¢: *Genuine.*

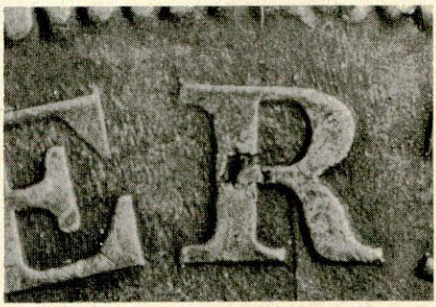
1943-S 50¢: *Genuine. No designer's initials.*

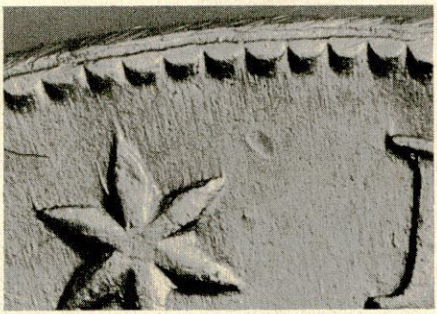
Counterfeit 1799 Bust Dollars

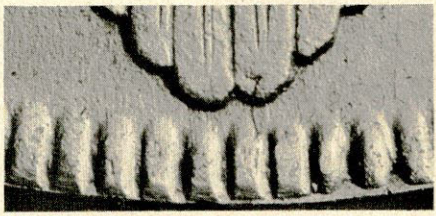
Collectors beware! What appears to be a new counterfeit has hit the numismatic marketplace. ANACS has examined several 1799 Bust Dollar counterfeits, one of which could easily have been sold as an uncirculated coin.

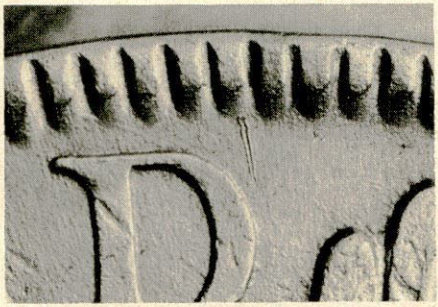
The chart below gives the range of weight, specific gravity, diameter and thickness of the heaviest and lightest, the thickest and thinnest, as well as the most and least dense of those specimens examined to date. We also give the nominal data for the genuine coins issued by the U.S. Mints.

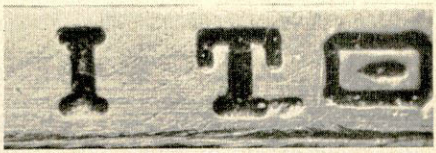
1799 $1: *Counterfeit.*



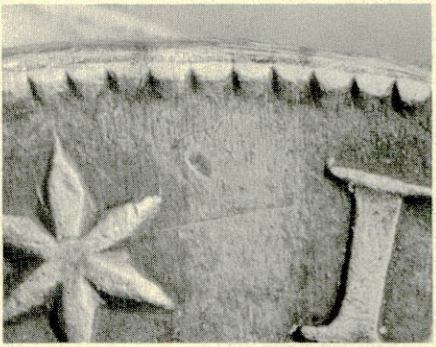


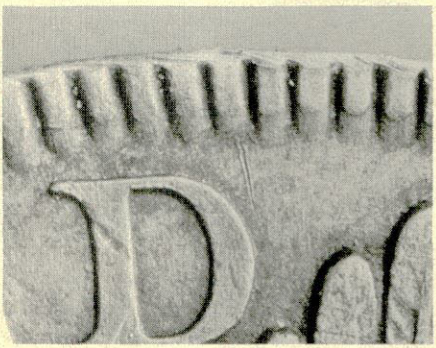


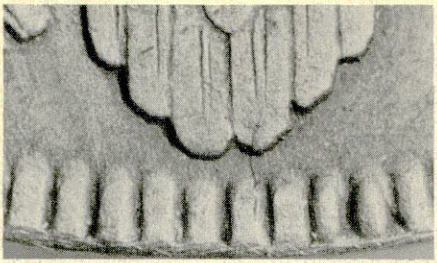


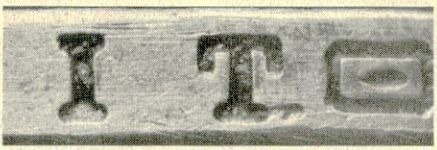


Circulated 1799 $1: *Counterfeit.*









	Lowest	Highest	Genuine
Weight (grams)	26.715	27.005	26.956
Specific Gravity	10.28	10.30	10.34
Diameter (mm)	39.75	39.75	39.50
Thickness (mm)	2.25	2.35	n/a

The overall appearance of these Bust Dollars is similar to that of many coins struck from extremely worn dies. However, the damage or bagmarks would never be identical on two genuine coins. We have had occasion to examine whizzed coins that have had a very similar superficial appearance, an appearance very much like what most collectors associate with cast coins. Taken as a group, we doubt that they would fool very many people. Individually they would easily create problems for those who do not specialize in Bust Dollars.

ANACS Staff Helps Recover Linderman 1804 Silver Dollar

The Linderman specimen of the 1804 silver dollar, stolen from the home of its owner Willis H. duPont in 1967, has been recovered after being missing for more than 14 years. The coin, unheard of since it was stolen, was brought to ANA Headquarters on July 20, 1981, for authentication. Presented first to ANA authenticators Ed Fleischmann and Tom DeLorey, the virtually flawless proof, seemingly undamaged during the years since it was stolen, appeared to be simply too good to be true. The lore and legend associated with this coin and its rarity alerted ANA personnel immediately. The only other authentic 1804 dollar seen by ANACS personnel was the Berg specimen, sold as part of the Garrett collection. The Berg specimen, which had been carried as a pocket piece at one time, was worn down to a Proof-40 grade, and contrasted sharply with the flawless Linderman specimen.

Relying on the excellent research facilities available in the ANA library, Fleischmann and DeLorey compared the coin to the illustrations in *The Fantastic 1804 Dollar*, a book by Eric P. Newman and Ken Bressett. After verifying that the coin showed several die characteristics proper for an 1804 dollar as listed in the front sections of the Newman/Bressett reference, the coin in question was compared to the plates of the 15 known genuine specimens included in the volume.

Bearing in mind the remote possibility that the coin represented a previously unknown 16th specimen, the authenticators compared it with each illustration in the Newman/Bressett reference. One illustration closely matched the coin both in overall condition and in the specific appearance of a few tiny carbon spots scattered about the surface. The volume listed Willis H. duPont, the heir of Willis duPont, as the last recorded owner of the coin.

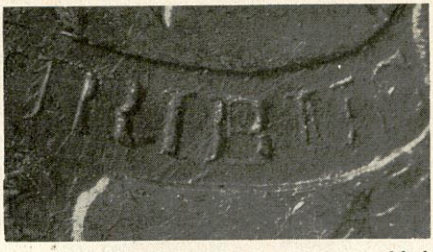
Although Fleischmann and DeLorey recognized the Newman/Bressett volume as the most accurate reference available for the 1804 dollar, they remembered that one of the illustrations pictured is not of the correct coin. Because of this fact the two ANA authenticators felt it imperative to verify the identity of the coin against a second source. DeLorey recalled that duPont obtained the piece from the James Ten Eyck auction sale, which was catalogued in 1922 by Thomas L. Elder. The ANA's extensive library of sale catalogs included a copy of the document published for the James Ten Eyck sale, complete with plates, and the coin in question matched perfectly with the plate shown of the 1804 Linderman specimen. In a final analysis the coin was weighed, registering to within 1/20th of a grain of the weight listed for the Linderman specimen in the Newman/Bressett reference.

Certain at this point that the piece was indeed the specimen stolen from duPont, ANA Executive Vice President Ed Rochette, who had been kept in-

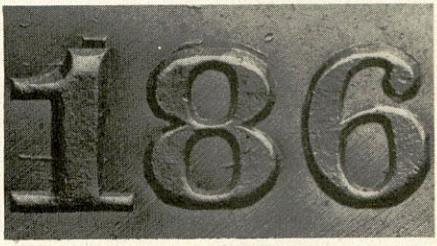
formed of the proceedings by Fleischmann and DeLorey, contacted the Colorado Springs office of the FBI, who in turn contacted the Miami FBI staff and duPont's lawyer. The coin was left at the ANA for certification, and shortly thereafter was subpoenaed by the U.S. District Attorney's Office in Denver for use as evidence in a Grand Jury investigation. Approximately six weeks after the coin was presented to ANACS, the individual who originally had brought it in for certification returned to pick it up, and was served a subpoena by the FBI to appear before the Grand Jury.

Safely returned to duPont's lawyer on March 16, 1982, fourteen years and five months after it disappeared at gunpoint from the duPont's Florida home, the rare coin remains the property of duPont. Once back in Colorado Springs, however, the coin will be on indefinite loan to the ANA and will highlight the opening and dedication of the new building addition and numismatic museum at the ANA Colorado Springs Headquarters building. The Linderman specimen is a most appropriate coin to take the featured spot in the opening ceremonies of the new ANA museum. Not only is it rich with numismatic romance and lore, its recovery is a tribute to the expertise and professionalism of the ANA Headquarters staff.

Characteristics of Genuine Dollars



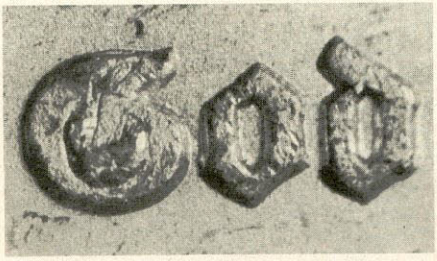
1798 $1 Bolender 9-A: *Genuine. Doubled die at* E PLURIBUS UNUM.



1867 Seated Liberty $1: *Genuine. Repunched date.*

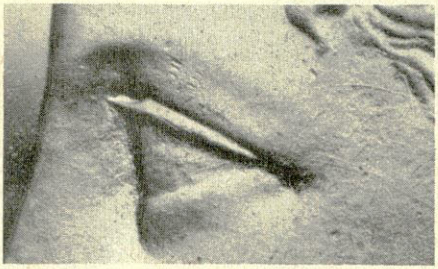
1877/7-S/S Trade $1: *Genuine.*

1893-S Silver $1: *Genuine. All genuine 1893-S silver dollars that ANACS has seen so far have a small die scratch running diagonally upward from the top of the left side of the vertical portion of the T in* LIBERTY, *and two tiny die chips in the left foot of the R of* LIBERTY. *None of the Philadelphia products with an added mintmark have shown that same die scratch in the same location. Since the letters of* LIBERTY *are incused into the headband, the die scratch will remain, even on the lower grade coins.*

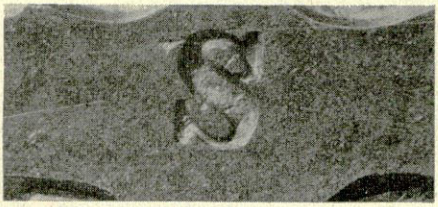


1879-CC $1: *Genuine. Filled "G".*

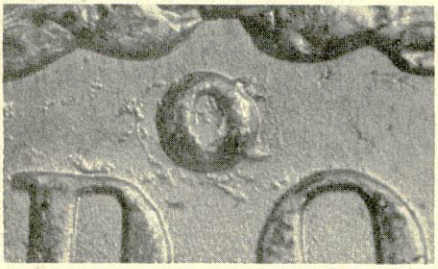
1894 $1: *Genuine. Two fine die polish marks form an "X" between the eagle's tail and the leg at the right.*



1895 Proof $1: *Genuine. A number of very fine die polish marks can be seen on Liberty's eyeball and temple behind the eye.*



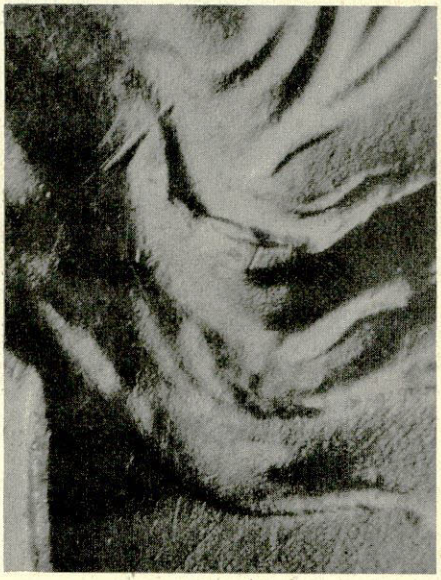
1895-S/horizontal S $1: *Genuine.*



1900-O/CC $1: *Genuine.*

1928 $1 (#1): *Genuine. A dash-like mark appears on the field between the rays just to the right of the B of LIBERTY.*

1928 $1 (#2): *Genuine. Extremely fine die polish marks on the field at right of the B of LIBERTY.*

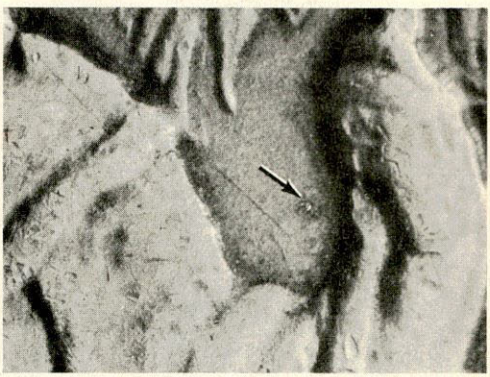


1928 $1 (#3): *Genuine. Look for a slightly diagonal die gouge just below the shortest curl below the back of Liberty's head.*

Diagnostic Checkpoints:
Hawaii and Cincinnati Commems

Though counterfeits of both the Hawaii and Cincinnati commemorative half dollars have been known for a number of years, the recent influx of counterfeits submitted to ANACS prompts us to print some of the more obvious characteristics of the two coins. We hope that commemorative fanciers will be able to spot these checkpoints.

HAWAII Obverse: *Counterfeit. An irregular depression is found just to the right of the upper portion of the last A in AMERICA.*

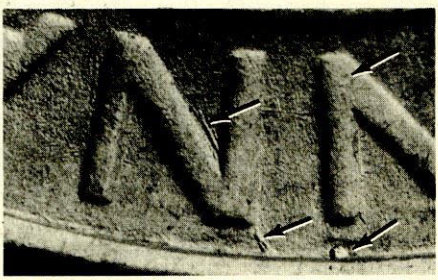


HAWAII Reverse: *Counterfeit. A series of circular depressions occur in the field adjacent to the native's arms.*

Upon closer examination of both coins, we are certain that you will be able to pick out many more characteristics of these counterfeits. We would urge you to make note of anything out of the ordinary and compare those items with other specimens of the same coin. Bear in mind that depressions normally occur only as a result of circulation and when identical depressions are found on more than one coin, those coins should be viewed with suspicion.

CINCINNATI Obverse: *Counterfeit. Several depressions appear in the upper portion of the hair and at the upper left of Foster's ear. A series of depressions can be seen on his chin.*

CINCINNATI Reverse: *Counterfeit. At first glance, the reverse has a rather pleasing appearance. However, when examining the lettering closely a great amount of die tooling and damage becomes apparent. The tooling and damage show up as raised lines and "extra" metal. A few identifiable depressions can be seen, notably at the upper right of the first I in CINCINNATI and on the lower right of the second N in that same word.*



Hudson and Spanish Trail Counterfeits

Two more counterfeit commemoratives have appeared in the numismatic marketplace since the ANACS article on the Hawaii and Cincinnati commemoratives. The newest counterfeits examined by the ANACS staff are the 1935 Hudson and Spanish Trail commemorative half dollars.

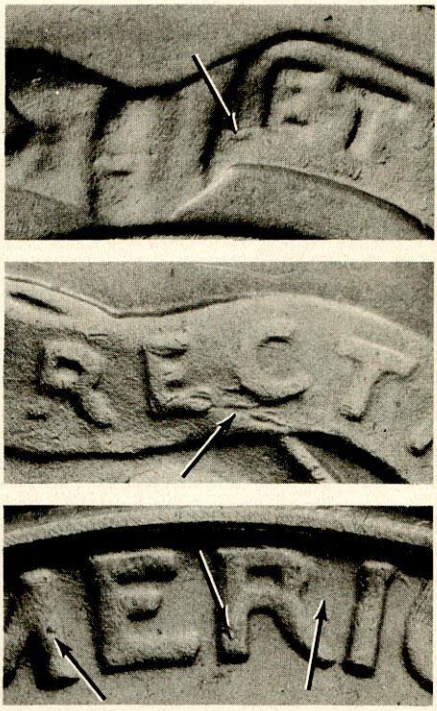
The general appearance of these new counterfeits is about the same as the two previously reported and should not be too difficult to spot with the equipment available to most collectors. Both of them appear to have rather dull and grainy surfaces instead of the bright and sharp surfaces of genuine Mint products.

The 1935 Hudson commemorative half dollar counterfeit has a number of depressions and some raised tooling marks. Among the more obvious are:

1. A depression on the right leg of the M in AMERICA;
2. An irregularly shaped depression with a raised mark on the vertical bar of the R in AMERICA;
3. Some tooling marks between the R and I and at the right of the top of the I in AMERICA;
4. A circular depression and depressed tooling marks in the area of ET DECUS on the ribbon; and
5. Depressed tooling marks on, and around, the EC of RECTI, also on the ribbon.

The 1935 Spanish Trail counterfeit commemorative half dollar, like the Hudson, has a number of frosty depressions and some tooling marks on both obverse and reverse. Some of them are:

1. A circular depression on the field inside the curve of the steer's right horn (right as viewed);
2. Two depressions on the vertical portions of the F in HALF and a small de-



1935 Hudson, N.Y. Commemorative: *Counterfeit.*

1935 Spanish Trail Commemorative: *Counterfeit.*

pression at the right of the F;

3. A circular depression above and to the right of the triangular mark between the two dates;

4. Numerous horizontal raised lines at left and right of the F in HALF; and

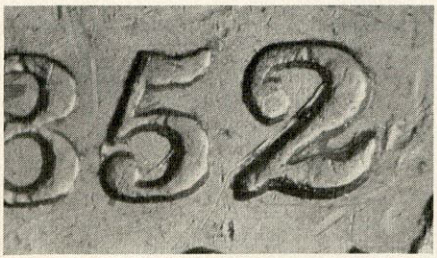
5. A depressed area on the field at left of the state of Florida, on a line even with the D of GOD.

These are only a few of the more obvious defects. Close examination with even a mediocre glass will reveal quite a few more.

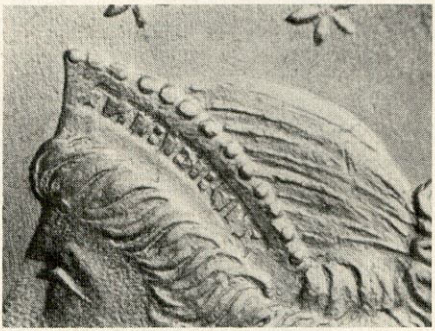
As you read our articles, you might wonder why we point out depressions and seem to ignore other defects. Depressions can be found on genuine Mint products if a piece of metal or dirt stuck to a die. However, under succeeding strikes, those bits of foreign material would flatten out and the depression would appear to spread out. However, if a die is made from a coin that has a dent in its surface, that die would reproduce the defect in identical detail during use. Then all products of that fake die would have identical depressions. Such a defect on a single coin would not be proof of counterfeiting, but when it is seen on several coins, the buyer would be well advised to be wary.

Genuine Gold Dollars

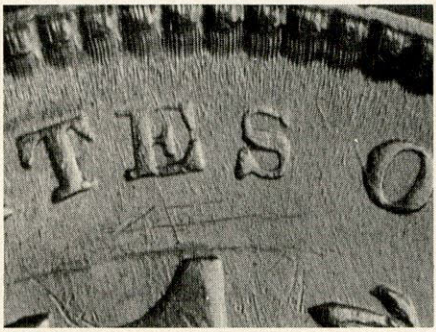
As you view the diagnostic points of these genuine coins, we hope you'll remember that while these characteristics can help to determine authenticity, the absence of the characteristics does not automatically mean that a coin is counterfeit. Presumably, the die was near perfection when it was first put into service and "fingerprints" such as die polish marks and diecracks were acquired by the dies during the production run of that particular die. Also, while we show only one characteristic, in many instances more than one die pair was used, but space limits do not permit identifying each and every die that was used.



1852 $1, repunched 52: *Genuine. Remnants of the first punched 52 show above the final punch. The mark at lower left of the 2 is a scratch on this coin and is not characteristic of all genuine coins.*

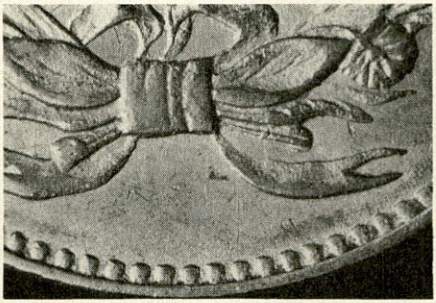


1853 $1: *Genuine. Die polish marks in* LIBERTY *on the headband.*

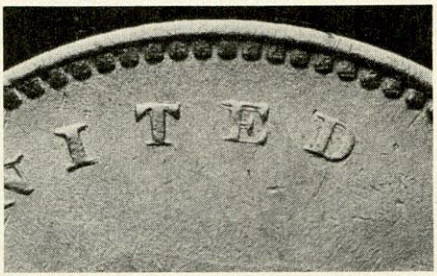


1853 $1: *Genuine. Very worn die, resulting in weak letters and some die gouge marks (the raised lines in and below the* E *of* STATES *and left of* O *in* OF.

1874 $1: *Genuine. Diecracks connecting many of the letters. The marks immediately in front of Liberty's face are clash marks, a common occurrence on all coins from all Mints.*

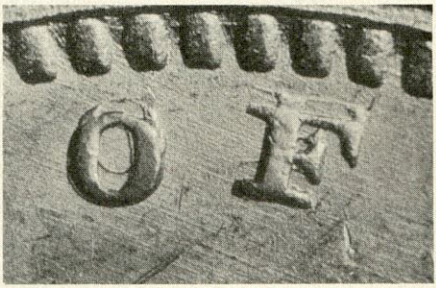


1854 Gold $1, Type 2: *Genuine. Vertical pattern of die polish lines in and below the bow.*



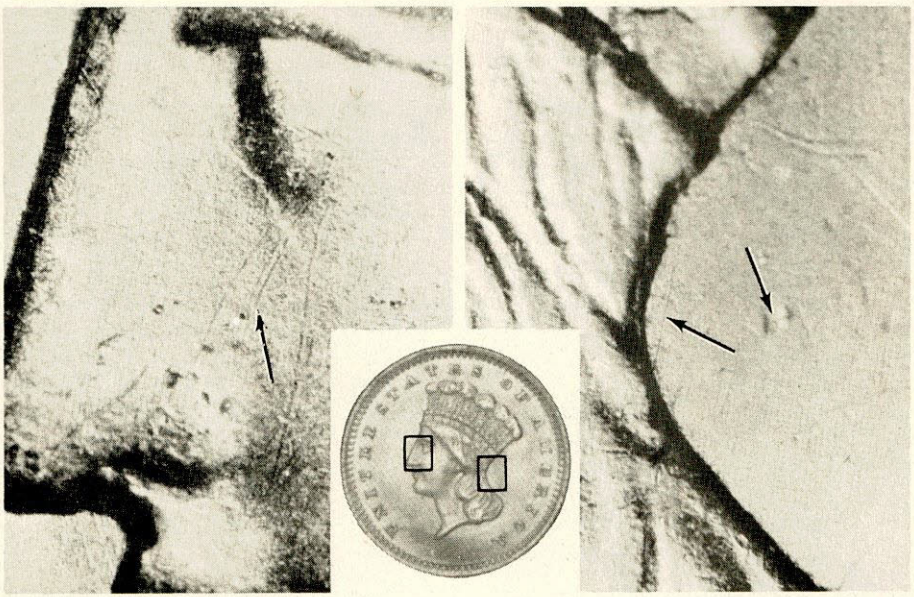
1854 Gold $1, Type 2: *Genuine. Doubled die obverse.*

1854/1854 Gold $1: *Genuine. Type 2.*



1862 Gold $1: *Genuine. Double Die.*

Several Counterfeit Gold $1's Show Common Obverse



U.S. Gold $1: *Counterfeit. Type 3.*

Counterfeit U.S. gold dollars are a good example of a counterfeiter using a common obverse die muled with different dated reverse dies. A photographic enlargement shows an obverse die that was used to make coins dated 1874, 1883, and 1887. The most obvious imperfections are the long tool marks from the eye to the nose. We also found corresponding depressions both on the field and on some of the relief elements.

If just one coin were examined, the depressions would appear to have been the result of normal circulation damage. When several coins of different years bear the same tool marks and depressions, fakery can be the only conclusion reached.

Beware of Recurring Coin Defects
Reverse Die Mulings Seen on $2½ Gold Dates:

Of a series of counterfeit Quarter Eagles dated 1883, 1884 and 1885 examined by the ANACS staff, all three dates had identical reverse diagnostic points; a single counterfeit reverse die was muled with three different dated counterfeit obverse dies. This type of muling is characteristic of many counterfeit operations. The counterfeiter saves the cost of additional dies, normally the undated die, by muling the undated die with various dated dies of the same denomination. The counterfeiter's need to cut corners in an effort to increase the profit margin often makes our work much easier, because we can pick out depressions that were transferred from the original genuine coin, through the counterfeiters dies, to the fake coins.

In this latest series, and we have no way of knowing when they actually hit the numismatic market, a number of things were catalogued for one of the dates and later compared with the other two dates which matched. Undoubtedly there are still more dates that we haven't yet seen.

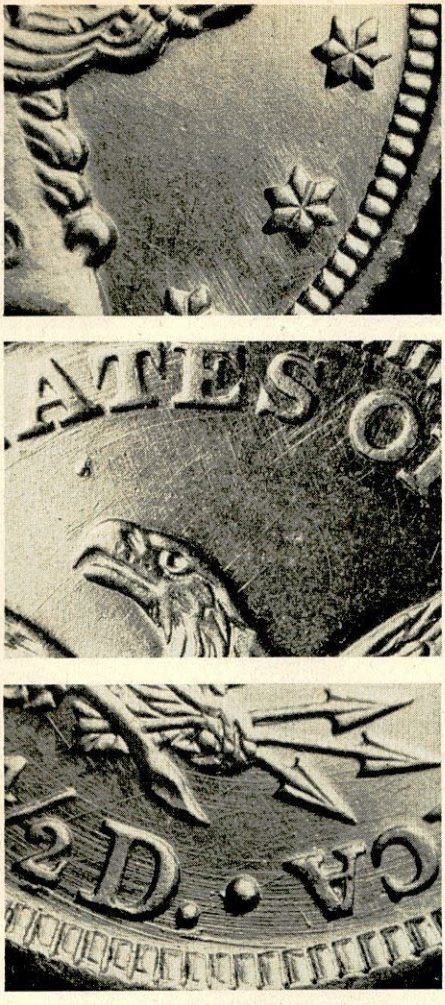
Some of the characteristics of the counterfeits include:

- A depression on the dot between the 2 of the denomination and the U of UNITED.
- A depression on the upper portion of the vertical section of the D of UNITED.
- Odd lumps and lines through the denomination.
- A rather large lump midway between the upper curve of the eagle's beak and the bottom of the A in STATES.
- Numerous raised lumps and lines through STATES.

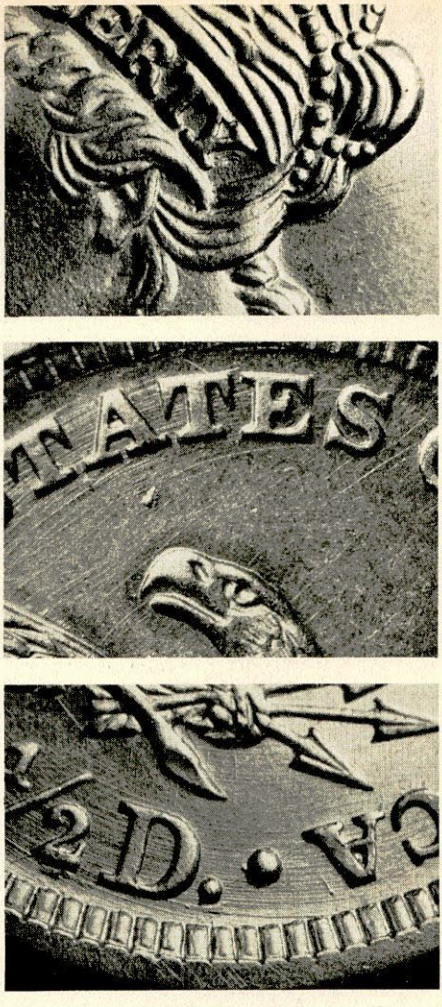
This series of counterfeit coins graphically illustrates a point we try to drive home to everyone who attends an ANACS seminar. We continually stress the fact that people should catalog the die and coin defects of every coin that they handle that has a numismatic value. The response we get most often is, "I haven't got time to do that" and our stock reply is, "You haven't got enough money *not* to do it."

If you should encounter an identical series of depressions on several coins, especially on the undated side of coins covering more than one year, you can be almost positive that you are looking at counterfeit coins.

Before we get an irate letter from our friend in Detroit telling us about the detailed Royal Mint records that indicate that a single hub was used to produce dies for several years' coinage which could indeed result in identical depressions, we must point out that the former Chief Assayer and Chemist for the Royal Mint, and the same person who has prepared evidence and appeared as the Crown's Expert Witness in the resulting cases, agrees with our conclusion. . .the odds against finding a series of depressions that repeats on a number of coins is so astronomical that finding such a series of depressions should be considered evidence of counterfeit coins.



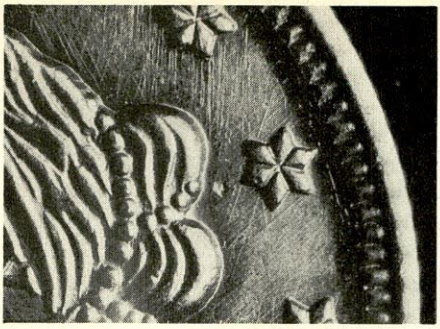
1883 $2½ Gold: *Counterfeit.*



1884 $2½ Gold: *Counterfeit.*

Those who have read the ANACS articles in *The Numismatist* since the ANACS office was moved to Colorado Springs in October 1976 may note that we seem to place more emphasis on raised defects than we do on depressions. We point out raised defects more often than we do depressions because those raised defects are usually much larger and more easily seen with low-power magnifiers in low lighting conditions. The original determination is usually made because we've catalogued a series of repeating depressions on a number of coins and sometimes that determination is reinforced by weight and specific gravity tests.

The coins of the three dates covered in this article (1883, 1884 and 1885) had normal specific gravity results, and their weights ranged from a low of 4.171 grams to a high of 4.208 grams (64.368 to 64.939 grains for those who have not yet converted their records). Normal weight should be 4.180 grams (64.507 grains), plus or minus 0.016 grams (0.25 grains).

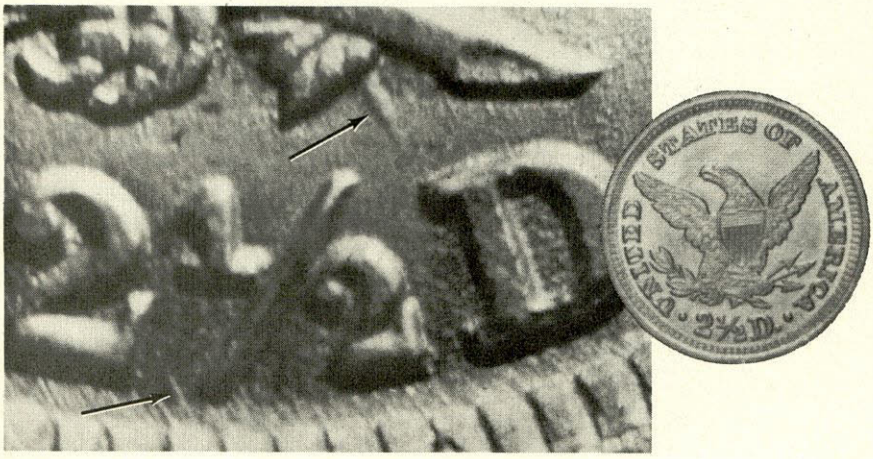


1885 $2½ Gold: *Counterfeit.*

Other Counterfeit $2½ Gold Coins

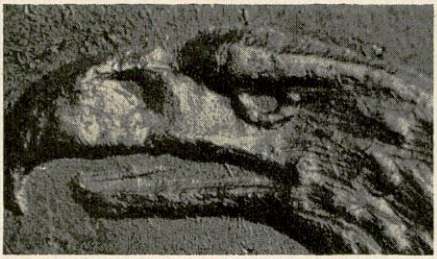
This crude counterfeit is deceptive when polished since the polishing tends to hide some of the die characteristics. Heavy marks appear vertically through the wing at the left and several isolated lines diagonally through the shield. Miss Liberty's face looks pockmarked.

1858 $2½ Gold: *Counterfeit.*

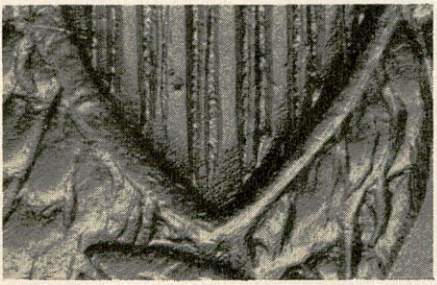


Other examples of muling undated dies occur with the $2½ gold. The same reverse die was used for coins dated 1873, 1878 and 1899 as well as a few other dates. These counterfeit mules are easily spotted by looking for a gouge mark downward from the arrow feathers toward the D, and unusual tooling marks beneath the denomination. Again, since it is so unlikely that a reverse die could have lasted for 27 years in Mint production, fakery must be responsible for these combinations.

Characteristics of Genuine $2½ Gold



1836 $2½ Gold: *Genuine. Strong diagonal die polish mark between eagle's upper and lower beak and extending above beak.*



1852 $2½ Gold: *Genuine. Die polish marks between shield lines.*

1853 $2½ Gold: *Genuine. Pattern of heavy and light die polish marks between arrow heads and bottom of IC of AMERICA.*

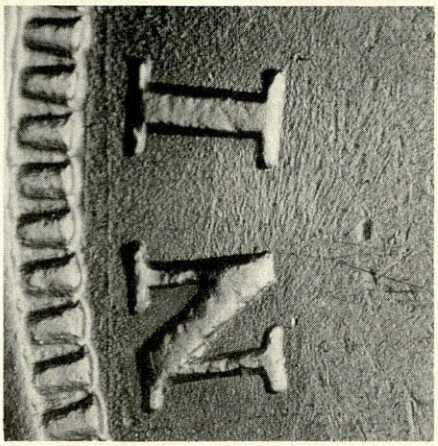
1861 $2½ Gold: *Genuine. Diagonal die polish marks on reverse.*

1851 $2½ Gold: *Genuine. Die polish marks in LIBERTY diagonal pattern between R & T and horizontal at right of Y.*

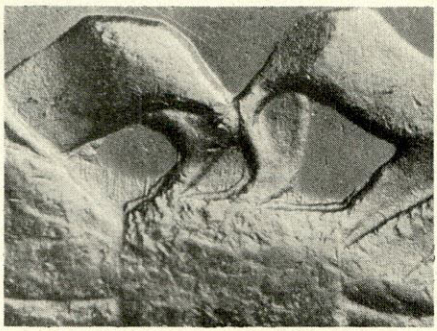
1911 $2½ Gold: *Genuine. Die polish marks below crescent on headdress.*

1912 $2½ Gold: *Genuine. Die polish marks below crescent of Indian's headdress.*

Characteristics of Genuine $3 Gold Coins



1854 $3 Gold: *Genuine. Two parallel die polish marks are found above the NIT of UNITED.*

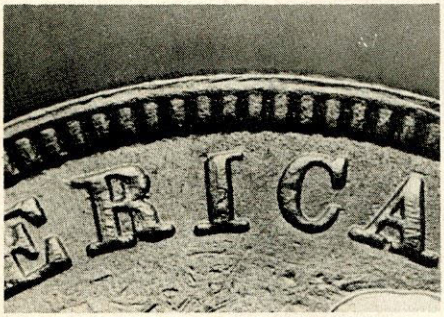


1878 $3 Gold: *Genuine. Look for a pattern of vertical die polish marks inside the bow on the reverse.*

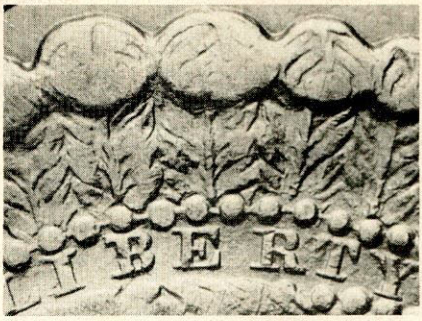
1883 $3 Gold: *Genuine. Doubled Die Obverse.*

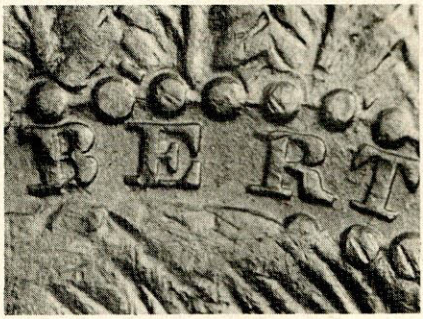
Counterfeit $3 Gold Coins

This so-called "Omega" is similar to that on the 1907 Roman numeral $20, and also found on 1878 counterfeit $3s. We have been told that it can be found on 1874 $3s but have not yet seen that date. Shown here is the R of LIBERTY with the "omega" appearing in the upper loop of the R.



1857 $3 Gold: *Counterfeit.*





1857 $3 Gold: *Counterfeit.*

Two $3 gold counterfeits that were relatively common about a half dozen years ago have reappeared in significant numbers on the numismatic marketplace in recent months, enough so as to warrant pointing out some of their characteristics.

On the piece dated 1857, most people notice a broken upper left serif on the Is of UNITED and AMERICA. However, genuine 1857 $3s occur with these missing serifs, so they should not be considered diagnostic—further examination is merited.

On counterfeits, depressions on the I and C of AMERICA occur, resulting from the transfer of circulation damage on the genuine coin from which these were copied. However, the depressions on the counterfeits have a smooth, matte surface similar to the rest of the letters, unlike the shiny surface found on genuine scrape marks. Similar depressions appear on the letters of LIBERTY, most noticeably on the center of the upright and on the bottom connector of the letter B.

Conclusive evidence that these are counterfeits, in our opinion, is the presence of numerous raised tooling marks on the tops of many of the letters caused by the counterfeiter touching up the letters on the false dies. The tooling marks differ from the polishing marks sometimes found on genuine coins in that they are almost always found on the areas formed by recesses in the dies, whereas polishing marks on genuine coins are almost always found on the fields of the dies.

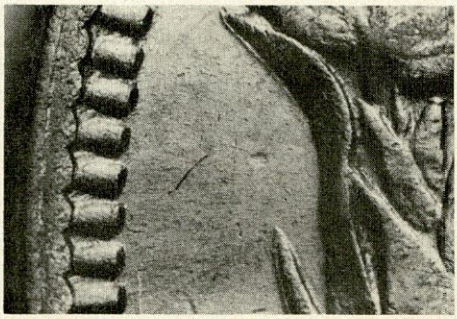
This counterfeit obverse is occasionally used for dates other than 1857. However, as far as we know at present, no genuine dates except 1857 have the broken serifs on the letter I.

The other counterfeit that has reappeared in rather massive quantities is the so-called "Omega" 1882/82 $3. The omega mark appears inside the R of LIBERTY on the headband. This particular counterfeit obverse has also been used for 1874 and 1878 dated pieces, though 1882/82 is the most commonly encountered counterfeit of the three.

Numerous raised tooling marks appear around the date area of these 1882/82 counterfeit pieces. Apparently these resulted from an attempt by the counterfeiter to "correct" the repunched date. The effort also resulted in a very noticeable depression above the 2 of the date.

Other characteristics of these counterfeit $3s include a rippled field around and above the entire date and a very round depression in the field just outside the wreath at 9:30 o'clock, directly in line with the short, vertical ear of corn.

There are many other characteristics that can be found on both the 1857 and 1882 $3 gold counterfeits with some study. The ones pointed out here can be seen with a 10-X magnifier.



1882/82 $3 Gold: *Counterfeit. "Omega."*

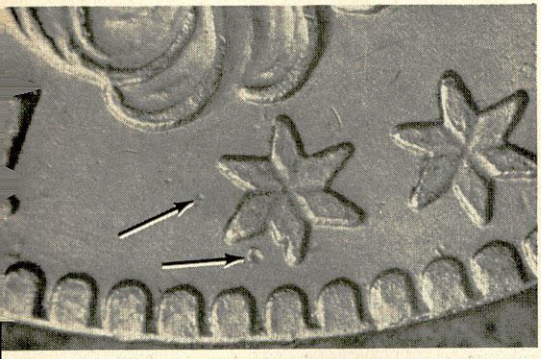
Counterfeits of the 1960's Reappearing

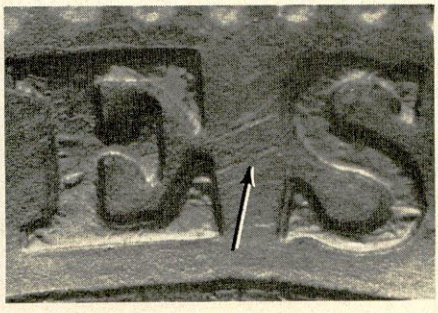
Two more of the old "type coin" counterfeits that were first offered back in the 1960s are again showing up in the numismatic marketplace and are fooling an occasional buyer as evidenced by our mail. However, both of the counterfeits are rather crude in appearance and should not give the potential customer problems if examined for appearance rather than price.

This first piece is an 1811 Half Eagle or $5 gold piece. It is usually a lighter yellow in color than the genuine article, but not impossibly so for an original coin. However, in this case, we would suspect that it is indicative of an incorrect counterfeit alloy.

The stars and numerals on the obverse are rounded and misshapen. The most noticeable flaw is in the concave appearance of many letters, especially evident on the last two 1s of the date, as well as many of the denticles around the border. The last (or 13th counting clockwise) star has a series of depressions next to it. Also, some rather gross tool marks appear between the RT of LIBERTY and between ES of STATES.

1811 $5 Gold: *Counterfeit.*





Counterfeit $5 Liberty Gold Pieces

ANACS has received some very eye-appealing $5 Liberty gold counterfeits. What makes these counterfeits so deceptive is that their lustre is representative of genuine coins. The dated obverses noted thus far include 1885, 1892, and 1908; yet, the reverses are all from a common counterfeit die. Thus, other dated obverses combined with this reverse might surface in the future.

Diagnostic characteristics of this common counterfeit reverse die include numerous depressions and raised metal not normally associated with genuine U.S. Mint products. The most obvious depression is below the eagle's right wing (Figure 1), with a similar depressed area in evidence in the field below the eagle and above the E of FIVE (Figure 2). Other depressions are apparent below the AME of AMERICA (Figure 3).

Raised metal in the form of "spikes" is repeatedly visible on the reverses of these counterfeits. Especially evident are the spikes from the rim into the fields above AMERICA (Figure 4). A similar spike is also present above the D of UNITED.

When studying the obverses of these counterfeits, it is important to note that although the coins themselves are all similar in appearance, texture and quality, the obverses each have their own distinguishing characteristics. The 1885 $5 counterfeits, for example, have numerous depressions on the date, hair and face (Figures 5 and 6).

The 1892 piece has similar characteristics yet it offers an added feature. Tool marks are present on the neck of Miss Liberty, indicating the counterfeiter's

Figure 1: *Series of depressions below eagle's right wing.*

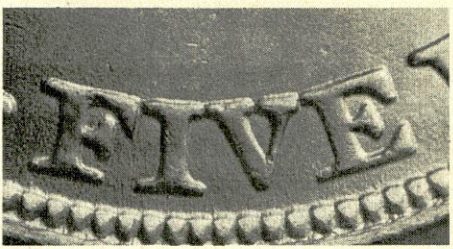


Figure 2: *Depressions above FIVE.*

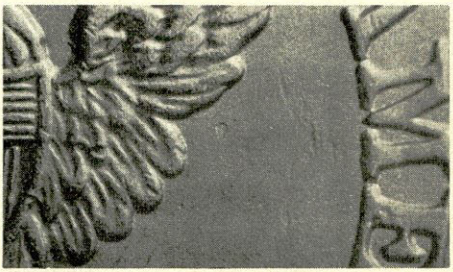


Figure 3: *Series of depressions below AME of AMERICA.*

Figure 4: *Raised spikes of metal from rim to field above AMERICA.*

Figure 5: *Depressions on date and bust of Miss Liberty.*

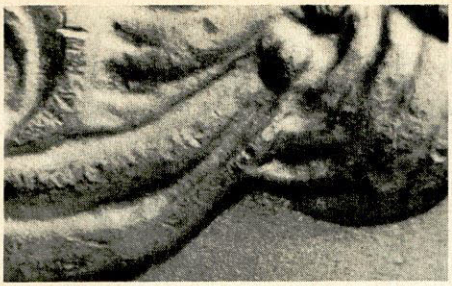


Figure 6: *Depressions in hair at back of head and raised lines in field below.*

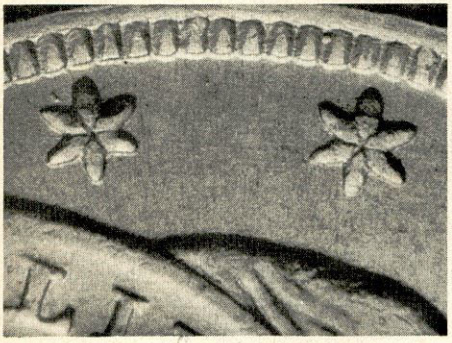


Figure 7: *Raised lines and lumps between stars seven and eight.*

attempt to correct his dies by removing raised metal. These elevated portions, usually the result of transferring a bagmark from a genuine coin, are scratched, filed or tooled in an attempt to hide the raised areas. The result is a series of fine raised lines rather than the depressions that would normally occur. On this particular counterfeit other depressions, lumps and raised lines appear in the fields of the coin (Figure 7), especially in front of the chin and above Miss Liberty's head.

The 1908 $5 counterfeit obverse is probably the easiest to detect, largely because of the obvious pieces of raised metal appearing on the face and neck of Miss Liberty (Figures 8 and 9).

However, the important features to remember are those associated with the reverse die. Because this reverse is common to all $5 Liberty gold pieces from 1866-1908, it can be expected that this reverse, or some variation of it, will be used with other dated obverses.

Figure 8: *Numerous depressions on face, neck and in field.*

Figure 9: *Raised lumps and depressions on obverse of 1908 $5 Liberty gold piece.*

Some Counterfeit $5 Gold Coins Identified

Counterfeit coins. That phrase sends shudders through most collectors whenever it is heard, especially when it is applied to a coin he has paid for. The following are characteristics of some of the $5 gold pieces that seem to give the most people the most trouble.

1852-C $5 Gold: *Counterfeit.*

This counterfeit is extremely crude by most standards, with doubling on many of the letters and design elements. The die polish marks are heavy and a number of tooling marks are especially noticeable on the LI and after the Y of LIBERTY. Heavy tooling lines are evident around the inside of the denticles, in the shield and above the upper left corner of the shield. There are many irregularly shaped pimples from the upper left corner of the shield to the curve of the wing at the right.

1906-S $5 Gold: *Counterfeit.*

The date and letters are softened, and a number of pimples can be seen all over the sand-textured surface. An irregularly shaped raised line runs diagonally through the left side of the 13th star. On the obverse the denticles are separated from the rim, and the mintmark loops are completely filled.

1914-S $5 Gold: *Counterfeit.*

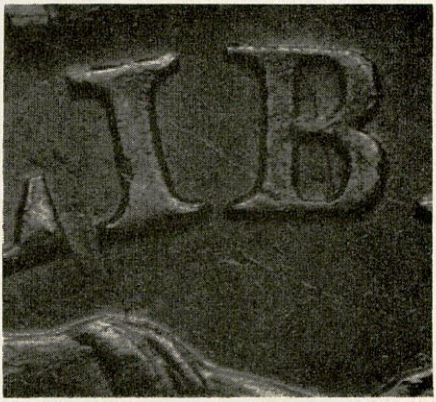
The most easily noticed characteristic of this counterfeit is the "wormy" mintmark. The S is wide open, quite prominent, with diagonal serifs and is surrounded by tooling marks. This same counterfeit reverse die has been seen with obverses of every date from 1908 through 1916.

Die Characteristics of Genuine $5 Gold Coins

It is our contention that cataloging the die characteristics of genuine coins is better than trying to remember the details of counterfeits; after all there will never be more dies made for these genuine issues while new counterfeits will always appear.

1795 $5 Gold: *Genuine. Small Eagle. Two die gouges point inward from the denticles between the R & I and the I & C of AMERICA.*

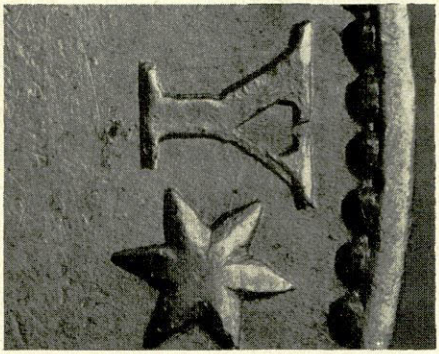
Genuine



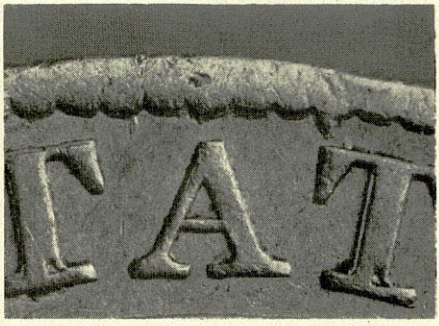
1800 $5 Gold: *Genuine. Die cracks can be diagnostic. This one shows as a very fine, slightly irregular, raised line of metal connecting the I & B of LIBERTY.*

1802/1 $5 Gold: *Genuine. A series of die gouges connect the eagle's tail to the ends of the denticles.*

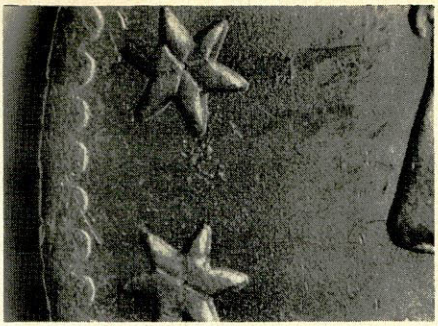
1806 $5 Gold: *Genuine. Rust pitted dies left some lumps of metal on the top edge of the ribbon at the back of the eagle's neck. A die crack appears between that point and the star.*



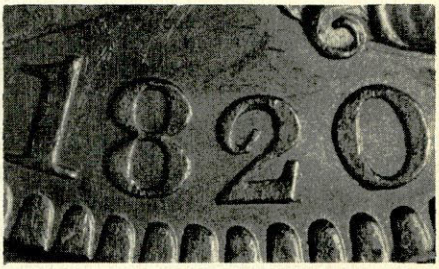
1807 $5 Gold: *Genuine. The right arm of the Y of LIBERTY is defective and a faint die crack connects the Y and the star right.*



1810 $5 Gold: *Genuine. Look for the die gouges above TAT of STATES. Do not use the holes just above the bases of the Ts, they have also been seen on counterfeits.*



1813 $5 Gold: *Genuine. By the time this coin was struck the dies were worn and rust pitted, resulting in some small raised lumps of metal between the third and fourth stars.*



1820 $5 Gold: *Genuine. The die polish marks through the date are very fine and crisp in appearance. Also, the bases of the 2 and the 0 of the date show some minor repunching.*

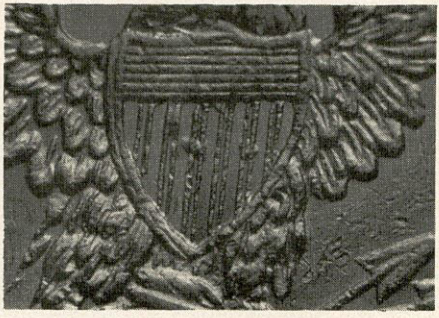
1834 $5 Gold: *Genuine. Close examination may reveal the horizontal pattern of die polishing in LIBERTY, while later states of the die have crack from the rim, across the hair, through the B & E and continuing on down the head.*

1836 $5 Gold: *Genuine. The pattern of fine horizontal die polish marks on the headband is diagnostic of this die.*

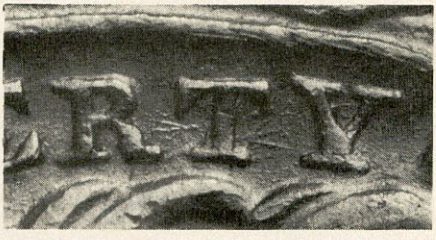
1843 $5 Gold: *Genuine. A rather heavy die gouge can be seen through the R of* LIBERTY.

1845 $5 Gold: *Genuine. Repunched 18.*

1847 $5 Gold: *Genuine. Look for a vertical pattern of fine, crisp, die polish marks and, on later states of this die, a rather thin die crack from the base of the bust, across the side of the 4 to the rim.*

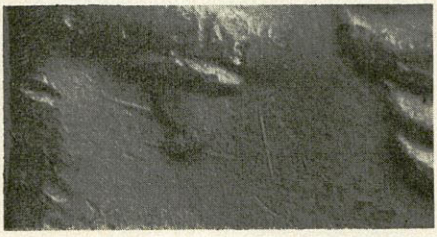


1861 $5 Gold: *Genuine. The lumps in the shield are the result of clashed dies, that is when the dies hit each other without a blank between them to absorb the force of the blow.*



1880 $5 Gold: *Genuine. Some small die gouges and a little bit of die polishing are visible on the headband at* RTY *of* LIBERTY.

1881 $5 Gold: *Genuine. 1881 over 1880. Remnants of the 1880 date show in and below the final punched 1881 date.*



1886-S $5 Gold: *Genuine. Horizontal raised lines appear at the left and right of Liberty's eyeball. The vertical line behind the eye is damage to this particular coin.*

1901-S/S $5 Gold: *Genuine. Heavy die polishing marks can be seen inside Liberty's ear.*

1909-D Gold: *Genuine. Pattern of die polish marks is found below the crescent on the head band.*

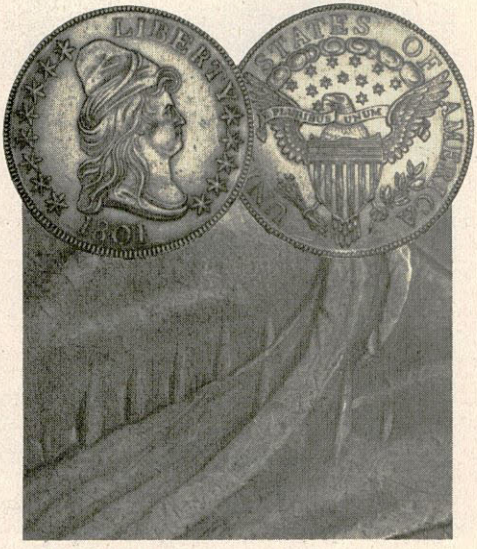
1913 $5 Gold: *Genuine. Clashmarks on the neck, corresponding to the feathers of the eagle's wings on the reverse, are often mistaken for counterfeit die tooling.*

Characteristics of Genuine $10 Gold Coins

1795 $10 Gold: *Genuine. Die polish marks can be seen from curl to 9 with another line continuing through the 9.*

1799 $10 Gold: *Genuine. Die gouge in front of Liberty's neck.*

1797 $10 Gold: *Genuine. Diecrack from rim, through second 7, to bust. The "scratches" on the field are planchet adjustment marks and are not damage to the coin.*



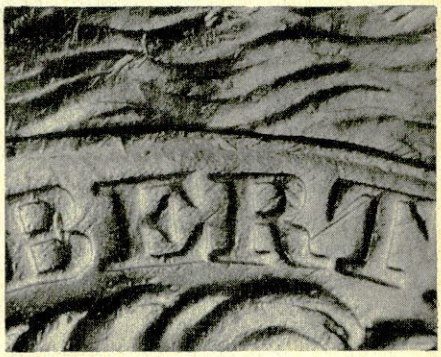
1801 $10 Gold: *Genuine. Die gouges in cap.*

1849/1849 $10 Gold: *Genuine.*

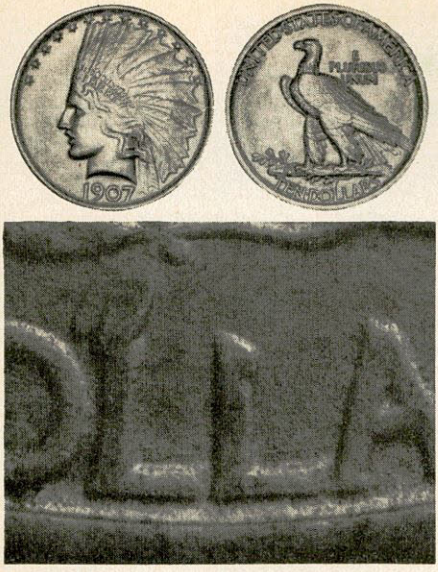
1881 $10 Gold: *Genuine. Single heavy die scratch between R and T of LIBERTY with a number of fine die polish marks between other letters.*

1892-CC $10 Gold: *Genuine. Doubled Die Reverse.*

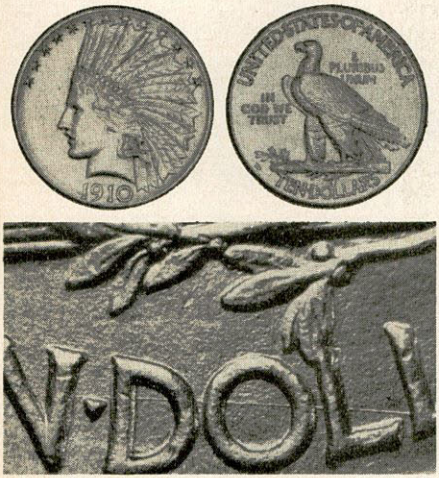
1894 $10 Gold: *Genuine. Small die gouge in second leaf cluster at left.*



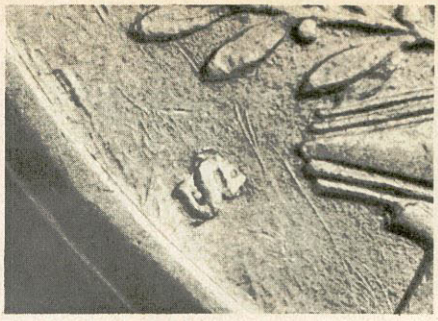
1901-S $10 Gold: *Genuine. Die polish marks through BERT of LIBERTY on the headband.*



1907 $10 Gold: *Genuine. No Periods. Die polish line above bases of* LL *of* DOLLAR.



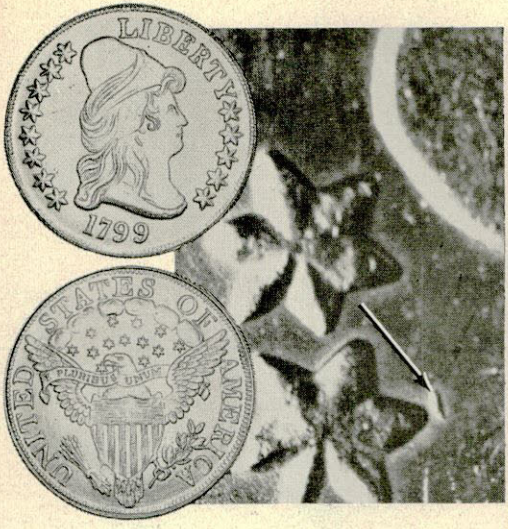
1910-D $10 Gold: *Genuine. Heavy die polish line through* N DOLL *of* TEN DOLLARS.

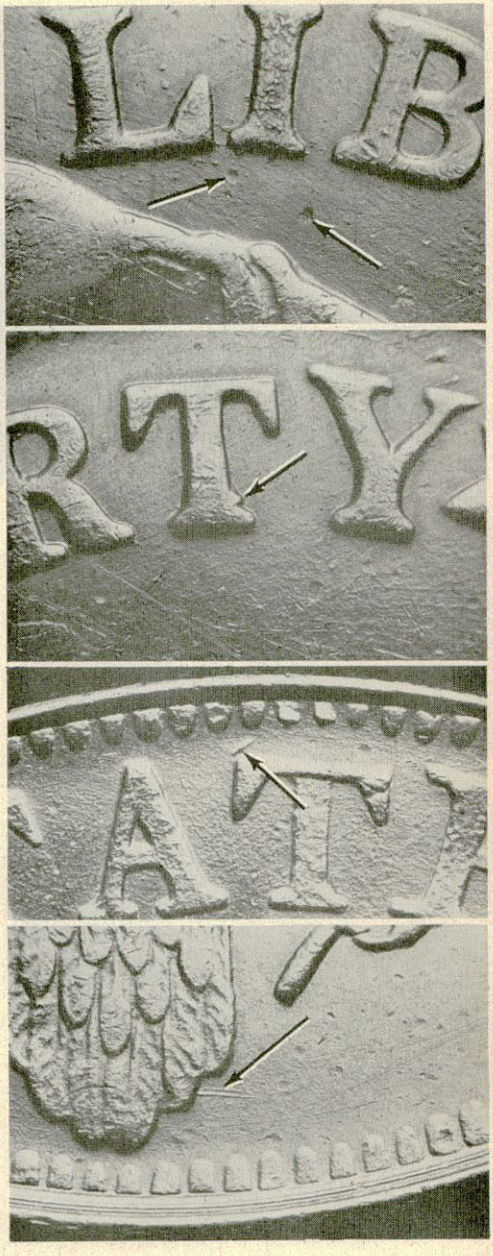


1910-S/S $10 Gold: *Genuine.*

1932 $10 Gold: *Genuine. Semi-circular die polish marks below Liberty's chin.*

Counterfeit 1799 $10 Gold Coin





The 1799 Gold $10 Eagle counterfeit has a somewhat bright surface with many tooling marks in the field, plus others around the letters of LIBERTY and the numeral date. Some, but not all, of these 1799 counterfeits have the following characteristics:

- Extra metal on, and around, the seventh star at left on the obverse.
- Depressions below the I, a lump above the right lower serif of the T, and three lumps above the Y of LIBERTY.
- A raised mark above the left end of the crossbar of the second T in STATES.
- Die damage (a rounded line) off the right side of the eagle's tail.

Generally, these coins can be described as being weak and fatty in appearance. They have the same surface texture on the fields as on the relief, a condition not usually found on genuine coins because of the way the dies were polished.

Die Mulings of $10 Gold Indian Counterfeits

One of the things that some counterfeiters do to make authentication much easier, is to use a singular undated die to manufacture coins of different dates.

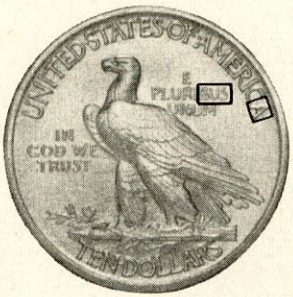
This example is not a new find by any means, nor is it the only undated die muling that exists. Rather, it is just one that we have selected to show collectors one of the observations they can make in examining their own acquisitions. Just because a coin looks good to the naked eye, and just because it carries an attractive price, does not make it a bargain.

Close examination of that coin and others like it will often reveal minor details that the counterfeiter overlooked. A word of caution is in order. The fact that the same markings on two or more coins of the same year can be found does not make those coins suspect. The identical markings must be found on coins separated by several years before any significance can usually be attached to those marks. Any marking that is on a normal die in Mint use will be reproduced for the life of that die until, or unless, it is further changed by polishing or cleaning.

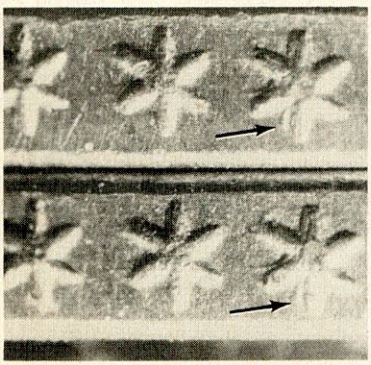
Even though we normally write about the coins that we refuse to certify, more than three-fourths of all the coins submitted for examination are found to be genuine and those coins are certified.

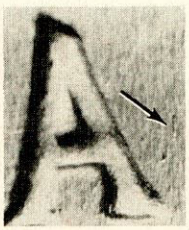
A very small percentage of coins examined are returned to their owners bearing the notation, "No Decision." That does not mean that the coins are counterfeit, it simply means that the ANACS staff and the consultants cannot reach a conclusive opinion. As time goes by, and we learn more about a particular coin type, we may be able to recall the coin for another examination and tell the owner that his coin is genine or not genuine. Those "no decision" coins are, meanwhile, in an unfortunate state of limbo. While this is a situation we dislike inflicting upon the coin's owner, in all fairness we cannot certify the item as genuine without some certainty nor condemn it without irrefutable proof.

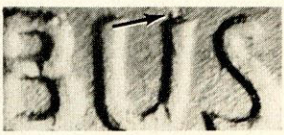
An example is the U.S. $10 gold Indian. The photographic enlargements shown here have the same imperfections on the reverse die of 1913 and 1926. Not only can we match up the same tooling marks and depressions, but on these particular pieces we are also able to match up collar "fingerprints."



U.S. $10 Gold Indian: *Counterfeit.*

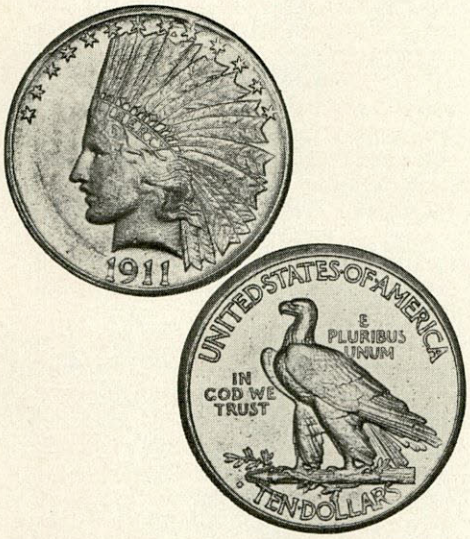


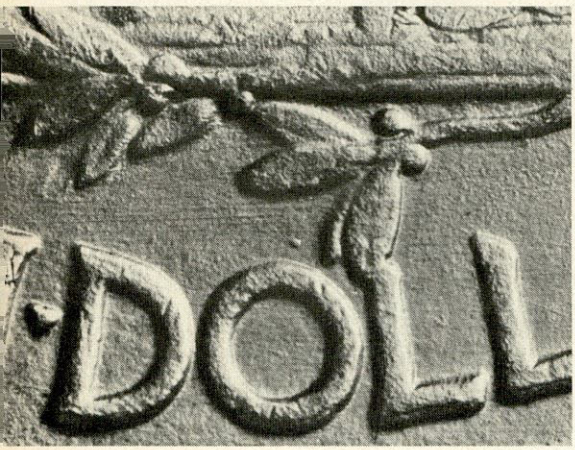




Counterfeiters' Shortcuts: 1908-S—1916-S Indian $10

Counterfeit Indian $10s from the San Francisco Mint, dated 1908-S through 1916-S, illustrate one method by which counterfeiters often reduce their manufacturing costs by taking shortcuts, and those shortcuts make detection of the fakes easier.





Counterfeit of a counterfeit with depressions and loss of detail.

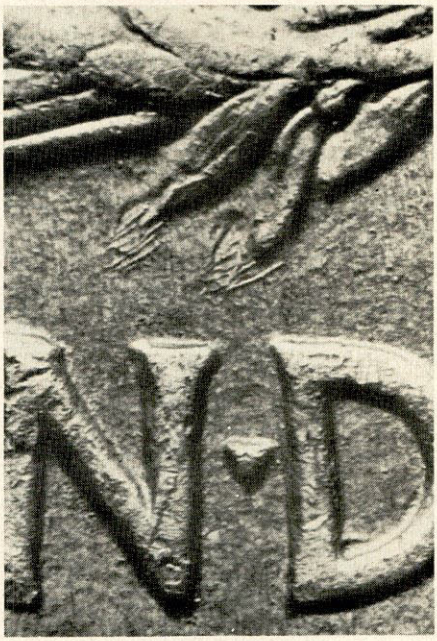
The full run of Indians of these dates required nine obverse and nine reverses for the U.S. Mint, a total of 18 dies, assuming only one die pair was used. This, however is quite unlikely because some of them wouldn't have lasted for the entire production of a single year's coinage. A counterfeiter can get by with only 10 dies—the nine dated obverses but only one reverse that can be "muled" with any, or all, of the dated dies. The counterfeiter can further reduce costs by using less sophisticated (and therefore less expensive) heat treating, or he may forego the hardening process entirely.

Detection of the counterfeit coins is made easier when the undated sides of several years can be examined simultaneously for common defects. When depressions show up over a span of nine years, we should at least be extremely suspicious of those coins even if we don't reject them completely. The depressions could have been the result of damage to the hub from which the working dies were made, or they could be damage to the coins after the coins got out into circulation. In the first instance, the depressions would be identical on all coins; in the second instance the odds of having identical damage to coins would be astronomical.

When, in addition to common depressions, we see things that are not normally associated with Mint quality, the suspicions should be confirmed. Heavy tooling marks in isolated areas and an overall weakness of design are just two examples of the confirmation that will

Depressions in field.

"Teardrop" angling downward from top bar of E and depression on bottom of I in AMERICA.



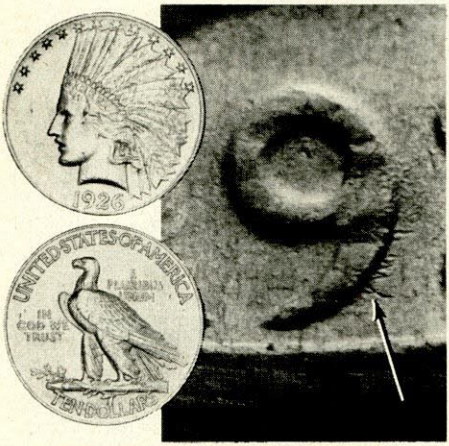
Depressions with tooling.

normally lead ANACS to refuse certification for coins. There was a time when weight and specific gravity of many counterfeits were often below the accepted limits of tolerance, but today's counterfeits usually meet or exceed the nominal weight and they are usually of the proper alloy so specific gravity will be normal. So, we catalog the marks found on coins and when we begin to see a pattern to those marks, we feel that we are able to prove with reasonable certainty that those coins are counterfeit.

Counterfeit 1926 and 1932 $10 Indians

Recent conversations with collectors and dealers have disclosed that counterfeit Indians are creating a great many headaches. This month we have put together a series of detail photographs that pinpoint the diagnostics of at least one counterfeiter's efforts at creating 1926 and 1932 $10 fakes.

The 1926 $10 is of fairly good quality. Even so, a number of depressions and tooling marks appear on this particular die-produced fake. One of the easiest points to check is the 9 of the date where a number of "negative" tool marks on the numeral and out into the field are the "fingerprints" that will identify this counterfeit.



The 1932 $10 illustrated here is probably the most appealing of the Indian counterfeits. The checkpoints are not quite as easily spotted as are those of the 1926 $10, but they shouldn't give anyone too much trouble once they are pointed out. A raised line shows below the 2 of the date that looks very much like a die gouge. Some small worm-like lines can be seen on Liberty's nose and neck. There are also some depressions and tooling marks on the reverse, with the most easily spotted ones appearing on the eagle's wing in front of the neck.

Though we show detail photographs of only the 1926 and 1932 counterfeit $10s, the type of characteristics shown are applicable to many counterfeits of other dates and denominations. Depressions, for example, can be found on most coins as the result of damage. When several coins are compared and show identical depressions, the finger of suspicion must point toward a counterfeiting operation that transferred the bagmark from the original coin to a counterfeit die and then onto the products of that die. Gross tooling marks, whether they are negative (incused into the surface) or positive (raised above the surface) or a combination of both negative and positive, would be unlikely on genuine Mint products because the Mints normally do such tooling on the galvanos or models that are oversize, generally 10 to 14 inches in diameter. As the galvano is reduced on the transfer lathes, the tooling marks are also reduced so that on the final coin they show only as extremely fine lines. Since the counterfeiters would normally work from a coin to a die, no reduction is required and tooling efforts stand out like a red flag.

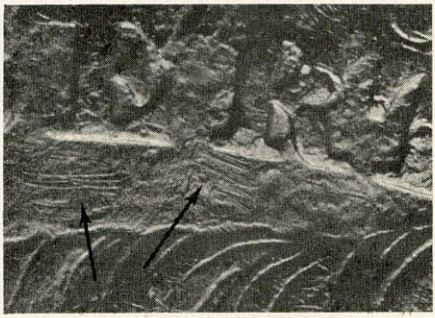
Die Mulings on Counterfeit Liberty $20s

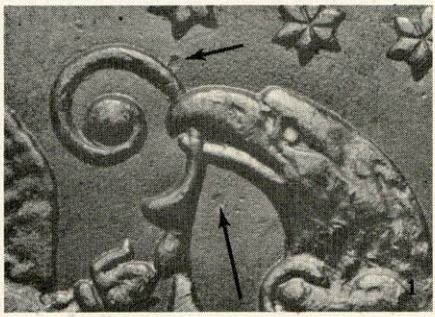
Liberty $20s dated 1879, 1904 and 1907 have been seen with a common reverse and similar (though not exactly identical) tooling below the E and R of LIBERTY on the headband on the obverse.

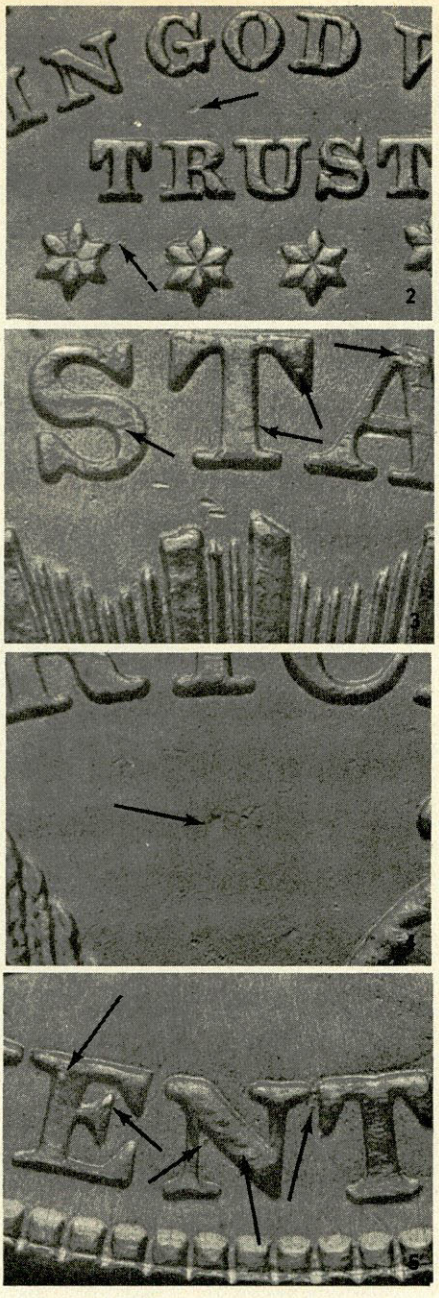
These particular diestruck pieces are not really new items, but the quality of the striking and the manufacture of the blanks are greatly improved.

The particular diagnostic points that ANACS has found common to all three dates are:

1. Depressions on field above and below the eagle's beak.
2. Depression below the G of GOD and tool marks at top of star below first T of TRUST.
3. Depression on lower right curve of the S, two depressions on first T (one just above bottom right serif of base, the other on upper right serif) and a depression on top of A of the word STATES.
4. A large depression on field below I of AMERICA.
5. On the word TWENTY: a pimple on upper back of E, depression on upper portion of center bar serif, pimple inside the N where left vertical and the diagonal bar meet, depression on diagonal bar of N, two depressions between tops of N and T and depressions on left and right ends of crossbar of the last T.







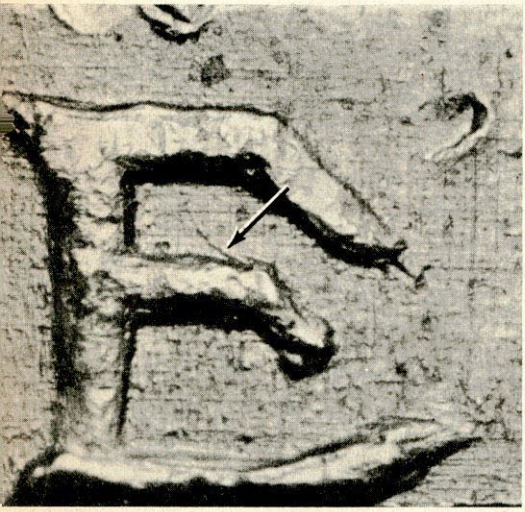
Liberty $20 Gold: *Counterfeit reverse.*

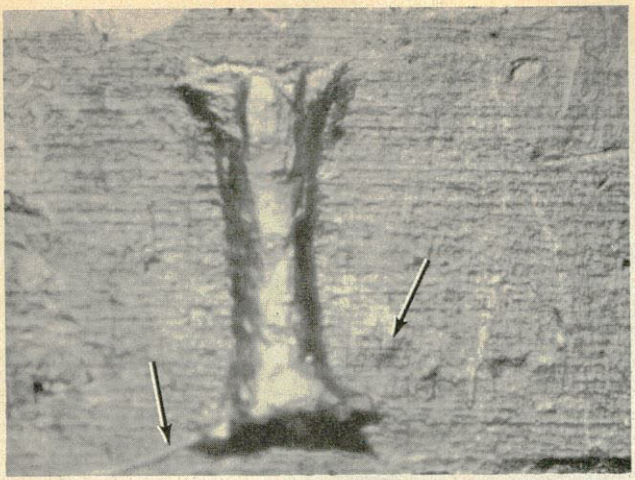
St. Gaudens $20 Gold Counterfeits

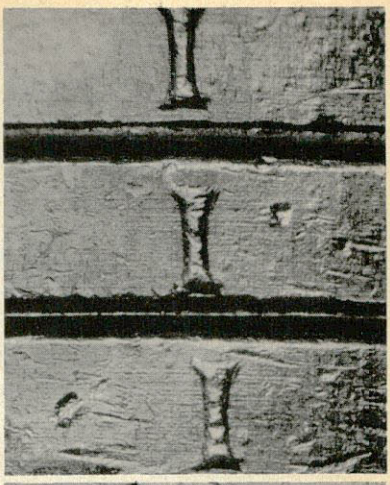
Collectors and dealers have sent quite a number of St. Gaudens $20 Double Eagles to ANACS for examination. Many of these high-quality counterfeits dated in the 1920s have the same imperfections and all appear to have the same collar defects. Those examined that have identical defects include pieces dated 1920, 1924, 1926, 1927 and 1928.

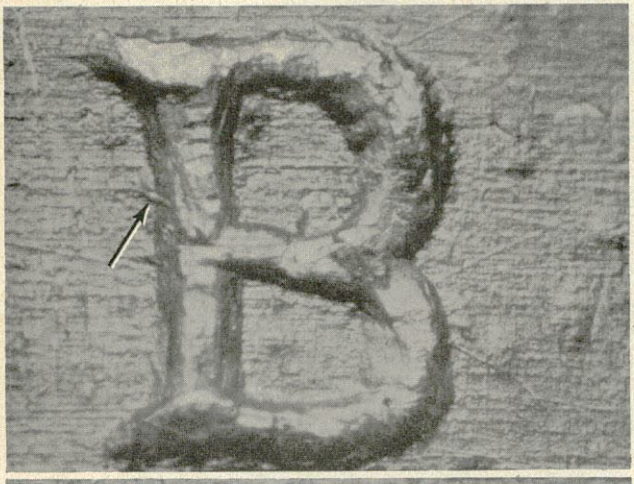
Most of the obvious flaws are reflected on the edge of the coin and the E PLURIBUS UNUM inscription, especially the first two words. A curved tool mark on the E radiates upward to the left from the right end of the center bar. Another tool mark, diagonally downward to the left from the lower left serif of the I and a raised "pimple" at the right of the I just above the lower right serif, also mar the coin's edge. The B has uniform tooling and depressions, the most obvious being a short mark to the left of the letter directly opposite the upper side of the center crossbar. Many of the stars on the edge show identical tooling and damage. Most obvious are the third star left of the letter E and the star between E and P. Both have numerous tooling marks on and around them. The edge legend also includes three raised bar-like areas created by the use of a three-piece collar.

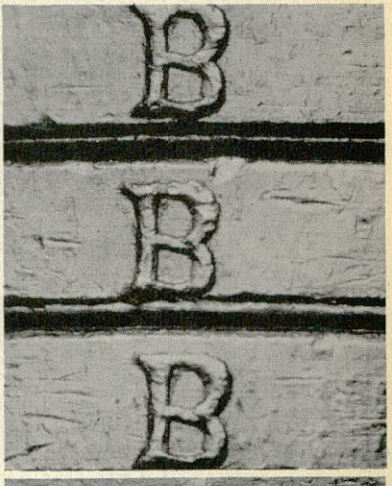
Though individually these counterfeit St. Gaudens $20 Double Eagles could easily fool most anyone, collectively they can be spotted by identical characteristics.

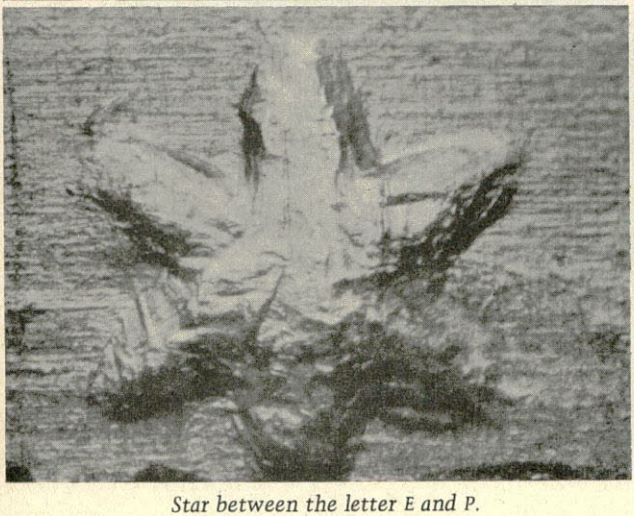


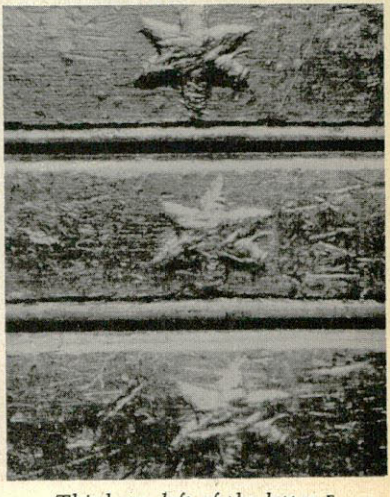










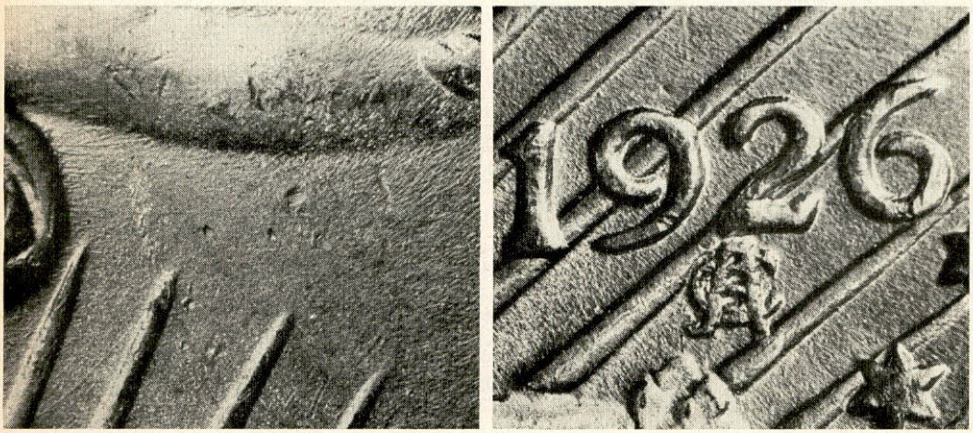


Star between the letter E and P.

Third star left of the letter E.

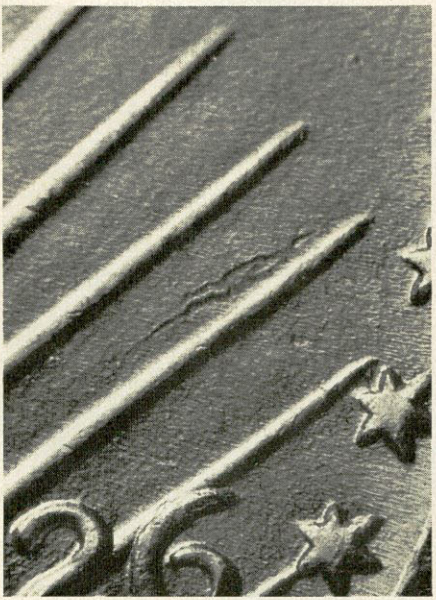
1926 $20 Joins Ranks of Outstanding Counterfeits

One counterfeit on the numismatic marketplace is destined to fool quite a number of people. The first example a collector sees will appear to be "mint quality" to almost everybody, including many of those who've handled large numbers of Double Eagles. Comparison of two or more of these 1926 $20s, however, will show identical indentations, something that cannot normally happen to coins in circulation. This characteristic can occur on counterfeit material if the original coin from which the counterfeiter made his dies had some bagmarks or other damage that was transferred from that original coin to the dies and then to all of the coins struck by those counterfeit dies.

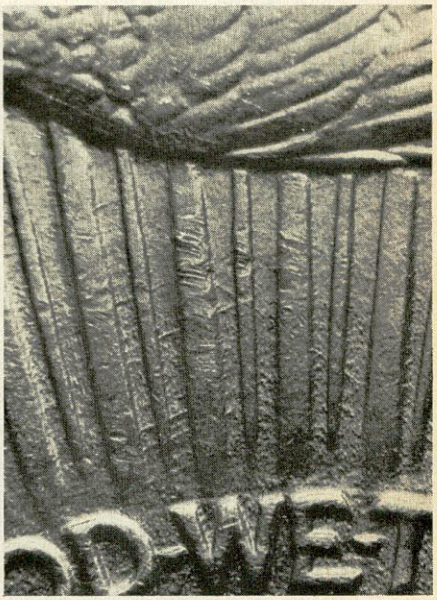


1926 $20 Gold: *Counterfeit.*

1926 $20 Gold: *Counterfeit.*



1926 $20 Gold: *Counterfeit.*



1926 $20 Gold: *Counterfeit.*

Some of the checkpoints to watch for in this example include:

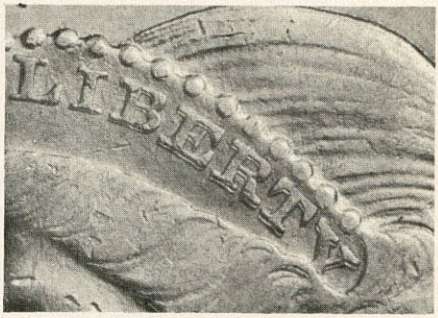
1. Two irregular grooves between the rays above the 6 of the date.
2. A series of depressions below the arm that holds the branch.
3. A large depression on the upper end of the second ray at the right of Miss Liberty.
4. A slight depression above the 9 of the date.
5. Depressions on the left side of the O of OF.
6. Depressions on the F of OF at the point where the vertical stroke of the letter meets the upper crossbar, and
7. Tooling marks on the rays above D WE of IN GOD WE TRUST.

Genuine $20 Gold Coins

Bear in mind when studying these photographs that some of the things pointed out as characteristics of genuine dies could be reproduced by a counterfeiter making a fake die from a genuine coin. However, to do so would involve at least two additional transfer steps with an attendant loss of detail. Sharp, crisp die scratches become softly rounded and possibly broken. Fine details, such as veins in leaves or strands of hair, are entirely lost. So, along with these diagnostic points, the surface textures of genuine coins should also be considered.

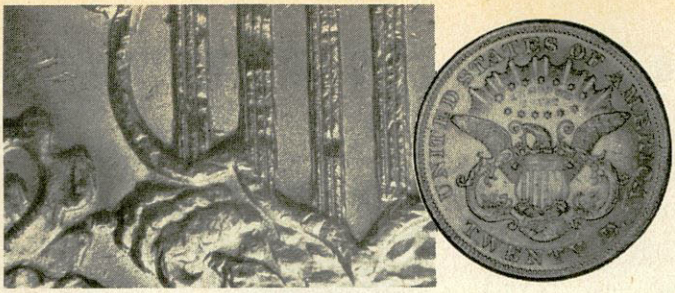
Remember also that for every rule there is an exception. A good example of this type of exception is the 1924 Double Eagle. It shows two die gouges inward from the raised rim. In past articles and in seminars we've talked about "spikes of metal" being characteristic of counterfeit dies, yet here we are pointing out two similar features as being clues to a genuine coin. The die gouges are sharp and crisp; spikes are generally more numerous, smaller in many cases, with more rounded upper surfaces.

If you are looking at a coin and see the characteristic shown exactly as we illustrate it, you can be quite certain that you are looking at a genuine coin. However, if the coin you are looking at does not have that particular characteristic, the coin is not unquestionably counterfeit, but was probably produced by a different die pair, or an earlier die state of the same die.

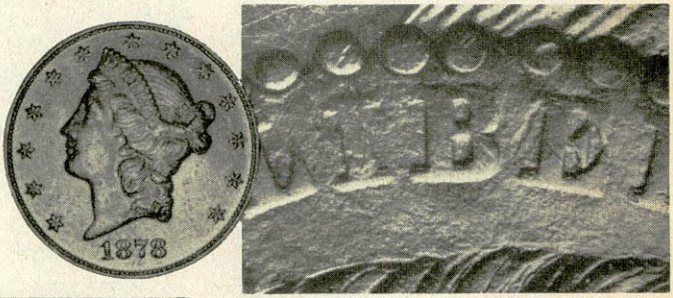


1859-S $20 Gold: *Genuine. Doubled Die Obverse.*

1861 $20 Gold: *Genuine. Fine die polishing below nose and at front of mouth.*

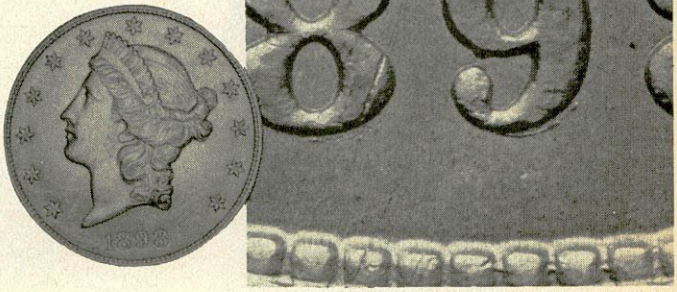


1873 $20 Gold: *Genuine. Open 3. Small die gouge in lower left corner of shield.*



1878-S $20 Gold: *Genuine. Doubled die obverse, split serifs on letters of* LIBERTY.

1879-S $20 Gold: *Genuine. Die polish mark below eyeball.*



1898-S $20 Gold: *Genuine. Double punched 89 of date.*

1878 $20 Gold: *Genuine. Doubled Die Reverse.*

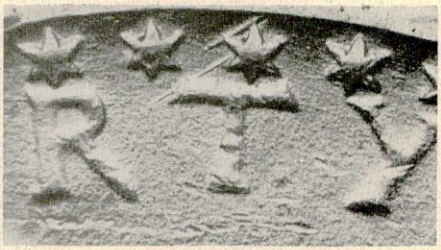
1890-CC $20 Gold: *Genuine. Doubled Die Reverse.*

1900-S $20 Gold: *Genuine. Peculiar pattern of die polishing marks at TES of STATES.*

1908 $20 Gold: *Genuine. No Motto. Die polish marks between arm and torch.*

1910-S $20 Gold: *Genuine. Die polishing marks through WE TRUST.*

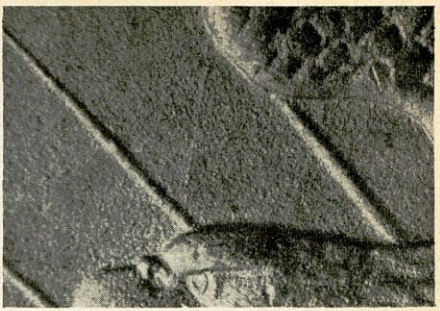
1922-S $20 Gold: *Genuine. Die polish lines in AME of AMERICA.*



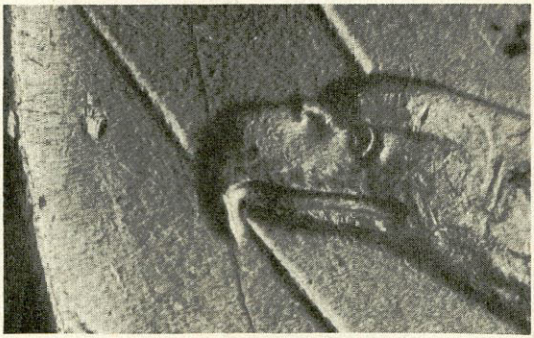
1924 $20 Gold: *Genuine. Two die gouges above T of LIBERTY.*

1924-D $20 Gold: *Genuine. Two die polish lines in RU of TRUST.*

1924-S $20 Gold: *Genuine. Diecrack through torch and* BE *of* LIBERTY.



1925-D $20 Gold: *Genuine. Diecrack from top of Eagle's head to wing.*



1927 $20 Gold: *Genuine. Diecrack through Eagle's beak.*

1927-S $20 Gold: *Genuine. Die polishing and diecrack through date.*

Counterfeit 1962 Peru 100 Soles Oro

During a recent ANA midyear convention, Robert Mish of San Mateo, California, advised us that counterfeit 1962 Peruvian 100 Soles were being offered in the bullion market. Mish submitted several pieces from this new batch of extremely deceptive fakes to ANACS for study. The following table shows the comparison of data between the genuine and counterfeit pieces.

	Genuine	Counterfeit
Weight (grams)	46.8071	46.80 to 46.86
Specific Gravity	17.16	14.59 to 14.60
Diameter (millimeters)	36.50	37.20 to 37.25

The specific gravity tests indicate that these coins do not contain the full measure of gold (.900 fine or 90 percent,) but are composed of approximtely .750 fine alloy or 75 percent. As compensation, however, most are not only slightly heavier than normal but are also slightly larger than they should be.

While the weight, specific gravity and size are far enough from normal to be a clue to origin, everybody does not have access to good calipers and an accurate balance to make that determination. So we have photographed the coins in detail so everyone can see some of the things we spotted that will be helpful in identifying these fakes.

OBVERSE

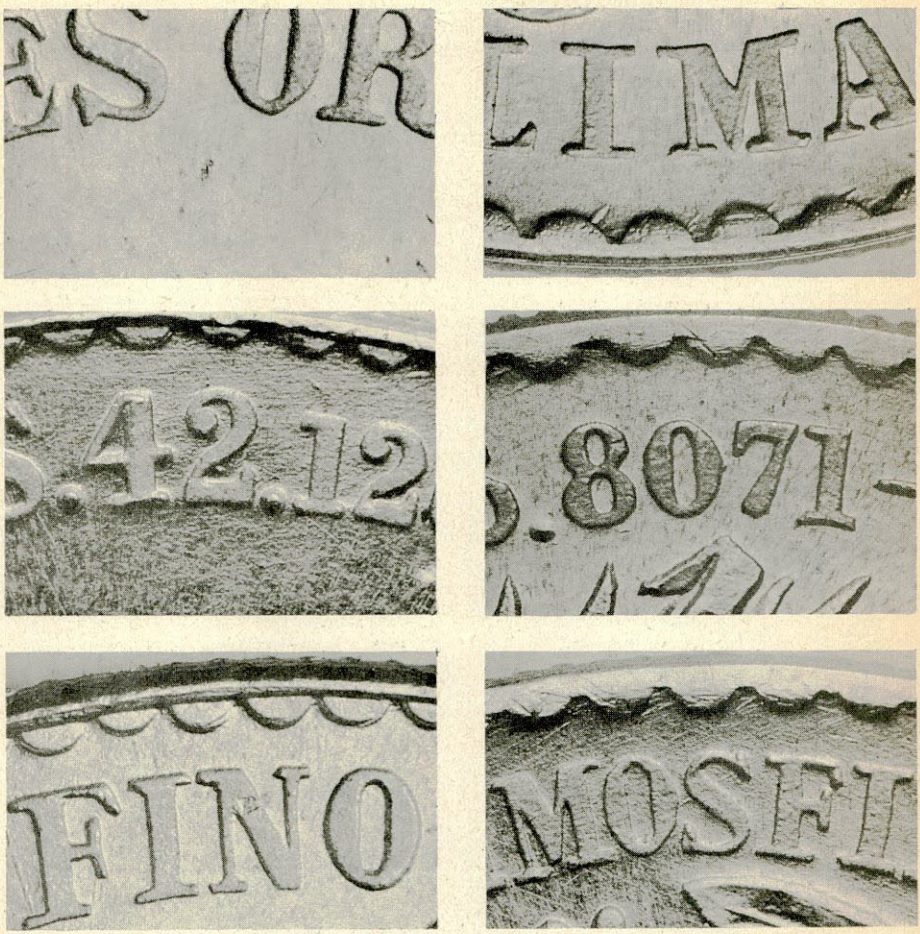
1. Raised "pimple" in side of neck.

2. Blemish on the field below and between the words SOLES ORO. Part of that blemish is incused and part of it is raised.

3. Tiny lump on right side of back curve of the first 2 in 42.1264.

4. Barely discernible, but odd looking, tooling marks at left of the F and above the upper right serif of the N in FINO.

1962 Peru 100 Soles: *Counterfeit.*



1962 Peru 100 Soles: *Counterfeit.*

REVERSE

A. Tool markings on the ends of the denticles below the word LIMA and a tiny lump on the I just above the lower left serif.

B. Small lump on the right edge of the 0 in 46.8071.

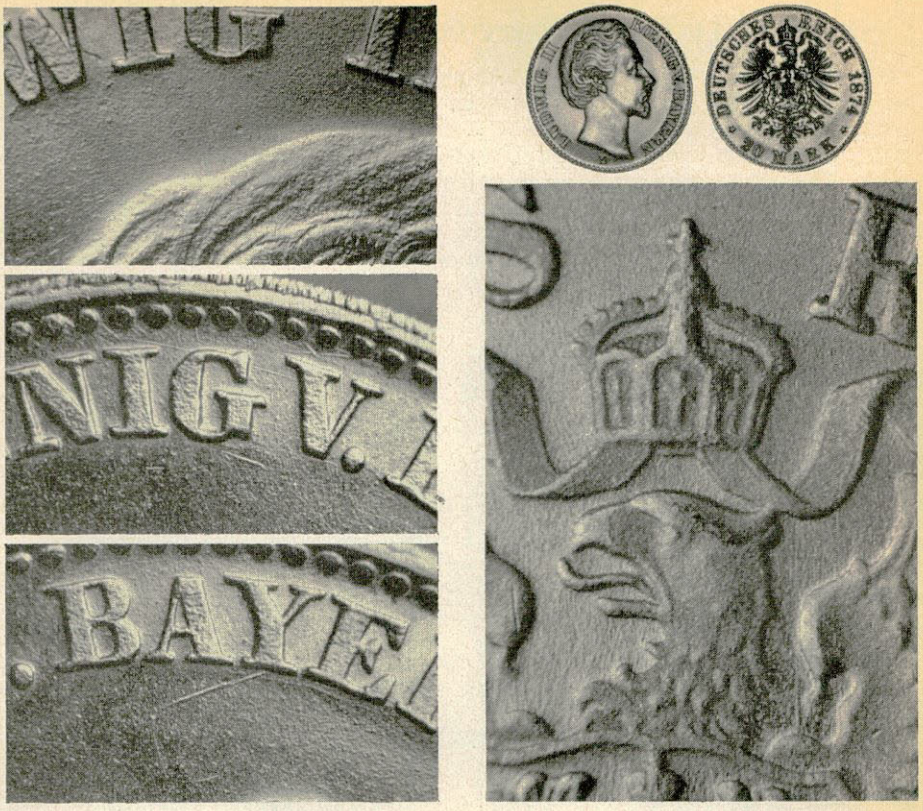
C. Tool mark or die scratch through the upper part of the S in DECIMOS.

Commonly Seen Foreign Counterfeits

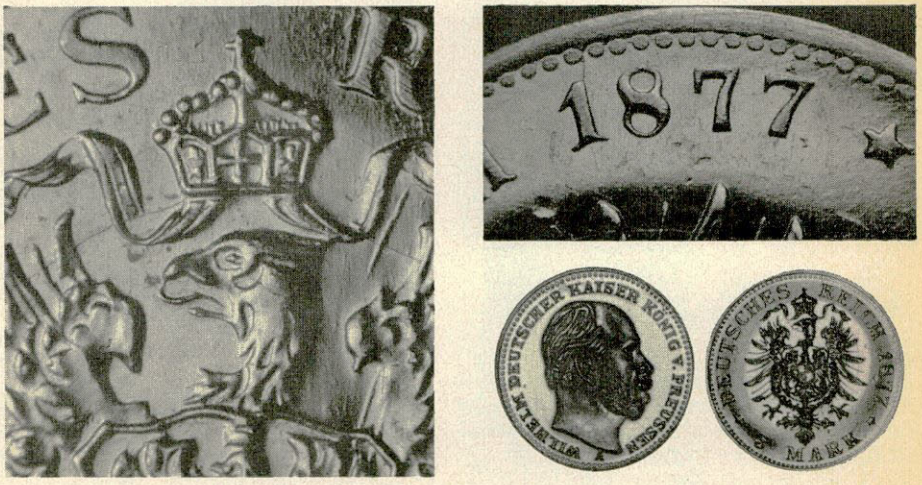
The examination methods ANACS employs for foreign coins are identical to the methods used for U.S. coins; only the diagnostic characteristics differ. While weight and specific gravity remain important elements of any examination, it is important to realize that most present-day counterfeiters are able to turn out products that consist of almost perfect alloys and that are well within Mint tolerances for weight.

The counterfeits shown this month are only a small portion of those that are examined by ANACS, and those that have been examined to date represent only a minute percentage of the counterfeits in existence.

FRANCE. *1869-BB 100 Francs:* *Counterfeit. Most noticeable is a small pimple on the field between the upper back of the head, below the N of NAPOLEON. An irregular wavy line appears at the left of the pimple and a depression at left of the wavy line. Quite a number of irregularities can be seen on the field on both obverse and reverse. The die polishing lines are not crisp and sharp as can be expected on genuine coins.*

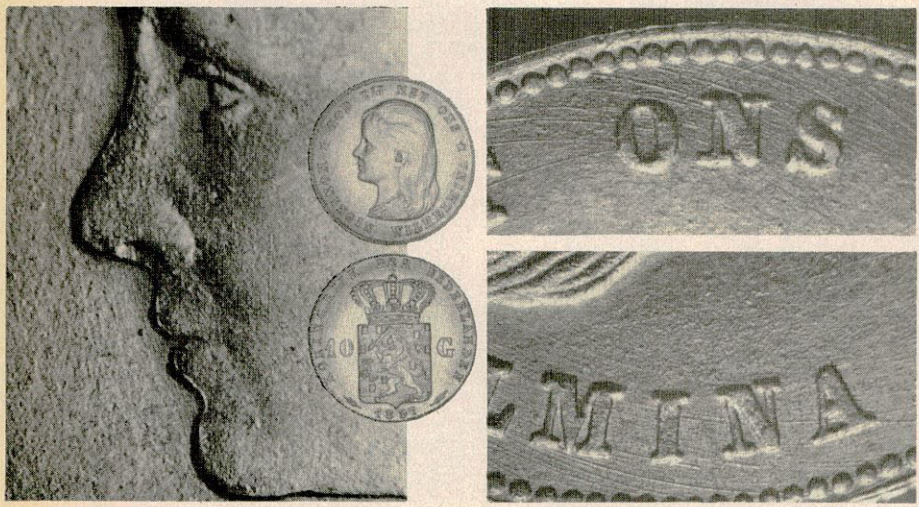


GERMANY (Bavaria). ***1874-D 20 Marks:*** *Counterfeit. The fields and raised devices appear as though they were made of sand, but the coin is apparently die struck. Perhaps the die was cast? Numerous depressions, isolated tooling marks and "wormy" raised lines appear throughout.*

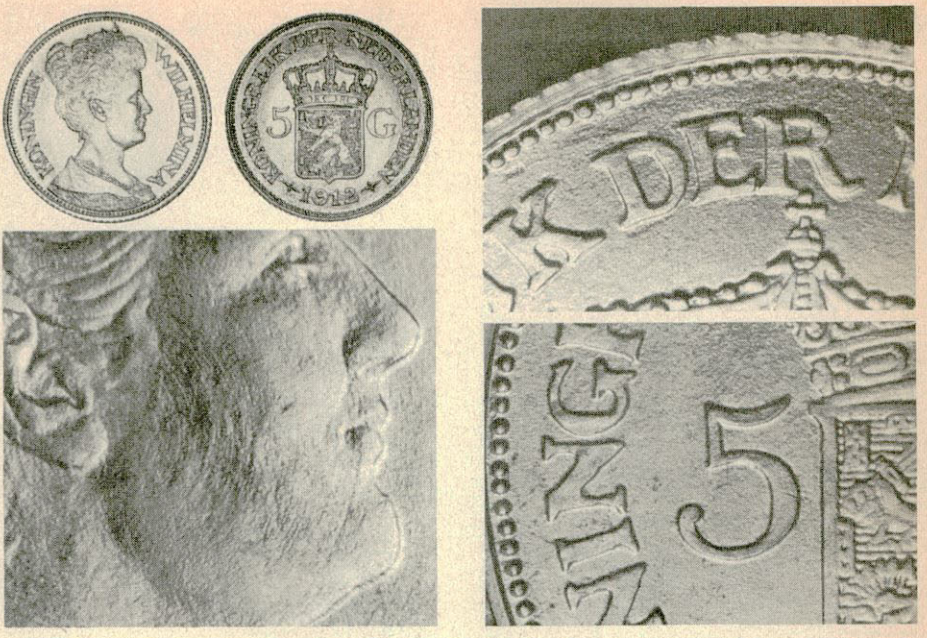


GERMANY (Bavaria). ***1877-A 5 Marks:*** *Counterfeit. The fields of this coin are almost mirror-like but they are not smooth as should be expected. A number of depressions seem to repeat from coin to coin.*

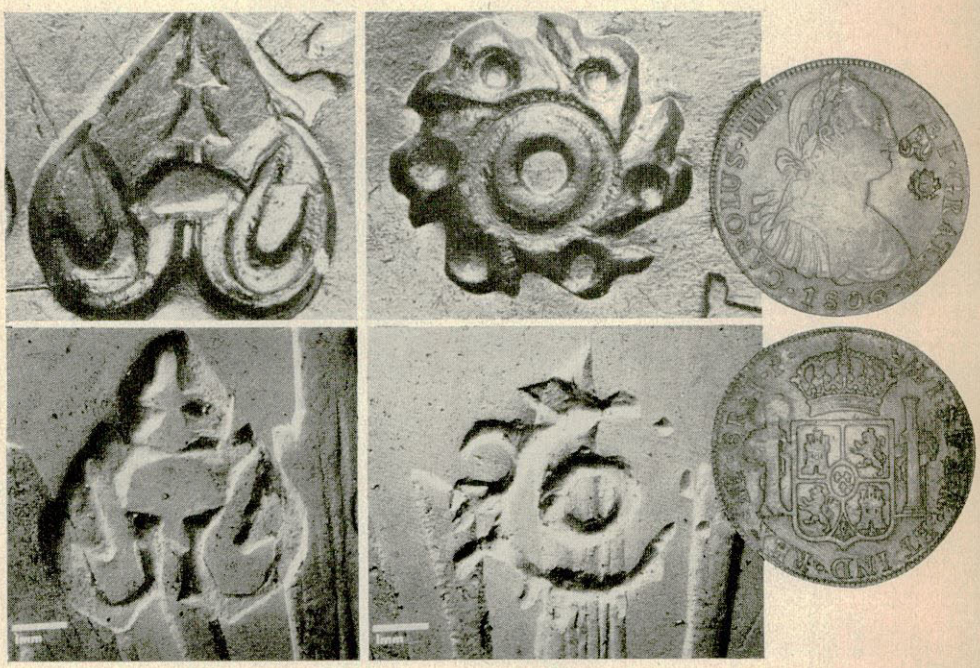
GREAT BRITAIN. *1817 Sovereign:* *Counterfeit. Extremely rough sandy appearing surfaces with many repeating depressions and incomplete letters with many of the letters having rounded bases.*



NETHERLANDS. *1897 10 Gulden:* *Counterfeit. Ridges of metal appear around some of the devices, especially noticeable on the profile. The fields are rough and exhibit a large number of odd-looking die polish markings and depressions.*



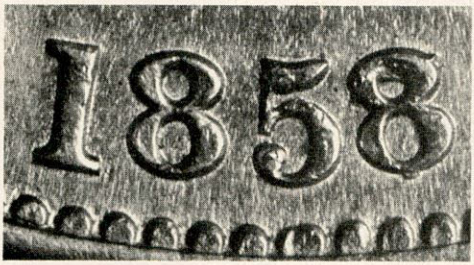
NETHERLANDS. *1912 5 Gulden:* *Counterfeit. Rough, almost sandy looking fields with numerous depressions and raised areas. One of the first things that catch the eye are the circular marks on the Queen's face, neck and hair.*



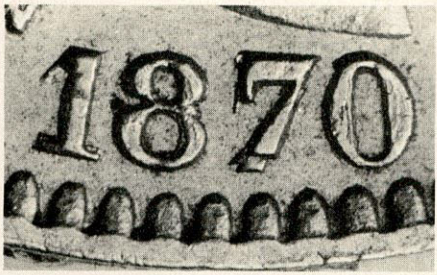
THAILAND COUNTERSTAMP (1851-61 A.D.) ON GENUINE PERU *1806 8 Reales.* *The fake modern counterstamp bears only a vague likeness to the genuine. Most of the fakes look much better than their genuine counterparts.*

Foreign Coin Varieties

Collectors of U.S. coins often allow themselves to believe that their collecting field has a monopoly on errors, varieties and coins in general. The coins illustrated below, however, show that this is not the case. Errors and varieties are found in the coinage of every country.



Great Britain 1858/7 One Penny: *Genuine.*



Belgium 1870/1870/70/ 20 Francs: *Genuine.*

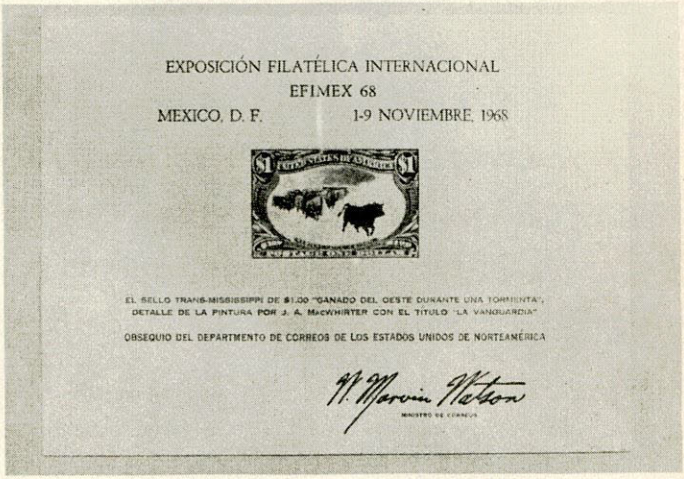
Counterfeit Souvenir Cards Surface

As ANA governor Grover Criswell left his home in Florida to attend the Midwinter Convention in Colorado Springs, he received in the mail three souvenir cards offered for sale. On close inspection, he found all three to be counterfeit. Two of the cards resembled BEP issues, and the third was similar to a U.S. Bank Note Company issue.

Criswell was informed by Bureau of Engraving and Printing Director Harry Clements that the BEP counterfeits are subject to seizure under the same laws that govern the treatment of counterfeit currency and stamps. Production of the U.S. Bank Note Company counterfeit is also illegal, but only as a violation of the Federal Trade Commission's consumer protection laws because the card does not feature the word "copy."

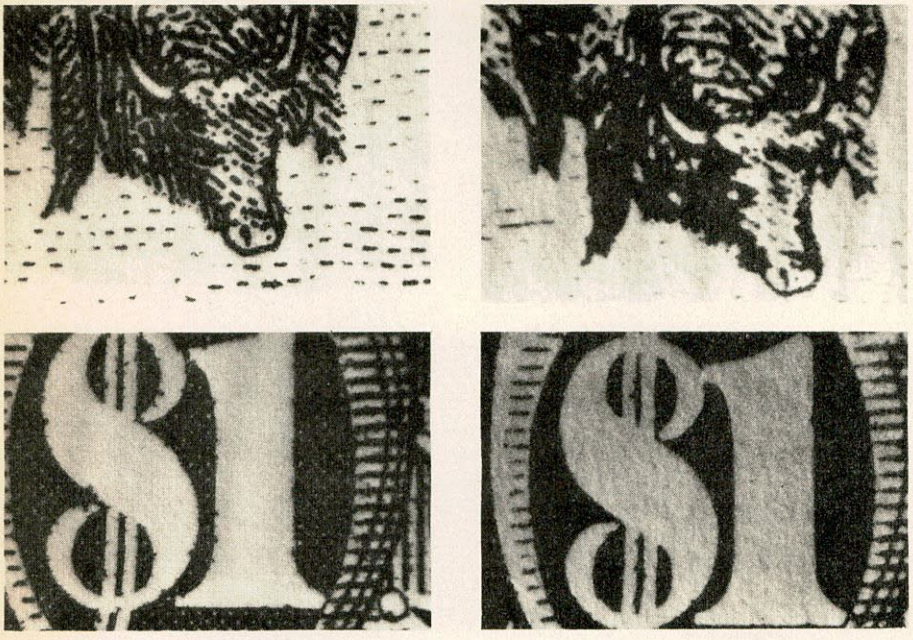
Counterfeit cards can be distinguished easily from the genuine articles. Authentic issues use the intaglio method of printing from engraved plates, and thus have a raised, readily detectable surface. Because considerable pressure is used in the printing process, the originals also show the impression on the reverse. Counterfeits are usually printed by a photo-offset process and consequently do not exhibit traits associated with genuine issues.

The counterfeit cards received by Criswell were of good color and precise weight, making it very easy for an unsuspecting buyer to overlook them in a group of genuine cards. The three pieces have been photographed and recorded by the ANA Certification Service, and the party responsible for distributing the counterfeit cards has been reported to the U.S. Secret Service.



Counterfeit of BEP issue for Efimex 68.

Genuine *Counterfeit*



The enlargements at the left vividly display the characteristics of authentic intaglio printing: a crisp, slightly raised design. Details of the counterfeit at right are muddy in appearance and no impressions can be noticed.