ADVANCE EDITION

Curiosities of American Coinage

By Alex. E. Outerbridge, Jr.

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MEMORANDUM (not for publication) **FROM THE AUTHOR.**

The "proof" of this paper was submitted to the National Sound Money League, 740 Monadnock Building, Chicago, with the request that any errors of fact or theory might be pointed out. The Secretary replied, "Your communication has been examined by our staff and found correct."

The proprietors of the *Bankers' Magazine*, N. Y., referring to the statements regarding the gold coinage, which appeared in a brief article in the July issue of that magazine, write (Aug. 19th, 1898): "The facts brought to light by your investigations are certainly important, and if you have not already done so we would suggest that you bring the matter to the attention of the Secretary of the Treasury, the Director of the Mint, and the Committee on Coinage of the House of Representatives"

7025 Germantown Ave.,
Philadelphia, Sept. 1st, 1898.

CURIOSITIES OF AMERICAN COINAGE.

By Alex. E. Outerbridge, Jr.[1]

It is remarkable, in view of the universal desire of mankind to obtain money, that so few persons, comparatively, really know anything about the early history of money, or the social and industrial conditions which led, long ago, to the substitution of pieces of coined money for direct barter, in short, when, where, and how, the art of coining and use of metallic money originated. These are interesting subjects for historical and archæological research, and they have a direct practical relation to the development of the modern science of money. Elsewhere I have gone over this classical ground, and I propose, on this occasion, to limit the field to be surveyed to that portion of the subject which relates particularly to the early history of American coinage and its modern developments. There are many curious and important facts relative to this coinage with which the people are either wholly or in part unacquainted.

My subject will be comprised under four heads, viz.: 1. The functions of money; 2. The early Colonial coinage; 3. The coinage by private individuals or companies; 4. The National coinage.

THE FUNCTIONS OF MONEY.

In "Money and the Mechanism of Exchange," Professor Jevons relates an amusing experience of a Parisian singer who made a professional tour of the world some years ago. In crossing the Pacific Ocean the steamship was unexpectedly compelled to call at the Society Islands, where she was detained for a day or two. A few foreigners who were there invited the singer to give a concert, agreeing that she should receive one-third of the gross proceeds. The lady accepted the invitation, and the concert was well attended by the natives, who

[1] A lecture delivered in the Museum of Science and Art, University of Pennsylvania, March 23d, 1898.

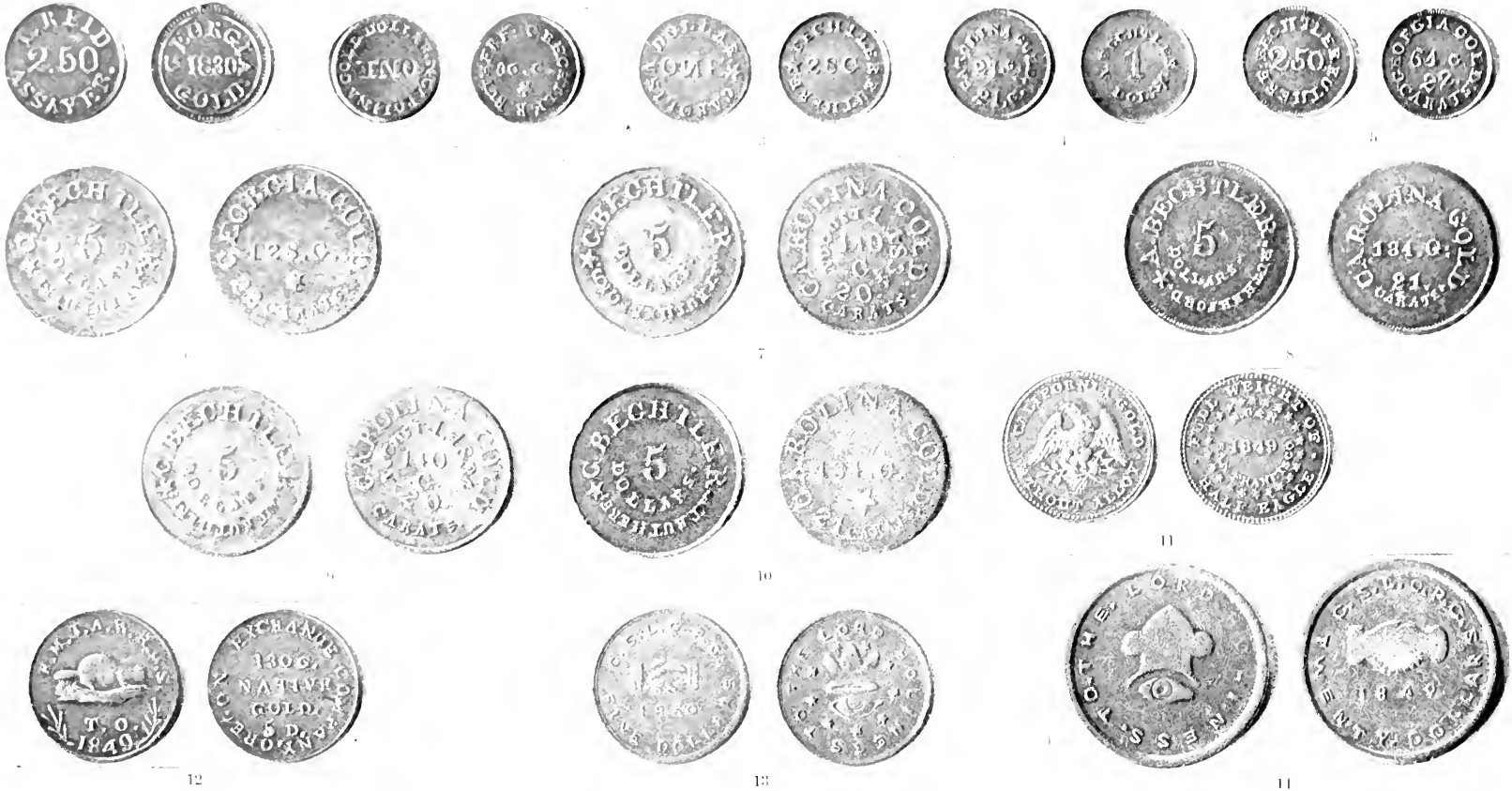
came from all parts of the islands. When the receipts were counted the lady found that her share consisted of several pigs, fowls, goats, and a large quantity of bananas, cocoanuts, and other tropical fruit. There was very little money in circulation on the islands, and as Mademoiselle could not consume any considerable portion of her share of the proceeds of the concert it became necessary to feed the live stock with the fruit.

This story is told to illustrate a difficulty which arose in the earliest commercial transactions from the want of a common medium of exchange, which difficulty led to the invention (about 700 B. C.) of coined money as a "go-between" or substitute for direct barter.

At the first glance it might appear a simple matter for the butcher, the farmer, or the miller to make due exchange of commodities without the intervention of the go-between called money, but a little reflection will soon reveal at least three great difficulties: First, that of finding two persons whose disposable goods mutually suit each other's wants; second, the impracticability of subdividing many articles; for example, a tailor cannot cut up a coat into small portions without destroying its value; third, the complexities involved in equitably adjusting the relative values of various commodities. These and other difficulties led to the selection, quite early in the history of civilization, of certain substances which, by common consent, were received by all persons in exchange for all commodities at certain rates by mutual agreement. A curious variety of materials have, at different times, and in different countries, served this useful purpose, and it is evident that such substances would soon come to possess the two great functions of money, viz.:

1. A common medium of exchange.
2. A common measure of value.

In the most primitive age the skins of wild animals were usually selected, being both useful and portable. Even in the early part of this century the business of the Hudson Bay Trading Company was transacted with the North American Indians entirely on this basis; a gun, for example, was valued at "twenty beaver skins." In Massachusetts (and other colonies)



No. 1. $2.50 gold piece. T. Reid. Georgia gold, 1830.
2. $1.00 gold piece. N. Carolina gold. C. Bechtler.
3. $1.00 gold piece. Carolina gold. Bechtler.
4. $1.00 gold piece. Carolina gold. A. Bechtler.
5. $2.50 gold piece. Georgia gold. Bechtler.
6. $5.00 gold piece. Georgia gold. C. Bechtler.
7. $5.00 gold piece. Carolina gold. C. Bechtler.
8. $5.00 gold piece. Carolina gold. A. Bechtler.
9. $5.00 gold piece. Carolina gold. C. Bechtler (20 carats).
10. $5.00 gold piece. Carolina gold. C. Bechtler (21 carats).
11. $5.00. California gold. N. G. & N., 1849.
12. $5.00. Oregon Exchange Co., 1849.
13. $5.00. Utah (Holiness to the Lord), 1850.
14. $20.00. Utah (Holiness to the Lord), 1849.

prior to the Revolution specie was at times so scarce that laws were passed legalizing the payment of taxes in skins, cattle, and farm products.

It is said that in the mountainous districts of Kentucky, skins are used even to this day as currency to a limited extent by the natives.

In Massachusetts a law was enacted, March 4th, 1634, as follows: "It is likewise ordered that muskett bulletts, of a full boare, shall pass currantly for a farthing a-piece, provided that noe man be compelled to take above XII pence att a tyme in them."

EARLY COLONIAL COINAGE.

The inconvenience experienced from the want of specie caused the colony of Massachusetts to establish a mint as long ago as the year 1652; this was exactly 140 years before the establishment of the National Mint in Philadelphia. The Massachusetts law provided for the coinage of "shillings," "6 pence" and "3 pence," all of sterling silver, that is, 925 parts of pure silver and 75 parts of copper; the law stipulated that the coins were "to be reduced in weight 2 pence in the shilling less than the English coin." A curious mistake occurred in the calculation whereby these shillings were made $5\frac{1}{2}$ grains too light, but they served a good purpose notwithstanding. The device upon the coins is a "pine tree," and the Massachusetts pine-tree shillings are now so rare that they are only to be found in cabinets of coins.

The British Government opposed the establishment of this mint, as it did in fact all manufacturing industries of every kind in the colonies, but the mint continued in active operation for over thirty years and Maryland soon followed Massachusetts' example. These were the only silver coins issued before the Revolution, but several other American colonies issued copper coins. After the Revolution silver was coined by the different States, and even by private individuals, and very soon after peace was established Congress began agitating the subject of a national coinage. Robert Morris, the financier, was directed to present a scheme of coins and currency. His first

report (prepared by the assistant financier) was presented in 1782 and it proposed a decimal system, which has been adopted, but all the other features were discarded, chiefly on account of the diminutiveness of the proposed "unit," which was only one-tenth of a penny. Jefferson said in the discussion "a horse or bullock of $80 value would require a notation of six figures, to wit: 115,200 units." A few years later Jefferson himself presented a report proposing the Spanish milled dollar as a suitable unit, as this coin was very familiar to the people and of a convenient size; these proceedings were under the "confederation" and one of the articles of the original compact permitted coinage "by the respective States." Vermont, Connecticut, Massachusetts, and other States issued coins under this arrangement for a few years, until the Constitution in 1787 vested the right of coinage solely in the General Government.

For some reason, not known, the code of laws for establishing the National Mint was not formulated until five years later.

The Act of April 2, 1792, provided for the establishment of a Mint, and for the coining of ten, five, and two-and-a-half dollar gold pieces; also one dollar, one-half, one-quarter, one-tenth of a dollar in silver; one cent and half-cent in copper.

Copper coins were struck at the Philadelphia Mint in 1792, some of these bore the head of Washington on one side, but he disapproved of the device and suggested the substitution of the head of Liberty. Since that time no American coin has ever displayed the head of any individual.

COINAGE BY PRIVATE INDIVIDUALS AND COMPANIES.

An exceedingly interesting curious, and, indeed, inexplicable feature of the early history of coinage of money in America, regarding which there is but little accurate information available at the present day, is the issuing, on a large scale, of gold, silver and copper coins (also "tokens") by private individuals and by trading companies. It will surprise many, no doubt, to learn the extent to which this practice was carried, and that it was permitted to exist until a comparatively recent period, notwithstanding the express prohibition in the Constitution of all such acts.

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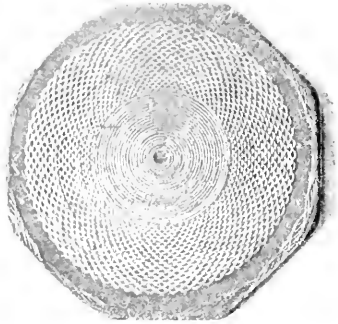

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No. 15. $5.00. California gold. S. M. V., 1850.
16. $5.00. Pikes Peak gold. 1860.
17. $5.63. Clark, Gruber & Co., Denver. 1861.

No. 18. $2.50. Clark Gruber & Co., Denver, 1861.
19. $50.00. Aug. Humbert, 1855. (887 thousandths.)
20. $50.00. Wass, Molitor & Co., 1855. (900 thousandths.)

No. 21. $10.00. Clark, Gruber & Co., 1861. Denver.
22. $20.00. Clark, Gruber & Co., 1861. Denver.
23. $10.00. Clark, Gruber & Co., 1860. Pikes Peak Gold.

In a report made to Congress by the Director of the Mint (Dr. Patterson) in 1840, these words may be found:

"Coinage of gold and silver, though withheld from the State, is freely permitted by individuals."

In 1850 the assayers of the Mint (Eckfeldt and Du Bois) reported: "There are several classes of gold coins which are struck within the national boundaries, but are not of the United States; these are Bechtler's coins of North Carolina and the California coins."

In 1851 the assayers reported that twenty-seven different kinds of gold coins, issued from fifteen private mints, had been received and assayed at the United States Mint in Philadelphia.

The earliest private coinage intended for use in the colonies of America (except the Bermuda "hog" coins) is known to numismatists under the general name "Rosa Americana," and the story connected therewith is most remarkable. In the year 1722, Mr. Wood, an iron founder of Wolverhampton, England, claimed to have discovered an alloy suitable for coins, consisting of copper, zinc and a small proportion of silver. Through the influence of a favorite of George I, known as the "Duchess of Kendall," a patent was issued by the King, dated July 12, 1722, together with a "Royal license," which was to continue for fourteen years, for coining "tokens" for Ireland and the colonies of North America to a large extent, viz., "three hundred tons;" the amount of the Irish coin was limited to £105,000, a great sum at that day.

A small royalty of £100 a year was to be paid into the King's exchequer and a salary of £200 to an officer of the Crown, called the "Comptroller." Sir Isaac Newton, then the Director of the Royal Mint, was chosen for this office, and he served for a short time, when he nominated a nephew, who succeeded him.

Thousands of Wood's base metal coins were struck for use in Ireland, and the issue would probably have been accepted by the people without question, had it not been that Dean Swift, then living in seclusion, saw in this scheme an opportunity to attack the English Government, and by his "Drapier's Letters," his poems, and other writings, all anony-

mously published, in which he mercilessly lampooned the scheme and all those who were in any way connected with it, he aroused a storm of fury that is said to have been "indescribable." A writer of the day said: "All parties, Catholics and Protestants, Whigs, Tories, Orangemen and Rapparees, were equally frantic. Merchants publicly announced they would not accept the coin, the very hawkers and link-boys refused it, declaring it would buy neither ale, tobacco, nor brandy. Wood's effigy was dragged through the streets of Dublin and burned. . . . The Privy Council offered a reward of £300 for the discovery of the author of the 'Drapier's Letters.'"

The King then ordered the proposed issue to be reduced to £40,000, but this did not assuage the excitement in the least, and it finally became necessary, in order to restore peace, to buy back the Royal license from Mr. Wood, by the payment to him of a pension of £3,000 a year for fourteen years.

This failure did not, apparently, kill the project for coining money for the American colonies, and the many pieces actually struck for that purpose are creditable specimens of the art at that period. On the obverse appears the head of the king and on the reverse a full blown rose, with the legend, "Rosa Americana," and the date "1722." On the later issues the head of George II appears and the date, 1733.

There is preserved in the Massachusetts archives a letter of instructions, dated October 29th, 1725, from the Duke of New Castle to the Governor of Massachusetts, saying:

Sir, His Majesty having been pleased to graunt to Mr. Wood his letters patent for the coining of two pence and half pence pieces of the value of money of Great Britain for His Majesty's dominions in America, which said coin is to receive such additional value as shall be reasonable and agreeable according to the customary allowance of exchange in the several parts of His Majesty's dominions, as you will see more at large by the patent which will be laid before you by the person that delivers this letter to you, I am to signify to you His Majesty's pleasure that in pursuance of a clause in said patent by which all His Majesty's officers are to be aiding and assisting Mr. Wood in the due execution of what is therein directed and in the legal exercise of the several powers and enjoyment of the privileges and advantages thereby graunted to him, you are to give him all due encouragement and assistance and that you and all such other of His Majesty's officers there, whom it may concern, do readily perform all legal acts that may be

requisite for that purpose. This I am particularly to recommend to your care, and to desire your protection to Mr. Wood and to those whom he shall employ to transact this affair in the Provinces under your government.

I am Sir

Yr Most Humble Servant

NEW CASTLE.

If we may rely upon the statement of an English writer of the day Mr. Wood's coin did not meet with a very cordial reception in America, for the pamphlet says:

"Wood obtained a patent for coining small money for the English plantations in America in which he had the conscience to make 13 shillings out of 1 pound of brass, this money they rejected in a manner not so decent as that of Ireland."

In the year 1830 Mr. Templeton Reid, of Georgia, established a private mint at which he coined $10, $5, and $2.50 gold pieces; these circulated freely through the South, and they were brought to the U. S. Mint in Philadelphia for deposit and re-melting in quantities. The assayer reported in 1842 that the $10 gold pieces of T. Reid weighed 248 grains, contained 942 parts of pure gold in 1,000 parts of metal, and the intrinsic value slightly exceeded the nominal value, being worth $10.06. These coins are now quite rare.

In 1831 Christopher Bechtler of Rutherfordton, N. C., followed Mr. Reid's example on a larger scale, and in a few years he had issued several million dollars worth of gold coins of denominations of $10, $5, $2.50, and $1.[1]

In 1842 the Mint assayers stated that "coining is still carried on by Bechtler, although there is a branch United States Mint less than eighty miles distant." This was located at Charlotte, N. C.

In 1851 the assayers reported that "several of the private issues of gold coins from California are close imitations of the national coin; some assay nearly up to the nominal value, but many fall below." A $10 piece of the Pacific Company only yielded $7.86 in gold. A lot of different denominations

[1] In 1840 Mr. Bechtler stated that the amount of his coinage to date was $2,241,840.

aggregating $562.50, nominal value, yielded at the Mint in Philadelphia $479.20.

One interesting gold coin, a $50 piece (some were octagonal), issued by Aug. Humbert, United States Assayer at San Francisco, yielded the full nominal value. All of these private issues have now been stopped, and strict laws have been passed punishing any attempt to imitate the coins of the nation; even the toy money formerly made for children of gilded paper has been prohibited by the government authorities.

THE NATIONAL COINAGE.

The Mint was established in Philadelphia in 1792 and in its first year issued copper coins only, coining of the other denominations of money, as already named, commenced in 1793.

Many persons believe that the so-called "Dollar of the Daddies," weighing 412½ grains (nine-tenths fine), having a ratio to gold of "16 to 1" in value when first coined, was the original dollar of the Constitution. This is, however, erroneous. The 412½ grain silver dollar was not authorized until forty-five years later. The original silver dollar weighed 416 grains, and the ratio of silver to gold was 15 to 1, not 16 to 1.

Several modifications in weight and fineness of both gold and silver coins were made during the first few years, prior to the Act of January 18, 1837, which greatly simplified the coinage by adopting the French decimal system, including a uniform "fineness" or proportion of 9 parts of gold to 1 part of copper for the gold coins, and the same proportion of silver and copper for the silver coins; the weights of the gold and silver coins were, at the same time, readjusted so as to make the ratio "16 to 1" between silver and gold.[1]

The total issue of silver dollars coined under the Acts of 1792 and 1837 until 1873, when the coinage was dropped, amounted

[1] The original silver dollar, authorized under the Act of April 2, 1792, contained 892.4 parts of pure silver in 1000 parts of metal and weighed 416 grains. The Act of January 18th, 1837, changed the proportion of silver to 900 parts in 1000 and the weight to 412½ grains, the amount of pure silver thus remained unchanged.

to $8,031,238. When the Bland Act was passed, in 1878, the silver in the silver dollar weighing 412½ grains was worth 89.1 cents; to-day the silver in the same dollar is worth about 42.5 cents. In the first four months after the Bland bill was passed 8,573,500 Bland dollars were coined, or more than the entire issue of the old silver dollars in eighty years. In the same year also the Mint coined 11,378,610 "trade dollars" which weighed 7½ grains more than the Bland dollars, but were not "legal tenders,"[1] and, though issued by the United States Mint, were refused by the United States Government in the payment for postage stamps, taxes, or for other dues, while the Bland dollar, of lesser intrinsic value, was a legal tender and good for payment of all debts. The total issue of trade dollars between 1873 and 1879 was 35,965,924, and the total issue of Bland dollars, from 1878 to the close of the fiscal year 1897, was 451,993,742.

The following table shows the total coinage value of all denominations of silver coin from the establishment of the United States Mint in 1792 to the end of the last fiscal year, June 30, 1897:

Dollars	1792 to February 12, 1873	$8,031,238 00
	1878 to June 30, 1897	451,993,742 00
Trade Dollars		35,965,924 00
Half "		134,033,195 00
Columbian Half Dollars		2,501,052 50
Quarter Dollars		52,395,052 00
Columbian Quarter Dollars		10,005 75
20 Cent Pieces		271,000 00
10 " "		29,428,613 90
5 " "		4,880,219 40
3 " "		1,282,087 20
Total		$720,792,129 75

It thus appears that the Bland dollars coined since 1878 exceed in coining value all the other issues of silver money

[1] The act of Feb. 12th, 1873, made the trade dollar a "legal tender in sums not exceeding $5.00; this legal tender quality was withdrawn by the joint resolution approved July 22d, 1876, and the coinage was limited to such amount as the Secretary of the Treasury should consider sufficient to meet the export demands."—*United States Treasury Department Circular No. 143.*

from the establishment of the Mint, in 1792, to the present day.

Although Congress appropriated a sum of money ($40,000) to "pay the freight" on Bland dollars from the Mints, or Sub-Treasuries, to any part of the country, the government has never succeeded in getting more than a small proportion of the vast accumulation of Bland dollars into circulation. It became necessary, therefore, to construct enormous storage vaults of steel, some of which will hold more than one hundred million of these dollars. The depreciation in market value of silver in the Bland dollars and uncoined bars is estimated to be about $200,000,000.

The dropping of the original 412½ grain silver dollar from the law of 1873 was purposely done in order to make a place for the new silver coin called the "trade dollar," ostensibly intended for foreign trade only, actually put into circulation to a large extent at home at a profit to silver owners, the "free coinage" privilege and falling market value of silver made these transactions remunerative. Some people who accepted the trade dollars in good faith suffered loss.[1] This was the first entering wedge of the silver speculation which has attained such gigantic proportions.

The first coinage of the country was, in a measure, experimental; there were several different and very complicated finenesses, or proportions of precious metal and alloy used. Then, in 1837, an admirably simple system of coinage proposed by Dr. Patterson was established. Later on various more or less absurd ideas were advanced and experiments were tried, such as the "goloid" dollars, consisting of silver and gold in proportions of 24 to 1 and 15½ to 1, invented and patented by

[1] Under the act of Feb. 19th, 1887, holders of trade dollars were permitted to exchange them for "Bland" dollars if presented at the Treasury, or any sub treasury, within six months from that date. Less than one-fourth were thus redeemed, (7,689,036), and since the expiration of the period of redemption, trade dollars have been purchased as bullion, at the market price of silver, when presented at the mints. Although containing more silver than the Bland dollar, the trade dollar is worth less than half as much, owing to the low price of silver.

Dr. W. W. Hubbell. Specimens of these freak coins were struck at the Philadelphia Mint in 1878.[1]

At the time that Congress was engaged in formulating laws for the establishment of the Mint and the regulation of the coinage in 1792, the production of silver in this country was insignificant in amount. From 1815 to 1857 inclusive, the silver output is estimated to have been about $50,000 each year. As long ago as the year 1853 the production of gold amounted to $65,000,000 and the annual output has never equaled that amount since that time. In 1860 the silver product amounted in value to $150,000. In 1861 it jumped suddenly to $2,000,000, in the following year to $4,685,000, in the next year to $8,500,000, and so on, by leaps and bounds, until, in 1878, we were turning out about $45,000,000 worth of silver (commercial value) per annum. This was the real reason why the Bland bill for the restoration of the old silver dollar, weighing 412½ grains, was introduced into Congress and passed over the President's veto. It was then supposed that a maximum output of silver had been attained, but this was far from the fact. Production increased amazingly even in the face of falling prices.

In 1878, the year the Bland bill became law, the average price of pure silver was $1.15 an ounce, and the output from American mines was less than 35,000,000 fine ounces. In 1896 the average value of an ounce of fine (pure) silver was 67 cents, but the output of silver had risen to nearly 59,000,000 fine-ounces. Since that time the price of silver has fallen still lower; to-day it is about 55½ cents per ounce.

In 1837, when the 412½ grain silver dollar was authorized,

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[1] Two different designs of goloid coins were struck:

1. The "goloid dollar," having the head of Liberty and motto "E Pluribus Unum" on the obverse, while on the reverse the following figures appear: 1 gold, 24 silver, .9 fine, 258 grains.

2. The "goloid metric dollar," having similar design on the obverse, and on the reverse the following figures: 15.3 gold, 236.7 silver, 28 copper, 14 grammes.

Proof specimens of these coins are preserved in the cabinet of the Mint in Philadelphia.

the pure silver contained therein (371¼ grains) was worth 100 cents in gold. To-day the pure silver in the Bland dollar is worth 42½ cents.

The value of any raw product depends mainly upon the relation between the production and consumption; when this remains constant the price of the commodity varies but little.

The commercial ratio of silver to gold has been carefully determined by Dr. A. Soetbeer, the renowned statistician, from the years 1687 to 1832; by Pixley and Abell from 1832 to 1878, and after the latter date by the daily cablegrams from London to the Bureau of the Mint. These tables show that the ratio between silver and gold vibrated between the limits of a trifle below 15 to 1 and 16 to 1 for nearly two centuries. In 1873 the ratio was almost exactly 16 to 1, then the great flood of silver began to pour out from the famous Comstock lode and other mines in the West, so that production soon far exceeded consumption. The government was compelled by the "Bland" Act of February, 1878, to purchase silver at the rate of "not less than $2,000,000 worth per month." This continued without interruption for twelve years (from 1878 to 1890) during which time more than four hundred million silver dollars were coined. The Sherman Act, repealing the coining of the Bland dollars, really made matters worse, in some respects, as it authorized the purchase by the government of not less than 4,500,000 ounces of silver per month, and 168,674,682.53 fine ounces were purchased in four years (1891–1894) at a cost to the government of $155,931,002.25, under the act of July 14th, 1890. The average price paid for this silver was almost 92½ cents per ounce. At the present market price (55½ cents per ounce) there is a depreciation in value of $62,316,553.45 on the silver pigs purchased under this act. Notwithstanding these heroic efforts to sustain the price of silver through the compulsory purchase by the government of such vast quantities of the metal, the flood continued rising higher and higher while the price descended lower and lower, thus proving that silver obeys the law of all commodities, and that any attempt to sustain the price by artificial means, even when

backed by such a rich and powerful government, and carried out on such a great scale, must surely fail.[1]

COINING OF GOLD.

If the question should now be asked you, "What denomination of gold money of the United States has been most largely coined since the establishment of the Mint in 1792?" you would probably say the "gold dollar, of course." The answer would be wrong—very wrong. Less than twenty million gold dollars in all have been struck, and their coinage has been entirely discontinued for nearly ten years. If, on the other hand, the question should be asked, "Which denomination of gold money has been coined most sparingly?" you would probably say, "the double-eagle." Again the answer would be wrong.

Although the double-eagle was not authorized until 1849, fifty-seven years after the Act which authorized the eagle, half-eagle and quarter eagle, more double-eagles have been coined than of any other denomination of gold, and the intrinsic value thereof is more than twice that of all the other gold coins put together. The total value of all gold coined in the United States Mints, except the double eagles, from the organization of the Mint in 1792 to June 30, 1897, is $548,840,918. The value of the double-eagles coined since 1850 (the first year of their coinage) to June 30, 1897, is $1,337,498,040.

[1] Circular No. 143 (dated July 1st, 1897), issued by the United States Treasury Department, says, p. 63: "The stock of gold and silver in the world in 1873 and 1896 is estimated to have been as follows:

	1873.	1896.
Gold	$3,015,000,000	$4,100,000,000
Silver	1,817,000,000	4,200,000,000

The commercial value of silver in 1896 was less than one-half of its value per ounce line in 1873; notwithstanding this great fall in price, the estimated value of silver in the world in 1896 exceeded the estimated value of gold at that time, while in 1873 the estimated value of silver was only 59½ per cent. of the estimated value of the gold in the world.

Stated in other terms, the gain in estimated value of gold is 34.65 per cent., while the gain in estimated value of silver in the same period is 131 per cent.

A circular issued by the United States Treasury Department says: "The total coinage of gold by the Mints of the United States from 1792 to June 30, 1897, is $1,886,338,958, of which it is estimated that $671,676,250 is now in existence as coin in the United States." The pamphlet explains in detail the basis upon which the estimate of the gold coin in the United States was established, and says: "It will be seen that more than two-thirds of the gold coins struck at the mints of the United States have disappeared from circulation." This is an astounding statement. What has become of all this vast store of gold, amounting in value to $1,214,662,708, or more than 90 per cent. of the value of the entire issue of double eagles?

It is not a mere theory of mine that the disappearance from circulation of about two-thirds in value of all the gold coins struck at the Mints of the United States is due in part to the preponderance of coinage of double eagles. Thirty-seven years ago the Director of the Mint called attention to the matter in his official report as follows: "The chief design of a National Mint is to subserve the interests of the people at large preferably to a few large owners of bullion or coin. The interests of the public and of depositors are not always concurrent in the matter under discussion. . . . The plain effect of issuing gold coin of a large size is to keep down the circulation of specie, and increase the use of paper money."

In the Director's report for the year 1880 I find the following: "In Great Britain the gold coinage consists almost wholly of sovereigns and half-sovereigns; in France, of twenty and ten-franc pieces; and in Germany of ten-mark pieces, all of these coins being of less value than five dollars. The absorption by France of $1,100,000,000 of gold imports into her circulation during the thirty years from 1850 to 1880 may in part be accounted for by the coinage of nearly all this gold into denominations of less than two and four dollars value."

The average coinage value of double-eagles during the past four years has been over $14,000,000 a year, as compared with a yearly average value during the same period of about $10,000,000 in eagles, $4,000,000 in half eagles, and $30,000 in

quarter eagles! It thus appears that we are still coining two-thirds of our gold into double-eagles that never pass into circulation and disappear immediately.[1] If, instead of pursuing this short-sighted policy for so many years, the people had been encouraged, by the issue of small denominations, on the return to specie payments in 1879, to circulate gold instead of paper, the gold could not have been so readily drained away from this country to foreign lands, as has unfortunately happened on a great scale during the past few years.

If these words shall produce any impression upon those in authority, and thus lead to a modification of our coinage laws or customs in this regard, the attempt I have here made to combine with an academical discussion of the curiosities of American coinage some practical suggestions for improvement therein may not prove altogether futile.

For nearly fifty years we have been coining double-eagles (not to mention eagles) that are, as a rule, immediately shipped to Europe; there they go at once to the melting-pot, and are converted into British sovereigns (having a different proportion of alloy) or into gold coins of other nations; as soon as the rate of exchange changes beyond a certain degree these brand-new foreign gold coins are to some extent shipped back to us, and they in turn go to the melting-pot at the Mint, where the proportion of alloy is again changed to make the standard of the United States (9-10 fine). The gold is then recoined, shipped back to Europe, and so the process is repeated indefinitely.

In addition to the large expense involved in this useless and endless work there is irrevocable loss of precious metal with

[1] The following table shows the gold coinage executed at the mints of the United States during the fiscal year ended June 30th, 1897:

Denomination.	Number.	Value.
Double Eagles.....	2,990,211	$59,804,820.00
Eagles.....	801,501	8,013,010.00
Half Eagles.....	747,802	3,739,010.00
Quarter Eagles.....	23,916	59,865.00
Total gold.....	4,566,230	$71,616,705.00

each handling, melting, and coining. I believe that all this is unnecessary. It would be perfectly feasible for the nations to agree upon some simpler method of adjusting trade balances at a tithe of this cost; and even if the time shall not yet have come for making such settlements by a sort of international clearing house, a partial solution of the difficulty would be found in the adoption of an international gold coin, or in the more general employment for export of fine gold bars instead of coin, which have been assayed at the mints or United States Assay Offices and officially stamped with their weight and fineness. There is less risk of loss by robbery in transshipment of such bars, and counterfeiting is not likely to prove a dangerous impediment for several reasons, one of which is that such bars do not pass into general circulation.

It is, of course, necessary, before we can hope to interest foreign governments in any improvement in international monetary matters, that we should adopt a reform in our own currency, bringing order out of the present chaotic condition.

In conclusion, I desire to call your particular attention to the valuable collection of early American coins, as well as coins of other nations, deposited in this Museum by Mr. Robert C. H. Brock, of Philadelphia, from which the Director, Mr. Culin, has had the illustrations made. This collection is rich in specimens of all of the issues mentioned, and they are in excellent preservation.

ADDENDUM—"Pattern pieces" only were struck at the Mint in Philadelphia, in 1792; the regular coinage of copper cents and half cents began in 1793; the coining of silver commenced in 1794, and of gold in 1795.