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PROCEEDINGS  
OF THE  
ASSAY COMMISSION OF 1888;

ALSO,

LAWS OF THE UNITED STATES RELATING  
TO THE ANNUAL ASSAY,

AND

RULES FOR THE ORGANIZATION AND GOVERNMENT OF THE BOARD  
OF ASSAY COMMISSIONERS.

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# ANNUAL ASSAY.

1888.

Conformably to the provisions of section 3547 of the Revised Statutes of the United States, the Assay Commissioners *ex-officio* and designated by the President met at the mint at Philadelphia Wednesday February 8, 1888, to examine and test the fineness and weight of the gold and silver coins reserved for the purpose during the calendar year 1887, from the coinage of the mints at Philadelphia, San Francisco, Carson City and New Orleans.

The Commissioners came to order with Judge William Butler in the chair, and a clerk from the Bureau of the Mint secretary. Thereupon the following letter was read :

EXECUTIVE MANSION, *January 9, 1888.*

SIR : The following-named gentlemen are hereby designated as commissioners to test and examine the weight and fineness of the coins reserved at the several mints during the year 1887, pursuant to the provisions of section 3547 of the Revised Statutes: Zebulon B. Vance, United States Senate; Thomas M. Norwood, House of Representatives; George F. Becker, San Francisco, Cal.; C. Elton Buck, Wilmington, Del.; Charles B. Dudley, Altoona, Pa.; W. P. Lawver, Bureau of the Mint, Washington; J. W. Mallet, University of Virginia, Va.; Alfred M. Mayer, Hoboken, N. J.; Frank Nicholson, St. Louis, Mo.; John M. Ordway, New Orleans, La.; Charles S. Peirce, Milford, Pa.; Charles E. Pellew, New York, N. Y.; Raphael Pumpelly, Newport, R. I.; David K. Tuttle, Carson City, Nevada; Henry F. Wild, Boise City, Idaho.

GROVER CLEVELAND.

Hon. CHARLES S. FAIRCHILD,  
*Secretary of the Treasury.*

The roll of the Commission was called, and the following members ascertained to be present: Messrs. Butler, Torrey, Vance, Norwood, Becker, Buck, Dudley, Lawver, Mallet, Mayer, Nicholson, Ordway, Pellew, Pumpelly, Tuttle, Wild; also the Director of the Mint. Absent: The Comptroller of the Currency (Mr. W. L. Trenholm) and Mr. Peirce.

On motion of Mr. Buck, the reading of extracts from the statutes,



the minutes of the last annual meeting of the Commission and rules for organization, was dispensed with.

The Chair announced the following committees:

*On Counting*.—Messrs. Becker, Lawver, Mallet, Mayer, Norwood, Peirce.

*On Assaying*.—Messrs. Pumpelly, Becker, Buck, Dudley, Lawver, Mallet, Mayer, Nicholson, Ordway, Pellew, Torrey, Trenholm, Tuttle, Vance, Wild.

*On Weighing*.—Messrs. Mayer, Dudley, Mallet, Norwood, Peirce.

On motion of Mr. Lawver, a recess was taken until such time as the committees might be ready to submit reports.

An official communication read from the Director of the Mint reported that during the calendar year 1887 there were no changes in the *personnel* of the executive offices of the coinage mints of the United States:

TREASURY DEPARTMENT,  
BUREAU OF THE MINT,  
Washington, D. C., February 7, 1888.

GENTLEMEN: I have the honor to inform you that during the calendar year 1887 no changes were made in any of the executive offices of the United States mints at Philadelphia, San Francisco and New Orleans.

No coinage was executed during the year at the mint at Carson City, Nevada.

Very respectfully,

JAS. P. KIMBALL  
*Director of the Mint.*

To the BOARD OF ASSAY COMMISSIONERS OF 1888.

FRIDAY, February 10, 1888.

The Commission met at 10.15 A. M. Present: Messrs. Butler, Torrey, Norwood, Becker, Buck, Dudley, Lawver, Mallet, Mayer, Nicholson, Ordway, Peirce, Pellew, Pumpelly, Tuttle, Wild.

Reports from the several committees were read by the respective chairmen and adopted, as follows:

*Report of the Committee on Assaying.*

PHILADELPHIA, February 9, 1888.

In compliance with the laws and regulations governing the committee, we have taken samples of coin reserved for assay at mints of the United States, viz., Philadelphia, San Francisco and New Orleans, as stated in the annexed schedules, the samples representing the deliveries

mentioned in the year 1887, from the coiners to the superintendents, and have assayed the individual coins, and the same in mass, with the results stated in the schedules.

*Reserved Gold Coins from the Mint at Philadelphia assayed by the Committee on Assaying at the Annual Assay, February 8, 1888.*

Date of delivery.	Denomination.	Fineness.
October 29.....	Eagle.....	900. 1
December 14.....	Dollar.....	900. 2
December 27.....	Three-dollar piece.....	900. 2
December 27.....	Quarter-eagle.....	Standard.
December 31.....	Eagle.....	900. 3

MASS-MELT.

\$490 eagles, \$12 in three-dollar pieces, \$12.50 in quarter-eagles, and \$7 in dollar pieces, coined during 1887—Fineness..... Standard.

*Reserved Gold Coins from the Mint at San Francisco.*

Date of delivery.	Denomination.	Fineness.
January 7.....	Half-eagle.....	899. 8
January 28.....	Eagle.....	899. 9
February 19.....	Half-eagle.....	900. 2
February 23.....	Eagle.....	899. 9
March 19.....	Half-eagle.....	899. 9
March 30.....	Eagle.....	Standard.
April 8.....	Half-eagle.....	899. 8
April 28.....	Eagle.....	899. 9
May 20.....	Half-eagle.....	899. 8
May 27.....	Eagle.....	900. 1
June 17.....	Half-eagle.....	Standard.
June 24.....	Eagle.....	Standard.
July 15.....	Eagle.....	Standard.
July 28.....	Half-eagle.....	899. 9
August 11.....	Half-eagle.....	899. 9
September 5.....	Half-eagle.....	900. 1
September 22.....	Eagle.....	899. 9
October 5.....	Eagle.....	899. 8
October 13.....	Double-eagle.....	900. 2
November 3.....	Double-eagle.....	899. 8
November 16.....	Double-eagle.....	900. 1
December 6.....	Double-eagle.....	899. 9
December 13.....	Eagle.....	900. 1
December 22.....	Half-eagle.....	899. 9

MASS-MELT.

\$200 double-eagles, \$160 eagles, \$90 half-eagles, coined during 1887—Fineness..899. 9

*Reserved Silver Coins from the Mint at Philadelphia assayed by the Committee on Assaying at the Annual Assay, February 8, 1888.*

Date of delivery.	Denomination.	Fineness.
January 16 and 28.....	2 Dollars.....	899. 8
February 19 and 23.....	2 Dollars.....	899. 3
March 5 and 7.....	2 Dollars.....	899. 6
April 26 and 30.....	2 Dollars.....	899. 1
May 2 and 11.....	2 Dollars.....	899. 8
June 2 and 3.....	2 Dollars.....	899. 3
August 12 and 24.....	2 Dollars.....	899. 3
September 3 and 17.....	2 Dollars.....	899. 3
October 4.....	2 Dollars.....	Standard.
November 5.....	2 Dollars.....	899. 3
December 19 and 21.....	2 Dollars.....	899. 6

MASS-MELT—DOLLARS.

110 one-dollars, coined during 1887—Fineness..... 899. 8

January 6.....	2 Dimes.....	Standard.
February 24 and 25.....	2 Dimes.....	899. 3
April 26 and 30.....	2 Dimes.....	899. 6
May 17 and 28.....	2 Dimes.....	899. 8
June 7 and 21.....	2 Dimes.....	899. 8
October 4.....	2 Dimes.....	899. 1
November 2.....	2 Dimes.....	899. 6
December 10.....	2 Dimes.....	899. 3

MASS-MELT—DIMES.

931 Dimes, coined during 1887—Fineness..... Standard.

*Reserved Silver Coins from the Mint at San Francisco.*

Date of delivery.	Denomination.	Fineness.
August 16 and 24.....	2 Dollars.....	899. 8
September 14 and 30.....	2 Dollars.....	899. 8
October 21 and 26.....	2 Dollars.....	Standard.
November 21 and 25.....	2 Dollars.....	899. 6
December 2 and 28.....	2 Dollars.....	899. 6

MASS-MELT.

50 Dollar-pieces, coined during 1887—Fineness..... 899. 8

May 13.....	2 Dimes.....	Standard.
August 10.....	2 Dimes.....	899. 1
November 18.....	2 Dimes.....	900. 4
December 14.....	2 Dimes.....	899. 6

MASS-MELT.

821 Dimes, coined during 1887—Fineness..... 899. 8

*Reserved Silver Coins from the Mint at New Orleans.*

Date of delivery.	Denomination.	Fineness.
January 15 and 28.....	2 Dollars.....	899.1
February 2 and 10.....	2 Dollars.....	900.7
March 7 and 30.....	2 Dollars.....	899.3
April 15 and 22.....	2 Dollars.....	899.3
May 5 and 16.....	2 Dollars.....	Standard.
June 10 and 17.....	2 Dollars.....	899.6
July 25 and 30.....	2 Dollars.....	899.8
August 11 and 29.....	2 Dollars.....	898.5
September 14 and 23.....	2 Dollars.....	898.9
October 14 and 28.....	2 Dollars.....	899.6
November 19 and 21.....	2 Dollars.....	899.6
December 23 and 26.....	2 Dollars.....	Standard.

## MASS-MELT.

120 Dollar-pieces, coined during 1887—Fineness ..... 900.4

From the foregoing it will be seen that the greatest excess in the assay value of the gold coinage above the standard at the different mints (the limit of tolerance being one-thousandth) is, at—

Philadelphia, .3 of .001.

San Francisco, .2 of .001.

The greatest deficiency below the standard (the limit of tolerance being one-thousandth) is, at—

Philadelphia,—there was no coin deficient.

San Francisco, .2 of .001.

The greatest excess in silver coin above standard (the limit of tolerance being three one-thousandths) is, at—

Philadelphia, no coin in excess.

San Francisco, .4 of .001, in the dimes.

New Orleans, .7 of .001.

The greatest deficiency below the standard (the limit of tolerance being three one-thousandths) is, at—

Philadelphia, .9 of .001, both in dollars and dimes.

San Francisco, .9 of .001, in the dimes.

New Orleans, 1.5 of .001.

The Assay Committee have also tested the inquartation silver and the lead used in the assays of the gold bullion, and found them free from gold.

The weights used were also tested, and found to be correct.

The acid used in the humid assay of silver was found to be free from silver, and also from chlorine.

The committee, therefore, deem the assays exhibited in the foregoing schedules to be trustworthy.

No coin among those examined was found to deviate from the standard fixed by law beyond the legal tolerance.

RAPHAEL PUMPELLY.	H. G. TORREY.
FRANK NICHOLSON.	W. P. LAWVER.
C. ELTON BUCK.	CHARLES B. DUDLEY.
JOHN M. ORDWAY.	ALFRED M. MAYER.
H. F. WILD.	J. W. MALLET.
DAVID K. TUTTLE.	GEO. F. BECKER.
CHARLES E. PELLEW.	



*Report of the Committee on Weighing.*

The Committee on Weighing respectfully report that they have completed the examinations required by law in the department assigned to them, with the following results:

1. The standard balance was adjusted so as to enable us to make weighings within one ten-thousandth (.0001) of an ounce.
2. Comparison was made of the United States standard troy pound-weight with the copy pound of the Mint, which was thus found to be correct within one ten-thousandth (.0001) of an ounce, which is as exact as is necessary or attainable under the conditions prescribed by law.
3. The standard pound was also compared with the sum of the six-ounce weight, four-ounce weight and two-ounce weight of the set used with the standard balance in our weighings, and the latter were thus found correct.
4. The weights used with the standard balance, from 100 ounces down, were compared with one another and found to be correct within the limits above mentioned.
5. The small balance by Becker used in weighing the single coins was brought into adjustment and found to be sufficiently sensitive for the purpose intended.
6. The weights used with the Becker balance were compared with those of the set used with the standard balance, and with one another, and found to be correct.
7. Weighings were made of individual samples from the different sets of reserved coins, with the Becker balance in proper adjustment, and within a degree of accuracy of one-hundredth (.01) of a grain. The following are the results, in which the deviations from the standard weights are expressed in hundredths of one grain:

*Reserved Gold Coins from the Mint at Philadelphia weighed by the Committee on Weighing at the Annual Assay, February 9, 1888.*

Date of delivery.	No. of delivery.	Denomination.	Deviation from standard weight, in grains.	
			Heavy.	Light.
October 29.....	4	One Eagle.....		.05
October 29.....	4	One Eagle.....		.04
December 27.....	6	One Quarter-Eagle.....		.03
December 27.....	7	One Three Dollars.....		.02
December 28.....	8	One Double-Eagle.....		.05
December 28.....	8	One Eagle.....		.11
December 28.....	8	One Half-Eagle.....		.03
December 28.....	8	One Three Dollars.....	.02	
December 28.....	8	One Quarter-Eagle.....		.08
December 28.....	8	One Dollar.....		.01
December 31.....	9	One Eagle.....	.16	

*Reserved Silver Coins from the Mint at Philadelphia weighed by the Committee on Weighing at the Annual Assay, February 9, 1888.*

Date of delivery.	No. of delivery.	Denomination.	Deviation from standard weight, in grains.	
			Heavy.	Light.
January 4.....	1	One Dollar.....		.51
January 4.....	1	One Dollar.....		.56
January 11.....	9	One Dime.....	.21	
January 11.....	9	One Dime.....	.26	
February 25.....	49	One Dollar.....		.07
February 25.....	49	One Dollar.....	.04	
February 25.....	50	One Dime.....	.48	
February 25.....	50	One Dime.....	.23	
February 25.....	56	One Dollar.....	.73	
March 4.....	83	One Dollar.....	.66	
April 5.....	117	One Dollar.....	.11	
May 5.....	144	One Dime.....		.07
May 26.....	155	One Dime.....	.17	
June 4.....	171	One Dollar.....		.12
June 30.....	176	One Dollar.....		.17
August 4.....	231	One Dollar.....	.72	
September 28.....	247	One Dime.....	.25	
October 11.....	260	One Dollar.....		.16
October 20.....	298	One Dollar.....		.27
November 28.....	318	One Dime.....	.03	
December 14.....	328	One Dollar.....	.63	
December 24.....				

MASS-WEIGHINGS—PHILADELPHIA MINT.

No gold coins for mass-weighing were submitted to the committee from this mint.

Denomination and number of pieces.	Weight.		
	Standard, ounces.	Actual, ounces.	Deviation, ounce.
220 Silver dollars.....	189.0625	189.0674	.0049 heavy.
170 Dimes.....	13.66375	13.6706	.0068 heavy.

Coins of this mint are therefore largely within the limits allowed by law.

## NEW ORLEANS MINT.

There were no gold coins from this mint.

*Reserved Silver Coins from the Mint at New Orleans weighed by the Committee on Weighing at the Annual Assay, February 9, 1888.*

Date of delivery.	No. of delivery.	Denomination.	Deviation from standard weight, in grains.	
			Heavy.	Light.
January 18.....	11	One Dollar.....		.01
February 3.....	20	One Dollar.....		.08
March 2.....	39	One Dollar.....		.88
April 15.....	64	One Dollar.....		.94
May 4.....	79	One Dollar.....	.03	
June 21.....	113	One Dollar.....		.82
July 25.....	118	One Dollar.....		.86
August 31.....	145	One Dollar.....		.74
September 27.....	163	One Dollar.....		.52
October 17.....	176	One Dollar.....		.16
November 9.....	191	One Dollar.....		.72
December 29.....	224	One Dollar.....	Standard.	

## MASS-WEIGHINGS—NEW ORLEANS MINT.

Denomination and number of pieces.	Weight.		
	Standard, ounces.	Actual, ounces.	Deviation, ounce.
240 Silver dollars.....	206.25	206.1469	.1031 light.

The above tables show that all of the coins of the New Orleans mint were considerably within the limits of tolerance allowed by law.

*Reserved Gold Coins from the Mint at San Francisco weighed by the Committee on Weighing at the Annual Assay, February 9, 1888.*

Date of delivery.	No. of delivery.	Denomination.	Deviation from standard weight, in grains.	
			Heavy.	Light.
January 8.....	5	One Half-Eagle.....	.04	
January 27.....	21	One Eagle.....	.05	
February 15.....	36	One Half-Eagle.....		.06
February 24.....	43	One Eagle.....		.05
March 28.....	67	One Eagle.....	Standard.	
March 31.....	71	One Half-Eagle.....	.02	
April 14.....	79	One Half-Eagle.....	.01	
April 27.....	88	One Eagle.....	.03	
May 26.....	104	One Half-Eagle.....		.04
May 28.....	106	One Eagle.....	.04	
June 18.....	119	One Half-Eagle.....	Standard.	
June 25.....	124	One Eagle.....		.03
July 18.....	128	One Eagle.....		.34
July 19.....	129	One Half-Eagle.....	.04	
August 11.....	140	One Half-Eagle.....	.09	
September 3.....	141	One Half-Eagle.....		.08
September 23.....	152	One Eagle.....	.01	
October 7.....	158	One Eagle.....		.07
October 17.....	166	One Double-Eagle.....		.16
November 5.....	171	One Double-Eagle.....		.03
December 7.....	184	One Double-Eagle.....		.19
December 19.....	187	One Half-Eagle.....	.03	
December 30.....	190	One Eagle.....		.01

## MASS-WEIGHINGS—SAN FRANCISCO MINT.

Denomination and number of pieces.	Weight.		
	Standard, ounces.	Actual, ounces.	Deviation, ounce.
30 Double-Eagles.....	32.25	32.2474	.0026 light.
100 Eagles.....	53.75	53.7457	.0043 light.
100 Half-Eagles.....	26.875	26.8733	.0017 light.

*Reserved Silver Coins from the Mint at San Francisco weighed by the Committee on Weighing at the Annual Assay, February 9, 1888.*

Date of delivery.	No. of delivery.	Denomination.	Deviation from standard weight, in grains.	
			Heavy.	Light.
March 4.....	2	Dime.....	.81	
May 6.....	5	Dime.....		.23
June 8.....	15	Dime.....	.57	
June 9.....	16	Dollar.....	.78	
August 5.....	21	Dime.....		.21
August 12.....	29	Dollar.....	.60	
September 27.....	52	Dollar.....	.83	
October 20.....	58	Dollar.....		1.37
November 2.....	62	Dime.....	.24	
November 30.....	100	Dollar.....		.81
December 2.....	101	Dollar.....		.78
December 21.....	115	Dime.....	.93	

MASS-WEIGHINGS—SAN FRANCISCO MINT.

Denomination and number of pieces.	Weight.		
	Standard, ounces.	Actual, ounces.	Deviation, ounce.
100 Silver dollars.....	85.8375	85.9441	.0066 heavy.
120 Dimes.....	9.645	9.6355	.0095 light.

The above tables show that all of the coins examined from this mint were correct within the limits of tolerance allowed by law.  
All of which is respectfully submitted.

ALFRED M. MAYER.  
J. W. MALLET.  
CHAS. B. DUDLEY.  
C. S. PEIRCE.  
T. M. NORWOOD.

*Report of the Committee on Counting.*

FEBRUARY 10, 1888.

GENTLEMEN: The Committee on Counting respectfully submit the following report:

The packages of coins reserved for assay by the several mints, in accordance with section 3539, Revised Statutes, were delivered to us by the Superintendent of the Mint at Philadelphia.

The indorsements on all the packages were carefully compared with

the transcripts sent to the Director of the Mint by the several superintendents. They were found to correspond, except in respect to a few clerical errors on the packages from the Philadelphia Mint. These errors did not involve the amounts of coin inclosed, and were corrected by reference to the original records. The full number of packages called for by the records was found to be present.

The quantities of coin reserved at the several mints for the purposes of the Commission, consisting of unselected samples of each delivery, were as follows:

1. Gold coins from the mint at Philadelphia, 99 in number, of the value of \$749.50.

2. Silver coins from the mint at Philadelphia, 15,814 in number, of the value of \$10,719.65.

3. Silver coins from the mint at New Orleans, 5,775 in number, of the value of \$5,775. No gold coins appear to have been struck at this mint during the year.

4. Gold coins from the mint at San Francisco, 3,012 in number, of a value of \$23,390.

5. Silver coins from the mint at San Francisco, 3,115 in number, of a value of \$1,108.90.

In all, 27,815 coins, of an aggregate value of \$41,743.05, as set forth in detail on a subsequent page.

After verification of the number of packages and of the indorsements upon them by this committee, the Committees on Weighing and Assaying each selected such material as they required, taking coin pro rata from at least two deliveries in each month, when more than one delivery had been made in such month; as explained in their respective reports. The packages from which the coin needful for their purposes were taken were returned to this committee with indorsements on the envelopes showing the quantities of coin remaining in the hands of the other committees. After a careful count of the coins remaining in the broken packages, we found that these, added to the sums with which the other committees had charged themselves, corresponded in all cases to the indorsements which stood upon the envelopes when they were first put into our hands. These broken packages were returned by us to the Superintendent of the Philadelphia Mint.

The packages not found needful for the purposes of the Commission, after a second comparison with the records, were likewise returned by us with seals unbroken to the Superintendent of the Mint at Philadelphia, to whose custody they are committed by law.

The material in the hands of the Committees on Weighing and Assaying was turned over by them to the Superintendent of the Mint and not returned to us.

Very respectfully,

GEO. F. BECKER.  
T. M. NORWOOD.  
J. W. MALLET.  
ALFRED M. MAYER.  
W. P. LAWVER.  
C. S. PEIRCE.

To the BOARD OF ASSAY COMMISSIONERS OF 1888.

## ANNUAL ASSAY, 1888.

COINS RESERVED DURING CALENDAR YEAR 1887.

## MINT AT PHILADELPHIA.

Denominations.	Pieces.	Value.
GOLD.		
Double-Eagles.....	4	\$80 00
Eagles.....	58	580 00
Half-Eagles.....	4	20 00
Quarter-Eagles.....	11	27 50
Three Dollars.....	10	30 00
Dollars.....	12	12 00
	99	749 50
SILVER.		
Dollars.....	10,149	10,149 00
Half-Dollars.....	7	3 50
Quarter-Dollars.....	9	2 25
Dimes.....	5,649	564 90
	15,814	10,719 65
Total pieces and value.....	15,913	11,469 15

## MINT AT SAN FRANCISCO.

Denominations.	Pieces.	Value.
GOLD.		
Double-Eagles.....	283	\$5,660 00
Eagles.....	817	8,170 00
Half-Eagles.....	1,912	9,560 00
	3,012	23,390 00
SILVER.		
Dollars.....	886	886 00
Dimes.....	2,229	222 90
	3,115	1,108 90
Total pieces and value.....	6,127	24,498 90

## MINT AT NEW ORLEANS.

Denomination.	Pieces.	Value.
SILVER.		
Dollars.....	5,775	\$5,775 00

## RECAPITULATION.

Mints.		
GOLD.		
Philadelphia.....	99	\$749 50
San Francisco.....	3,012	23,390 00
Carson.....		
New Orleans.....		
	3,111	24,139 50
SILVER.		
Philadelphia.....	15,814	10,719 65
San Francisco.....	3,115	1,108 90
Carson.....		
New Orleans.....	5,775	5,775 00
	24,704	17,603 55
Total.....	27,815	41,743 05



The minutes were then read.

The test of the troy weights used at the mint at Philadelphia, referred to by the Committee on Weighing, was made in the presence of the Assay Commission.

On motion of Mr. Mallet, it was—

*Resolved*, That the Assay Commission having examined and tested the reserved coins of the several mints for the year 1887, and it appearing that these coins do not differ from the standard fineness and weight by a greater quantity than is allowed by law, the trial is considered and reported as satisfactory.

On motion of Mr. Norwood, a recess was taken until 1 o'clock to sign the record.

The Commission adjourned *sine die*.

WM. BUTLER.  
T. M. NORWOOD.  
Z. B. VANCE.  
J. W. MALLET.  
H. F. WILD.  
GEO. F. BECKER.  
CHARLES E. PELLEW.  
CHAS. B. DUDLEY.  
D. K. TUTTLE.  
W. P. LAWVER.  
ALFRED M. MAYER.  
C. S. PEIRCE.  
RAPHAEL PUMPELLY.  
C. ELTON BUCK.  
H. G. TORREY.  
JOHN M. ORDWAY.  
FRANK NICHOLSON.

Present:

JAS. P. KIMBALL

Director of the Mint.

Coinage executed at the mints of the United States during the calendar year ended December 31, 1887.										
Denomination.	Philadelphia.		San Francisco.		Carson.*		New Orleans.		Total.	
	Pieces.	Value.	Pieces.	Value.	Pieces.	Value.	Pieces.	Value.		
<b>GOLD.</b>										
Double-eagles.....	121	\$2,420 00	283,000	\$5,660,000 00					283,121	\$5,662,420 00
Eagles.....	53,690	536,800 00	817,000	8,170,000 00					870,680	8,706,800 00
Half-eagles.....	87	586,435 00	1,912,000	9,560,000 00					1,912,087	9,560,435 00
Three dollars.....	6,160	18,480 00							6,160	18,480 00
Quarter-eagles.....	6,252	15,705 00							6,252	15,705 00
Dollars.....	8,543	8,543 00							8,543	8,543 00
Total gold.....	74,573	\$82,883 00	3,012,000	23,390,000 00					3,086,573	23,372,883 00
<b>SILVER.</b>										
Dollars.....	20,290,710	20,290,710 00	1,771,000	1,771,000 00			11,550,000	\$11,550,000 00	33,611,710	\$33,611,710 00
Half-dollars.....	5,710	2,855 00							5,710	2,855 00
Quarter-dollars.....	10,710	2,677 50							10,710	2,677 50
Dimes.....	11,288,639	1,128,863 90	4,454,450	445,445 00					15,738,389	1,573,838 90
Total silver.....	31,591,069	\$21,424,636 40	6,225,450	2,216,445 00			11,550,000	\$11,550,000 00	49,366,519	\$35,191,081 40
<b>MIXED.</b>										
Five cents.....	15,263,632	763,182 60							15,263,632	763,182 60
Three cents.....	7,961	238 83							7,961	238 83
One cent.....	45,226,483	452,264 83							45,226,483	452,264 83
Total minor.....	60,498,096	1,215,686 26							60,498,096	1,215,686 26
Total coinage.....	92,164,038	\$23,222,795 66	9,237,450	25,606,445 00			11,550,000	\$11,550,000 00	112,951,488	\$60,379,150 66
* Coinage suspended March 8, 1885. No coinage executed at Philadelphia during July, 1887.										

\* Coinage suspended March 8, 1886.  
No coinage executed at Philadelphia during July, 1887.

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LAWS OF THE UNITED STATES  
RELATING TO THE  
RESERVATION OF COINS FOR THE ANNUAL ASSAY,  
AND TO THE  
DUTIES OF THE COMMISSIONERS.

REVISED STATUTES, JUNE 22, 1874.

TITLE XXXVII.

COINAGE, WEIGHTS, AND MEASURES.

STANDARD WEIGHT OF GOLD COINS.

SEC. 3511. The gold coins of the United States shall be a one-dollar piece, which, at the standard weight of twenty-five and eight-tenths grains, shall be the unit of value; a quarter-eagle, or two and a half-dollar piece; a three-dollar piece; a half-eagle, or five-dollar piece; an eagle, or ten-dollar piece; and a double-eagle, or twenty-dollar piece. And the standard weight of the gold dollar shall be twenty-five and eight-tenths grains; of the quarter-eagle, or two and a half-dollar piece, sixty-four and a half grains; of the three-dollar piece, seventy-seven and four-tenths grains; of the half-eagle, or five-dollar piece, one hundred and twenty-nine grains; of the eagle, or ten-dollar piece, two hundred and fifty-eight grains; of the double-eagle, or twenty-dollar piece, five hundred and sixteen grains.

STANDARD WEIGHT OF SILVER COINS.

SEC. 3513. The silver coins of the United States shall be a trade-dollar,\* a half-dollar, or fifty-cent piece, a quarter-dollar, or twenty-five cent piece, a dime, or ten-cent piece; and the weight of the trade-dollar shall be four hundred and twenty grains troy; the weight of the

\*Authority to coin "a trade-dollar" repealed by act of March 3, 1897.

half-dollar shall be twelve grams (grammes) and one-half of a gram (gramme); the quarter-dollar and the dime shall be, respectively, one-half and one-fifth of the weight of said half-dollar.

AN ACT to authorize the coinage of the standard silver dollar, and to restore its legal-tender character.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That there shall be coined at the several mints of the United States, silver dollars of the weight of four hundred and twelve and a half grains Troy of standard silver, as provided in the act of January eighteenth, eighteen hundred thirty-seven, on which shall be the devices and superscriptions provided by said act. \* \* \* (Passed February 28, 1878.)

#### STANDARD OF FINENESS.

SEC. 3514. The standard for both gold and silver coins of the United States shall be such that of one thousand parts by weight nine hundred shall be of pure metal and one hundred of alloy. The alloy of the silver coins shall be of copper. The alloy of the gold coins shall be of copper, or of copper and silver; but the silver shall in no case exceed one-tenth of the whole alloy.

#### ALLOWED DEVIATIONS FROM STANDARD FINENESS AND WEIGHT.

SEC. 3533. No ingots shall be used for coinage which differ from the legal standard more than the following proportions, namely: In gold ingots, one-thousandth; in silver ingots, three-thousandths. \* \* \*

SEC. 3535. In adjusting the weights of the gold coins, the following deviations shall not be exceeded in any single piece: In the double-eagle and the eagle, one-half of a grain; in the half-eagle, the three-dollar piece, the quarter-eagle, and the one-dollar piece, one-fourth of a grain. And in weighing a number of pieces together, when delivered by the coiner to the superintendent, and by the superintendent to the depositor, the deviation from the standard weight shall not exceed one-hundredth of an ounce in five thousand dollars in double-eagles, eagles, half-eagles, or quarter-eagles, in one thousand three-dollar pieces, and in one thousand one-dollar pieces.

SEC. 3536. In adjusting the weight of the silver coins the following deviations shall not be exceeded in any single piece: In the dollar, the half and quarter dollar, and in the dime, one and one-half grains. And in weighing [a] large number of pieces together, when delivered by the coiner to the superintendent, and by the superintendent to the depositor, the deviations from the standard weight shall not exceed two-hundredths of an ounce in one thousand dollars, half-dollars, or quarter-dollars, and one-hundredth of an ounce in one thousand dimes.

#### COINS TO BE RESERVED FOR THE ANNUAL ASSAY.

SEC. 3539. At every delivery of coins made by the coiner to a superintendent, it shall be the duty of such superintendent, in the presence of the assayer, to take indiscriminately a certain number of pieces of

each variety for the annual trial of coins, the number for gold coins being not less than one piece for each one thousand pieces or any fractional part of one thousand pieces delivered; and for silver coins one piece for each two thousand pieces or any fractional part of two thousand pieces delivered. The pieces so taken shall be carefully sealed up in an envelope, properly labeled, stating the date of the delivery, the number and denomination of the pieces inclosed, and the amount of the delivery from which they were taken. These sealed parcels containing the reserved pieces shall be deposited in a pyx, designated for the purpose at each mint, which shall be kept under the joint care of the superintendent and assayer, and be so secured that neither can have access to its contents without the presence of the other, and the reserved pieces in their sealed envelopes from the coinage of each mint shall be transmitted quarterly to the Mint at Philadelphia. A record shall also be kept at the same time of the number and denomination of the pieces so taken for the annual trial of coins, and of the number and denomination of the pieces represented by them and so delivered, a copy of which record shall be transmitted quarterly to the Director of the Mint. Other pieces may, at any time, be taken for such tests as the Director of the Mint shall prescribe.

#### CONSTITUTION OF COMMISSION.

SEC. 3547. To secure a due conformity in the gold and silver coins to their respective standards of fineness and weight, the judge of the district court for the eastern district of Pennsylvania, the Comptroller of the Currency, the assayer of the assay-office at New York, and such other persons as the President shall, from time to time, designate, shall meet as assay commissioners, at the Mint in Philadelphia, to examine and test, in the presence of the Director of the Mint, the fineness and weight of the coins reserved by the several mints for this purpose, on the second Wednesday in February, annually, and may continue their meetings by adjournment, if necessary. If a majority of the commissioners fail to attend at any time appointed for their meeting, the Director of the Mint shall call a meeting of the commissioners at such other time as he may deem convenient. If it appears by such examination and test that these coins do not differ from the standard fineness and weight by a greater quantity than is allowed by law, the trial shall be considered and reported as satisfactory. If, however, any greater deviation from the legal standard of weight appears, this fact shall be certified to the President; and if, on a view of the circumstances of the case, he shall so decide, the officers implicated in the error shall be thenceforward disqualified from holding their respective offices.

#### STANDARD WEIGHTS OF THE MINT.

SEC. 3548. For the purpose of securing a due conformity in weight of the coins of the United States to the provisions of this Title, the brass troy-pound weight procured by the minister of the United States at London, in the year eighteen hundred and twenty-seven, for the use of the Mint and now in the custody of the Mint at Philadelphia, shall be the standard troy pound of the Mint of the United States, conformably to which the coinage thereof shall be regulated.

SEC. 3549. It shall be the duty of the Director of the Mint to procure for each mint and assay-office, to be kept safely thereat, a series of standard weights corresponding to the standard troy pound of the Mint of the United States, consisting of a one-pound weight and the requisite subdivisions and multiples thereof, from the hundredth part of a grain to twenty-five pounds. The troy weights ordinarily employed in the transactions of such mints and assay-offices shall be regulated according to the above standards at least once in every year, under the inspection of the superintendent and assayer; and the accuracy of those used at the Mint at Philadelphia shall be tested annually, in the presence of the assay-commissioners, at the time of the annual examination and test of coins.



R U L E S  
FOR THE  
ORGANIZATION AND GOVERNMENT  
OF THE  
BOARD OF ASSAY COMMISSIONERS,  
ADOPTED BY THE BOARD IN 1880.

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I.

At the hour appointed for meeting by the Director of the Mint, if a quorum appears to be present he shall so announce, and the judge of the district court of the United States for the eastern district of Pennsylvania, or, in case of his absence, such member as the Commissioners present may designate, shall take the chair, and the Director's clerk, unless otherwise ordered by the Board, shall act as secretary.

II.

The letter of the President, or the Director of the Mint, naming the Commissioners who have been specially designated by the President of the United States, will be read, and the roll of the members, *ex officio*, and of the others accepting the appointment, will be called.

III.

A quorum being present, the secretary will read section 3547 of the Revised Statutes of June 22, 1874, under which the Commission is constituted; the several sections bearing upon the duties of the Commissioners; the rules for the organization and government of the Board; and the minutes of the last preceding assay.

IV.

The "reserved coins" having been produced by the officers in charge of them, the several packages in which they are contained will be opened in the presence of the Commissioners, or of a committee for that purpose appointed, who shall report to the Commission for confirmation, and the coin distributed by them in parcels with reference to their places of coinage and their metallic character, as follows:

1. Gold coins from the mint at Philadelphia.
2. Silver coins from the same.
3. Gold coins from the mint at San Francisco.
4. Silver coins from the same.
5. Gold coins from the mint at Carson.
6. Silver coins from the same.
7. Gold coins from the mint at New Orleans.
8. Silver coins from the same.

But when it shall be made known to the Board that at either of the mints there has taken place, during the year, a change in any of the officers that are responsible for the coinage, the coins made during the terms of the respective incumbents will be distributed in separate parcels.

## V.

The coins contained in each parcel having been examined and counted, the number will be compared with the number reported as "reserved," and, having been verified, the secretary will note the results on the minutes of the Commission.

## VI.

The chairman will then arrange the members of the Board in *two committees*; one to take charge of the *weighing*, the other of the *assaying*; with power to associate members interchangeably, and to require the manipulatory aid of the officers of the mint.

## VII.

## OF THE WEIGHING.

*a.* The Committee on Weighing shall take from each parcel of the coins, as distributed, two or more piles—each of ten or more pieces, and embracing two or more denominations—and five or more single pieces, of two or more differing denominations.

*b.* They shall arrange the piles, and the single pieces thus taken out, with the mint-marks downwards, in such order that the particular place of mintage shall be known only to the members of the committee.

*c.* The piles, and the single pieces, shall then be severally weighed under the scrutiny of the committee, and their respective weights ascertained; the piles to the one-thousandth of an ounce, the single pieces to the eighth of a grain; and the results shall be noted with a special reference as to any that may be found without the legal limits of weight.

*d.* The committee shall then examine the weights ordinarily employed in the Mint, and shall attest their accordance with the standards prescribed by law.

## VIII.

## OF THE ASSAYING.

*e.* The Committee on Assaying shall receive the residues of the several parcels of reserved coins; and adding to them—if it shall be necessary, but not otherwise—from the piles in the possession of the Committee on Weighing, shall first cause a portion of each parcel to be melted into an ingot of convenient size; and from each of the ingots so made they shall take test samples for assay.

*f.* They shall then select a convenient number, not less than three, of single pieces of divers denominations from each parcel; from which they shall take test samples for assay.

*g.* They shall then arrange all the test samples in such order as shall be known only to the members of the committee; and in that order such sample shall be assayed, the silver first, and the gold afterwards.

h. Should the operations of the assay be not consummated before the adjournment of the Board for the day, the parcels of reserved coins, ingots, and test samples will remain in a chest or vault, under the joint and separate charge of the chairman and the Director of the Mint.

## IX.

The weighings and assayings having been completed under the scrutiny of the committees, respectively, the committees will report, fully and specially, as to the coins of each mint.

## X.

And thereupon the Commissioners will proceed to declare their judgment by an open vote; and a full record thereof, and of all their doings, having been engrossed by the secretary, it will be signed by all the members, and delivered to the Director of the Mint. After which the Board will be adjourned *sine die*.

The foregoing rules are subject to such modifications or alterations as a majority of the Board may, at any time during each annual assay, deem expedient and proper.

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