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SITE of the

FIRST UNITED STATES BRANCH MINT IN CALIFORNIA

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George Tays

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THE FIRST UNITED STATES BRANCH MINT IN CALIFORNIA

In Spanish and Mexican California, coined money had always been a very scarce article. It seems to have been the policy of those two governments to allow as little as possible of their metallic currency to be taken to California, possibly for fear that it would be carried out of the country by foreign traders. At any rate, from the time of its founding until the American occupation, the standard of value in California was either the cow-hide or the aroba (25 lb. weight) of tallow. Most of the business transactions carried on in this country then were in terms of those two commodities. Barter for the articles in question was the means by which foreign merchants disposed of all their goods. What little metallic money circulated in California was composed of a diverse collection of Spanish, Mexican, American, English, French, Dutch and other national coins that had found their way to California on the various merchant-ships which visited these shores.

After the conquest by the United States, American money began to circulate more freely, but still not in sufficient volume to meet all the demands of the country. Then came the gold rush in 1848, and the amount of currency in circulation became inadequate to meet the great and rapidly increasing demands made on it. Coined money was then

practically abandoned, and gold dust became the accepted medium of exchange, with the ounce as the smallest unit of value. This, of course, was a very wasteful and inaccurate standard as the gold dust varied greatly in its fineness and the scales upon which it was weighed were not always exact. By this method, California was annually losing millions of dollars since all gold bullion had to be shipped to the Atlantic Coast. Gold circulated in California in the form of bars, ingots or slugs of various sizes and values. The gold dust was usually taken to some assay office where it was melted and converted into various forms stamped with the weight and assayer's initials to give them authenticity.

During the period from December 1848, to May 1850, more than 11,400,000 dollars worth of gold in various forms was shipped from California to the Philadelphia mint to be coined.[1] Thus, even before California had been admitted into the Union as a state, the people here were agitating for the establishment of a government assay office, or a branch mint, in San Francisco. Soon after Senator Gwin arrived in Washington he set to work in an effort to get a mint built in San Francisco.

President Millard Fillmore, in his first message

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1. H. C. Mervin, The life of Bret Harte, 34, 783-784.

to congress, on December 2, 1850, took note of the fact that the miners in California were being subjected to heavy losses, due to the large discounts they had to take on their bullion, because there was no mint on the Pacific Coast. He therefore recommended that a branch mint be established in San Francisco.[2]

The matter of the mint for San Francisco was before congress for the next year and a half. On March 31, 1852, Secretary of the Treasury Thomas Corwin submitted an estimate to the house committee of ways and means, on the cost of a branch mint at San Francisco. Plans and specifications had been prepared by a prominent Boston architect, but he had made no estimate of the cost as he had no information as to the cost of materials in San Francisco. But a San Francisco architect had furnished another plan which called for an expenditure of 876,000 dollars. That was the cost of the building only and the machinery would require an additional 200,000 dollars or 250,000 dollars. This plan called for a mint equipped to operate on the same scale as the one in Philadelphia. The secretary was of the opinion that a branch mint could be established for about 250,000 dollars.[3]

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2. President M. Fillmore, Message to Congress, December 2, 1850, Executive documents, 2nd session, 31st congress, 1850-1851, I, 10.
3. Secretary of Treasury T. Corwin, to Ways and Means Committee, House of Representatives, Washington, March 31, 1852, Executive document, No. 92, 1st session, 32d congress, 1851-1852, IX, I.

The state authorities also became active in trying to secure the establishment of the mint in San Francisco. To that end the California state legislature passed a joint resolution which they sent to the governor to be forwarded by him to the house committee of ways and means in Washington, and copies as well to the members of congress from California. The resolution stated that the senate and assembly of California instructed and requested the California congressional representatives to use their utmost endeavors to procure the establishment of a branch mint of the United States in this state at the earliest possible moment. This resolution was approved on April 9, 1852, and signed by Governor John Bigler; then it was forwarded to Washington by Secretary of State William V. Voorhies. It arrived in Washington, June 8, 1852, and was evidently given immediate consideration.[4]

A bill that had already been prepared and was being considered was soon brought up for a vote, so that on July 3, 1852, congress passed a bill authorizing the construction of a branch mint at San Francisco, and appropriating the sum of 300,000 dollars for that purpose.[5]

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4. California Legislature Joint Resolution, Sacramento, April 9, 1852, Miscellaneous executive document, No. 60, 1st session, 32nd congress, 1851-1852, I.
5. F. Soulé, The annals of San Francisco, 527; also H. H. Bancroft, History of California, VI, 629.

In a letter of August 5, 1852, the acting secretary of the treasury, William L. Hodge, sent to the speaker of the house of representatives, Linn Boyd, an estimate of expenses for one year at the proposed San Francisco mint. The secretary also pointed out that the limitations of 300,000 dollars for the cost of buildings and machinery would be entirely inadequate. He thought that the suggestion to use the assay office building and equipment with alterations and additional machinery would prove unsatisfactory. Even if extensions and enlargements were made, the establishment would always be more or less incomplete and badly arranged. Therefore he suggested that a new and proper building should be constructed for that purpose, with new and suitable machinery. The estimate of expenses for running the mint in San Francisco was as follows:[6]

Salary of superintendent	$ 4,500
Salary of treasurer	4,500
Salary of assayer	3,000
Salary of meter and refiner	3,000
Salary of coiner	3,000
Salary of assistants and clerks	17,000
Labor	50,000
Acid	100,000
Contingencies	15,000
	$200,000

In spite of Secretary Hodge's objections, the

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6. Secretary of Treasury W. L. Hodge to House of Representatives, Washington, August 5, 1852, Executive document No. 132, 1st session, 32d congress, 1851-1852, XIII.

money was used for the purchase and extension of the United States assay office which served as a mint for the next year or more.[7] It was estimated that the absence of a mint caused a loss of 10,000,000 dollars a year to the State. So Curtis and Perry, a firm of assayers on Commercial Street, contracted with the government to make certain additions to their establishment and put in the necessary machinery for the sum of 296,000 dollars. While this temporary plant was in operation, a new appropriation was made and work started on the new mint building in 1853. This structure was built on Commercial Street on a lot controlled by Jacob P. Leese, for which the government paid him 100 dollars for a quit claim deed to the lot, in 1856. It was on the north side of the street between Montgomery and Kearny streets. The mint was a dark, heavy-looking, brick building, sixty feet square, and three stories high; the brick covered with a fine cement and thoroughly fireproof. All the windows had heavy iron bars and shutters, the doors also being barred. High above, standing on and just peering over a high cornice, there was a large American eagle, looking down into the place as if it meant to see and take note of all that went on within. On the roof back of the eagle was a small forest of chimney

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7. Bancroft, History of California, VI, 629.

stacks, from which various kinds of smoke and different colored fumes issued.[8]

The machinery was of the newest, finest and strongest kind used in such establishments. It was manufactured in Philadelphia under the supervision of George Eckfeldt of the United States mint, and was installed by himself and his son, John M. Eckfeldt, the first coiner.[9]

The mint was reported completed on March 1, 1854, at a cost of 300,000 dollars. The contractors turned the building over to L. A. Birdsall, the first superintendent, and all was ready for receiving the first gold dust on April 3, 1854.[10] J. R. Snyder was the first treasurer; John Hueston, melter and refiner; A. Haraszthy, assayer, and they had some twenty-five assistants.

At that time, the prevailing charge for assaying and running into bars was one-half of one per cent of the value of the gold presented. For assaying and refining, the rate was eleven cents an ounce, or six-tenths of one per cent. Half of one per cent additional was charged for coining, so that the whole cost for turning gold dust into coin was one-

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8. Anonymous, "Coining money at San Francisco Branch Mint," Hutchings' California magazine, I, No. 4, 145-146, October 1856.
9. Soulé, The annals of San Francisco, 526.
10. Secretary of Treasury J. Guthrie, Report to Congress, Washington, December 4, 1854, Executive document No. 3, 2d session, 33d congress, 1854-1855, II, 357.

and one-tenth per cent. The Philadelphia mint charged only seven-eigths of one per cent for the same service but that was because labor and materials were much cheaper there than in San Francisco at that time.[11]

A visit to the San Francisco branch mint revealed many interesting details of its construction and operation. There was no alley or lot behind it where commercial vehicles could load or unload, so the pavement in front of the building was cluttered up with odd-looking square boxes, containing bottles of acid used in the refining of the gold and silver. The acid, due to its explosive nature, had to be stored in a warehouse outside the fire limits of the city. There were ordinances prohibiting the keeping of such materials in the city. The carting of the acid back and forth from mint to warehouse constituted a very heavy expense to the operation cost of the mint.

The street was always occupied by drays and wagons unloading supplies of various kinds for the mint; and express wagons arrived all day long with packages of the precious metals from the mines. Men went in and out of the door with sacks hanging heavily from their hands as they took in their gold and came out with minted coin.

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11. Bancroft, History of California, VII, 167.

At the door sat a watchman whose business it was to inquire from everyone who came to the door the reason for wishing admittance. Visitors who wished to see the operation of the establishment were admitted on a pass from the proper authorities, and a guide was provided to conduct, and explain the workings of each department.[12]

The gold, as it was brought into the mint, was received by a clerk at the treasurer's counter, where it was weighed accurately. Then the depositor was given a certificate before the gold was melted, for the gross weight received. The gold was then sent to the melting room where it was converted into a bar. A chip weighing about a tenth of an ounce was taken from each end of the bar at opposite corners, one from the top and the other from the bottom. Those chips were assayed and analyzed to determine the amount of gold, silver and other metals in each chip. The assayer's report, giving the exact proportion of each metal found, was sent to the treasurer. By this the standard of fineness of the bar was determined and the value of the deposit ascertained. The depositor then presented his certificate to the superintendent's clerk, who issued a warrant on the treasurer for the net

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12. Anonymous, "Coining money at San Francisco Branch Mint," Hutchings' California magazine, I, No. 4, 146-147. October 1856.

value of the gold deposited. Payment was made in coin or bar.

To facilitate business and prevent any great delay, a large amount of coin was kept on hand, so that depositors did not have to wait until their gold was coined; as soon as the assayer's report was made, the value of the deposit was paid in coin.

The process of converting the gold dust into coin is very interesting. It was done as follows: In the melting room the gold was combined and melted with twice its weight of silver, in order to separate, or destroy the affinity of, gold and silver, and to enable the acid to act on the silver. While the two metals were in the molten state they were poured gradually into cold water where small, thin pieces called granulations were formed. These were taken to the refining room and placed in porcelain pots which stood in vats lined with lead. Nitric acid was then poured upon the granulations in a ratio of two and five-tenths pounds of acid to one of gold. The vats were then closed and the mixture boiled for six hours, during which the base metals dissolved and the gold remained on the bottom untouched. After boiling, the solution was drawn out, by means of a golden syphon worth 2,000 dollars, into small tubs which were emptied into a large vat twelve feet in diameter and six feet deep. Salt water was poured in,

which caused the nitrate of silver to precipitate and become chloride of silver. The chloride was run out into large filters where it was washed until all the acid was taken out. The silver chloride was mixed with granulated zinc in a reducing vat where water was added. Sulphuric acid was then poured in, which combined with the zinc and produced hydrogen gas. That united with the chlorine of the silver chloride to form hydrochloric acid and left the silver in a fine powder in the bottom of the vat.

The silver was washed and placed in a hydraulic press where all the water was squeezed out under a pressure of 12,000 pounds to the square inch. The cake of silver was placed in a drying pan to remove all moisture. This silver was then ready for melting, to be made into coin or for use in the granulating process.

Returning to the gold, after the first boiling it was subjected to another boiling for six more hours in fresh nitric acid in the same proportions as the first time.

After the second boiling the acid was drawn out and was saved for other "first boilings." The gold was put in filters and thoroughly washed with hot water, which removed all the remaining silver nitrate, leaving only the gold. The gold was then pressed, like the silver, and the cakes put into a drying furnace.

The gold went to the melting room where it was

converted into ingots. In the white heat of the furnace the gold was mixed with a certain amount of copper to reduce the standard of fineness from 1,000 to 903. The molten gold was then run into shoe molds and sent to the assayer to determine the exact amount of copper to be added to reduce it to 900/1000, or the United States standard of fineness for coins. The gold was melted again and reduced to the required standard, then made into ingots which were assayed once more.

The ingots of standard gold, each weighing about sixty ounces, were then "pickled" or heated red hot and immersed in sulphuric acid water, which cleaned and annealed them. These were then sent by the melter and refiner to the treasury, where they were weighed accurately and delivered to the coiner. The size of the ingots varied for every different size of coin to be made. Those to be used for twenty-dollar pieces were twelve inches long, one and seven-sixteenths inches in width and one-half inch thick.[13]

The bars were sent to the rolling room where the ingots passed through the rollers thirteen consecutive times, each time becoming thinner and longer, until they were three and one-half feet long. From there they went to the annealing

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13. Anonymous, "Coining money at San Francisco Branch Mint," Hutchings' California magazine, I, No. 4, 146-149, October 1856.

room where each bar was put into a copper tube and sealed to prevent oxidation or loss of metal. They were then put into the annealing furnace; after forty-six minutes, they were withdrawn and cooled in clear water. The strips were then returned to the rolling room where they were reduced to the finished thickness, and once more taken to the annealing room and heated red hot for forty-five minutes, then cooled once more as before.

From there the strips were carried to the drawing and cutting room, where they were pointed, heated by steam, and greased with wax and tallow, after which they were ready for coining. They were then taken to the cutting press where a proof-piece was punched and weighed. If it was found correct, the rest of the strip was punched into blanks or "planchets" at the rate of about 180 per minute. If any of the strips were too heavy they were redrawn through the "draw-jaw." If too light, they were put aside to be regulated by the "doctor." This was a method used only in the San Francisco mint and was invented by Mr. Eckfeldt, the coiner, which saved about 15,000 dollars in light strips from remelting every day and a large sum in labor cost to the mint every year.

When the blanks had been cut from the strips, the

scraps were collected and sent back to the melting room to be converted into bars. Those were sent to the coiner's office to be weighed and checked against the blanks to make up the gross amount received in the morning from the treasury. The bars were then sent back to the treasury, weighed again and returned to the melter and refiner to be recast into strips.

The blanks were sent to the cleaning room where they were boiled in very strong soap-suds, from which they were taken and dried in a pan, and heated by steam. Then they went to the coiner's office and were weighed, after which they went to the adjusting room where each piece was weighed separately; those found too light were condemned to re-melting, and those too heavy were reduced by filing to the standard weight. All the blanks that were adjusted were sent back to the coiner's office where they were carefully weighed along with the filings and light blanks. The combined weights had to check with a gross weight of the blanks delivered to the adjusters during the day.[14]

The work of adjusting was done by women; some ten to fifteen were employed, according to the amount of labor that was required.

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14. Anonymous, "Coining money at San Francisco Branch Mint," Hutchings' California magazine, I, No. 4, 149-152, October 1856.

From the adjusting room the blanks were sent to the milling room where they were dropped into a tube in the milling machine, which had a revolving circular steel plate, with a groove in the edge, and a corresponding groove in a segment of a circle. There the blanks were revolved rapidly, horizontally, and by that process the edges were thickened and the diameter of the blank accurately adjusted to fit the collar of the coining press. After they were milled the blanks went back to the coiner's office to be weighed to see that they were correct.

From the milling room the blanks were sent to the annealing room where they were put into square cast-iron boxes, with double covers. The boxes were carefully cemented with fire-clay, placed in the annealing furnace, and subjected to a red heat for about an hour. They were then put into a pickling bath of diluted sulphuric acid to soften and clean them. After that they were rinsed in hot water and well dried in sawdust heated by steam, and then returned to the coiner's office to be weighed once more. Then they went to the coining room to be stamped. There they were dropped into a tube in front of the stamping machine from where feeders took them to the "collar" and placed them on the lower die. The head die then descended and by its great power made the impression upon both sides of the coin and the fluting on the edge at the same time.

From the coining room the finished coins were again taken to the coiner's office where they were weighed for the last time, counted and delivered to the treasury for payment to depositors.

It was the custom to take one piece out of every 60,000 dollars coined of each denomination, and those were sent to the Philadelphia mint where they were kept for the "judgment day," as it was appropriately called, which took place every year, under the superintendence of commissioners appointed by the United States government.[15]

It was a surprising thing to see the large amount of coin that was produced by the San Francisco mint in a short time. It was equipped with machinery capable of coining 2,500,000 dollars a month, but after the first year the demands upon it increased tremendously.[16] That situation made it very difficult for the superintendent to operate the plant at the maximum efficiency. The building soon became too small for the amount of work to be done and there was no room for expansion as there were buildings on all sides.

In 1855, about a year after the mint opened for business, Mr. L. A. Birdsall resigned his office as superintendent of the mint at San Francisco and Mr. Peter Lott was

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15. Anonymous, "Coining money at San Francisco Branch Mint," Hutchings' California magazine, I, No. 4, 152-153, October 1856.
16. Z. S. Eldredge, History of California, IV, 31.

appointed to fill the vacancy. By that time the business had more than doubled and it became necessary to add a number of new employees to the staff. The supplies sent from the East for the first year were exhausted and it became necessary to purchase materials in San Francisco. The situation brought about a raise in operating cost and the San Francisco mint ran up a deficit of about 30,000 dollars during that year. Mr. Lott then asked Mr. James Ross Snowden, the director of the United States mint, to ask congress for an increase of 40,000 dollars in the appropriations for the San Francisco branch mint, to take care of the cost of alterations in the machinery and the extra workmen who had to be hired.

On June 30, 1856, Mr. Snowden addressed a letter to Secretary of the Treasury James Guthrie, asking him for the increased appropriation for the next fiscal year, and money to cover the deficit already incurred. He said that the staff in San Francisco had not been paid for the month of May or June and they were obliged to borrow money for their support at 3 per cent per month.[17]

The secretary of the treasury was much surprised to learn that the branch mint was "going in the red" and

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17. J. R. Snowden to J. Guthrie, Philadelphia, June 30, 1856, Executive document No. 32, 3d session, 34th congress, 1856-1857, V, 2.

wanted to know the cause. On July 4, 1856, he wrote to the treasury special agent in San Francisco, Mr. J. Ross Browne, ordering him to inspect the accounts of the mint and recommend any reductions that might be made in the cost of operation. Secretary Guthrie evidently believed that Superintendent Lott was rather extravagant in the number of men he employed and the prices he paid for work and materials.

After a thorough investigation lasting several weeks, Mr. Browne sent a long and detailed report to the treasury department on the operation of the San Francisco mint. He analyzed each item of expense and the reasons for employing extra workmen. Not only had the business of the mint doubled, but due to the distance from the source of supplies and the difficulties of transporting them to San Francisco, necessary articles like acid and other material were much more costly than on the Atlantic Coast. The fact that the building was poorly designed and its accommodations limited made it difficult to operate it efficiently. The great demands made on the mint forced the staff to work long hours overtime for which they had to be paid extra; and it also made it imperative to hire extra help. Labor costs were much higher in San Francisco than in the East, and furthermore every person in the mint was, and had to be, a skilled craftsman in his line and only persons of the highest type and character could be safely employed there, so it was

necessary to pay higher wages to them than were paid to workers in other lines of business. Moreover, the intense heat and discomforts to which those workers were subjected, due to poor design and arrangement of the building as well as the overcrowded conditions in each department, made it necessary to pay good wages in order to keep the employees satisfied. Taking everything into consideration, Mr. Browne gave Mr. Lott's management a clean bill, although he did recommend that the wages of some of the staff be reduced about one dollar a day. A saving of several thousand dollars a year was effected.[18]

At this point it might be interesting to note the amount of business that was being done at the San Francisco mint during these years. The amounts of money of all denominations coined by the branch mint was as follows:[19]

1854 -------	$ 9,731,574
1855 -------	21,121,752
1856 -------	28,516,147

During these three years, operations had to be suspended temporarily on several occasions in order to reorganize the departments of the mint and rearrange the interior of the building so as to take care of the increase in business. All

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18. J. R. Browne to Secretary J. Guthrie, San Francisco, August 4, 1856, Executive documents, No. 32, 3d, session, 34th congress, 1856-1857, V, 7-35.
19. Secretary J. Guthrie, report of Secretary of Treasury, Washington, December 6, 1858, Executive document No. 1, 2d. session, 35th congress, 1858-1859, I, 72.

those changes cost money and charges of embezzlement were preferred against several of the employees, but were later dismissed.

Business continued to increase during the late 50's and early 60's as silver production in Nevada coupled with the gold of California greatly increased the amount of precious metals extracted on the Pacific Coast. The situation led congress to grant an appropriation of 300,000 dollars to enlarge the structure in 1864.[20]

All these years the San Francisco mint was being operated as a branch of the Philadelphia mint. By 1870, however, the San Francisco branch was doing more business than the mother plant. Congress recognized this fact and granted it new appropriations at that time. In the Coinage Act of 1873 it was provided that the San Francisco mint be placed on an independent basis. In order to do so, a new building had to be provided and built. For that purpose congress made the necessary appropriations in 1873 and a large lot was bought at Fifth and Mission streets, San Francisco. There a large granite and brick structure 217 feet long by 160 feet wide and three stories high, in Doric style, was built. This new plant was opened for business in 1874 and at once took the rank of the principal mint

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20. Bancroft, History of California, VII, 167.

for the country, since it was the central depot for all gold and silver produced in the western United States.[21]

After the removal of the mint to the Mission Street site, the old building on Commercial Street continued to serve for other governmental purposes and was in use until April 18, 1906, when it was destroyed in the earthquake and fire. During the period 1854 to 1867 some 242,000,000 dollars were coined in the old building, an amount equal to one-half the entire coinage of the Philadelphia mint from its origin in 1793 to 1867. Several hundred million dollars more were coined from 1867 to 1874 when it was removed to the new site.

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21. B. E. Lloyd, Lights and shades in San Francisco, 397; also Bancroft, History of California, VII, 197-198.

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