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No. 8



THE MINT OF THE  
PHILIPPINE ISLANDS

By GILBERT S. PEREZ

THE AMERICAN NUMISMATIC SOCIETY  
BROADWAY AT 156TH STREET  
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The Mint of the Philippine Islands in the Old Intendencia Building

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THE first colonial mint of the United States was opened on the fifteenth of July, 1920, at Manila, thus instituting a new departure in our mint procedure. Some years previously this policy had been adopted by England, whose colonial mints had been established in Australia, India and Canada. Since 1903 the United States Government had minted the coinage for the Philippine Islands at Philadelphia and San Francisco. Expediency, economy, the possibility of quicker deliveries, together with the Government's policy of helping the Filipinos to participate in the management of domestic affairs, were the determining features for the establishing of the Manila mint. On

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February 8, 1918, the Philippine Legislature passed a bill appropriating 100,000 pesos, half the original appropriation, for the construction of machinery for a new mint. This bill was signed by Governor Harrison eight days later.

The machinery was designed and built at Philadelphia under the supervision of Clifford Hewitt, then chief engineer of the United States mint. In June, 1919, it was assembled, tested and found satisfactory; it was then shipped to the Philippine Islands via the Panama Canal, arriving at Manila in November in perfect condition. Mr. Hewitt reached Manila at the end of the month and undertook the installation of the machinery.

Although the Manila mint is probably the smallest in the world, it is one of the finest and most modern. It is located on the lower floor of the old Intendencia Building fronting the Pasig River. This building also contains the offices and the hall of the Philippine Senate, and the offices of the Treasury of the Philippine Islands.



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On October 11th,<sup>r</sup> three months after its inauguration, the mint narrowly escaped destruction by fire which gutted the two upper floors of the Intendencia Building. The Senate hall, the offices of the Insular Treasurer and other governmental offices were totally destroyed, but the mint on the lower floor was so little damaged that minting was resumed next morning.

The mint was formally opened on Thursday morning, July 15th. A copper ingot was taken from the furnace, cooled, rolled into a thin strip between the heavy rollers of a machine, shot beneath the smoothly working pistons of another machine whence it emerged in the form of many small discs and then placed in the stamping machine — and there came into existence the first piece of money ever coined under the American government in the Philippine Islands. The first one-centavo piece was coined by Governor-General Harrison under the direction of Mr. Hewitt. Speaker Osmeña of the House of Representatives, in a like manner, struck off the first medal (designed

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by Mr. Clifford Hewitt) which was issued in commemoration of the opening. On the obverse of the medal appears the profile of President Wilson; the reverse shows the figure of Liberty protecting and instructing beginners in the art of coining, holding in her right hand a pair of scales to demonstrate the absolute necessity for care and exactness in operation which all mint work demands. On the first day two thousand of these medals were minted.

The official party at the formal opening included the Governor-General and Mrs. Harrison; Speaker Osmeña; Mr. Kwei Chih, Chinese Consul-General; Hon. Alberto Barreto, Secretary of Finance; Dr. A. P. Fitzimmons, Director of the Mint and former Treasurer of the Philippine Islands, and Mr. Clifford Hewitt, the mint's metallurgist.

The mint is prepared to coin all bronze, nickel and silver money needed for circulation in the Islands; it has a daily output of 85,000 pieces, and an annual capacity of 25,000,000 coins, made possible by twenty electrically driven machines.

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<p>In order to insure the legal fineness of bullion received as deposits and of ingots for coinage purposes, as well as to make accurate payment to depositors of metal, a well equipped assay department has been instituted. Such an establishment will have a stimulating effect on the mining of gold and silver throughout the Islands. Gold is mined in considerable quantities in Baguio, Paracale and Aroroy, and silver in the Island of Marinduque. As the gold mined here has heretofore been refined by the cyanide process it was not of very high fineness, but with the improved electrolytic process it is possible to obtain the fineness of 999.9 plus.</p> <p>With regard to the melting department, the output of each melting furnace, figured on an eight-hour day basis, would be approximately 2000 pounds. A specially designed settling chamber has been built which reduces the silver melting losses to a minimum of three-quarters of an ounce on every thousand ounces melted.</p> <p>The rolling and cutting department consists of two 50 h. p. electrically driven</p>	
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machines of the most modern type, fitted with hardened steel rolls. They are equipped with a patented adjustment whereby the rolls can be regulated to one ten-thousandth of an inch. By this accurate adjustment there is no difficulty in producing perfectly uniform strips of silver so that when planchets are cut they will be within the legal tolerance of weight.

An automatic coin reviewing machine has been installed. The coins are dumped into a distributing hopper which drops them on a travelling belt where each coin passes slowly before the reviewer's eye and the condemned pieces picked out. Those which are perfect pass on and fall into a box at the end of the machine. They are counted by means of a coin counting board which holds five hundred pieces. An experienced operator of this board can handle 2000 coins of any denomination per minute. As they are counted they are placed in bags.

A complete mechanical department has also been installed, with fully equipped machine, blacksmith, electrical, plumbing

and carpenter shops. This department is very necessary for a successful operation of the mint, as all tools and special medal or coin dies may be made in these shops at a minimum cost.

The annealing and cleaning department consists of an automatic rotary annealing furnace. All the coin blanks are run through this furnace at a temperature of 1400 degrees Fahrenheit, as continual rolling hardens metal and annealing restores the original softness to the coin blank. In this process the coin blanks become oxidized or tarnished. This oxidization is removed by rumbling and burnishing them in water and compound in a special rotary washing machine. The blanks are then placed in a centrifugal coin dryer which extracts all moisture.

The weighing system consists of a large six-foot bullion balance with a capacity for weighing 10,000 ounces of coin, clippings or ingots. The coins are weighed individually by an automatic weighing machine to determine which fall within the legal law of tolerance, which is less

than  $1\frac{1}{2}$  grains over or under the legal standard. These automatically controlled scales are enclosed in glass, designed to weigh to  $\frac{1}{16}$  of a grain and are entirely mechanical in operation. There are 10 weighing beams in each scale, and each beam will weigh 10 coins a minute — 100 coins on the 10 beams — approximating a daily output of 48,000 coins figured on an eight-hour day basis. This machine separates the heavy and light pieces from those that fall within the tolerance allowed. All that is required of the operator is to keep the ten feeding tubes filled with coins, as the machine does the weighing and separating into different boxes.

The Director of the Mint, Dr. A. P. Fitzimmons, former Insular Treasurer of the Philippine Islands, was greatly instrumental in securing the appropriation for the mint and in organizing it. Practically all of the employees are Filipinos; and having no previous mint experience, the present efficiency is attributed to the painstaking instruction of Mr. Hewitt and to the mechanical aptitude of the Filipino people.