

The Platinum Chalice of Pope Pius VI

By Donald McDonald

In the Treasury of St. Peter's in Rome there is a large and very fine chalice, consisting entirely of platinum. It is of great historical interest, having been made as long ago as 1788 from the first platinum produced in malleable form and in the following year presented to Pope Pius VI by Charles III, King of Spain.

Platinum, in its native form of small heavy metallic grains, had been known to exist in South America in the then Spanish colonial province of New Granada (now mostly Colombia and Venezuela), where it was a nuisance to the miners of placer gold. Eventually, as recounted by the present author in the two preceding issues of *Platinum Metals Review*, samples reached the scientists of Europe and it was recognized, about 1750, as a new metal with some very striking properties of resistance to heat and corrosion.

The chief part in this work was played by English, French, German and Swedish chemists and the French went on to produce (by a difficult process involving the use of arsenic) foil and plate that could be made into articles for decorative and scientific use. The Spaniards, who of course controlled the supply of mineral, were slow to awake to this, but eventually they did so. The Secretary of State for the Indies then asked Don Fausto de Elhuyar, since 1782 Pro-

fessor of Chemistry at the Seminario at Vergara, to take up research on the subject. This he did, assisted by the French Professor



of Physics, Pierre François Chabaneau (frequently spelled Chavaneau by the Spaniards).

In September 1785 Don Fausto had to leave Vergara to make a European tour before going to Mexico as Director General of Mining, and Chabaneau carried on the platinum work. He had made considerable progress by March, 1786, when Don Fausto paid him a short visit, and in that same month he was able to report that he could produce the metal in a malleable and ductile state. As a result of this, he was transferred by the King to an honorary professorship in Madrid and given a laboratory-workshop to be devoted to the refining and fabricating of platinum.

In 1786 or 1787 he went to Paris to meet Marc Etienne Janety, who was (by means of the arsenic process) the only other practitioner of these two arts. There, under Janety's instruction, he made a number of ornamental articles from platinum that he had brought with him.

On his return to Spain he trained his own silversmith, Don Francisco Alonzo, in the making of jewellery and instruments, and provided him with a room in his workshop. The first platinum object made in Spain in these circumstances was the large chalice made for the King, who presented it in 1789 to Pope Pius VI. An inscription on the plinth reads:

**CAROLUS III HISPAN ET IND REX PRIMITIAS
HAS PLATINAE A FR^{co} CHAVENEAU DUCTILIS
REDDITAE PIO VI P.O.M.D.D. ✽**

[Charles III, King of Spain and the Indies, gives as a gift the first fruit of platinum made malleable by Francisco Chavaneau to Pius VI, Supreme Pontiff of all the World (Pontifici Omnium Maximo Dono Dedit)]

There is said to be an announcement of this gift in the *Gaceta de Roma*, Number 8 of 1789, but it has not been possible so far to check this reference.

The chalice is said to have remained among the private possessions of the Popes until Pius IX, at some date not published, gave

it to the Basilica Vaticana and it is now on public view in the Treasury at St. Peter's.

Its dimensions are as follows:

Height—29.5 cm.

Diameter of cup—8.5 cm.

Diameter of base—15 cm.

Weight—55.45 oz. troy

There is also a small paten weighing 6.27 oz. troy.

Inside the cup is engraved the following:

**HISPAN ELABORAVIT ANN. R. J.
MDCCLXXXVIII
✽ FRANCISCUS ALONSO**

[Francisco Alonso the Spaniard fashioned (this) in the year A.D. 1788.]

The motifs of the elaborate and splendid decoration of the outside of the cup derive from the French style of the time of Louis XVI, and no doubt owe their inspiration to Chabaneau's visit to Janety in 1786 or 1787. Janety had been a prominent goldsmith serving the Court of King Louis, before devoting his attention to platinum.

References

The chief sources from which the above information has been drawn are:

Discursos leídos ante la Real Academia de Ciencias Exactas Físicas y Naturales en la Recepcion del Ilmo. Sr. D. Juan Fages y Virgili, 27 Junio 1909 (Los Químicos de Vergara)

de Galvez-Cañero y Alzola, A.—*Boletín del Instituto Geológico y Minero de España*, 1933, 53, 377—629 (Apuntes biograficos de D. Fausto de Elhuyar)

Anales Sociedad Española de Física y Química, 1933, 31, 115—143 (El Primer Centenario de D. Fausto de Elhuyar)

Encyclopedia Universal Ilustrada Europeo-Americana, Barcelona: 1907 on. Volume XLV, p. 558 on. Article on Platinum

Restrepo, V.—*Estudio sobre las Minas de Oro y Plata de Colombia*, 1884, pp. 208—214 (El platino)

Thanks are due to Mr James D. Utley, Attaché at Her Britannic Majesty's Legation to the Holy See, Rome, for obtaining from the Authority of the Treasury of St. Peter confirmation of the accuracy of the statements made above, and also for the detail of the dimensions of the chalice and the disclosure of Alonso's name and date inside it. Thanks are also due to Mrs. L. B. Hunt for noticing the presence of this magnificent relic in St. Peter's.