

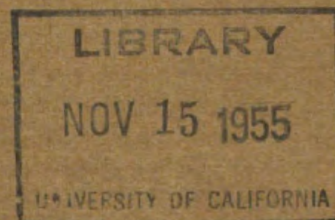
NUMISMATIC NOTES AND MONOGRAPHS

No. 131

THE COINAGE OF THE FIRST MINT
OF THE AMERICAS
AT MEXICO CITY

1536—1572

By ROBERT I. NESMITH



THE AMERICAN NUMISMATIC SOCIETY

NEW YORK

1955

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NUMISMATIC NOTES AND MONOGRAPHS

Number 131

NUMISMATIC NOTES AND MONOGRAPHS

is devoted to essays and treatises on subjects relating
to coins, paper money, medals and decorations.

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The Coinage of the First Mint of the Americas at Mexico City

1536—1572

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To my friend,

Alberto Francisco Pradeau

Without whose help this book could
not have been written

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INTRODUCTION

The earliest silver and copper coins of America were struck at Mexico City where the first mint of the New World was established by the Spanish in the spring of 1536, during the reign of Charles and Johanna. Probably because of the great number of varieties in which the coins of this series exist, they have never been fully described or illustrated. It is the aim of this work to fill the long existing void in numismatic literature covering the coinage of the Mexico City mint between 1536 and 1572.

The present study originated with a suggestion of Mr. Wayte Raymond that the author prepare three short articles on the series for *The Coin Collector's Journal* in 1943-44. In the preparation of these articles it became clear how scanty the information is concerning this entire series and the circumstances under which it was struck. Much of the little information available — scattered through books, periodicals, and coin catalogues — is either incorrect, vague, or contradictory.

The original documents of the period 1536-72 relating to the Mexico City mint — decrees, regulations, appointments, etc. — repose in the Archives of the Indies in Spain. Many of these which have not perished have never been transcribed and printed. The documents are long and involved; many of the words commonly found are obsolete today, many others have changed their meaning; proper names, legal forms, and technical terms are abbreviated; and the handwriting of the sixteenth century is difficult to decipher. As a result there have been errors in transcription of dates and names in some of the printed sources. It has been our attempt, so far as possible, to examine reproductions of the original documents and to reconcile the existent inconsistencies. Because it has been so frequently misquoted, the royal

decree establishing the mint is published in English translation for the first time in the Appendix to this volume.

A wealth of detail concerning the mint in its early days of operation is contained in the record¹ of the testimony taken in the investigation of the Mexico City mint made by Don Francisco Tello de Sandoval. This is the most valuable record of mint affairs and procedures during this period which has yet come to light. It has been possible through it to reconstruct the early history of the mint on the following pages.

When Hernando Cortés, the conqueror of Mexico, returned to Spain in 1540 he preferred charges against the Viceroy Mendoza, and inspired an attack on his administration of New Spain and on those others whom he regarded as responsible for his lost prestige. He found little satisfaction at court but with the framing of the New Laws in 1542-1543 under Las Casas he presented his charges and complained of unfair treatment at Mendoza's hands and charged his administration with graft, inefficiency and favoritism.² As a result of Cortés' charges, the lic. Francisco Tello de Sandoval³ sailed for New Spain in November, 1543, with authority to investigate all of the royal offices in New Spain under a *provisión de visita*, which

¹ The original manuscript record of the testimony in the investigation consists of seventy-eight folio pages in the *Archivo General de Indias, sección de Justicia, estante 48, legajo 2, cajas 20-22*. Excerpts appear in J. T. Medina, *Las Monedas Coloniales Hispano-Americanas*, Santiago de Chile, 1910, pp. 59-63. Medina in error dates the investigation as taking place in 1546. It was also used as the basis of an article by A. S. Aiton and Benj. W. Wheeler, "The First American Mint," in *The Hispanic-American Historical Review*, Vol. 9, No. 2, 1931. The full text is printed in Spanish in A. F. Pradeau, *Don Antonio de Mendoza y la Casa de Moneda de México en 1543*, Mexico City, 1953, where errors by the printer have confused the text and names. These errata have been published in *Numisma*, Num. 13, Oct.-Dec. 1954, pp. 127-129. Hereafter, references to the original testimony are given as TSI. Other references to the *Archivo General de Indias* are given as AGI.

² For the charges see A. S. Aiton, "The Secret Visita Against Viceroy Mendoza," in *New Spain and the Anglo-American West*, 1932, Berkeley, Cal., pp. 1-22.

³ Sandoval, a member of the Council of the Indies, canon of the Cathedral in Seville, and Inquisitor of the bishopric of Toledo was granted his authority by royal decrees of May 13, and June 26, 1543.

gave him authority to question the conduct of all officials, from the highest to the lowest, and bring charges against them.^{3a}

The party⁴ appeared at the mint on May 27, 1545, to inspect and investigate the Mexico City mint and its officials, to ascertain what money was being coined there, and to learn whether the royal ordinances and laws governing mints were being observed.⁵

As the investigation progressed and the departments of smelting, coining, weighing and bookkeeping were visited, the officials and workers were thoroughly questioned as to their appointments, their duties, their predecessors and fellow workers. Veiled insinuations from some of the workers cast charges of questionable and illegal conduct at others. The official weigher of the City of Mexico was called to test the weights of the mint weigh-master. Investigation was made of the family relationships of officials to each other and of their ownership of slave workers at the mint.

The Sandoval investigation of New Spain lasted from 1544 to 1547, in which year Sandoval returned to Spain and brought charges against the viceroy before the Council of the Indies.

The results of the Sandoval investigation may have corrected some administrative abuses of the colony but all the charges against the viceroy Mendoza were later dismissed by the Council of the Indies. The mint was also later investigated by the viceroy himself and as a result certain changes were recommended to the King. Mendoza, however, did not imprison the officials, although he found them all guilty in some degree of minor infraction of the laws.

Study of the actual coins issued by the mint presented their own set of complications. Because of their multitudinous variations, it soon became obvious that special techniques were required to make a clear and exact arrangement of the coins possible. Each coin was

^{3a} C. Pérez Bustamante, *Don Antonio Mendoza*, Santiago, 1928, and A. S. Aiton, *Antonio de Mendoza*, Durham, N. C., 1927.

⁴ Sandoval's staff consisted of Miguel López de Legazpi and as witnesses, Francisco Vásquez de Coronado, a member of the town council of Mexico City, Cristóbal de Espíndola, constable of the Holy Inquisition; and Diego de Rivera, a resident of Mexico.

⁵ TSI, May 27, 1545.

photographed and then enlarged to as much as fifteen diameters, so that every variation and imperfection was easily seen. To provide the illustrations a tracing was made directly on the enlarged photograph which was then bleached to leave only the pen lines. Reduced to the actual size of the coin each illustration presents an exact tracing – not a drawing – of the original piece. Thus the details, which otherwise could only have been seen in an enlarged photograph, are clearly exhibited. The illustrations thus produced of coins and punch design details appear in the catalogue of coins. They are supplemented by plates made from photographs of actual coins.

A great number of persons kindly allowed their coins to be studied, photographed, and included. Among them mention should be made of P. K. Anderson, F. J. Angert, Eduardo Arpi, Jesús Avalos, Bradford Babbitt, Paul Berninger, F. C. C. Boyd, Vernon L. Brown, Humberto Burzio, Joaquín Alberto Contreras, Roy E. Daniels, Harley L. Freeman, Howard D. Gibbs, José Gómez, Clyde Hubbard, Salvador Illanes, B. G. Johnson, Fernand Kososky, Lucio Laguette, Ing. Rufino Lavín, George Martin, Enrique Martínez, George McGonigle, Jr., F. S. Neelon, Edgardo Nenclaves, A. R. Perpall, Lic. Alfredo Porraz, Dr. A. F. Pradeau, R. R. Prann, T. V. Purrington, Don Manuel Romero de Terreros, Bruno Rosales, O. K. Rumbel, José Tamborrel, Jr., R. B. Warren, J. W. Wilson, Raymond H. Wilson.

In addition, the collections of the American Numismatic Society (generously augmented by Stuart Mosher and Wayte Raymond) and the Hispanic Society of America were studied. Lic. Alfredo Porraz furnished photographs of the coins in the Museo Nacional de Historia in Mexico City by courtesy of the director, Dr. Silvio Zavala. The valuable collection of the Banco Nacional de México, S. A., was photographed through the assistance of its director, lic. Carlos Novoa, and of Carlos R. Linga. Clyde Hubbard classified several Mexican collections above mentioned, without which this work would have suffered considerably. In the summer of 1952, a large and interesting hoard of coins of Charles and Johanna and Philip II was unearthed

in Mexico. Due to the kindness of O. K. Rumbel, E. H. Windau, Victor Lanz, and Clyde Hubbard, over a thousand pieces of this hoard were examined and included in the study.

Adam Pietz of Philadelphia is to be thanked for his assistance on questions of die manufacture. Wilbur T. Meek's valuable study, *The Exchange Media of Colonial Mexico* (New York, 1948), has been quoted with his permission, as has "The First American Mint" by A. S. Aiton and B. W. Wheeler, from *The Hispanic American Historical Review*, IX, no. 2 (Durham, 1931), together with A. S. Aiton's *Antonio de Mendoza* (Durham, 1927). A. J. S. McNickle generously contributed his investigations concerning the continued striking of the Charles and Johanna series during the reign of Philip II.

Sydney P. Noe, Chief Curator, and the staff of the American Numismatic Society were of much assistance. William L. Clark and DeVere Baker photographed most of the coins, and the weighing was done by Richard D. Kenney. Richard P. Breaden translated the manuscript of the Sandoval Investigation from the Spanish transcription of Dr. A. F. Pradeau. George C. Miles provided access to the collection of the Hispanic Society of America. Sawyer McA. Mosser, T. V. Buttrey, and H. L. Adelson edited the text.

Above all, the author owes a debt of gratitude to Dr. A. F. Pradeau for his advice and criticism, for permission to use material from his private library and his published works, and for information from recent documentary discoveries. He obtained microfilms of manuscripts in the Archives of the Indies through Don José María Albareda y Herrera of Madrid, Secretario General del Superior de Investigaciones Científicas de Sevilla. For the ten years that the book has been in preparation he has enlisted the help of his friends and given freely of his own vast knowledge and energy. If he were credited throughout the text, his name would appear on every page.

THE FOUNDATION OF THE MEXICO CITY MINT

The earliest coins of the Mexico City Mint bore the names KAROLVS ET IOHANA. Charles I of Spain, the fifth Holy Roman Emperor of that name, was the son of Philip the Handsome of Burgundy, and Johanna (Juana la Loca), the daughter of Ferdinand and Isabella. He was born in Ghent on February 20, 1500. Upon the death of Ferdinand in 1516, Charles succeeded to the throne of Spain, and with his mother, Johanna, whose reason had given way in 1506 and who took no part in state affairs, ruled Castile, Aragon, Navarre and Granada, Valencia, Catalonia, and the Kingdoms of Naples, Sicily, and Sardinia, as well as the Spanish Netherland together with the new colonies in America and the possessions in northern Africa. When his grandfather, Maximilian I, died in 1519, Charles was elected Emperor, succeeded to the inheritance of the Hapsburgs, and was crowned Charles V of the Holy Roman Empire at Aix on October 23, 1520.

His mother, Johanna, lived until April 1555. In October of that year Charles resigned the sovereignty of the Netherlands to his son, Philip. On January 16, 1556, he resigned his Spanish kingdom and retired to the monastery of Yuste in 1557, where he spent his last days in rest and study.¹ Charles' enthusiasm for America was keen and farsighted, and he had a boundless belief in its possibilities. His was the age of conquest and of the organization of the western hemisphere.

New Spain had repeatedly requested the establishment of a mint prior to November 10, 1525, the date of the first recorded petition.² However, long before this petition reached Spain, the king, in his

¹ E. Armstrong, *The Emperor Charles V*. London 1902, is valuable for his life and for documents bearing on his reign.

² Francisco del Paso y Troncoso, *Epistolario de Nueva España*, Mexico, 1942. Vol. 1 p. 85.

decree of November 24, 1525, stated that "the favor has been asked of me to grant permission for the establishment of a mint in New Spain," and commissioned Luis Ponce de León to investigate the advantages of founding a mint in Mexico.³ Ponce died on July 20, 1526, only sixteen days after his arrival in Mexico⁴ and his mission was not even begun.

By a decree of April 5, 1528, Nuño de Guzmán was empowered to investigate the necessity of a mint in Mexico.⁵ As far as is known, nothing developed from his commission. A few years later, in a letter dated January 22, 1531,⁶ the lic. D. Juan de Salmerón, a member of the Audiencia of Mexico City, brought the subject before the Council of the Indies. He believed, upon the advice of competent local persons, that there were craftsmen in Mexico capable of making the dies and performing the other necessary mint processes.

Requests for action on a mint continued, and there are recorded letters by the Audiencia of Mexico City to the queen on March 30, 1531;⁷ by Salmerón to the Council of the Indies, August 13, 1531;⁸ and by the Audiencia to the queen on April 19, 1532.⁹ The President of the Audiencia, D. Sebastián Ramírez de Fuenleal, wrote to the king on April 30, 1532, stressing the fact that he had mentioned several times previously the necessity of a mint in New Spain to complement the production of gold and silver.¹⁰ All these efforts produced no action and no mint, and the years passed.

³ *Actas del Cabildo de la Ciudad de México*, Mexico, 1871, libro I, p. 207; cf. W. T. Meek, *The Exchange Media of Colonial Mexico*, New York, 1948, p. 40.

⁴ A. F. Pradeau, *Numismatic History of Mexico from the Pre-Columbian Epoch to 1823*, Los Angeles, 1938, p. 22.

⁵ Vasco de Puga, *Provisiones, Cédulas, Instrucciones de Su Magestad, etc.*, Mexico, 1878. Vol. I, pp. 74-75. Originally published in Mexico in 1563.

⁶ *Colección de Documentos Inéditos Relativos al Descubrimiento, Conquista, y Organización de las Antiguas Posesiones Españolas en América y Oceanía*, (First Series), Madrid, 1864-84, 42 Vols. Vol. XIII, pp. 193-94. See also Pradeau, p. 23.

⁷ Del Paso y Troncoso, *op. cit.*, Vol. II, pp. 41-42.

⁸ *Ibid.*, Vol. II, p. 16.

⁹ *Ibid.*, Vol. II, p. 118.

¹⁰ *Col. de Docs. Ined.*, (First Series), Vol. XIII, pp. 217-218.

In 1535, with the introduction of a new form of government for New Spain under the viceregal system, Don Antonio de Mendoza was selected to act as the first viceroy in the Americas. Offered the post in 1529, he was appointed by the queen in early 1530, but was not officially confirmed until five years later, on April 17, 1535. He arrived with his party in Mexico City on November 14, 1535 to assume his position.¹¹ Among the duties assigned Mendoza was that of investigating the need of a mint and advising the king as to the necessary steps to be taken.¹² When he arrived in Mexico, however, he carried authority in the form of a decree signed by the queen on May 11, 1535,¹³ to establish a mint, and he wasted no time about it. The viceroy was ordered in the decree to find a suitable location, and if space in the court buildings was not adequate, to select a proper site, construct a building at the expense of the crown, and with the treasurer's assistance, appoint the mint staff. These orders were carried out, and the first coins of silver were issued about the month of April, 1536.¹⁴

¹¹ C. Pérez Bustamante, *Don Antonio de Mendoza*, Santiago, 1928. Mendoza sailed from San Lucar de Barrameda during July, 1535, and arrived at Santiago, Cuba, on August 26, where he stayed a few days and left about September 13. The *Actas del Cabildo de la Ciudad de México*, Vol. III, p. 129, minutes of October 2, 1535, state that the viceroy had arrived at Vera Cruz and ordered two additional councilmen to hasten there to kiss the hand of his Majesty's representative. He was received with great homage in the city of Mexico on Sunday, November 14, 1535. *Actas del Cabildo*, Vol. III, p. 131.

¹² *Colección de Documentos Inéditos Relativos al Descubrimiento, Conquista, y Organización de las Antiguas Posesiones Españolas de Ultramar*, (Second Series), Vol. X, pp. 250-251. Mendoza's duties were outlined in royal instructions dated April 25, 1535, of which Article Seven covers the mint question.

¹³ Since this decree does not appear to be in print in English, it is included in full in the Appendix. The translation is from the Spanish of José Toribio Medina, *Monedas coloniales Hispano-Americanas*, Santiago de Chile, 1919, pp. 54-57. The original is in the *Archivo General de Indias*, 96-6-12. The decree mentions only Mexico although it has been misquoted by many writers as also having authorized mints in Santo Domingo (Española), Potosí, and Santa Fé (Colombia).

¹⁴ Cf. the viceregal order of July 15, 1536, in Puga, *op. cit.* Vol. I, p. 388, which reads in part, "Before there was a mint in this city . . . and silver money coined, there was a great deal of trading by means of *tepuzque* gold. All *tepuzque* gold debts and contracts

There has been considerable difference of opinion among antiquarians concerning the problem of the site of the first mint in the New World. The difficulties have stemmed largely from the confusion of the *casa de fundición* with the *casa de moneda*. There is no doubt that the foundry, where the silver was cast into ingots and the king's *quinto* extracted as the royal tax, was not located in the same building with the mint but in the rear of the *Ayuntamiento*, or town hall. It certainly was in this location when the town council complained of its proximity to their meeting place on November 7, 1533. It is probable that the foundry was there even before the period of the *tepuzque* coinage.

When the Audiencia wrote to the king in 1531 appraising the property of Hernán Cortés, which had been confiscated by the order of the Council of the Indies, they mentioned that part of Cortés house, "will be convenient and necessary for installing a mint and smelter."¹⁵ This opinion was confirmed by Sebastián Ramírez de Fuenleal, president of the Audiencia, in a letter to the king dated April 30, 1532. He stated that in one part of the palace "there could very well be a smelter, a mint, and a prison."¹⁶

It appears that the viceroy Mendoza, who was authorized to select a site for the first mint, did choose space in the rear of the house of Cortés. Dr. Pradeau says that the viceroy decided on "a portion of the house of Cortés, Marqués del Valle, . . . at a yearly rental of five hundred pesos. On either side of this building were the streets of Tacuba

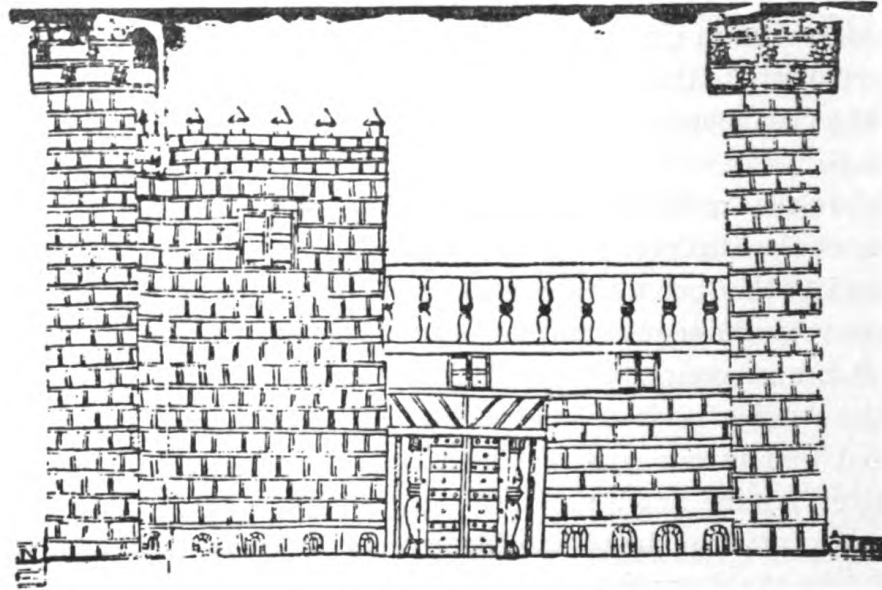
made from the first day of April of the present year are to be paid in the said gold in terms of the . . . silver reales that circulate at thirty-four maravedíes each, one real for one tomín, and eight reales for one peso of *tepuzque* gold." *Actas del Cabildo*, Libro IV, pp. 20-21, June 2, 1536: "Relative to the silver reales now being made and used in trade in the city, there is much confusion because some accept them at eleven grains and others at twelve grains of *tepuzque* gold." The exact date that the mint opened is not found in any document, but the new coinage was well in circulation by June, and probably began to come from the mint in April. See Pradeau, *op. cit.*, pp. 25-26, and Meek, *op. cit.*, p. 53.

¹⁵ *Col. de Docs. Ined.*, First Series, Vol. XLI, p. 70.

¹⁶ *Ibid.*, Vol. XIII, p. 214.

and San Francisco; the rear was on Calle de la Carrera, and the front opened into a public square."¹⁷ The square is the Plaza Mayor.

In his letter to the king of December 10, 1537, the viceroy suggested "that a well fortified house might be built on the avenue called Tacuba to accomodate living quarters of various officials, as well as the foundry and the mint."



DRAWING OF CORTÉS RESIDENCE, FIRST HOME OF THE MINT*

The home of Cortés was used by the mint as late as the years 1544 to 1547 during the investigation of Don Francisco Tello de Sandoval into the affairs of the viceroyalty. Diego Fernández, a contemporary writer, verified that the mint was located in "the house where the Royal Audiencia is. It had nine patios inside and a very good garden and plaza where bull fights can easily take place. In this edifice there lived comfortably the viceroy, Don Antonio de Mendoza, the visitor, Don Francisco Tello de Sandoval, three members of the Audiencia, and the

¹⁷ Prádeau, *op. cit.*, p. 23. This site is the present location of the National Pawn Shop, the Director of which is Don Manuel Romero de Terreros, Marqués de San Francisco, the well-known historian and numismatist.

* From A.G.I. 154-2-19.

chief accountant. In the same building, there were also the royal prison, the smelter where bells and cannon are cast, and the mint. Along one side passes the street called Tacuba, and at one end San Francisco Street. At the back is the street called La Carrera. All these are principal thoroughfares. In front is a plaza where bull fights take place. The house is so large that facing the streets and plaza, there are eighty doors of private houses."¹⁸

That the mint edifice was not adequate appears in statements by the mint officials in 1545. The vice treasurer suggested that "his Majesty should order that a mint be built which would be better and more secure that it is at present, inasmuch as it has little strength and protection, for the walls are of thin adobe, thus causing a hazard to the silver, the traders, the treasurer, and a slave who guards it." The die-sinker, Francisco del Rincón, also stated that "it would be appropriate that his Majesty order a good mint constructed in this city, for at present it is very much in ruins and is used in this ruinous state, for which reason the merchants are distrustful and run a risk in leaving silver at the mint over night for in places its walls are of adobe. He knows that [thieves] one night broke into a box owned by a merchant named Alonso de Villaseca which contained grains of silver which he had melted for coining at the mint. The witness has seen the hole made in the wall close to where the box was kept, and heard Villaseca complain that a large quantity of silver had been stolen. . . ." Other witnesses supported this description of the condition of the mint.¹⁹

The two earliest detailed drawings or plans showing the buildings around the Plaza Mayor that have come to light in the Archives of the Indies are one of ca. 1574 and one of 1596.²⁰ By this time, the *Casa del Real Palacio*, now the National Palace, had been built. It was purchased by the crown for 33,000 pesos on January 19, 1562, and

¹⁸ Diego Fernández, *Historia del Perú*, Sevilla, 1571, p. 3.

¹⁹ Tello de Sandoval Investigation testimony of June 3 and 5, 1545.

²⁰ Diego Angulo Iniguez, *Planos de Monumentos Arquitectónicos de América y Filipinas existentes en el Archivo de Indias*, Universidad de Sevilla, Laboratorio de Arte, 1933; láminas 2 A to 2 H. = A. G. I. 154-2-19.

occupied by the royal offices on August 19 of the same year. On the 1596 plan, the mint is shown as part of the palace opposite the *Casa Principal de Guerreros*. This location is on the first block of the street called *Calle de la Moneda*, and the mint was moved to this location in 1569.²¹ There is some evidence to support the suggestion of Don Lucas Alamán and Artemio Valle Arizpe that from 1562 until 1569, the mint temporarily occupied a building adjacent to the rear of the Council Chambers at *Calle de la Monterilla* and *Pasaje de Disputación*, beside the *casa de fundición*.

Even after the removal of the mint to the National Palace, it is doubtful whether conditions improved. The workers at the mint continued to toil under many handicaps until the pounding of coins by hand was finally superceded by the introduction of the screw press in 1732 and a new mint was constructed.

²¹ Alberto María Carreño, "Las Primeras Fundiciones y Amonedaciones en México" in *Investigaciones Históricas*, No. 3, April 1939, pp. 315-316. The mint moved to the location on *Calle de Moneda* behind the National Palace in 1569. "At the southern bastion of the National Palace the mint offices were auctioned off by accepting bids at the lighting of a candle and closing the auction when the candle burned out."

MINT OFFICIALS AND WORKERS

The decree of May 11, 1535, authorizing the foundation of the Mexico City mint, ordered that the viceroy, Mendoza, together with the treasurer, select the proper officials to operate the mint. The first officials were selected and appointed for terms of two years. In a letter to the king, dated December 10, 1537,¹ Mendoza mentioned that he had forwarded the list of officials to Spain, but fearing that it was lost in transit, he enclosed a duplicate list. Neither list has come to light, so that the complete staff of the mint for its first two years of operation is unknown. The viceroy did say that he had appointed to the office of assayer and foundryman Francisco del Rincón, who was in Mexico when Mendoza arrived and who had a letter of recommendation from the king. Antón de Vides was given the position as die sinker. Mendoza spoke highly of the skill of both appointees.

Because many of the appointments and records of the period 1536–1572 have not been located in the archives of Spain or Mexico, it is not possible to construct a complete and documented record of the various mint officials. We do know that the following officials pioneered at the mint from its opening in the spring of 1536:

Don García Manrique, the Conde de Osorno, treasurer by the king's appointment, who arrived in Mexico with the viceroy.

Francisco del Rincón, first assayer and foundryman, appointed by the viceroy.

Francisco del Rincón, a cousin, foundryman and assistant to the assayer, appointed by the treasurer.

Antón de Vides, first die sinker, appointed by the viceroy.

Alonso Ponce, a workman.²

¹ *Col. de Docs. Ined.*, First Series, Vol. II, p. 192–194.

² *Idem*, reference to Francisco del Rincón, assayer, and Antón de Vides. Francisco del Rincón, assayer, and Alonso Ponce testified on June 5 and June 9, 1545, respectively, in TSI. For the Conde de Osorno, see below note 28. The Indians of the town of Xiquipilco were assigned as the labor force of the mint for the first two years.

Late in 1537, as the first two year period was drawing to an end, a new staff of mint officials arrived from Spain. The offices had been granted to Spanish favorites by the king, and the arrival of their *tenientes*, or deputies, to assume their duties created a situation both confusing and embarrassing for the viceroy and the mint workers. As a result, Mendoza suggested that the king relieve him of the duty of making mint appointments, and that the king assume the responsibility. He complained that it was unfair to the officials who had made the initial step of opening the mint, to be displaced after the routine had been established; and that there was not room for as many officials in the Mexico City mint as in the mints of Castile. The list of the king's appointees has not been found, and the outcome of this duplication in appointments is unknown. It is known however that Francisco del Rincón, the first assayer, did not continue into a second consecutive term. Neither did de Vides, the die sinker, as far as is known.

The grant of mint offices was made in the same manner as political "plums" are handed out by politicians in our time. The king simply conferred the offices on his favorites. The beneficiary received ownership of the position for life, with all the "honors, graces, favors, franchises, freedoms, exemptions, pre-eminences, privileges, prerogatives, and immunities"³ which the title afforded. Under the royal grant, the owner could, and generally did, sell, lease, or assign the position to one or more *tenientes*. Usually the owner of the office lived in Spain, while his *teniente* resided in the mint edifice in Mexico City and performed the functions of the position. Thus, in the year 1545, the Bishop of Lugo owned the office of secretary of the mint, but the duties were carried out by Pero Sánchez de la Fuente, under a lease whereby the bishop received two-thirds of the fees, while Sánchez, his *teniente*, retained one-third.⁴

The officials and workers at the mint did not receive a salary, but worked by contract according to which they shared in the division of sixty-eight maravedíes (two reales) in fees taken from each mark of

³ From the appointment of Francisco del Rincón as die-sinker, February 11, 1542.

⁴ TSI, testimony of the vice-treasurer, May 29, 1545.

silver coined. The division of the fees as given in the testimony of the Sandoval Investigation follows:

Of the fees the treasurer received twenty-two maravedíes

per mark,	XX II
the assayer received one maravedí	I
the die sinker received five maravedíes,	V
the secretary received one maravedí,	I
the guards (two) received two maravedíes,	II
the weigh master received one maravedí,	I
the coiners received eight maravedíes,	VIII
the foremen received twenty-four maravedíes,	XX IV
and the <i>raciones</i> were four maravedíes.	IV
	<hr/>
	LX VIII

The four maravedíes of the above called *raciones* were divided among the workers for subsistence.⁵ The assayer, in addition to his fees, charged for assay two reales for each ten marks of silver which the merchants brought to the mint to be coined. The *alcaldes* and the *merino* of the mint did not share in the division of the fees, but each received an allowance of 117 maravedíes for each one thousand marks coined.

The value of a mint office was considerable, as can be illustrated by the suit brought against Francisco del Rincón by Pedro de la Membrilla. The plaintiff claimed to have been swindled out of his property, del Rincón having purchased for 550 gold ducats the position as assayer which was worth some 1800. In 1544, Juan Gutiérrez purchased the office of assayer from de la Membrilla. The contract, which seems to have embraced the permanent sale of the right as *teniente*, or deputy assayer, rather than a short time lease, involved "1500 pesos *de oro de minas* of a value of 2210 maravedíes per mark."⁶

That the mint offices were much sought after stemmed not simply from the considerable income they afforded. Besides receiving the

⁵ TSI, May 29, 1545.

⁶ TSI, appended to court record.

fees assigned them, the officials were furnished quarters in the mint buildings, and were exempt from many taxes and duties which fell upon the common citizen. They had ample opportunity for graft, and, operating at a distance from Spain, with little government supervision, they had many chances to earn substantial incomes beyond their legal fees. The extent of illegal activity at the mint is indicated in the fact that the investigation by Viceroy Mendoza, reinstituted after that of Tello de Sandoval, resulted in the indictment of every official for some infraction of the laws.⁷ As early as the Tello de Sandoval hearings it was learned that, contrary to all regulations, several officials were of one family — del Rincón, and that the Negro slaves working at the mint were owned by certain of the officials, and that there was irregularity in the registration of dies as well.

Assayer and foundryman, *ensayador y fundidor*

The laws of the Catholic kings commanded that all coin of their dominions bear the registered mark, or *señal*, of the assayer of the mint of issue, as a guarantee of his responsibility for the legality in weight and fineness of the coins.⁸ From the arrangement of the coins by design and details it appears that the assayers marks were used on the coins approximately in this order: EARLY SERIES R, G, F, P; LATE SERIES G, A, R, S, L, O. In order to prove this arrangement, it would be necessary to document both the name of the assayer and the period in which he worked at the mint, an impossibility at the present because of the gaps among the records so far located. Confusion has also arisen because some of the owners of the office of *ensayador y fundidor* were not actually at the mint but lived in Spain and leased

⁷ A. G. I. Doc. 58-3-8, Mendoza to the Marqués de Mondéjar, July 1545, filed as 1549, with Mendoza's answers to the Tello de Sandoval charges against him. In Pradeau, *Don Antonio de Mendoza y la Casa de Moneda de México en 1543*, Mexico, 1953, pp. 107 ff. (referred to incorrectly as 60-3-23). The marquis was D. Luis Hurtado de Mendoza, the second person to bear the title. He was the oldest brother of D. Antonio de Mendoza.

⁸ Ley 38, June 13, 1497. "...una señal suya por donde se conozca quien hizo el ensai de aquella moneda."

the position to a *teniente* at the mint. The *señal* of the *teniente* who actually worked in the mint is that which appears on the coinage.

Francisco del Rincón, first assayer. There is no question that the first assayer at the Mexico City mint was Francisco del Rincón, but he is not to be confused with his relative of the same name who at this time was foundryman. He was appointed by the viceroy and served from the opening of the mint in the spring of 1536 until some time after March 22, 1538.⁹

By the time del Rincón had completed his first two year period as assayer, the ownership of the office of assayer and foundryman belonged to Pedro de la Membrilla of Medina del Campo in Spain, who by reason of being either a minor or an incompetent was represented by his father, lic. Gutiérrez Velásquez, in all affairs pertaining to the office.¹⁰ On July 31, 1538, the owner, through his father, granted to Francisco de Loaysa, the *Oidor* of New Spain, and to Bartolomé de Consate, the Governor of Mexico City, authority to lease the office to a *teniente* for such a period and price as they saw fit. This information proceeds not from the actual contract, but from an affidavit of de Loaysa, which explained the lease, and included the statement that "I leased the office of *ensayador y fundidor* in the Mexico City mint to Francisco del Rincón [i. e., for a second term], and inasmuch as the most honorable Lord Viceroy of New Spain and the Treasurer of the said mint would not accept Francisco del Rincón for the said offices, and since the said offices [cannot] remain vacant," the lease was granted to Juan Gutiérrez.¹¹

⁹ TSI, testimony of May 28, 1545.

¹⁰ TSI appended documents and lawsuit, Justicia 1008. In every recorded document found to date, Gutiérrez Velásquez signs as father and legal administrator for his son, Pedro de la Membrilla.

¹¹ TSI appended to records, the first of a series of documents demonstrating how Gutiérrez became assayer. It is strange that having mentioned Francisco del Rincón so highly to the king that the viceroy refused a short time later to accept him for another term. Perhaps some such difficulty arose as was later to be made public in del Rincón's attempt to defraud de la Membrilla in the purchase of the office of assayer, or in the attacks on the del Rincón family generally which found a place in the Tello de Sandoval investigation.

At some time following the expiration of his first office, del Rincón seems to have filled the office of *teniente* treasurer. In 1542 he may have received the appointment as die sinker.

The next mention of Francisco del Rincón in connection with the office of assayer occurs in 1543, on the occasion of the purchase of the office by him from de la Membrilla on March 21.¹² On September 29, however, the owner¹³ brought suit against del Rincón to recover the rights to the office of assayer which had been sold to him a year and a half previously. Sebastián Rodríguez who had been retained as counsel, presented a petition on December 4, which claimed that del Rincón, who was thoroughly familiar with mint affairs, had purchased the office of *fundidor y ensayador*, and paid a deposit of 400 ducats of the total sale price of 550 ducats. Del Rincón had represented to de la Membrilla (who had never been in Mexico and was unfamiliar with the true value of the office) that no one would buy it for more. Rodríguez contended that the office was really worth 1800 ducats or more, and that the purchase had been made by fraud and deceit. The owners pleaded that del Rincón be forced to accept the return of his deposit, that the sale be declared void, and that the appointment be returned to the owners, in order that the position could be sold to another at its real worth.¹⁴

On December 5, 1544, a copy of the above claim was presented before the Council of the Indies. Appended to it was the statement that the petition had been examined by the members of the Council, and that Francisco del Rincón was given fifteen days to answer the charges. On December 16 lic. Juan de Lazcano stated that he, acting for de la Membrilla and Gutiérrez Velásquez and by the orders of the Council, had found del Rincón in the city of Seville and had served

¹² Listed in the General Index of the papers in the Library of the Royal Academy of History, Madrid. See below, note 17.

¹³ TSI, third document appended.

¹⁴ The position had already been sold to Juan Gutiérrez (who had leased it in 1538), on April 22, 1544. See TSI fourth document appended. During this brief period, March 1543 to April 1544, the scarce LATE SERIES coins with del Rincón's mark R were probably struck.

him in persons with the summons. No answer was received by the following January 2; five days later the plaintiff's claim of del Rincón's default was registered along with the judgment for settlement and costs of the action.¹⁵

With this suit, Francisco del Rincón disappears from the records. He may have later become the first assayer at the mints of Lima or Potosí, or it may be that this was another member of the famous family.

Juan Gutiérrez, second assayer. It is now necessary to return to the year 1538, when Francisco del Rincón completed his first two year term as assayer. The exact date on which Juan Gutiérrez assumed the official duties of *ensayador y fundidor* at the mint is unknown, but he did follow del Rincón. Because Pedro de la Membrilla owned the office at the time, Gutiérrez must have leased the position from him through de Loaysa.

Unfortunately, no documents whatever for the years 1539 or 1540 relating to the mint have been found in the Archives or calendars of state papers of Spain or Mexico. There is extant, however, the last lease signed by Gutiérrez renting him the office on January 17, 1543.¹⁶ It states in part, "that I lease to you, Juan Gutiérrez, as principal lessee, and to you, Alonso de Villaseca, as his trustee . . . being present, the said offices of *ensayador y fundidor* . . . which I lease to you for a time and space of two full years, first following, which begin to run and do run from the first day of the month of August next . . ." This does not exclude the possibility that Gutiérrez had been at the mint as early as 1538, in order to follow del Rincón in the office and to produce the EARLY SERIES with *señal* G. During del Rincón's second lease, which started March 21, 1543, and ended by the lawsuit on January 7, 1545, the position was sold to Gutiérrez on April 22, 1544.¹⁷ This contract mentioned no term of service and was evidently an outright sale for life tenure.

¹⁵ A. G. I., Justicia 1008.

¹⁶ Second document appended to TSI.

¹⁷ Fourth document appended to TSI. The date of del Rincón's second lease has been found in the index to the records in the Royal Academy of History in Madrid, but the document itself has not yet come to light. The date is possibly incorrect; it is

The dates on which Juan Gutiérrez signed either leases or documents at the mint as assayer are as follows:

January 17, 1543, two year lease, to commence the following August.¹⁸

March 17, vouchers at the mint.¹⁹

August 1, lease of office renewed, at a rental of 35 pesos *de oro de minas*, each peso valued at 450 maravedíes.

April 22, 1544, purchase of office for 1500 pesos valued at 2210 maravedíes per mark. One-half the price was paid in the form of five plates of silver weighing 152 marks, 5 oz., and 6 reales.²⁰

August 9, vouchers at the mint.

February 16, 1545, vouchers at the mint.

March 18, vouchers at the mint²¹

difficult to understand how he could have leased the office in March of 1543 after Juan Gutiérrez had already obtained the lease to begin the following August. If the date of the del Rincón lease is correct, one of two solutions may obtain. It is conceivable that the leases were granted under two separate powers of attorney, some confusion arising therefrom; but for this there is no evidence. It is also possible, and certainly more probable, that del Rincón bought the office rather than leased the position of *teniente*. Such indeed was the case, if it is this lease to which the suit against del Rincón refers, the suit giving no date for the original transaction. In such a case, Gutiérrez, who had already leased the office as *teniente* for two years beginning August 1, 1543, would continue in his position, now having as his master del Rincón rather than Pedro de la Membrilla. Del Rincón would have ownership of the office, but would not act in it until Gutiérrez' lease should have expired. If this hypothesis is true, we may have here a further source of the enmity between Gutiérrez and the family del Rincón in general; for Francisco del Rincón would hardly have let out to Gutiérrez in 1545, on the expiration of the two year lease, an office he was competent to fill himself, and it was to the interest of Gutiérrez to frustrate del Rincón's ownership to keep his own position secure.

¹⁸ Doc. no. 2 appended to TSI. But there surely was an earlier lease under which Gutiérrez acted prior to 1543. The vice-treasurer stated on May 29, 1545 that Gutiérrez took the office before the lease in question was signed — "he took office under the ordinances before the transfer."

¹⁹ TSI, testimony of May 28, 1545.

²⁰ Fourth document appended to TSI. A considerable sum, amounting to 675,000 maravedíes, compared to the annual rental of 15,750 maravedíes, which Gutiérrez had paid previously to lease the position.

²¹ The above are signatures, found in TSI, testimony of May 28, 1545.

From May 28 to July 15, he was acting as assayer during the Sandoval Investigation.

On May 28, 1545, Gutiérrez testified that he had resided at the mint for six years, which would place him there as early as May, 1539.

The known history of Juan Gutiérrez, then, makes him responsible for the EARLY SERIES coins with the mark G, as well as those of the LATE SERIES with G. More varieties are known of his coins than of those of any other assayer of the Charles and Johanna coinage.

Esteban Franco, third assayer. The history of this assayer, though interesting, is extremely fragmentary. He was originally an assayer at the foundry, the *casa de fundición*, for he was appointed assayer for the *tepuzque* gold coinage on August 4, 1531.²² He was still serving at the foundry in June-July 1545, and was summoned to the mint by Tello de Sandoval to make test assays.²³ Charges were later preferred against him for irregularities, and he was recalled to Spain, convicted, and removed from office.²⁴

Among the many hundreds of pieces of the Charles and Johanna coinage which were studied, only eight coins bearing the *señal* F were found. Franco clearly served in a temporary capacity at the mint only for a very short period, probably around 1538-40. His coins seem to have been struck at approximately the same period as some of the LATE SERIES G.

Pedro de Espina, fourth assayer. The rare EARLY SERIES coins with the mark P are probably those of this assayer. His period at the mint can be dated by his signature on a voucher dated October 22, 1541.²⁵ Like Franco, de Espina probably served only briefly. One Pedro de Espina was at the foundry in Mexico City in 1528 and to him was entrusted the position of assayer of the gold smelted there —

²² *Actas de Cabildo*, II, p. 124. He was appointed at the request of Alonso Franco, assay master (*marcador*), who returned to Spain.

²³ TSI, May 27, June 13, and July 15, 1545.

²⁴ Alberto María Carreño, *Un desconocido Cedulario del Siglo XVI*, Mexico, 1944, pp. 395-401. Doc. 213, *Ejecutoria de la Fiscal en la residencia e pleito con Esteban Franco, vecino de México*.

²⁵ TSI, testimony of May 28, 1545.

“... ensayara y marcara los quilates del oro.” In 1533 he was named “marcador desta ciudad... ensayador...”²⁶ As no other individuals with the initial P have been found during these years in the records of the foundry or the mint, we may assume that the Pedro de Espina of each case was one and the same person, and that he was the assayer responsible for the coins of the EARLY SERIES with *señal* P.

Luis Rodríguez, seventh assayer. The common LATE SERIES coinage with the mark L has generally defied attribution, partly because most previous attempts to locate an official to whom the mark might be referred covered only the period 1536–1556. However it now seems clear that the mass of pieces with the marks L and O cannot be fitted into the brief period which would have to be allotted for the LATE SERIES coinage in such a scheme. Rather, the Charles and Johanna coinage continued to be struck into the reign of Philip II, probably as late as 1572,^{26a} and it is in this period that the latest assayers are to be found. It is known that on May 30, 1570, the Council of the Indies notified Philip II of the death of one Luis Rodríguez, “assayer of the mint of Mexico”, and asked instructions as to the conditions under which the office of assayer might be offered for sale.²⁷ Inasmuch as there was no need for the assayer to register the initial of his family name one may assume the mark L to have been that of Luis Rodríguez.

The assayers who used the marks A, S, and O — probably the fifth, sixth, and eighth respectively — on the LATE SERIES coinage are unidentified to date. Since O was also the first assayer of the coinage bearing the name of Philip II, his appointment may come to light in the records of that reign. L (Luis Rodríguez) and O evidently alternated as assayer for at least one period, and possibly more, since pieces are known both with L punched over an original O on the die, and vice versa.

²⁶ Pradeau, *Historia Numismática de México*, Mexico, 1950, p. 52, citing L. Anderson, *El Arte de la Platería en México, 1519–1936*, New York, 1941, I, p. 82.

^{26a} See also p. 38.

²⁷ A. G. I. 140–7–32.

Treasurer, *tesorero*

The first treasurer of the mint was Don García Manrique, the Conde de Osorno, who arrived in Mexico with the viceroy in 1535.²⁸ Returning to Spain in 1537, he left as *teniente* or vice-treasurer of the mint Alonso de Mérida, who served from 1537 until 1541, when he returned to Spain.²⁹ On July 20, 1538, the Conde de Osorno resigned his office in favor of his eldest son, Pedro Manrique.³⁰ This did not affect the position of the *teniente*.

Francisco del Rincón, the first assayer, may have been *teniente* treasurer for some period between 1538 and 1543; during the investigation of Tello de Sandoval, testimony was given to this effect.³¹ No other documentation of this possibility has been found.

Juan de Manzanares was appointed vice-treasurer in the place of de Mérida in 1541.³² His signature appears on vouchers dated October 22, 1541; March 17, 1543; August 9, 1544; and February 16, 1545.³³ He was at the mint during May-July 1545. How much longer he served is not known.

Life ownership of the office of treasurer passed to Miguel Manrique, who resided in Spain, from his father, Pedro Manrique, the Conde de Osorno, on November 9, 1555.³⁴

Scribe, *escribano*

The scribes of the mint are known only through scattered references. The names of the following persons have been found:

²⁸ A. G. I. 60-2-6, "El conde de osorno paso a la nueva españa el año de 535 pero no parece la cédula de la merced que se le hizo de tesorero de la cassa." Quoted in Aiton and Wheeler, "The First American Mint," *The Hispanic American Historical Review*, IX, no. 2 (May, 1931), p. 209, n. 35; hereafter referred to as Aiton and Wheeler.

²⁹ TSI, May 28, 1545, voucher of March 22, 1538; and testimony of May 29, 1545.

³⁰ General Index of the papers in the Library of the Royal Academy of History, Madrid.

³¹ TSI, testimony of Gonzalo Pérez, June 8, and Alonso Ponce, June 9.

³² TSI, testimony of May 29, 1545.

³³ TSI, testimony of May 28, 1545.

³⁴ General Index of the papers in the Library of the Royal Academy of History, Madrid.

Pedro Juárez de Carabajal, appointed June 16, 1535.³⁵

Diego Hernández was serving at the mint on March 22, 1538 and February 16, 1545.

Baltazar del Salto was serving on October 22, 1541.

Andrés de Cabrera was serving on March 17, 1543.³⁶

The Bishop of Lugo owned the office of scribe in 1545. Pero Sánchez de la Fuente acted as his *teniente* at the mint and signed documents dated August 9, 1544, and March 18, 1545.³⁷

Die Sinker, *tallador*

Antón de Vides was the first die sinker of the Mexico City mint. He was appointed for a two year term by the viceroy before the mint opened. He served from the beginning until some time after Dec. 10, 1537,³⁸ and was responsible for the dies with which the first coinage, the EARLY SERIES with R, were struck. Whether a new die-sinker appointed by the king then took over the position is unknown although the viceroy mentioned that new appointees to mint offices had arrived in Mexico (see p. 14) late in 1537.

Ambrosio Gutiérrez³⁹ was die sinker at the mint (c. 1540-41) but he died before Feb. 11, 1542, and the appointment was given to Francisco del Rincón (which one of the Francisco's is not known).

One Pedro Salcedo is mentioned as having served as die sinker.⁴⁰ He could have been acting temporarily following the demise of Ambrosio Gutiérrez, in 1541 or early 1542. A Pedro Salcedo was a silver-

³⁵ Aiton and Wheeler, p. 210. This is doubtful at best, since the mint was not opened until some ten months later. Mendoza, to whom the appointments were entrusted, only arrived in Mexico City in November 1535.

³⁶ TSI, May 28, 1545. All three signed *encerramiento* vouchers.

³⁷ TSI, May 28, 1545, voucher signatures; and testimony of May 29.

³⁸ *Col. de Docs. Ined.*, First Series, II, p. 193. The Mendoza letter.

³⁹ Aiton and Wheeler, p. 210, misread Gutiérrez as "Gris," probably from the abbreviation of the name in manuscripts.

⁴⁰ TSI, testimony of the guard, Santa Cruz, June 2, 1545. At this time Salcedo was inspector of weights and scales for the City of Mexico. He was called to the mint on June 20 to test the weights.

smith in Mexico City who on January 12, 1543 was ordered by the town council to make a stamp or die to mark textiles and woven

materials made in the city with the mark $\overset{o}{x}$ M⁴¹

J. T. Medina, without naming his sources, stated that "Francisco del Rincón, as his father once did, likewise renounced his office and placed his resignation in the hands of his Majesty, in favor of Juan de San Pedro. Gaspar de Tebes, the chief royal equerry, who had been appointed to the same office, filed suit against Juan de San Pedro."⁴² Dr. Pradeau and the author have been unable to trace or document this information; if the records of the transaction and suit could be traced in the Archives of the Indies, they should offer considerable new information on the officials and the transfer of offices during the early years of the mint.

Although it was contrary to law for relatives to hold, own or serve in more than one capacity at the mint, this rule apparently did not prevent relatives from holding different positions. Previous to 1545, Alonso del Rincón owned the office of die-sinker and served at the mint.⁴³ He returned to Spain on April 12, 1545, and left at the mint as his *teniente* the Francisco del Rincón who had been previously a foreman and foundryman,⁴⁴ who was working at the mint and who testified at the Sandoval investigation. How long he held the office and who followed him in the position is unknown to the writer.

There is evidence that he was in Chachapoyas, Peru, in December, 1544. His signature appears on a document^{44a} re-appointing him a

⁴¹ *Actas de Cabildo*, IV, pp. 326 and 333.

⁴² *Las Monedas Hispano-Americanas*, Santiago de Chile, 1919, p. 50. So many of the family del Rincón were active in the mints of Spain, Mexico, and Peru, that they are easily confused. They seem to number father, sons, brothers, and cousins. A Juan de San Pedro was living in Mexico City at the time, but he does not seem to be mentioned in any mint records. *Actas del Cabildo*, Vol. IV, p. 340.

⁴³ TSI, testimony of May 27, 1545; May 29, June 2, June 3, June 5, June 8, and June 9.

⁴⁴ TSI, testimony of June 3, 1545.

^{44a} Harkness Collection of Spanish Manuscripts Concerning Peru, Nos. 1195 and 1196, Library of Congress. The signature on this document is identical with that of Del Rincón on the TSI papers.

manager of mines at that city. How he could have been active at the Mexico mint and simultaneously a manager of mines in Chachapoyas is an unsolved mystery.

Justices of the mint, *alcaldes*

Lic. Castañeda, 1543-1555, appointed by the king.

Lic. Alemán, 1545, appointed by the viceroy.⁴⁵

Judge of the mint, *merino*

Hernando Alonso was serving as *merino* during May-July, 1545, by appointment of the treasurer.⁴⁶

Guards, *guardas*

Francisco de Lerma, at some time during 1538-1543.⁴⁷

Cristóbal de Caniego, or Callego, signed vouchers at the mint on March 22, 1538, and October 22, 1541. He died some time before May 29, 1545.

Juan de Cepeda signed voucher on March 17, 1543.

Juan de Santa Cruz was appointed by the viceroy following the death of Caniego. He was guard at the mint in May-July 1545, where he had served for about three years.

Diego de Madrid signed vouchers as guard on August 9, 1544, and March 18, 1545, and was serving during May-July, 1545. He acted in the absence of Santa Cruz.⁴⁸

⁴⁵ TSI, testimony of May 29, 1545.

⁴⁶ Idem.

⁴⁷ The only mention of de Lerma occurs in TSI, testimony of Alonso Ponce, June 9, 1545.

⁴⁸ On the guards generally, TSI, May 28, 1545, voucher signatures; and testimony of May 29, June 2, and June 9.

Weigh master, *balanzario*

Gabriel del Rincón owned the position in 1544–1545, residing in Spain. Martín del Rincón served in Mexico as his *teniente*. He resigned on August 20, 1544, but continued to live in Mexico City. In 1545 he was trading in silver and taking it to the mint to be coined.

Juan de Cepeda, formerly a guard, was appointed by the treasurer to this office following the resignation of Martín del Rincón. He was serving in May–July, 1545.⁴⁹

Coiners, *acuñadores*

Francisco Hernández, 1542 to July 1545 and later.

Miguel Consuegra his brother, was serving in 1545.

Pedro Bezón, beginning in 1543, was still serving in May–July, 1545.

Gonzalo Pérez, beginning in 1540, was still serving in May–July, 1545.⁵⁰

Foremen, *capataces*

Francisco del Rincón, cousin of the assayer Francisco, about 1540.

Gerónimo de Tuesta, was serving during May–July, 1545.

Alonso Ponce, formerly a workman, was serving as foreman during May–July, 1545. He had been at the mint since it opened.

Antón Sánchez, his brother, a foreman in May–July, 1545, stated that he had been at the mint for about three years, first as a workman.⁵¹

The labor force.

The Indians from the village of Xiquipilco were used as laborers in the mint under the system of *repartimiento*, at least for the first four

⁴⁹ TSI, testimony of May 27, 1545; May 28, May 29, June 3, June 5.

⁵⁰ TSI, testimony of May 29, June 3, June 6, and June 8, 1545.

⁵¹ TSI, testimony of May 29, June 5, and June 9, 1545.

years of operation.⁵² Under this system, which was really serfdom, a weekly allotment of Indians was assigned to the mint for the heavy work, and their Spanish owner collected for their services. Besides the Indians, a number of Negro slaves were employed at the heavier work — some cut and shaped the silver, others hammered the coins. They were said to be “competent and efficient,” and “without them the coins could not be made, inasmuch as the work was very hard and of little interest to the Spaniards, who did not want it nor had the knowledge for it.”⁵³ The difficulty of the work cannot be questioned; during the investigation by Tello de Sandoval it was asserted that some of the slaves had died from the effects of their labors.⁵⁴

⁵² Meek, *op. cit.*, p. 44.

⁵³ TSI, testimony of June 5, 1545.

⁵⁴ TSI, testimony of June 2, 1545.

III

MINT TECHNIQUES: DIE MAKING AND COINING

Little is known of the mint processes and procedure during the period of the Charles and Johanna series. This is hardly strange, for coinage, like the arts and crafts of the middle ages, was a trade jealously guarded, the secrets of which were not published for laymen to learn or practise. The mint workers purchased their positions and paid for the privileges of capitalizing on their skill, which they had learned from their fathers and from years of apprenticeship. Francisco del Rincón, the die sinker, stated that he could teach a new worker to become skillful in three days,¹ but certainly he did not mean the trade of die sinking, but such menial work as an ordinary helper or workman might be assigned to do.

Machinery was not in use. The knowledge and craftsmanship derived from the staff of Spanish officials; the strength and muscle was provided by the Indians and the Negro slaves who did the hot, dirty work, and the hammering.

The Flans

Silver bars bearing the tax collector's seal denoting that the king's fifth had been deducted could be purchased at the foundry.² The trader or merchant who brought his silver to the mint to be coined received

¹ TSI, testimony of June 5, 1545.

² The United States National Museum purchased one of a number of such ingots of silver, brought up from an old wreck off the Florida coast in 1949. It weighs seventy-five pounds Troy, and is stamped with some numbers and designs, undecipherable due to corrosion. Two more stamped ANATA, are in McKee's Museum of Sunken Treasure at Plantation Key, Florida. A fourth, in such good condition that the markings are plain, is on exhibit at the Nassau Development Commission, and is described in *The Lost Treasure of King Philip IV*, Nassau, 1953, by A. J. S. McNickle.

a receipt for so many marks' weight of metal. His silver was marked and stored with a copy of the receipt to await coining. There was some criticism by merchants who were forced to await the delivery of their coins on account of various delays. The mint officials suggested in 1545 that the king deposit one or two thousand marks of silver as a backlog for the mint to coin, that they might thus anticipate any demand. At least part of the trouble lay in the slowness of the foundry to deduct the *quinto* (the King's Fifth paid to the crown from all gold and silver mined) and release the bullion to traders.³

The silver previously assayed at the foundry was again assayed at the mint, and the owner was charged a fee of two reales per ten marks by the assayer for this service. If the quality did not agree with the standard, the owner was notified. If somewhat better than standard, the owner generally allowed it to be coined rather than undergo the expense of returning it to the foundry to be resmelted and re-alloyed; if below standard, the silver was returned to the owner, since the mint officials would have been penalized for coining it.

The bullion was cast into thin bars, and hammered or rolled into strips from which the blanks were cut and rounded. This work was done by Indians or slaves under the supervision of Spanish foremen, *capataces*. The copper blanks were made with more difficulty than the silver. The first flans were brittle and broke under the blow of a hammer. Since the mint staff was unable to overcome the difficulty, the work finally was given out to the Indians of Michoacán, who were well versed in handling copper. They cast the bars, rolled the strips, and delivered the blanks to the mint already cut. During the investigation, Juan Gutiérrez testified that "there had been cut and minted copper money in cuartos of four maravedíes and two maravedíes, and at present (1545) the blanks are being brought, ready cut, from Mechoacán. . . that the making of the blanks has been done in this manner for two years,⁴ more or less, by the Indians of Mechoacán,

³ TSI, testimony of June 3, 5, and 8, 1545.

⁴ So that copper blanks must have been made at the mint for about a year at most.

who are taught at this mint, and they make them from copper extracted from the Province of Mechoacán... that in this copper money no silver is used, as the viceroy ordered, although by the sovereigns of Castile a certain quantity of silver is used in the copper coinage." He also stated that "the copper money struck at this mint belongs to His Majesty, and none is made for any private individual."⁵

The blanks were weighed by the weigh master, the *balanzario*, and if they averaged correctly (67 reales to the mark for silver; 144 maravedies for copper) they were sent to the coining department. Here the blanks were heat treated or annealed, and passed on to the coiners to be struck between the dies by hand hammering.

In spite of the crude methods employed, the coins of the Charles and Johanna series are of fairly even thickness and are well rounded. They are better made than many of the coins struck at the same mint in later years.

The Dies

No dies of the early days of the Mexico City mint are known to exist. In fact, very few dies of the hand hammering era have survived from any of the European mints. Most of them were literally pounded to pieces. Only eight examples of mediaeval coining tools are preserved in the Royal Mint Museum in London,⁶ and a small series is found in the Vienna Mint Collection.⁷

Whether dies, or more likely the punches to manufacture dies,⁸ were carried by the Mendoza party when they arrived in Mexico in 1535 is not known from any document. However, it seems reasonable to assume that Mendoza, with his knowledge of mint procedure, would have made provision for the necessary tools. Certainly the punches for the earliest R coins were of Spanish manufacture. The

⁵ TSI, testimony of May 27, 1545.

⁶ W. J. Hocking, *Royal Mint Museum Catalogue*, vol. II, p. 3.

⁷ *Katalog Münzen- und Medaillen-Stempel Sammlung des K. K. Hauptmünzamt in Wien* (1901), vol. I, pp. 23-24.

⁸ On the punches see below pp. 32-33.

lions, castles, and letters are typically Spanish in design, and resemble closely the punches of dies used in Spain at this period. If these earliest Mexican punches were not conveyed to the New World by Mendoza, they certainly arrived shortly after him. It may well be that sample dies were also sent as guides for the die sinkers.⁹

Because of the number of punches used to make a die, no two dies were identical. It was possible for a careful workman to punch the dies quickly and with a minimum of effort; but it was impossible to duplicate exactly the spacing of every detail, given the number of parts which had to be hammered into the die one by one. The punches wore and broke at the edges and through their narrowest sections; the breaks widened and finally only a ragged design of the original was left. The broken punches sometimes continued in use until replacements from Spain could be obtained or substitutes could be made locally. Thus the varying stages of wear of a given punch determine a chronological arrangement of the dies on which it was used, and upon that arrangement this catalogue of the Charles and Johanna series is based.

The preparation of the dies — it cannot be called engraving — was under the care of the die sinker, the *tallador*. The shaping of the steel for punches and dies could have been executed by any skilled laborer, but the tempering, the incision of the design into the die, and any secret trade details, were done by the official himself. That the Spaniards were skilled in working and tempering steel is proved by the fine swords and armor of the period.

The steel for the dies having been forged into the proper shape, the end which was to receive the design of the die was smoothed and

⁹ That punches were manufactured in Spain for use in the New World is proved by a document listing a number of punches sent to the Santo Domingo mint in 1573 (A. G. I. 78-2-1, printed in Medina, p. 134; and in *Catalogue of the Julius Guttag Collection*, p. 487.) Fifteen large letters and a cross, together with sixteen other punches — lion, castle, pieces of crowns, etc. — were to be used in the manufacture of dies for coins of four and two reales, and four maravedíes. A second group of letters served for the dies of the one real and two maravedíes pieces. (No mention is made of punches for dies of the eight reales size, an additional proof that coins so large were not issued from American mints until after 1573.)

polished. The die sinker then laid out the design. He began by making a center indentation with a prick punch, around which he cut several circles with a compass, guides for the inner and outer beading. The center mark, a small raised dot, can usually be seen on the coins when it is not covered by some part of the design. The die sinker then proceeded to hammer the design, element by element, with the various punches into the untempered surface of the die.¹⁰ Clearly each die was unique. Not only was it impossible to place each punch exactly, but any carelessness in the spacing of the legend resulted either in a gap at the end of it, to be filled by annulets or crosses, or in a limitation of space which resulted in an almost endless variety of abbreviations. Thus REGES, on the obverse, is found as R, RG, REG, RE, RGS, RGES, REGS, and GS; while INDIARVM became INDIARM, INDIARV, INDIAR, INDIA, INDI, IND, and IN.

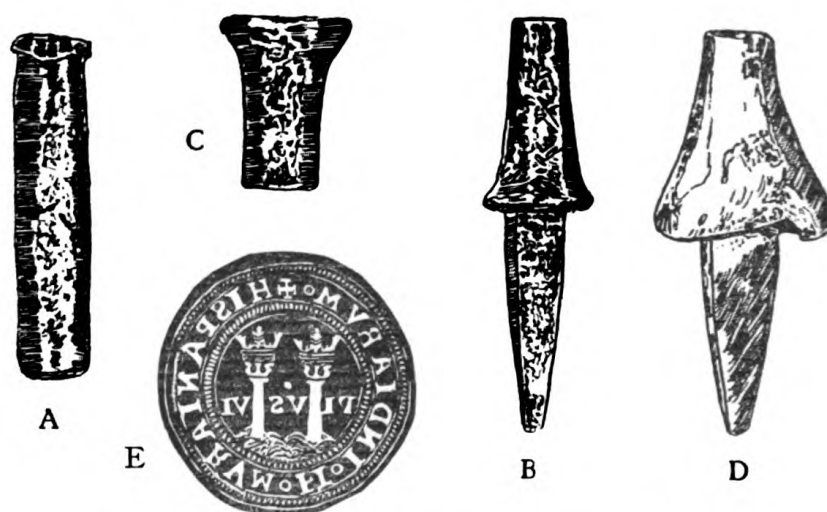
The Coinage

The lower die was sunk into an anvil by means of a tongue at its base which fitted into the block. It was the die with the more elaborate device, the obverse, since it was less liable to be damaged by the repeated blows of striking. It was called the *pila*, or "pile." The upper die, the *troquel* or "trussel," was cut into the end of a rod, receiving

¹⁰ G. MacDonald, *The Evolution of Coinage*, Cambridge, 1910; p. 69. "A common error is the supposition that dies in medieval times were cut directly upon a prepared piece of metal, in the same manner as a seal or intaglio. . . . A die was usually made by the use of a number of irons or punches, each cut to the requisite shape to produce some portion of the design; and these were punched by the die maker into the prepared piece of metal in such a fashion as eventually to make up the complete die. The saving of labor effected by this means is obvious, and it was often used, at any rate in the case of legends, in classical times." Twelve punch designs — circles and crescents of different sizes, dots, etc., — are shown with which the die maker could make the portrait and legend on the short-cross penny of Henry III of England. A little practice would enable an intelligent mechanic to turn out the finished die in a brief space of time and with comparatively little effort. See also Shirley Fox, "Die Making in the Twelfth Century," in *British Numismatic Journal*, First Series. vol. VI (1909), pp. 191-196, quoted by MacDonald.

the direct force of the hammer and thus suffering the greater danger of breaking.¹¹

In use, the blank was laid upon the *pila*, and the *troquel* was held above it while the coiner struck the upper end of the rod with a hammer. A very careful, straight, and heavy blow was necessary to impress the silver blank evenly. Mendoza acknowledged that at the beginning "the workers of the mint toiled very hard but obtained meager results, as the coin continually moved (*la moneda se erraba*), which [then] had to be made over and over again."¹² The dies were movable



HAND HAMMERING DIES AT VIENNA MINT MUSEUM

The upper dies (A and C) were held over the lower dies (B and D) which were set in a hole in an anvil. The designs for the coins were punched into the lower ends of A and C into the tops of B and D. E illustrates how a reverse die of a one real of the LATE SERIES would appear.

so that there is no fixed relation of the obverse of the coins to the reverse. No collars were used on the dies and the breakage rate was high. Virtually no die breaks appear; when a die cracked, it broke,

¹¹ English records show that in hand hammering, fresh dies were issued to provincial mints in the proportion of two reverse (upper) dies for every obverse (lower) die. See MacDonald, *op. cit.*, p. 69.

¹² *Col. de Docs. Ined.* vol. II, First Series, p. 192. Letter of Nov. 18, 1537.

because no collar held the metal together. The short life of a die is illustrated in that nearly every coin examined was from a different pair, although many coins show that they were made from dies made from the same punches.

One of the chief difficulties in cataloguing the varieties stems from the virtual impossibility of listing them by die varieties. The greater part of all hand hammered coins were double and sometimes triple struck. This caused many queer effects in the details on the coins, which were not die details. Double striking can make one of the lions thin, the other fat. It can completely obscure one or more letters of a legend, or it can duplicate them. A coin with the obverse legend ending EGGS in place of REGES can be the result of a double strike; the legend was not cut with that spelling in the die. Similarly, three- and five-legged lions with two tails do not indicate a new die variety.

Variations in individual punch details are a different matter. By a flaw in a letter punch, a tongue on a lion, a break in the left side of a castle, or a slight change in a crown design, the varieties of punches in use to make the dies can be established. The coins have been organized into varieties by this method, and an attempt has been made to place them in the proper order of issuance from the mint.

After the coins were struck they were blanched, a process by which they were cleaned and whitened. They were carefully weighed to ascertain that they averaged sixty-seven reales to the mark. Samples were also taken for assay and for the biennial *encerramiento*; the assayer's mark in the die was of course his guarantee of the purity of the silver content.

IV
THE SILVER AND COPPER COINAGE;
METROLOGY

The Silver Coinage

From the opening of the Mexico City mint silver coins were struck in denominations of one-quarter real (cuartilla), one-half (medio real), one (sencillo), two (real de a dos), and three reales (real de a tres).¹ Their proportionate production was regulated by the original decree: one-half of the silver bullion coined was to be in pieces of one real; one-quarter, in pieces of two and three reales; and one-quarter, in pieces of quarter and half reales. From each mark of bullion minted sixty-seven reales in coin were to be obtained. Two reales of this amount was divided among the mint officials as fees.²

Of the coins struck, several were regarded with disfavor by the populace. The pieces of three reales — an unusual denomination — were quickly found to be unsatisfactory since they were easily confused with the two reales pieces. They were struck only for a short time; late in 1537 the viceroy ordered that they be discontinued, and he wrote to the king explaining his action. On November 18 of that year, the king ordered the mint to coin pieces of the larger size of four and eight reales, "if expedient." Allowing time for the order to reach Mexico, and for the mint to make the dies, it was probably in the spring of 1538 before the coins of four reales were issued. A few are known with the mark R of del Rincón, the first assayer.

¹ The denominations and their types were prescribed by the decree of May 11, 1535 which established the mint. See Appendix.

² The mint fee in Spain was only one real per mark; the higher rate in Mexico was due to the difficulties involved in creating a mint. The original decree establishing the mint provided for a fee of three reales, but actually only two were deducted.

Pieces of eight reales were never issued, although an attempt was made to manufacture them. The process of making large blanks, and of striking coins of dollar size by hand hammering was too slow, difficult, and costly for the mint to support. Occasionally, a so-called Charles and Johanna piece of eight reales appears, but to date all have been fabrications.³ Mint officials testifying at the Tello de Sandoval Investigation stated that "pieces of eight reales had been made and their coinage was discontinued inasmuch as it was very difficult, and they were not circulated."⁴

The silver cuartillas were so small (about the size of the United States silver three cent piece of the 1850's and 60's) that they were most unpopular. That only two are known in the EARLY SERIES with mark R, and one with P, probably indicates how few were struck. On November 12, 1540, the viceroy ordered that "regardless of what the proportions were previously," the coinage of the mint was to be one-third in pieces of four reales; one-third in pieces of two reales; and one-third in pieces of one real and one-half real.⁵

The coinage of the cuartilla was thereby discontinued, although many persons complained that the half real was too large a denomination for ordinary purchases. In recognition of the need for money of very small denominations, the queen issued an edict on October 9, 1549, ordering the production of the denominations of one-half, one-quarter, and one-sixteenth real in silver. The one-half real piece was already being struck, and no attempt was made to issue the smaller coins. Cuartillas were not made again until 1794.

The first silver coinage brought some confusion to commercial transactions in Mexico. Before the mint opened, some silver coin had been

³ See Plate XIII, 1 and 3.

⁴ TSI, testimony of May 27, 1545, by Juan Gutiérrez. Similar statements were entered by Francisco del Rincón, the die sinker, on June 5, and by Alonso Ponce on June 9.

⁵ Mendoza ordinance, in Diego de Encinas, *Libro de Provisiones, Cédulas, Capítulos de ordenanças, Instrucciones y cartas... de los señores Reyes Católicos... y Emperador Don Carlos... y Doña Juana, etc.* Madrid, 1596, III, p. 229. Puga, *Provisiones, Cédulas, Instrucciones de Su Magestad, etc.*, Mexico, 1878, II, p. 49, dates the ordinance as November 12, 1549, evidently a misprint.

brought from Spain, and it was circulating at forty-four maravedies per real because of the risk and the expense of importing it. On May 31, 1535, the queen decreed that two months after publication of the edict, all silver coins were to pass at thirty-four maravedies per real, at par with the coins which were to be minted locally. The devaluation of the imported money was the cause of alarm and uncertainty, as the imported reales had been accepted as equal to the tomín of *tepuzque* gold.⁶ The viceregal ordinance of July 15, 1536, which reduced the value of the real to thirty-four maravedies, nonetheless continued the exchange of one real for one tomín. As a result the silver money generally circulated at a discount, in spite of the law. Finally, the queen issued another *cédula* on February 28, 1538, allowing the imported coin to circulate at forty-four maravedies per real until the end of 1538, when they were to be valued at thirty-four maravedies. Eventually the real became accepted at its lower value.⁷

From certain facts it would appear that the LATE SERIES of Charles and Johanna silver coins (at least those with the assayer's marks L and O) were issued from the Mexico City mint from 1556 until 1572.⁸ This cannot be proven, except indirectly, unless further documentation is discovered in the mint records. The silver coinage in Spain proper bearing the yoke and arrows of Isabella I and Ferdinand V was minted through the reign of Charles and Johanna and well into that of Philip II. In fact it was not until Nov. 23, 1566, that Philip ordered a change in the design of the coinage in Spanish mints.⁹ This order also included a change in the shield to include the arms of all the Spanish dominions, as well as those of Hapsburg. That this order was not applied to the American mints can be seen from the first coinage of the Lima mint. The *cédula* for founding the

⁶ *Actas de Cabildo*, July 5 and 7, 1536.

⁷ See Meek, *op. cit.*, p. 55.

⁸ The theory that the Mexico City coins with pillars and Charles and Johanna's names were minted until 1572 was brought to the attention of the writer in 1951 by A. J. S. McNickle who has been studying the coinages of Philip II. On the same theory, see Tomás Dasí, *Estudio de los reales de a ocho*, Valencia, 1950, I, pp. 94, 102 II, p. 55.

⁹ Herrera, *El Duro*, Vol. 1, p. 13.

mint in Lima, dated August 21, 1565, described the design to be used,¹⁰ which although carrying Philip II's name, still bore the pillars and motto design, similar to that used in Mexico City for Charles and Johanna, with the mint mark P for "Peru". This design is known in a complete series of denominations from one-fourth to eight reales.

It was not until March 8, 1570, that Philip ordered a new design put into use in American mints.¹¹ On June 28, 1570, the Council of the Indies ordered that the sum of 260 ducats be paid to one Juan Paulo Roxini, *escultor*, for steel for and manufacture of the *marcas* and *punzoneria* he had made for the new coinage of New Spain and Peru.¹² The arrival of these new dies and punches in Lima was acknowledged by the viceroy Toledo of Peru in a letter to Philip II in 1572.¹³

When the mint at Potosí, Peru, began operations in 1575, the design with the new shield was used with the cross with castles and lions in the quarters on the reverse instead of the pillars and motto.

Although the theory that the Charles and Johanna LATE SERIES L and O coins were made until 1572 cannot be directly proved, it can however be supported by the following facts or deductions:

1. Philip did not change the pillars design when the Lima mint was opened at his order of Aug. 21, 1565.
2. The first order authorizing a change in design in American mints was dated March 8, 1570. The engraver was paid for the new dies after June 28, 1570, and Lima announced their arrival there in 1572. It seems reasonable to suppose that no mints could alter the coinage design, without orders from the ruler.
3. The Mexico City Charles and Johanna coinage Late Series L assayer was very likely Luis Rodriguez whose death was announced on May 30, 1570 before the Council of the Indies in Spain.¹⁴

¹⁰ J. T. Medina, *Monedas coloniales hispano-americanas*, Santiago de Chile, 1919, pp. 169-172; A.G.I., 109-7-5.

¹¹ A. Herrera, *El Duro*, Madrid, 1914, I, p. 13.

¹² Herrera, *op. cit.*, II, p. 493; (where name is given as Proxini); Medina, *op. cit.*, p. 43; A.G.I., 139-1-12.

¹³ Medina, *op. cit.*, p. 155, no. 26.

¹⁴ Medina, *op. cit.*, p. 43; A.G.I., 140-7-32.

The Copper Coinage

The decree for the founding of the Mexico City mint set no design for the copper coinage as it had for the silver. Rather, it ordered the viceroy, as "a person who . . . has had experience in this matter, having been our Treasurer of the mint of Granada," to order the design and metal for the copper coins, to have them minted, and to send a report on them to the Council of the Indies.

It would appear that both the viceroy and the new mint officials were too busy to plan and execute the orders for the copper pieces until mid-1542.¹⁵ Certainly the necessity existed; the discontinuance of the silver *cuartilla* left the country without coins of small denomination. Since most of the minor market transactions were in terms of prices of less than a half real, the copper pieces would have filled this need. As a matter of fact the Indians disliked copper coins, and writers on the subject all agree that the natives used various types of exchange media other than coins.¹⁶

The copper pieces known to us as the "Santo Domingo type," and which are still excavated in Santo Domingo and Puerto Rico, were probably used to some extent in New Spain. They had been authorized for the island by Ferdinand on December 20, 1505, and again by Johanna on May 10, 1531.¹⁷ They were struck under contract at the mint of Seville or of Burgos, possibly at both. The design, pictured in the catalogue (see p. 127), shows crowned pillars between the letters S and P on the obverse, and a crowned Y ("Ysabel") between F and 4 on the reverse. No pieces of one or two maravedies are known to the author.

On February 28, 1538, Charles issued a decree prohibiting the

¹⁵ Orozco y Berra, *Diccionario Universal de Historia y de Geografía*, Mexico, 1853-1855, V, p. 913.

¹⁶ Cf. Meek, *op. cit.*, pp. 15-31.

¹⁷ *Col. de Docs. Ined.*, Second Series, V, p. 114. Antonio Vives y Escudero, "Reforma Monetaria de los Reyes Católicos," *Boletín de la Sociedad Española de Excursión*, Sept., 1897, p. 117. José Toribio Medina, "La Primera Casa de Moneda que hubo en América," *Revista Chilena de Historia y Geografía*, I (1911), p. 355-6.

coinage of gold and copper in the colonies.¹⁸ Since the Mexico mint had not begun to coin copper (and gold was not considered), the decree served only to delay any plans for the copper coinage which Mendoza had formed. The town council of Mexico City discussed the desirability of copper coinage at various times, and the minutes of July 30, 1540, show that different opinions were current. On April 17, 1542, the *Cabildo* proposed that copper money should not be struck and circulated as long as silver money of small value was in production.¹⁹ In spite of this, the viceroy authorized the copper coinage some ten weeks later. It is safe to assume that no copper was struck at the Mexico City mint until after the viceroy's edict of authorization of June 28, 1542.²⁰

The first copper coins were struck from dies made with the first series of punch designs with which the EARLY SERIES G, F, and P dies were cut. The square K of the obverse is distinctive. The four maravedíes (cuarto), is the only denomination known of this series. The pieces do not show an assayer's initial; it was not necessary to assay the metal since it contained no silver.

Before many of these coins could be struck, the third series of punch designs arrived from Spain. The details of the die design were changed, and were now similar to the dies of the LATE SERIES G coinage. The many varieties of obverse and reverse arrangement of punch details are shown on page 130. The coppers of this series are known in denominations of four and two maravedíes. It was testified in 1545 that the following copper coins had been struck: four maravedíes, two maravedíes, and that patterns of one maravedí had been made although none had been issued.²¹ No pieces of one maravedí are known.

As soon as the copper coins were issued the Indians refused to accept them. The viceroy issued strict orders enforcing their circulation, but even the strictest punishment could not prevent the Indians from

¹⁸ *Docs. Inéd.*, Second Series, V, p. 114.

¹⁹ *Actas de Cabildo*, IV, pp. 204-5 and 278-9.

²⁰ See p. 30, note 4, and Pradeau, *Numismatic History of Mexico*, p. 39.

²¹ TSI, testimony by the vice-treasurer on June 3, 1545.

throwing them into the gutters or into Lake Texcoco "that they might never more be seen."²² Now, some four hundred years later, the coppers are being excavated from the mud of the old lake bed during drainage operations. Most of the copper pieces examined came from this source, thickly caked with hard grey mud in which they had reposed since the sixteenth century.

The Audiencia at Mexico City, in a letter to the king dated March 17, 1545, agreed that copper money should still be made;²³ and the town council minutes of August 16, 1546 mention "the copper money that is made in New Spain."²⁴ However, at least by the meeting of March 6, 1550, the members of the *Cabildo* had agreed that copper money should be discontinued because of its misuse by the Indians, who apparently were still throwing the pieces to the four winds.²⁵ The coining of copper was probably suspended about 1551 or 1552, and it was officially outlawed by the royal decree to that effect of 1565.²⁶ Copper coinage was not again attempted in New Spain until 1814.

The history of copper coinage in Mexico was epitomized by Suárez de Peralta, who wrote in the sixteenth century:

For a long time, at least up to 1579 when I left New Spain, . . . the smallest and most ordinary coin given [as alms] to the Spaniards is the half real of silver because there have not been any [copper] cuartos, and the natives do not know what they would be like. Thus, when I arrived in Spain, . . . and saw cuartos and learned of their circulating value, I was amazed and could not help ask, 'Is it possible that this coin has a value and that one may purchase food with it?'

I remember hearing it said that Viceroy Mendoza had a large quantity of cuartos coined, which he ordered accepted, and they circulated; and this coinage must have been the grossest stupidity

²² Pradeau, *op. cit.* p. 38, citing Torquemada, *La Monarquía Indiana*, Book 5, chapt. XIII, p. 1.

²³ Del Paso y Troncoso, *Epistolario de Nueva España*, Second Series, IV, p. 195.

²⁴ *Actas de Cabildo*, V, p. 148.

²⁵ *Ibid.* V, p. 292-3.

²⁶ *Recopilación*, IV, tit. 23, ley 3.

of the land, since the Indians never wished to receive them, and had no remedy. Instead of accepting the coins, the Indians secretly gathered them and dumped them into the lake, until they put an end to them, and none were seen. When this was realized, no more were ever made.²⁷

Metrology

During the sixteenth century, the weight of individual coins was not specified by law. In all mints, reliance was placed on the principle of averages. The decrees of the period prescribe that a certain number of coins be struck from a stated quantity of metal.²⁸ Any particular piece might be heavy or light as long as the lot in which it was struck weighed true to the mark.²⁹

In the decree establishing the Mexico City mint it was ordered that 67 reales in coin be struck from each mark weight of silver.³⁰ The tests conducted during the Tello de Sandoval investigation confirmed the ratio of 67 reales to the mark. Of this three reales were to be apportioned among the mint workers in fees. During the investigation, the officials were dividing two reales. The fineness of the bullion was set at 11 *dineros*, 4 *granos*, the equivalent of 930.51 thousandths.³¹

The process of weighing the silver coins was described as it was performed at the mint on June 13, 1545, before the visitor Tello de Sandoval and his entourage. Esteban Franco, the assayer of the foundry, was called to the mint to assay the coins of the *encerramientos* and to check the current output by weight.

²⁷ Don Juan Suárez de Peralta, "Tratado del Descubrimiento de las Yndias," *Noticias Históricas de la Nueva España*, Mexico, State Dept. of Education, 1949, pp. 96-7.

²⁸ MacDonald, *The Evolution of coinage*, p. 70.

²⁹ See R. I. Nesmith, *ANS Museum Notes*, I, pp. 93-4.

³⁰ In 1349, Alfonso XI, wishing to re-establish the Roman system of weights, had two mark standards brought to Spain, one from Cologne, the other from Troyes, France. The former was used in weighing metals; the mark of Troyes served to weigh all other matter. The mark of Cologne was equivalent to .507 pound, or 230 grams.

³¹ The *dinero* was a Spanish measure of assay in testing the fineness of silver. Absolute purity was counted as 12 *dineros*, each of which was divided into 24 *granos*. The fineness 930.51 obtained in the silver struck in Mexico until 1729.

The money was kept in piles of four, two, one, and one-half reales. Franco scooped two handfuls (*dos almuerzadas*) of four reales pieces from the pile. On one side of the scales he placed the weight of one mark (which had been certified as correct) and one silver real, and on the other he laid 17 pieces of four reales. They were found to be overweight. He then took another handful from the opposite side of the pile and again weighed seventeen pieces, which also were somewhat overweight.

Moving to the pile of two reales coins, he repeated the process by balancing 34 pieces of that denomination against the mark and one real. Going through the procedure six times in all, he found the coins overweight on four occasions, underweight on one. Franco then weighed the one real coins in lots of 67 against the one mark weight. Four lots taken from different parts of the pile were each overweight. The one-half real coins, 134 to the mark, were heavy in two cases, exact in one. There is no mention in the report that any copper coins were weighed.

On June 22, 1545, certain coins owned by a merchant were brought to the mint and weighed in the same manner, and were found to be overweight "rather generously."³²

Most of the coins examined by the author, although in good to fine condition, were light in weight, even though the earliest at least evidently were struck heavy. A small percentage showed signs of having been filed around the edges, but surprisingly few were holed. It seems probable that the heavier coins disappeared from circulation while the lighter survived.

Before circulation the coins should have averaged in weight as follows:

$\frac{1}{4}$ real	at 268 to the mark	.858 grams
$\frac{1}{2}$ real	at 134	1.716
1 real	at 67	3.432
2 reales	at 34 to the mark & 1 R.	6.865
3 reales	at 22 & 1 R.	10.296
4 reales	at 17 & 1 R.	13.731

³² TSI, testimony of June 22, 1545.

The EARLY SERIES coins of R, G, F, and P are so rare that the weights of the few studied prove nothing, except that the best examples weighed near the standard. They are:

$\frac{1}{4}$ real R	$\frac{1}{2}$ real P	1 real R	2 real R	3 real R	4 real P
.85	1.68	3.37	6.79	10.10	13.57 grams

In the case of the LATE SERIES so many pieces are known that it was possible to select the coins showing the least wear to submit to weighing, and in two instances hoards were available to weigh in lots so that the averages could be obtained in the same manner as originally. A hoard of 25 pieces of 4 reales of series $\overset{\circ}{M}$ -O was weighed with the following interesting results:

8 coins were standard (13.73 grams) or better, the heaviest weighing 13.95 grams. The 8 pieces totaled .53 grams overweight.

17 coins weighed light, from 13.72 down to 13.44 grams. The 17 pieces totaled 1.61 grams underweight.

The 25 coins were therefore a total of 1.08 grams underweight, or .0432 grams per coin in average. Even slight wear would account for the discrepancy. When 9 of the best pieces apart from the hoard were added to it to make a lot of 34 coins, and they were weighed 17 pieces to one mark and one real, even as Franco had weighed them four hundred years before, the lot of 34 was light 1.60 grams. This is less than $\frac{1}{4}$ real light on 67 reales in coin, or a shortage of .80 gram on one mark of 230 grams.

Part of another hoard of one real LATE SERIES pieces came to the writer in quantity, and was weighed in lots of 67 to the mark with the following results:

208 pieces	1 real $\overset{\circ}{M}$ -O averaged	3.312 grams.
42	1 real O- $\overset{\circ}{M}$	3.30
43	1 real $\overset{\circ}{M}$ -L	3.32
34	1 real L- $\overset{\circ}{M}$	3.27
67	1 real L-M	3.28
76	1 real M-L	3.30

The entire 470 coins of assayers L and O averaged 3.304 grms. per l real. All of these showed signs of considerable circulation, and from the fact that they were found buried with many coins of Philip II, they could have circulated for years. None were holed.

The copper coins were generally in such poor condition that they were not systematically weighed. Eleven pieces in better condition in the collection of the American Numismatic Society weighed between 5.23 and 6.63 grms., averaging 5.75 grms. Thirty-six of these coins, the number struck from one mark, would then weigh 207 grms., a total of 23 grms. light. However considerable weight was lost through wear and corrosion.

CATALOGUE

THE CATALOGUE

The coins of the Charles and Johanna series are here listed in two main groups, EARLY SERIES and LATE SERIES, and within these groups by assayer's marks chronologically, as far as can be determined. It was evident that the two groups had to be treated differently. The coins of the EARLY SERIES are quite uncommon – of some only one example has been found. Every piece known to the author has been listed. Many small variations in design and legend have been considered in establishing the list of varieties. The provenance has been given for every piece seen, and brief notes concerning the distinguishing characteristics of each accompany its illustration. Although every die is not represented, a close parallel of every coin known can be found in the catalogue.

The LATE SERIES coins, however, could not possibly be handled in the same manner. Some 2000 pieces have been examined, but inasmuch as each die is a variety in itself, it was necessary to classify them according to changes of specific die details. The obverse varieties have been differentiated on the basis of a change in the design details of either the crown, or the lion, or the castle, or the upper edge of the shield, or even some combination of these. The individual variations of these features are explained in the commentary to the Table of Design Varieties for the LATE SERIES, p. 101. The reverse varieties are differentiated according to the changes of design of the small crowns on the pillars as well as by their relative size. Since in the case of the one-half real pieces no lions and castles appear, and many of them are in poor condition, they have been classified by the relative location and arrangement of the mint mark, assayer's mark, and annulets on the obverse, and by the form of the motto PLVS on the reverse.

An examination of the enlarged photographs of the coins* showed clearly that the dies were not engraved, but had been formed from the impressions of a number of punches, each bearing one element of the total design. The commentary on the EARLY SERIES will illustrate in some detail the type of punches used. It also became evident that three different punch design series were employed. These developed from Gothic to Roman, from KAROLVS to CHAROLVS to CAROLVS, from reverse motto on a panel to reverse motto free on background. Such observations made it possible to plot a rough chronological scheme for the dies. Particularly in the case of the first series of punch designs there is evidence of worn and broken punches for which substitutes were made. In very few instances have two coins been found struck from the same pair of dies, so that the number of dies actually must have been enormous.

The key to the catalogue numbers will enable one to locate in the catalogue any silver coin of either the EARLY or LATE SERIES. A given piece can be checked according to denomination and to the form of the assayer's mark and the mint mark. The resultant number obtained from the key refers to the listing of that piece in the catalogue, where its obverse and reverse types and legends are noted. Some denominations are unknown for some assayer's marks, but numbers (in italics) have been assigned to them in case any examples come to light. Numbers 27 to 30 have been omitted to provide for possible future additions to the EARLY SERIES. A brief summary listing of the copper coinage completes the catalogue.

* See p. 3.

KEY TO CATALOGUE NUMBERS
OF SILVER COINAGE

THE EARLY SERIES

R-G-F-P

1536-1542 (?)

	$\frac{1}{4}$ r.	$\frac{1}{2}$ r.	1 r.	2 r.	4 r.	3 r.
R between pillars (on the reverse)	1*	2	3	4	6	5
G between pillars (on the reverse)	7	8	9	10	11	
$\overset{\circ}{\underset{\circ}{M}}-\overset{\circ}{\underset{\circ}{F}}$ } $\overset{\circ}{\underset{\circ}{P}}-\overset{\circ}{\underset{\circ}{M}}$ } $\overset{\circ}{\underset{\circ}{M}}-\overset{\circ}{\underset{\circ}{P}}$ } on obverse divided by shield	12	13	14	15	16	
	17	18	19	20	21	
	22	23	24	25	26	

* See p. 57 of the catalogue and p. 136 of the appendix for proof that this coin belongs to this series despite the absence of the assayer's mark R.

4*

THE LATE SERIES

G-A-R-S-L-O

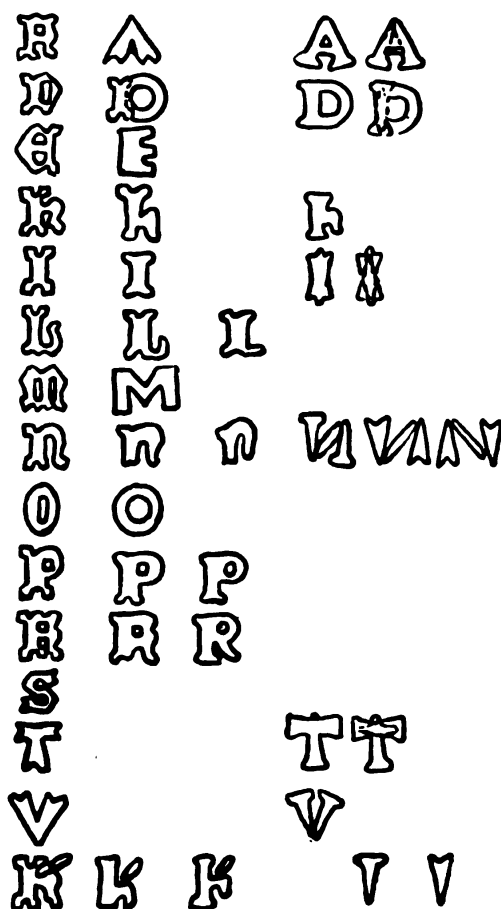
1542 (?)–1570

	$\frac{1}{2}$ r.	1 r.	2 r.	4 r.
$\overset{\circ}{M}-\overset{\circ}{G}$	31	32	33	34
$\overset{\circ}{M}-\overset{\circ}{G}$	35	36	37	38
G- $\overset{\circ}{M}$	39	40	41	42
G-M	43	44	45	46
M-G	47	48	49	50
$\overset{\circ}{M}-G$	51	52	53	54
M-A	55	56	57	58
A-M (or A- $\overset{\circ}{M}$)	59	60	61	62
$\overset{\circ}{M}-A$	63	64	65	66
M-R	67	68	69	70
R-M	71	72	73	74
M-S (or $\overset{\circ}{M}-S$)	75	76	77	78
L-M	79	80	81	82
M-L	83	84	85	86
$\overset{\circ}{M}-L$	87	88	89	90
L- $\overset{\circ}{M}$	91	92	93	94
O-M	95	96	97	98
M-O	99	100	101	102
O- $\overset{\circ}{M}$	103	104	105	106
$\overset{\circ}{M}-O$	107	108	109	110

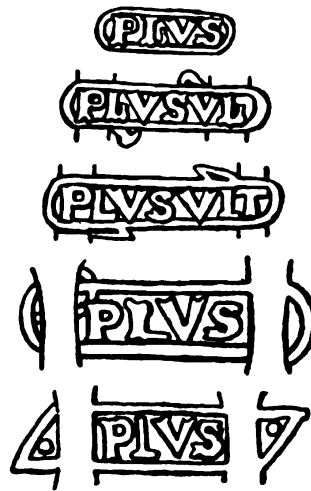
THE EARLY SERIES

R

The earliest output of the Mexico City mint consisted of coins with the assayer's mark R. These were struck from dies formed from the first series of punch designs. This series of punches consisted in part of the fifteen letters necessary for the legends of both obverse and reverse, the mint mark, and the assayer's mark. These letters along with the design of the other punches in the series are illustrated in the figures below.



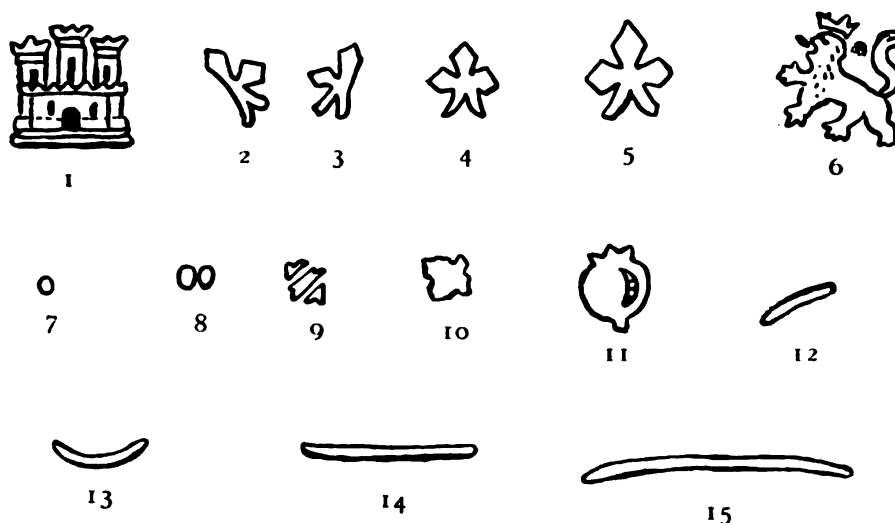
As a result of constant use the letter punches often broke. In their original form they were Gothic letters cut in Spain as shown in the first column of the figure on page 53. The earliest coins (1536) have the largest number of Gothic letters in the legends. As letters broke, crude copies were cut in the mint by native workers. Examples of these can be seen in the columns to the right in the figure. Those shown at the furthestmost right are the substitutions found on the last of the R coins. These substitutes were made with the tack and wedge shaped punches shown at the bottom. No punch existed for the letter K. When that letter was needed an upper arm was added separately to an H.¹ A smaller group of letters, five in number, served for the reverse motto, an abbreviation of *plus ultra*. The motto appeared on an oval panel in front of the pillars. Gradually the panel became elongated, moving behind the pillars, and at the end of the series developing into a rhomboid (no. 6d).



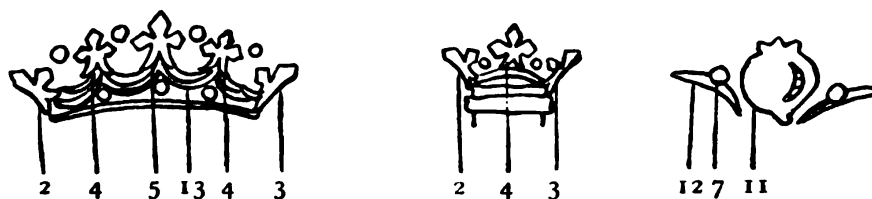
The design of the obverse and reverse types was accomplished through the use of twelve other punches in the series. The rondule (7) was used to separate words, denote the denomination, and to combine

¹ The Gothic **h** was misread as L by the compiler of the Vidal Quadras y Ramon catalogue.

with other punches to form the obverse crown and pomegranate. Another device to separate words was punch 9 which is often found quite worn (see 10).



The beading forming the border on both obverse and reverse was stamped with a punch of two rondules (no. 8) in the use of which one rondule was rested in a bead of the first impression to guide the position of the second, etc. A single punch, or perhaps several, was used in the manufacture of the lion and of the castle in the obverse die. Both obverse and reverse crowns employed the same parts (no. 2-5) as well as various lines and curves (nos. 13-15).



The pomegranate consisted of the fruit (no. 11) and the leaves (nos. 7 and 12). The manner in which all these punches were combined to produce the finished dies can be seen by examining their reproductions on the overlays to the enlarged photographs of the one real coin of this series between pages 56 and 57.

ENLARGED
ONE REAL EARLY SERIES

R No. 3

Showing use and placement of punches
in first series of die punches





ONE REAR VIEW SERIES AND
R No. 3, Reverse
(See p. 33 for punch design numbers)



ONE REAL EARLY SERIES

R No. 3 Obverse

(See p. 55 for punch design numbers)



ONE REAL EARLY SERIES
R No. 3 Reverse
(See p. 55 for punch design numbers)



ONE SERIES YMAA SERIES ENO
R No. 3
(See p. 1 for details of design and use)



EARLY SERIES

R

Cuartilla

I.



Q·AROLVS·ET·IOHANA
HI·SPANIA·ET·IR·D·

ANS (Wayte Raymond coll.), 18 mm., .85 grms.

No assayer's mark, but the details of design definitely place it under R. Large K on obverse for KAROLVS, I on reverse for IOHANA, the design prescribed for silver cuartillas in decree establishing mint. Letter A on reverse is already a substitute for original Gothic punch. Nos. 1 and 1a, as well as no. 22, are the only coins of the Charles and Johanna series without pillars. Note the spelling CAROLVS on both varieties, unusual in the EARLY SERIES.

1 a.



(actual size)



(enlarged)

•D•AROLVS•ET•IO(RR)

•ET•INDIAR•D•GR

Museo Nacional de Historia, Mexico, 16 mm., .75 grms.

Obverse similar to 1, but no rondule between arms of K. Reverse differs in legend, omitting HISPANIE, adding D. GR (*Dei Gratia*) and in the omission of the rondules above and below the M's at either side of the crowned pillar.

One-Half Real

2.



(actual size)



(enlarged)

**X:KROLVS:ET:IOHANN:RE:
:X:ISPANIA:ET:INDIARVM** **PLVS**

Lucio Laguette coll.

Crowned KI on obverse, the I Gothic style script. On reverse crowned pillar behind motto PLVS on panel. Two rondules in pale separate words. Note KA or KROLVS and ISPANIE in legends. Additional examples in Banco Nacional de México, S. A., and ANS (Wayte Raymond coll.), 20 mm., 1.62 grms.

One Real

Obverse, crowned shield with emblems of Castile, Leon, and Granada. Mint letter at each side of shield with rondules above and below. Reverse, crowned pillars of Hercules, connected by panel with motto PLVS, PLVSV, or PLVSVL. Below, assayer's mark R. No mark of denomination. Two rondules between words. Obverse legends on 3c and 3e end with letter appearing to be V, but probably a Gothic D (for *Dei*). The breakdown in original letter punches can be seen by following the changes in L, O, A, N, and M.

3.



**KAROLVS X ET IOHANNES
X HIS PANIE X ET INDIARVM PLVSV**

O. K. Rumbel coll., 24 mm., 3.36 grms.

Eleven rondules above crown. Original Gothic A on obverse, M on reverse. Crude I on obverse, A on reverse. Motto PLVSV.

3a.



NERO CAESAR **PATER PATRIAE** **PATER**

José Tamborrel coll.

Four rondules above crown. Obverse legend ends IOHAN. Motto PLVSV. Additional examples in Clyde Hubbard coll., 24 mm., 3.12 grms; 25 mm., 3.32 grms.

3b.



NERO CAESAR **PATER PATRIAE** **PATER**

Alfredo Porraz coll., 26 mm., 3.25 grms.

Obverse legend ends IOH. Motto PLVS. Additional examples in Banco Nacional de México, S. A.; Clyde Hubbard coll., O. K. Rumbel coll. (obv. legend ending IOHA); and G. C. Martin coll. (IOHA), 25 mm., 3.28 gms.

3c.



KAROLVS:ET:IOHANNES:V **PLVSVL**
:X:HISPANIE:ET:INDIARVM

Alfredo Porraz coll., 25 mm., 3.25 grms.

Obverse legend ends in Gothic D. Motto PLVSVL. M and O are now not Gothic. Additional examples in Lucio Laguerre and A. R. Perpall colls.

3d.



:KAROLVS:ET:IOH **PLVSVL**
:X:HISPANIE:ET:INDIARVM

A. R. Perpall coll., 25 mm., 3.29 grms.

Crude A on obverse. Motto PLVSVL. An example with reverse 3e. is in O. K. Rumbel coll.; with rev. 3b in F. S. Angert coll., 25 mm., 3.29 grms.

3e.



KAROLVS: ET: IOHANNES: REX: HISPANIE: ET: INDIARVM
PLVSVL

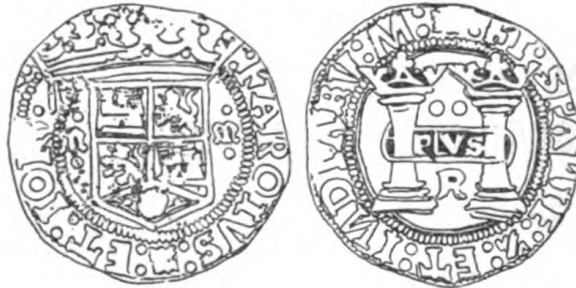
H. L. Freeman coll., 25 mm., 3.32 grms.

Legend as 3c, but no annulets after M ending reverse legend. Crude D, made with I and O punches, substitutes for Gothic D in INDIARVM. Motto PLVSVL. Examples also in ANS (Wayte Raymond coll.), 24 mm., 3.14 grms.; Humberto F. Burzio coll., Clyde Hubbard coll., 25 mm., 3.24 grms.

Two Reales

The design is generally that of the one real coin. Above the reverse panel are two rondules to indicate denomination. The examples noted have original Gothic letters H, K, S, and L (in part). All other letters are crudely recut. If earlier pieces do exist, they will be identified by the Gothic style of the legend. The motto of all pieces seen is PLVS.

4.



:KAROLVS:X:ET:IOH.....

:X:HI:SPANIE:X:ET:INDIARVM

PLVS

F. C. C. Boyd coll. (Guttag 2424), 27 mm., 6.64 grms.

Crude block M in reverse legend.

4a.



KAROLVS:X:ET X IOHAN

X:HI:SPANIE:ET:X:INDIARVM:R

PLVS

A. R. Perpall coll., 28 mm., 6.71 grms.

The Gothic L is now lost, a crude form of the letter supplanting it.

4b.



KAROLVS: X: ET NIOH

: X: HISPANIE: X: ET: INDIARV: M

PLVS

Museo Nacional de Historia, Mexico

The final M of the reverse legend is original Gothic. Additional examples in V. Q. R., no. 6912 (pl. 26,20) (reading PLV, but original was probably PLVS); Fonrobert 6216, and Ulex 1207.

This unusual denomination was struck only in this series. Discontinued in late 1537 to be replaced by coins of four reales, it was never struck again. The number of original Gothic letters has been taken to determine the order of issuance. The motto is consistently PLVSVLT except on 5 d.

F. J. Angert coll., 35 mm., 10.00 grms.

Legends of this coin and 5 a, the two earliest of this denomination known, are the most nearly complete of the series, since obverse crown remains within beaded circle. Single or double rondule between words. Waves may have been added to coin after striking.

5a.



†:KAROLVS:ET:IOHANN:DAIGRA:R
 *:HISPANIE X:ET:INDIARVX:M

PLVSVL

F. J. Angert coll., 35 mm., 9.90 grms.

M and D on obverse and reverse are later punches, the latter manufactured from I and O.

5b.



KARO...ET:IOHANN:?:
 ?:HISPANIE X:ET:.....RVX:M?

PLVSVL

Salvador Illanes coll.

Gothic O gives way to cruder type. The lion punch is a native imitation of the original Spanish lion. Obverse legend may end in a Gothic D.

5c.



KAR...VS:ET:IOHANA:
:HISPANIE:ET:INDIARVM: **PLVSIT**

F. C. C. Boyd coll., 31 mm., 9.90 grms.

New forms of A and N now replace Gothic type. Additional examples in ANS, 32 mm., 9.71 grms.; Hispanic Society of America, 31 mm. 9.75 grms.; Casa Pardo coll., 32 mm., 10.10 grms.; P.K. Anderson coll. (Huth-Gutttag 2423 A); J. J. J. Dos Santos coll., 3655; V. Q. R. 6911 (pl. 26, 19).

5d.



KAROLVS X:ET:IOHANA:
:HISPANIE:ET:INDIARVM **III**
PLVSIT

Museo Nacional de Historia, Mexico, 31 mm., 9.50 grms.

Undoubtedly last design of the three reales coin. Only H, K, R, and S remain of original Gothic letters. Note the three strokes which have replaced dots over reverse panel. Motto, PLVSIT. Another example in F. J. Angert coll., 30 mm., 10.10 grms., whose legend is that reproduced here.

Four Reales

The coins, the largest issued by an American mint until the eight reales pieces of Philip II, were not struck until those of three reales had been discontinued, appearing probably in 1538 toward the end of the term of office of Francisco del Rincón. The letter punches are plainly not Gothic. The earliest illustration of one of this issue appeared as a woodcut entitled "Realen vān vieren van gewichte aladvenant" in a book of instructions to money changers printed by Kornelis van Alkemade, Antwerp-Rotterdam, 1633. Heiss reprints the illustration as does Dasí. E. H. Adams, in *The Coin Collector's Journal*, November 1934, illustrated a counterfeit piece of eight reales of similar design. The fabricator used Heiss' engraving as a pattern, but copied the many errors of the woodcut, creating a design and denomination never issued by the mint at Mexico City. J. T. Medina illustrates a piece of four reales of the EARLY SERIES with assayer's mark P (*Las Monedas Coloniales Hispano-Americanas*, p. 66, no. 2), actually an R defaced by wear or weakly struck.

6.



•KAROLVS•X•ET•IOHANA
•X•HISPANIE•X•ET•INDIARVM•RE (PLVS)

O. K. Rumbel coll., 32 mm., 13.03 grms.

Two rondules follow ET on reverse. Another example in L. S. Forrer coll. (*The Numismatist*, July 1950).

6a.



**:KAROLVS:ET:IOOHANA PLVS
:HISPANIE:X:ET:X:INDIARVM:X**

Lucio Laguette coll.

Number 9 punch between rondules following ET on reverse. IOOHANA and multiple rondules are result of double striking.

6b.



**:KAROLVS:X:ET:IOHAN: PLVS
:HISPANIE:X:ET:INDIARVM:RE:X**

Clyde Hubbard coll., 30 mm., 13.35 grms.

Similar to 6, but obverse legend ends IOHAN: Another example, Salbach 3219, not illustrated.

6c.



**:KISPANIE:X:ETX:INDIARV:M:RX
PLVS**

Clyde Hubbard coll., 30 mm., 13.45 grms.

Obverse legend as 6b, but reverse legend ends with R. Number 9 punch and two rondules after ET on reverse.

6d.



**:KAROLVS:X:ET:IOBANA
:X:KIS:PANIE:X:ET:X:INDIARV:M**

**4
/ PLVS 7**

Alfredo Porraz coll., 32 mm., 12.75 grms.

Reverse motto panel has changed to a rhomboid, pointing right. Other examples in José W. Gómez coll.; J. T. Medina, *Las Monedas Coloniales Hispano-Americanas*, p. 66, no. 2.

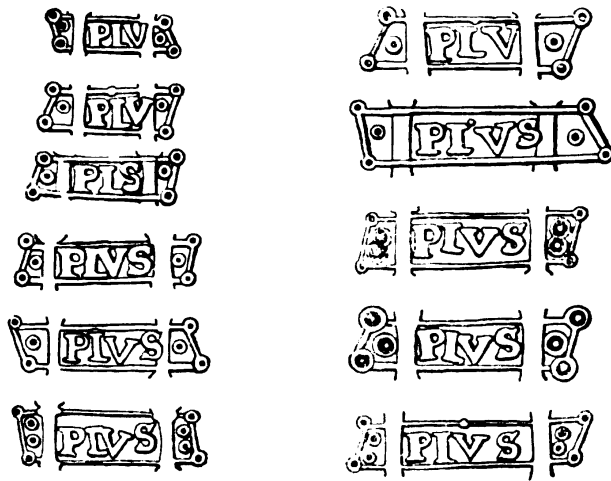
EARLY SERIES

G-F-P

The general design of the coinage with assayer's marks G, F, and P did not change from that of mark R, but a new (the second) series of punches was used to make the dies. It is likely that the set of punches were cut in Mexico by skilled Indian workers, for they are not as delicate nor as Spanish in style as those used for the earliest dies. The castle is not Spanish, but is rather like an Aztec ideograph. The lion is no longer crowned, and appears to have been designed by a native unfamiliar with the animal. Both lion and castle are now impressed with a group of punches, the design being too difficult to cut on one punch in entirety. For the lion, one punch included the body and head, while the legs and tail were added separately. The pomegranate is reduced in size, to fit a smaller triangle at the base of the shield. No waves appear at the base of the pillars.

The lettering and mint mark were made with a redesigned font of punches, now of Roman rather than Gothic type. Various stops divide words, such as rondules in annulets, quatrefoils, crosses and lozenges. The legend varies in length and spelling.

The shape of the reverse panel has altered from an oval, used under R, to a rhomboid, placed behind the pillars, pointing either to the left or to the right. At the corners of the panel, annulets or rondules with annulets appear, as they do singly or in pairs on the ends of the panel, beyond the pillars. The motto never appears in full because of lack of space. It was abbreviated to PLS, PLV, and PLVS. Only on the R coins, where the panel appeared in front of the pillars, was there space for PLVSVLT to be inscribed.



FORMS OF REVERSE MOTTO ON
G—F—P

SECOND PUNCH DESIGN SERIES

FOR EARLY SERIES G-F-P

A D E F G H I K L M N O P R S T V

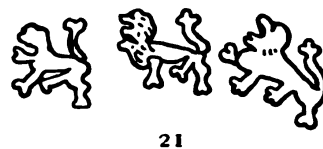
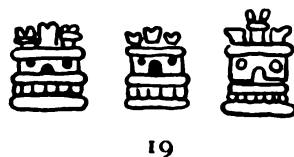
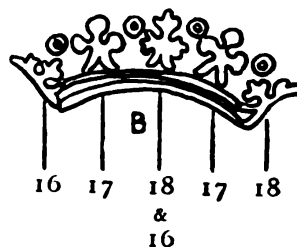
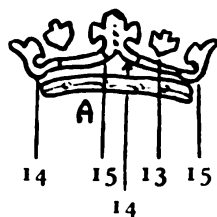
1

P L V S

2

4

3



1. Letter punches (17) for legends. 2. Letter punches [for reverse motto
3. Denomination indication. 4. Rondule. 5. Rondules for beading. 6. An-
nulet. 7. Rondule in annulet. 8. Lozenge. 9. Mascle. 10-11. Quatrefoils.
12. Cross potent. 13-18. Crown decorations. 19. Castle. 20. Pomegranate.
21. Lions.

ENLARGED
TWO REALES EARLY SERIES

P-M No. 20

Showing use and placement of punches
in second series of punch designs





SEAL OF THE UNIVERSITY OF CALIFORNIA
(Seal of the University of California, 1908-1920)
The seal of the University of California, 1908-1920, is a circular seal. It features a central shield with a castle, a lion, and a cross. The shield is surrounded by a decorative border of grapevines and leaves. The entire seal is rendered in a reddish-brown color.



TWO REALES EARLY SERIES

P-M No. 20 Obverse

(See p. 74 for punch design numbers)



TWO REALES EARLY SERIES

P-M No. 20 Reverse

(See p. 74 for punch design numbers)



UNIVERSITY OF CALIFORNIA

Library of the

(Specialized in the study of the history of the book)



EARLY SERIES

G (Juan Gutiérrez)

Of this group the coins of Gutiérrez are the earliest, as is seen in the position of the assayer's mark, on the reverse between the bases of the pillars. Only the first coins, those of del Rincón, are similar.

Cuartilla

7. No example located.

One-half Real

8.



(enlarged)

⌘ KAROLVS ⌘ ET ⌘ IOHAN
⌘ HISPANIARVM ⌘ ET ⌘ IN PLV

O. K. Rumbel coll., 19.5 mm., 1.40 grms.

Five annulets above crown, quatrefoils between words in legend. Rhomboid reverse panel points right. Motto PLV. Additional examples in F. J. Angert coll., 19 mm., 1.30 grms.; Banco Nacional de México, S. A.

8a.



⌘ KAROLVS ⌘ ET ⌘ IOANA ⌘ RE
⌘ HISPANIARVM ⌘ ET ⌘ IN PLV

G. C. Martin coll., 19 mm., 1.41 grms.

Three annulets above crown, quatrefoils between words. Johanna's name appears as IOANA. Motto PLV.

One Real

9.



(enlarged)

⌘KAROLVS⌘ET⌘IOHA PLVS
 ⌘HISPANIARVM⌘ET⌘INDIAR

ANS (Nesmith coll.), 23 mm., 3.35 grms.

Quatrefoils between words on obverse, lozenges on reverse. Reverse panel points left.

9a.



⌘KAROLVS⌘ET⌘IOHA⌘ PLVS
 ⌘HISPANIARVM⌘ET⌘INDIAR

T. V. Purrington coll., 23 mm., 3.14 grms.

Lozenges between words on both obverse and reverse. Another example in V. Q. R. 6884 (pl. 26,7), 24 mm.

9b.



✠KAROLVS ✠(ET ✠)IOHA
✠HISPANIA(RVM)ET ✠INDIA PLVS

O. K. Rumbel coll., 23 mm., 3.13 grms.

Similar to 9a, but reverse legend ends INDIA. The example in the F. G. Angert coll., 23 mm., 3.20 grms., has lions and castles similar to those of 10. Other examples of 9b in Alfredo Porraz coll., 23 mm., 3.25 grms.; Clyde Hubbard coll., 23 mm., 3.15 grms.; Banco Nacional de México, S. A.; Salvador Illanes coll.

Two Reales

10.



✠KAROLVS [•••] IOHANA •
✠HISPANIA RVM • ET [•••] DIARY PLVS

O. K. Rumbel coll., 26 mm., 6.09 grms.

Reverse panel points left. Lozenges separate words on both obverse and reverse. Reverse motto PLVS. Additional examples in R. H. Wilson coll. (with rev. 10), 25 mm., 6.31 grms.; Heiss I, pl. 27,8 (with rev. 10c), 6.70 grms.

10a.



✠KAROLVS✠ET✠IOHANA PLV
✠HISPANIARVM✠ET✠INDIAR

ANS (Wayte Raymond coll.), 26 mm., 6.54 grms.

Rhomboid panel points right. Lozenges separate words on obverse, quatrefoils on reverse. Motto PLV. Another example in F. C. C. Boyd coll. (Guttag 2425), 26 mm., 6.70 grms.

10b.



✠KAROLVS✠ET✠IOHANA✠ PLV
✠HISPANIARVM✠ET✠INDIAR

Lucio Laguette coll.

Reverse panel to right. Quatrefoils between words on both obverse and reverse. Motto PLV.

10c.



✠ KAROLVS ✠ ET ✠ IOHANA ✠
 ✠ HISPANIARVM ✠ ET ✠ INDIARVM ✠ PLVS

Lucio Laguette coll.

Reverse panel to left. Quatrefoils between words on obverse, lozenges on reverse. PLVS.

Four Reales

11.



✠ KAROLVS ✠ ET ✠ IOHANA ✠ RE ✠ PLVS
 ✠ HISPANIARVM ✠ ET ✠ INDIARVM ✠ RE ✠

H. F. Burzio coll., 31 mm., 13.50 grms.

Reverse panels point left. Lozenges in both obverse and reverse legends. Motto PLVS. Another example in J. T. Medina, *Las Monedas Coloniales Hispano-Americanas*, p. 65, no. 1.

11a. Obverse legend punctuated by quatrefoils, ending IOHANA ✠ R. Reverse as 11. Illustrated in Heiss I, pl. 27,5 = V. Q. R. 6882.

EARLY SERIES

F (Esteban Franco)

The rare coins of Franco were struck only during a brief period, possibly about 1538-40 during the absence of Juan Gutiérrez. Until 1945 the only examples known were V. Q. R. 6880 and 6881, and Ulex 1215. The design is similar to that of the coins of Gutiérrez, except that the assayer's mark has been removed from the reverse between the pillars, and is found at the right of the shield on the obverse, balancing the mint mark.

Cuartilla

12. No example known.

One-half Real

13.



Hispanic Society of America no. 233, 20 mm., 1.56 grms.

Three annulets above crown. Quatrefoils between words on both obverse and reverse. Reverse panel points left. PLV. Another example in Clyde Hubbard coll., 19 mm., 1.30 grms.

14.

One Real



**[K]AROLVS ET [I]OHANA
[H]ISPANIARVM ET INDIAR PLVS**

O. K. Rumbel coll., 24 mm., 3.16 grms.

Reverse panel points left. Quatrefoils in obverse legend, lozenges in reverse. PLVS. Additional examples in Lucio Laguerre coll.; V. Q. R. 6881 (pl. 26,6), 25 mm.; Ulex 1215.

15.

Two Reales



**[K]AROLVS ET [I]OHANA
[H]ISPANIARVM ET INDIARV PLVS**

A. R. Perpall coll., 27 mm., 6.66 grms.

Reverse panel points left. Lozenges in legends on both obverse and reverse. PLVS. Example also in a Mexican collection, 26 mm., 3.96 grms.; V. Q. R. 6880 (pl. 26,5).

6

16.

Four Reales

✠ KAROLVS ♦ ET ♦ IOHANA ♦ RE PLVS
 ✠ [HIS] PANIARVM ♦ ET ♦ INDIARVM ♦ RE

Hispanic Society of America no. 784, 32 mm., 11.68 grms.

Reverse panel points left. Lozenges in both legends. PLVS. The only example noted.

P (Pedro de Espina)

$\overset{\circ}{P}-\overset{\circ}{M}$

The coins of de Espina, struck around October 1541, fall into two groups: $\overset{\circ}{P}-\overset{\circ}{M}$, in which the mint mark appears to the right of the shield, the assayer's mark to the left; and $\overset{\circ}{M}-\overset{\circ}{P}$, in which the order is reversed. The former group is the rarest of all the coins of the Charles and Johanna EARLY SERIES. Neither the cuartilla nor the four reales piece has been found by the author. As was the case with Franco, de Espina must have served only for a short time.

The notable features of this series are the use of rondules in annulets, rather than either rondules or annulets separately; IOAN or IOANA instead of IOHANA; HISPANDIE or HISPANIE instead of HISPANIARVM; and the large pomegranate on the obverse shield, as that of the R series.

Cuartilla

17. No example known.

One-half Real

18.



**•KAROLVS•ET•IO•MANA•
•HISPANIE•ET•INDIAR PLV**

Clyde Hubbard coll., 18 mm., 1.21 grms.

Four annulets above crown, annulets in pale between words in legend. Reverse panel points right. Motto PLV. Note that M in IO•MANA is a die error.

One Real

19.



**[KAR] OLV•S•ET•IOAN•
•HIS•PANIE•ET•INDIARV• PLVS**

O. K. Rumbel coll., 24 mm., 3.18 grms.

Lions and castles reversed in panels of shield. Rondules in annulets between words in legend. Reverse panel to left. Motto PLVS. The large pomegranate dates back to the R series.

19a.



**KAROLVS ET IOANA PLVS
HISPANIE ET INDIARVM**

Lucio Laguette coll.

Lions and castles in usual panels. Otherwise similar to 19, but reverse panel points right. No rondules or annulets above or below mintmark or assayer's mark.

Two Reales

20.



**KAROLVS ET IOANA PLVS
HISPANIE ET INDIARVM**

F. C. C. Boyd coll. (Gutttag 2427 A), 28 mm., 6.45 grms.

Rondules in annulets between words. PLVS on panel pointing right. Another example, badly holed was seen in photograph from a Guatemalan collection, owner unknown. Note large pomegranate.

Four Reales

21. No example known.

$\overset{\circ}{M}-\overset{\circ}{P}$

The coins of this series are considerably more common than those just preceding. They comprise a complete series from *cuartilla* to four reales, although of the first denomination only one example has been found. They are of the same style as the F and $\overset{\circ}{P}-\overset{\circ}{M}$ coinage, and probably were among the last of the EARLY SERIES pieces. A point of liason with the $\overset{\circ}{P}-\overset{\circ}{M}$ group is seen in the spellings IOANA of nos. 23 and 25 c, and HISPANIE of 23, 25 c and 25 d; the balance of the pieces seen bear IOHANA and HISPANIARVM.

Cuartilla

22.



**✠H^oAROLVS:ET:IOA
HISPANIARVM^o E (?)**

ANS (Wayte Raymond coll.), 17 mm., .80 grms.

No annulets above or below M and P, which appear on the reverse. This piece and nos. 1 and 1a are the only coins of this denomination which have been located.

One-half Real

23.



✠KAROLVS✠ET✠IOANA✠RE
✠HISPANIE✠ET✠INDIAR PLV

Clyde Hubbard coll., 18 mm., 1.55 grms.

Three annulets above crown. Quatrefoils divide words on both obverse and reverse. An annulet is used for O in KAROLVS. Note IOANA and HISPANIE. Reverse panel points left. Motto PLV. Additional examples in F. C. C. Boyd coll. (Gutttag 2428), 19 mm., 1.68 grms.; ANS (Wayte Raymond coll.), 19 mm., 1.68 grms.; O. K. Rumbel coll., 19 mm., 1.30 grms.; F. J. Angert coll., 18 mm., 1.50 grms.; Fernand Kososky coll.; Salbach 3229; Ulex 1216.

23a.



✠KAROLVS✠ET✠IOHANA
✠HISPANIARVM✠ET✠IN: PLS

ANS (Wayte Raymond coll.), 21 mm., 1.68 grms.

Five annulets above crown. Mescles divide words, with annulets at ending on reverse. Note IOHANA and HISPANIARVM. Reverse panel to right, PLS. Examples also in Clyde Hubbard coll., 18 mm., 1.45 grms.; Banco Nacional de México, S. A.; Augustin Fischer coll., Scott Sale of April, 1891, no. 7, not illustrated.

23b.



⌘KAROLVS⌘ET⌘IOHANA
⌘HISPANIARVM⌘ET⌘IN: **PLS**

ANS (Wayte Raymond coll.), 20 mm., 1.60 grms.

Eight annulets above crown. Quatrefoil and annulets between words on obverse, mascles on reverse. Reverse panel to right, PLS.

24.

One Real



⌘KAROLVS⌘ET⌘IOHA
⌘HISPANIARVM⌘ET⌘INDIAR **PLVS**

Clyde Hubbard coll., 23 mm., 3.29 grms.

Quatrefoils divide words in obverse legend, lozenges in reverse. Reverse panel to left, PLVS. Additional examples in A. R. Perpall coll., (rev. legend ending INDIA⌘); ANS (rev. 24a).

24a.



⌘KAROLVS⌘ET⌘IOHAN
⌘HISPANIARYM⌘ET⌘INDIA PLVS

Alfredo Porraz coll., 22 mm., 3.25 grms.

Quatrefoils between words of obverse legend, mascles in reverse. Reverse panel to left, PLVS. A second example in F. J. Angert coll., 22 mm., 3.20 grms.

24b.



⌘KAROLVS⌘ET⌘IOHANA⌘
⌘HISPANIARYM⌘ET⌘INDIAR⌘ PLVS

F. C. C. Boyd coll. (Guttag 2426A), 23 mm., 3.22 grms.

Quatretoils between words of legends on obverse and reverse, replacing cross potent at head of reverse legend. Rhomboid panel to right, PLVS.

24c.



⌘KAROLVS⌘ET⌘IOHANA⌘
⌘HISPANIARVM⌘ET⌘INDIA⌘ PLVS

Lucio Laguette coll.

Obverse similar to 24b. Mascles divide reverse legend, ending with annulets. Reverse panel to right, PLVS.

24d.



⌘KAROLVS⌘ET⌘IOHANA⌘
⌘HISPANIARVM⌘ET⌘INDIAR⌘ PLVS

ANS, 23 mm., 3.22 grms.

Obverse similar to 24b. Reverse as 24a but legend ending INDIAR.

24e.



✠KARO HAN PLVS
✠HISPANIARVM•ET•INDIAR

Clyde Hubbard coll., 22 mm., 3.20 grms.

Cross potent begins obverse legend. Lozenges divide words on reverse. Rhomboid panel points right, PLVS.

25.

Two Reales



✠KAROLVS•ET•IOHANA• PLVS
✠HISPANIARVM•ET•INDIARVM

ANS, 25 mm., 6.53 grms.

Lozenges in legends of both obverse and reverse. Reverse panel to left, PLVS.

25 a.



✠KAROLVS✠ET✠IOHANA✠ PLVS
[?]HISPANIARVM✠ET✠INDIARV

O. K. Rumbel coll., 27 mm., 6.53 grms.

Quatrefoils in legends of both obverse and reverse. Rondules in annulets rather than annulets alone found on obverse above and below mint and assayer's marks, on reverse panel, and as marks of denomination. Reverse panel to right, PLVS. Another example in ANS, 27 mm., 6.57 grms.

25 b.



✠KAROLVS✠ET✠IOHAN[A?] PLVS
✠HISPANIARVM✠ET✠INDIARV

Wayte Raymond coll., 28 mm., 6.79 grms.

Lozenges in legends of both obverse and reverse. Reverse panel to left, PLVS. The lions and castles of the obverse shield have been transposed, a situation unusual for Mexico but frequently found on the so-called Charles and Johanna coins of Santo Domingo.

25 c.

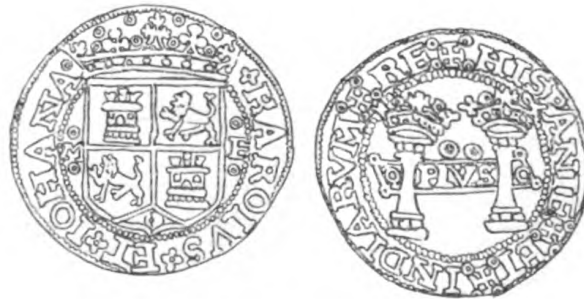


**⌘:KAROLVS⌘ET⌘IOANA⌘ PLVS
⌘:HISPANIE⌘ET⌘INDIARVM⌘:RE**

Lucio Laguette coll.

Unusual stops between words: obverse, quatrefoils between annulets; reverse, crosses potent between annulets. Reverse panel to left, PLVS.

25 d.



**⌘:KAROLVS⌘ET⌘IOHANA°
⌘:HISPANIE⌘ET⌘INDIARVM⌘:RE: PLVS**

Museo Nacional de Historia, Mexico, 28 mm., 6.60 grms.

Quatrefoils in obverse legend, reverse as 25c. Assayer's mark P broken by beading to resemble F.

25 e. **KAROLVS ET IOHANA PLVS**
HISPANIARVM ET INDIARVM

Clyde Hubbard coll.

Quatrefoils in obverse legend, mascles in reverse. Panel to left PLVS.

25 f. **KAROLVS NAO** **PLVS**
HISPAN ET INDIARV.

A. R. Perpall coll.

Mascles in both obverse and reverse legends. Panel to left, PLVS.

25 g. **KAROLVS ET IOHANAR** **PLVS**
HISPANIARVM ET INDIARVM

A. R. Perpall coll.

Lozenges in legends of both obverse and reverse. Panel to right, PLVS.

Four Reales

26.



KAROLVS ET IOHANA RE PLVS
HISPANIARVM ET INDIARVM RE

Banco Nacional de México, S. A.

Lozenges in legends of both obverse and reverse. Panel to left, PLVS. Arabic 4 indicates denomination, as usual. Another example in ANS (Wayte Raymond coll.), 30 mm., 12.53 grms.

26a.



✠KAROLVS◊ET◊IOHANA◊RE◊PLVS
✠HISPANIARVM◊ET◊INDIARVM◊RE

H. L. Freeman coll., 31 mm., 13.57 grms.

Mascles in both legends. Panel points right, PLVS. A variety in V. Q. R. 6909 (pl. 26,17), and in the Hispanic Society of America no. 27069, has obv. of 26 and rev. of 26a but reverse legend ends in R.

26b.



✠KAROLVS◊ET◊IOHANA[...?] PLVS
✠HIS[PANIARVM]◊ET◊[INDIARVM]◊RE

Alfredo Porraz coll., 30 mm., 13.25 grms.

Lozenges in obverse legend, quatrefoils in reverse. Panel points left, PLVS.

26c. Quatrefoils in both legends. Above and below mint and assayer's marks on obverse, and on reverse panel, rondules in annulets. Panel to left, PLVS. Illustrated in J. T. Medina, *Las Monedas Coloniales Hispano-Americanas*, p. 66, no. 3.

THE LATE SERIES

G-A-R-S-L-O

1542-1572

About the year 1542 a new series of die punches arrived from Spain. The designs were somewhat smaller than those of the EARLY SERIES, and were an adaptation of them. The new designs, the third punch design series, are illustrated on page 98.

Aside from the new punches, the differences in the LATE SERIES design distinguishing these coins from those of the EARLY SERIES are:

1. Waves appear at the bases of the pillars on the reverse to denote the Atlantic.
2. Charles' name is first spelled CHAROLVS, later CAROLVS.
3. The motto PLVS VLTRA, divided by the pillars, appears not on a ribbon or panel, but on the background.

The coins of the LATE SERIES are found with assayers' marks G (Juan Gutiérrez), A (unknown), R (Francisco del Rincón), S (unknown), L (Luis Rodríguez), and O (unknown). The L and O coinages were the latest, and fell at least partly, and possibly completely, into the first period of the reign of Philip II (1556-1570).

Of the more than 2400 pieces of the LATE SERIES which were examined, 12 per cent carry the mark G, about 3 per cent is divided among the A, R, and S coins, 43 per cent read L, and 41 per cent read O. The scarcity of the A, R, and S pieces demonstrates that they were minted only for short periods.

Classification of Varieties.

The coins have been classified according to die design varieties. The obverse dies are differentiated by the design details of the crown, the lion, the castle, and the upper edge of the shield. The design of the crown on the pillars has been used as the basis of the catalogue of the

reverses. The obverse legends have been assigned numbers, the reverse legends, lower case letters.

The one-half real pieces are catalogued according to the arrangement of the mint and assayer's marks with annulets on the obverse, and the form of the motto on the reverse. Please note that in the case of this denomination only, $\overset{\circ}{M}$ as mint mark in the catalogue means that M occurs with an annulet in some position, while M indicates the initial with no annulets.

In checking a given coin against the varieties listed and illustrated, one should remember that it is the *design* of the various punches and the *design* of the die which is shown. To classify every die would have been impossible. But the design in use during a certain period can be analyzed, even though on any particular piece it may be distorted, partly off the flan, or worn.

In the case of a few varieties, such as D and D¹, broken punches used over a long period have been classified separately. The broken crown D¹ is somewhat later than D. Similarly, B¹ is really design B after it had become worn and partly broken. Although more than one size of a given punch design was used among the dies of various denominations, crowns A and B, for example, are denoted by design, regardless of size. Only when the large-sized A intended for the piece of two reales appears on the dies for the one real coins is it denoted A^x.

The Legends.

The legends furnish some information which helps to arrange the coins in the sequence of their minting.

1. The coins bearing CHAROLVS on the obverse surely were struck before those reading CAROLVS. This applies as well to the copper coins of four maravedies. The CH legends appear only on the G coinage, which was struck from 1542 through 1545 and later to some date at present unknown. The copper coins with the CH legends thus fall into the same period, although they carry no assayer's mark.

2. The legends which achieved word divisions by two annulets in pale were earlier than those using a single annulet. This change is the

more noticeable on the one real coins, where space on the die was limited. The change from two annulets to one occurred on the real coins during the G period while obverses 9 and 10 and reverse A were in use. All the legends of the one real coins of A, R, S, L, and O use only one annulet.

3. Some legends show a trefoil between words, and occasionally at the end of the legend, to fill space. It might be wondered whether this was an ordinary development or a detail added deliberately to denote a certain period. Had it been planned it could be a device used in 1545 to denote the tenth anniversary of the opening of the mint. It would hardly be strange for the mint officials, proud of their success in manufacturing a good coinage, to have exerted themselves to make very carefully the coins of the tenth year of operation. Actually, the M-G and G-M coins of this period are the best of the LATE SERIES. The visitation of the lic. Sandoval occurred in 1545, and the officials had over a year's notice that he would appear at the mint and examine the coinage. Possibly this had some bearing on the appearance of a series of which the dies were designed with some extra care. The trefoil appears only in the legends of the G series. It is also found on some of the coppers of four maravedies, notably on no. 9 of the Rumble collection, and no. 3 of the Boyd collection.

THIRD PUNCH DESIGN SERIES

ACDEGHILMNOPRSTV

1

PLVSTR

2



3



4



5



6



7



8



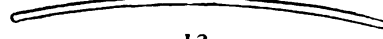
9



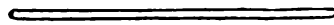
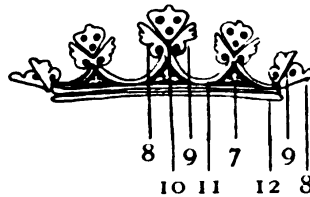
10



11



12



13



14



15



16



17



18



19

PUNCH DESIGNS FOR LATE SERIES

1. Letter punches (16) for legends. 2. Letter punches for reverse motto.
 3. Rondule for denomination indication. 4. Beads for circle. 5. Annulet.
 6. Cross potent for legend. 7. Jewel for base of crown. 8-10. Crown decorations.
 11. Connection for crown decorations. 12. Base of crown. 13. Top, sides, and center of shield. 14. Base of shield. 15. Pomegranate. 16. Waves.
 17. Castle. 18. Crown and capital for pillars. 19. Lion.

ENLARGED
TWO REALES LATE SERIES

M-A No. 57b .

Showing use and placement of punches
in third series of punch designs





TWO REALES LATE SERIES
 TWO REALES EARLY SERIES
 (See p. 98 for bunch design numbers)



TWO REALES LATE SERIES

M-A No. 57b Obverse

(See p. 98 for punch design numbers)



TWO REELES LATE SERIES
SERIES I REELES
(See p. 98 for punch design numbers)
(See p. 98 for punch design numbers)



1. PIV | SVL | TRA
2. PIV | SVL | TR
3. PL | VS | VI
4. PL | V | S
5. P | LV | S
6. P | V | S
7. P | L | V
8. P | L | A
9. P | LA | S

REVERSE MOTTO VARIETIES OF THE
LATE SERIES

1., 2., and 3 on four reales, two reales, and one real pieces. 4-9 on half real pieces.

LATE SERIES

One Half Real

39



43



74



51



59



63



83



87



91



107



TABLE OF DESIGN VARIETIES
FOR LATE SERIES

In checking a given coin against the varieties listed and illustrated use of the tables of design varieties will be found to be necessary. In the table of design varieties for the obverses a tracing of a typical example is shown along with enlarged tracings of the crown, castle and lion appearing on it. The point or points of difference from the preceding variety are noted opposite variety number. In the column to the right are shown the varieties of reverse crowns found with the obverse design varieties shown on the same page. In the case of a few varieties such as D and D¹ broken punches used over a long period have been given a separate classification. The broken crown D¹ is somewhat later than D.

The two reales crown is somewhat larger than the one real crown, and when it occurs on coins of that denomination it is distinguished as A^x. The tables of reverse design varieties are to be found following those of the obverse within the individual denominations. They contain tracings of a specimen of each variety along with a reproduction of the form of the crown used on the two pillars.

One Real — Obverse



No. 1



Crown



No. 2



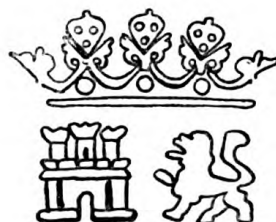
Crown



No. 3 No tongue in Lion



No. 4



Crown + Lion

REVERSE CROWNS



A



Ax



B



Bx

One Real — Obverse



No. 5 Crown

No. 5a No tongue on lion



No. 6 Crown



No. 7 Crown



No. 8 Crown

REVERSE CROWNS



A



Ax



Cr

One Real — Obverse



No. 9

Shield



REVERSE CROWNS



A



Ax



No. 10

Shield



C1

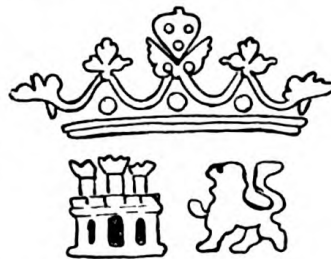


C2



No. 10a

Tongue in lion



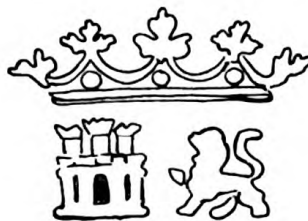
C



D



Nr. 11 Castle + No tongue in lion

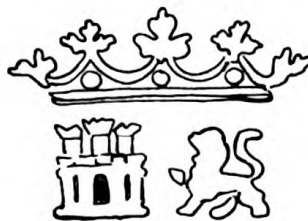


D1



No. 12

Crown





No. 13

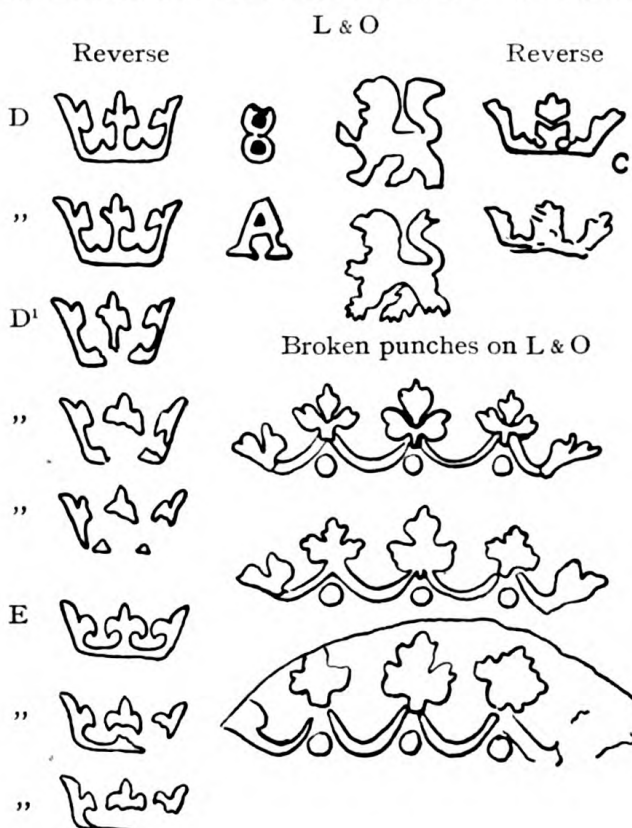


Castle + Lion

REVERSE CROWNS



CHARACTERISTIC BROKEN PUNCHES IN LATE SERIES



One Real — Reverse



A

on

G & A

Coinage



C

on

R, S, L &

O Coinage



Ax

on

G

Coinage



C1

on

G, L & R

Coinage



B

on

G

Coinage



C2

on

R & L

Coinage



B1

on

G

Coinage

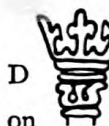


D

on

L & O

Coinage



E

on

L & O

Coinage



Two Reales — Obverse



No. 14 Crown



REVERSE CROWNS



A



No. 15 Crown



A²



No. 16 No tongue in Lion



B



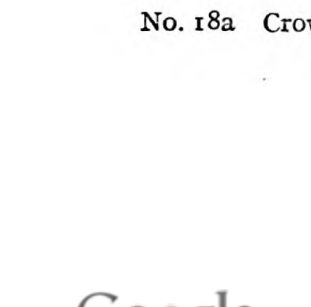
No. 17 Crown + Tongue in Lion



B¹



C¹



No. 18a Crown as 4R 18, but lion has no tongue



C²



No. 19 Crown



No. 20 No tongue in Lion

REVERSE CROWNS



A

A²C²

D

Details of worn or
broken punches as
usually found on
obverse 20.



Two Reales — Reverse



A



A



B



C¹



B¹



A²



C²



E



Four Reales — Obverse



No. 14

Crown



REVERSE CROWNS



A



No. 15

Crown



B



B1



No. 16 No tongue in Lion



C1



C2



No. 18 Crown + tongue in Lion



F

REVERSE CROWNS



No. 19 Crown

No. 20 Design identical with two reales



No. 16 Broken-Punch
in L and O Series



Four Reales — Reverse



A



B



B1



C1





C²



D



E



F



LATE SERIES

TABLE OF OBVERSE LEGENDS

When found with *CHAROLVS* the legend number in the text is preceded by CH.

1. CAROLVS ☙ ET ☙ IOHANA•RG
- 1a. CAROLVS ☙ ET ☙ IOHANARG
- 1b. CAROLVS ☙ ET ☙ IOHANA8R
- 1c. CAROLVS ☙ ET ☙ IOHANA8RG ☙
2. CAROLVS8ET8IOHANA8REGES8
3. CAROLVS8ET8IOHANA8REGES°
4. CAROLVS8ET8IOHANA8REGES
5. CAROLVS8ET8IOHANA8REGS8
- 5a. CAROLVS8ET8IOHANA•REGS8
6. CAROLVS8ET8IOHANA8REGS°
7. CAROLVS8ET8IOHANA8REGS
8. CAROLVS8ET8IOHANA8REG
9. CAROLVS8ET8IOHANA•REGES°
10. CAROLVS8ET8IOHANA•REGES
11. CAROLVS8ET8IOHANA•REGS°
12. CAROLVS8ET8IOHANA•REGS
13. CAROLVS8ET8IOHANA•REG
14. CAROLVS8ET8IOHANA•RGS
15. CAROLVS8ET8IOHANA•RG
16. CAROLVS8ET8IOHANAREGES
- 16a. CAROLVS8ET8IOHANAREGES°
17. CAROLVS8ET8IOHANAREGS8
18. CAROLVS8ET8IOHANAREGS
19. CAROLVS8ET8IOHANARGES

20. CAROLVS8ET8IOHANARGS
21. CAROLVS8ET8IOHANARG
22. CAROLVS8ET•IOHANAREGES
23. CAROLVS•ET•IOHANA•REGES•
24. CAROLVS•ET•IOHANA•REGES
25. CAROLVS•ET•IOHANA•REGS•
26. CAROLVS•ET•IOHANA•REGS
27. CAROLVS•ET•IOHANA•REGE
28. CAROLVS•ET•IOHANA•REG
- 28a. CAROLVS•ET•IOHANA•REG•
29. CAROLVS•ET•IOHANAREGES
30. CAROLVS•ET•IOHANAREGS•
31. CAROLVS•ET•IOHANAREGS
32. CAROLVS•ET•IOHANAREG
33. CAROLVS•ET•IOHANARGES
34. CAROLVS•ET•IOHANARGS
35. CAROLVS•ET•IOHANARES
36. CAROLVS•ET•IOHANAGS
37. CAROLVS•ET•IOHANARS
38. CAROLVS•ET•IOHANAREGES
39. CAROLVS•ET•IOHANA
40. CAROLVS•ET•IOHANA•R
41. CAROLVS•ET•IOHANAR
42. CAROLVS•ET•IOHANARG
43. CAROLVS•ET•IOANA•REGES
44. CAROLRVSS•ET•IOHANA
45. CAROLVSS•ET•IOHANA
46. CAROLVSET8IOHANAREGES

8•

LATE SERIES

TABLE OF REVERSE LEGENDS*

- a. ✠ HISPANIARVM8ET8INDIARVM
- b. ✠ HISPANIARVM8ET8INDIARVM◦
- c. ✠ HISPANIARVM8ET8INDIARVM8
- d. ✠ HISPANIARVM8ET8INDIARVM8◦
- e. ✠ HISPANIARVM8ET8INDIARVM8◦ ☙
- f. ✠ HISPANIARVM8ET8INDIARVM8 ☙8
- g. ✠ HISPANIARVM8ET8INDIARVM8 ☙
- h. ✠ HISPANIARVM8ET8IN8DIARVM8 ☙
- i. ✠ HISPANIARVM ☙ ET ☙ INDIARVM
- j. ✠ HISPANIARVM ☙ ET ☙ INDIARVM◦
- k. ✠ HISPANIARVM ☙ ET ☙ INDIARVM ☙
- k2. ✠ HISPANIARVM ☙ ET ☙ INDIARV
- l. ✠ HISPANIARVM8ET◦INDIARVM
- m. ✠ HISPANIARVM8ET◦INDIARVM◦
- n. ✠ HISPANIARVM8ET◦INDIARVM◦ ☙
- o. ✠ HISPANIARVM◦ET◦INDIARVM ☙
- p. ✠ HISPANIARVM 8 ET 8 INDIARVM ☙
- p2. ✠ HISPANIARVM8ET8INDIARVM◦ ☙
- q. ✠ HISPANIARVM8ET8INDIAR◦
- r. ✠ HISPANIARVM8ET8INDIARV
- r2. ✠ HISPANIARVM8ET8INDIARV◦
- s. ✠ HISPANIARVM◦ET◦INDIARV
- t. ✠ HISPANIARVM◦ET◦INDIARV◦

* On half real pieces, inscriptions often have the center trefoil of the crown substituted for the initial cross.

- u. ♣ HISPANIARVM•ET•INDIARVM8 °
- u2. ♣ HISPANIARVM8INDIARVM8 ° (ET8omitted)
- v. ♣ HISPANIARVM•ET•INDIAR
- w. ♣ HISPANIARVM•ET•INDIAR°
- x. ♣ HISPANIARVM•ET•INDIA
- y. ♣ HISPANIARVM•ET•INDIA°
- z. ♣ HISPANIARVM•ET•INDI
- z2. ♣ HISPANIARVM•ET•INDI°
- z3. ♣ HISPANIARVM•ET•IND
- z4. ♣ HISPANIARVM•ET•IN
- z5. ♣ HISPANIARVM•ET•IN°
- z6. ♣ HISPANIARVM8ET8INDIA
- z7. ♣ HISPANIARVM•ET•IND°
- z8. ♣ HISPANIARVM8ET8INDIA8
- aa. ♣ HISPANIARVM•ET•INDIARVM
- bb. ♣ HISPANIARVM•ET•INDIARVM°
- bb2. ♣ HISPANIARVM•INDIARVM° (ET°omitted)
- x1. ♣ HISPANIARVM•ET•INDIARM°
- x2. ♣ HISPNIARVM•ET•INDIARVM
- x3. ♣ HISPANIARVM•ET•INDIARM
- x4. ♣ HISPANIARVM8ET8INDIARM
- x5. ♣ HISPANIARVM•ET•INDIRM
- x6. ♣ HISPANIARVM•ET•ENDIARVM
- x7. ♣ HISPANIARVM•ET•INDIAM
- x8. ♣ HISPANIARVM•ET•INDIRVM
- x9. ♣ HISPANIARVM•ET•NDIARVM
- x10. ♣ ISPANIARVM•ET•INDIARVM

CATALOGUE OF LATE SERIES COINS


$$\overset{\circ}{M}-\overset{\circ}{G}$$

No.	Denom.	Obv. Design	Rev. Des.	Obv. Legend	Rev. Legend	Copies Seen
31	½ R	Unknown				
32	1 R	I	A	CH ₄ , CH ₇	a, c	4
32a		I	A ^x	CH ₇ , CH ₁₁	c	2
33	2 R	14	A	CH ₁₂	b	2
34	4 R	14	A	CH ₁₀	b	2



$$\overset{\circ}{M}-\overset{\circ}{G}$$

35	½ R	Unknown				
36	1 R	2	A	CH ₇ , CH ₁₂	b	9
36a		2	A	CH ₁₂	b PLV SVL TR	2
36b		4	B ^I	CH ₇ , CH ₈	a	2
37	2 R	Unknown				
38	4 R	Unknown				

$$G-\overset{\circ}{M}$$


39	½ R		P LV S	26, 28	y, z ⁸	3
40	1 R	Unknown				
41	2 R	15	A	12, 13	c, d, m, n, aa	6
41a		16	A	16, 22	b, c	2
42	4 R	Unknown				

$$G-M$$

43	½ R		P LV S	CH ₂₄	s	1
43a			PL V S	11	y	1
43b			PL V S	31	z ⁶	1



No.	Denom.	Obv. Design	Rev. Des.	Obv. Leg.	Rev. Leg.	Copies Seen
44	1 R	2	A	CH8	b, c, p.	5
44a		2	A ^x	CH8	a, c	5
44b		3	A	26	a	1
44c		6	A	11, 12	a, c, m	5
44d		6	CI	11	a	1
44e		8	CI	11	a	2
44f		9	A	10, 24	a, b, aa, bb	13
44g		10	CI	12	b	2
44h		10	A ^x	10, 12, 26	b, m, u2, bb, bb2	16
45	2 R	15	A	10	b	1
45a		16	A	9, 24	p2, bb	2
45b		17	A	10	b, c	2
45c		18a	A	10	c	1
45d		19	A	10	b	7
46	4 R	15	A	9, 10	b, c, d, p	6
46a		15	B	10	b	1
46b		15	F	10	h	1
46c		16	A	9	b	1
46d		16	CI	9	d	1
46e		18	A	10	b	1

M-G

47	1/2 R		PL V S	CH24, 28a	v, x	2
47a			P LV S	CH43, 43	s, aa	3
48	1 R	3	A	CH16, CH18	a, b, p	7
48a		3	A ^x	CH7	c	1
48b		3	A ^x	CH7	a PLV SVL TRA	4
48c		3	BI	CH7	a	2
48d		3	A	16, 18, 21	a, b, c, k2	8
48e		5	A	1b, 12, 14	a, i	10
48f		5a	A	15	a	1
48g		7	A	4, 12, 16, 18	b, c, m	8
48h		8	A	16	a	3
48i		9	A	10, 24, 25, 26	a, b, c, aa, bb	29
48j		10	A	11, 12, 18, 21, 25, 26	a, b, c, m, aa, bb	26
48k		10a	A	12, 14	a	4
49	2 R	15	A	CH9, CH10, CH11, CH12, CH13, CH18	a, b, g, p	6
49a		15	BI	CH6, CH7, CH12	a	3

No.	Denom.	Obv. Design	Rev. Des.	Obv. Legend	Rev. Legend	Copies Seen
49b		16	A	13	b, p	2
49c		17	A	10	b	1
49d		19	A	1a, 5a, 10, 16	b, j	6
49e		20	A	10	a, b	4
50	4 R	15	A	CH4	c	2
50a		16	B	CH4	c	1
50b		15	B ^I	CH4	c	2
50c		15	A	9, 10, 16	a, c	3
50d		15	C ^I	10, 16	b, c	3
50e		16	A	4, 10, 16	b, c	3
50f		19	A	CH4, 1a, 1c, 7, 9	f, i, j, k, p ^a	5
50g		19	F	16	e	1

M-G


51	1/2 R		P LV S	CH12	s	3
51a			P LV S	12, 26, 31	v, w, x, y	5
51b			PL V S	18, 26, 31, 32	v, x, y	9
52	1 R	4	A ^x	CH8	a PLV SVL TRA	1
52a		4	B	CH7, CH8	a	4
52b		4	B	CH8	a PL VS: VL	5
52c		4	B ^I	CH7, CH8	b	4
53	2 R	15	B	CH10, CH17	c	2
53a		15	A	10	c	1
53b		15	B	16	c	1
53c		16	A	16	a	1
54	4 R	15	B ^I	CH4	b	1
54a		15	A	3	d	1

M-A


55	1/2 R	Unknown				
56	1 R	9	A	24, 26, 29	aa, bb	4
56a		10	A ^x	24, 29	aa, bb	10
57	2 R	15	A	24, 26	bb	2
57a		15	C2	24	bb	1
57b		16	A	26	bb, u	9
58	4 R	16	C2	24	b	1

No.	Denom.	Obv. Design	Rev. Des.	Obv. Legend	Rev. Legend	Copies Seen
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A—M (or A— $\overset{\circ}{M}$ $\frac{1}{2}$ R)

59	$\frac{1}{2}$ R		PL VS VL	26	v	V.Q.R.
59a			P LV S	26	v	2
59b			PL V S	26	v	3
60	1 R	Unknown				
61	2 R	16	A	24	bb	1
61a		16	C2	24	bb	1
62	4 R	16	A	24	a	1
62a		16	C2	23	b, bb	2

 $\overset{\circ}{M}$ —A

63	$\frac{1}{2}$ R		PL V S	v (sic!)	v	2
63a			P LV S	v (sic!)	v	2
64	1 R	10	A	26	aa	2
65	2 R	Unknown				
66	4 R	Unknown				

M—R

67	$\frac{1}{2}$ R	Unknown				
68	1 R	10	C1	26	bb	1
68a		10	C2	26, 31	bb	4
68b		10	C	26	bb	2
69	2 R	20	C2	26	bb	VQR no. 6910
70	4 R	Unknown				

R—M

71	$\frac{1}{2}$ R	Unknown				
72	1 R	10	C2	26	aa, bb	4
73	2 R	19	A	26	aa	2
74	4 R	16	C1	24	l, aa, bb	4

No.	Denom.	Obv. Des.	Rev. Des.	Obv. Legend	Rev. Legend	Copies Seen
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M-S (or $\overset{\circ}{M}$ -S)

75	$\frac{1}{2}$ R	Unknown				
76	1 R	12	C	26, 29, 31	aa, bb, bb2	10
77	2 R	20	A2	29	bb	1


This coin is the only example noted of the $\overset{\circ}{M}$ -S series. ANS.

78	4 R	16	E	12	b	1
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L-M





79	$\frac{1}{2}$ R		P LV S	26	v	1
79a		„	PL V S	26	v	1
80	1 R	10	CI	24, 26	aa, bb	9
80a		10	C2	24, 26, 31	aa, bb	9
80a is misnumbered as 84a on PLATE VII.						
80b		10	C	24, 26, 28, 32	a, aa, bb	114
80c		11	C	24, 26, 28, 31, 32, 35	aa, bb	88
80d		12	C	23, 24, 26, 31	aa	9
80e	L O	12	D	26	aa	3
81	2 R	16	A	26	b	2
81a		20	A2	4, 23, 24, 25, 26, 29, 30, 31	u, aa, bb	42
81b		16	CI	26	a	1
82	4 R	16	E	7, 9, 10, 12, 24, 26	a, b, c, d, aa, bb	18
82a		16	CI	24	b	1

M-L

83	$\frac{1}{2}$ R		P LV S	26	v, x	12
84	1 R	10	A ^x	24	aa	1
84a		10	CI	24, 26, 29	aa, bb	33
84b		10	C2	24, 26	aa	4
84c		10	C	24, 26, 27, 29	aa, bb, o, x9, x10	136
84d		11	C	24, 26, 31, 32	aa, bb	85
84e		12	C	26, 31	aa, bb	6
84f		12	D	26	aa	3

No.	Demon.	Obv. Design	Rev. Des.	Obv. Legend	Rev. Legend	Copies Seen
85	2 R	16	A2	24, 26	aa, bb	6
85a		16	CI	24, 26	b, bb	5
85b		20	A2	24, 25, 26	aa, bb	28
86	4 R	16	CI	10, 24	b, l, aa, bb	4
86a		16	E	4, 12, 18, 23, 24	a, b, c, aa, bb	11

M-L




87	1 2 R		P LV S	26	v, x	4
87a			PL V S	26	v	2
87b			P LV S	24, 26, 28, 31	v, w, y	7
87c			PL V S	28	v	3
87d			P LV S	26	v, y	3
87e			PL V S	26, 31	x, y	3
87f			P LV S	26	v	2
88	1 R	12	C	24, 26	aa, bb	12
88a		12	D	24, 26, 29	aa, bb	47
88b L O		12	D	24, 28, 29	aa	10
88c		12	DI	24, 26, 29, 31	aa, bb, x1, x3	67
88d		13	DI	29, 32	aa	4
88e L O		13	E	31	x3	1
88f		13	E	34, 36	aa, x3	9

It is possible that some examples of nos. 88b, d, and e are included under other portions of no. 88, the original O having been completely obliterated. On certain pieces something seems to be visible under the L, but it is only conjectural that the die originally carried an O.

89	2 R	16	A2	7, 24	a, c, aa	4
89a	M̂ L-L M	20	A2	6	a	1
89b	M̂ M-L O	20	A2	16	a	2
89c		20	A2	4, 16, 18, 24, 26	a, b, aa, bb	19
90	4 R	16	E	3, 4, 7, 12, 16, 24, 25	a, b, c	18

No.	Denom.	Obv. Design	Rev. Des.	Obv. Legend	Rev. Legend	Copies Seen
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L-M

91	1/2 R		P LV S	3I	v	9
91a			PL V S	3I	y	1
91b			P LV S	3I	v	1
91c			P LV S	40(?)	x(?)	1
92	1 R	12	C	24, 26	aa, bb	13
92a		12	D	24, 25, 26, 29, 31	aa, bb	42
92b	L O	12	D & DI	24, 26, 29	aa, x3	9
92c		12	DI	24, 25, 26, 29, 31	aa, bb	71
92d		13	DI	31	aa, bb	5

Crowns D and DI are identical in design, the latter however showing punch breaks and consequently dating later. About 10% of this series could not be classified as to legend, since it was off flan or illegible.

93	2 R	20	A2	4, 7, 16, 24	a, c	10
93a	L M-M L	20	A2	16	a	1
93b	L O-M M	20	A2	16(?)	a	1
94	L O	16	E	3, 4, 7, 10, 16, 24	a, c, aa	20

On one example of 94 the motto reads PLV|LVST|TR

94a	4 R	16	E	16	a	2
94b		20	E	4	a	1

O-M


95	1/2 R	Unknown				
96	1 R	12	C	24(?)	aa	1
96a	O M-M L	12	D	26	aa	7
97	2 R	20	A2	24	aa	1
98	4 R	Unknown				

No.	Demon.	Obv. Design	Rev. Des.	Obv. Legend	Rev. Legend	Copies Seen
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M—O




99	1/2 R	Unknown				
100	1 R	12	C	28	aa, bb	6
100a		12	D	26	bb	1
100b		13	E	33, 34	x3	4
101	2 R	20	A2	7, 24	a, x6	3
102	4 R	Unknown				

O— $\overset{\circ}{M}$

103	1/2 R		P LV S	26, 29	v	2
104	1 R	12	C	24	aa	1
104a		12	D	24, 26	aa	13
104b	O L	12	D & DI	24, 29	aa, bb	16
104c		12	DI	24, 26, 29, 31	aa, bb, x2	35
104d		13	DI	29, 31	aa, bb	14
104e		13	E	31	aa, bb	12
105	2 R	20	A2	16, 23, 24, 31	a, aa	6
105a	O L	20	E	24	aa(?)	1
105b		20	E	24	aa	1
106	4 R	16	E	16, 18, 20	a, b, c	17

 $\overset{\circ}{M}$ —O

107	1/2 R		P LV S	34, 37	v, z, z ²	5
107a		„	P LA S	31	z	3
107b		„	P L V	39	z ³	2
107c		„	P V S	40	z ³	1
107d			P LV S	37, 42	v, z, z ⁵	5
107e		„	P V S	41	z, z ⁵	2

No.	Denom	Obv. Design	Rev. Des.	Obv. Legend	Rev. Legend	Copies Seen
107f			P V S	39, 41, 44	z, z ³ , z ⁴ , z ⁷	7
107g		„	P L V	39, 44	z, z ³	5
107h		„	P L A	39	z	1
107i		„	P L S	44	z	1
107j			P LV S	26	v	1
107k			P L V	45	z ³	2
107l		„	P L A	39	z	3
107m		„	P L S	45 ?	z ³	3
108	1 R	12	D	24, 26, 29	aa	7
108a	O L	12	D & DI	24, 26, 29	aa	4
108b		12	DI	24, 26, 29, 31	aa, bb, x6	67
108c		13	D & DI	29, 31, 34, 38	aa, bb	56
108d		13	E	28, 29, 30, 31, 32, 33, 34, 35, 36	aa, bb, x3, x7, x8	295

Of 108c, one example read CAROVS, a die error; one omitted °ET in rev. legend; and two showed motto PL|VS|V. Of 108d, one example read IOHANAEVS, another, CAROHLRVS°ET° IOHANARGS. Nearly 300 of no. 108 came from one hoard found in 1951.

109	2 R	20	A2	16, 18	a, b, c	14
109a		20	E	18, 24	a, c, bb, x4	21
110		16	E	4, 16, 18, 19, 20, 46	a, b, c, x4	343

Of 110, one example read CAROLS; six omitted 8 reading CAROLVS ET8; twelve read CARLVS; and one reverse read INDIAM. Two hundred seventy-five examples were found in one hoard in 1954, and were loaned to the author for study and classification.

110a	O L	16	E	10, 16	a	2
110b	4 R	16	.D	18, 20	a, c	5

THE COPPER COINAGE

The scarce EARLY SERIES copper was undoubtedly struck only in 1542, when the viceroy Mendoza first ordered its production. So few pieces are known that there must have been an alteration almost immediately to the third punch design series the design of most of the pieces known today. No pieces of 2 maravedíes of the EARLY SERIES were discovered.

The copper known to us is so badly preserved that even to consider cataloguing it is presumptuous. Of the 67 pieces examined, on only 38 could as much as the obverse and reverse varieties be recognized. The legends are even more difficult to read. Although the catalogue is a presentation of the legible copper seen, it must not be presumed that it begins to cover all possibilities. Thus obverse 3 certainly occurs with reverse H or I, but the condition of the coins prevents absolute identification and inclusion in the catalogue. Not only can new combinations of obverse and reverse be found, but perhaps even new die varieties await discovery.

The variety of obverse and reverse die combinations demonstrates that a number of dies were in use at one time and were paired capriciously. Thus no. 2a, a combination of dies 2 and I, carries no mintmark, while no. 5a shows no mark of denomination.

Within the EARLY and LATE SERIES all pieces are catalogued together, since no assayers' marks appear.

The earliest Spanish copper coinage used in Mexico was probably the so-called Santo Domingo issue. It was of a type utterly distinct from that coined in Mexico, as is clear from the accompanying illustration:



TWO MARAVEDÍES

Late series



1a.

Banco de México, S.A.

CHAROLVS on reverse, pomegranate below. M to left of pillar. Another example in Anderson coll.



1b.

Dr. A. F. Pradeau coll.

Probably CHAROLVS. M to right of pillar. Another in Delgado coll.



2a.

Busser coll.

HISPANIARVM ☉ ET ☉ INDIARVM on both faces. No pomegranate.



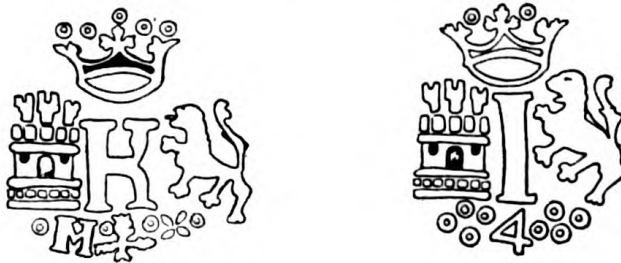
2b.

O. K. Rumbel coll. (2 examples)

As 2a. Evidently No M's at sides of castle, although area is worn.

FOUR MARAVEDÍES








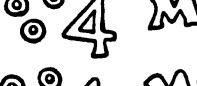



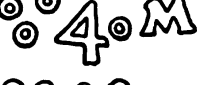

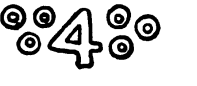








Early series type



Late series type



DIE VARIETIES

	Obverse	Reverse	
I			AA
2			A
3			B
4			C
5			D
6			E
7			F
8			G
9			H
IO			I
II			J

OBVERSE LEGENDS

1. KAROLVS⁴ET⁴IOHANA⁴REGES⁴
2. CAROLVS⁴ET⁴IOHANA⁴REGS⁴
3. CAROLVS⁴ET⁴IOHANA⁸REGS⁴
4. CAROLVS⁸ET⁸IOHANA⁸REGES⁸⁴
5. CAROLVS⁸ET⁸IOHANA⁸REGES⁸
6. CAROLVS⁸ET⁸IOHANA⁸REGES^o
7. CAROLVS⁸ET⁸IOHANA⁸REGES
8. CAROLVS⁸ET⁸IOHANAREGES
9. CAROLVS⁸ET⁸IOHANNA⁸REGES^o
10. CAROLVS⁸ET⁸IOHANNA REGES⁸
11. CAROLVS⁸ET⁸IOHANNA REGES^o
12. CAROLVS⁸ET⁸IOHANNA REGES
13. CHAROLVS⁴ET⁴IOHANA⁴REGES⁴
14. CHAROLVS⁸ET⁸IOHANA⁸REGES
15. CHAROLVS⁸ET⁸IOHANA⁸REGES⁸
16. CHAROLVS⁸ET⁸IOHANA^oREGES^o
17. CHAROLVS⁸ET⁸IOHANA^oREGES
18. CHAROLVS⁸ET⁸IOHANNA^oREGES
19. CHAROLVS⁸ET⁸IOHANNA REGES
20. CHAROLVS⁸ET⁸IOHANNA REGES^o

REVERSE LEGENDS

- a. HISPANIARVM⁴ET⁴INDIARVM⁴
- b. HISPANIARVM⁴ET⁴INDIARV⁴
- c. HISPANIARVM⁸ET⁸INDIARVM^o
- d. HISPANIARVM⁸ET⁸INDIARVM⁸
- e. HISPANIARVM⁸ET⁸INDIARVM^o
- f. HISPANIARUM⁸ET⁸INDIARVM⁴

Several of the above legends have not been noted in full, but that they exist is inferred from portions of legends on worn coins.

CATALOGUE OF FOUR MARAVEDIES

Early Series



ANS, 26 mm, 85.9 grms.

PLATE XII, I

The first type, using punch design series no. 2. Obverse type is that limited to this series, reverse is no. G. Obverse legend 1, reverse legend b. Only two copies were found, the second in the F. C. C. Boyd coll.

Late series



1. Dr. A. F. Pradeau coll.

No.	Obv.Des.	Rev.Des.	Obv.Leg.	Rev.Leg.	Copies
1	1	G	15, ?	?	3
1a	1	J	?	?	1
2	2	A	3, ?	d, e, ?	2
2a	2	I	3	d, e	3
3	3	A	?	e	1
4	4	A	7, ?	d, e	2
4a	4	H	?	e	1
5	5	I	5	e, ?	2



5a O. K. Rumbel coll.

No.	Obv.Des.	Rev.Des.	Obv.Leg.	Rev.Leg.	Copies
5a	5	J	5, 7, ?	d, ?	3
6	6	A	12, 19	f	2
6a	6	B	19	e	1
6b	6	C	?	e	1
7	7	A	?	e	1



7a. F. C. C. Boyd coll.

7a	7	B	5, ?	e, ?	3
7b	7	E	18	d	1
7c	7	F	?	e	1
7d	7	H	?	?	1
8	8	B	7, ?	c, f	2



9a. F. C. C. Boyd coll.

No.	Obv.Des.	Rev.Des.	Obv.Leg.	Rev.Leg.	Copies
9	9	AA	?	C	1
9a	9	B	7	e	1
9b	9	H	5	e	1



10. F. C. C. Boyd coll.

10	10	A	7, 16, 20	d, ?	3
11	11	B	18	e	1
11a	11	D	?	e	1

APPENDIX

ROYAL DECREE ESTABLISHING THE MINT OF MEXICO — MAY 11, 1535¹

THE QUEEN. — Don Antonio de Mendoza, our Viceroy and Governor of New Spain and President of our Court and Royal Chancery which resides there. You already know that in one of the chapters of the book of laws which the Emperor and King, my lord, commanded given to you for the good government of the republic of that province, he ordered you to coin money of silver and copper,² and in doing so to observe the order which was given you by those of our Council of the Indies, who, with the concurrence and opinion of officials of some Mints of our kingdoms, ordered that in the coining of the said money of silver and copper and in the duties of the said officials of the Mints of said New Spain, the following order be observed in as much as it is our pleasure and will.

First, you will observe in the making of the said money of silver and copper the regulations of the Mints of these kingdoms which have been ordered in respect thereto by the Catholic Rulers don Fernando and Doña Isabel, our parents and grandparents, for at present no money is to be made of gold.

And in regard to the second chapter of the book of said laws and ordinances there is set forth the pattern which the said money of silver which may thus be made is to have, half of it to be single real pieces, and a fourth part two and three reales pieces, and the other fourth part, half and quarter real pieces; and the die for the single real pieces

¹ Translated from the Spanish of Medina, *Monedas coloniales hispano-americanas*, pp. 54-57.

² *Vellón* is regularly translated as "copper" although it was in reality an alloy of copper and silver.

and the two and three reales pieces is to be on one side castles and lions with the pomegranate, and on the other side the two columns, and between them an inscription as follows: *PLVS VLTRA*, which is the device of the Emperor, my lord; and the half real pieces are to have on one side a "K" and an "I," and on the other side the said device of the columns, with the said inscription, *PLVS VLTRA*, between them; and the quarter real pieces shall have on one side an "I," on the other a "K,"³ and the legend of all the said silver money shall be *CAROLVS ET JOANA. REGES HISPANIE ET INDIARVM*, or what can be included of this, and there shall be placed on the side where the device of the two columns may be a Latin M, so that it may be known that it was made in Mexico.

Furthermore, inasmuch as it is prohibited by a chapter of the said ordinances that money can be exported from our kingdom, we permit and approve that the silver and copper money which may thus be made in said New Spain may be exported from it to our kingdoms of Castile and Leon and for all our Indies, islands and land of the Atlantic Ocean, in order that it may be current and valid within them for its true value, which is thirty-four maravedies each real, and the other pieces of silver accordingly; and if they are produced and made in other places, the penalties of our laws and ordinances shall be incurred.

Furthermore, inasmuch as from all the gold and silver which is mined and obtained as ransom or booty or in any other manner, there must be paid to us a payment of one-fifth to the officials of our Smelter in New Spain, and it is necessary to mark with our mark to show that the said fifth has been paid, we command that there be no silver received in the said Mint to be coined unless it has first been marked with our royal mark, which shall show that a fifth of it is paid to our said officials, under penalty of death to persons who in any other way receive or coin the said silver, and all their wealth shall be turned over to our Treasury; and the owners of the said silver shall

³ C. Pérez Bustamente's reading, which is correct as can be seen from the coins.

have lost it and two-thirds of it shall be turned over to our Treasury and the other third to him who reported it; such owners of silver may incur this penalty only by having presented it to the Mint, even though it be not coined nor the officials thereof not wish to coin it.

Furthermore, we order and command that the President and members of our court which resides in the city of Mexico and our other common justices may try any case of counterfeiting which is committed by the said coiners, although it may be committed in the said Mint, and may remove to their jurisdiction such a case, even though the justices of the said Mint may have prepared and commenced trial.

Furthermore, inasmuch as by another of said ordinances it is commanded that if the officials and coiners of the said Mint be brought to trial in civil cases, that the justices of said Mint may try them and no other justices; we declare that this is not understood in respect to that which concerns the tax of one fifth, land taxes, other taxes, and whatever else is owed by them to us and to our officials in our name; for in all these matters we desire and command that any of our justices may bring trial in their towns and jurisdiction as they could try a case if they were not officials of the said Mint.

Furthermore, we command that the residence which, in conformance with the said laws and ordinances must be taken by the justices and officials and other persons of the said Mint, shall be taken by the person whom our Viceroy and Governor of said land may name and signify and by no other.

Likewise, we command that insofar as regards the frank and exemption from land taxes and moneys and other things from which the coiners are exempt in conformance with the laws of our kingdom, it be understood that, save for sales taxes, the tax of one fifth, duties on imports and exports, and other tributes that we may impose with the allotment of territory or land that we may give them, in the same manner as other residents are accustomed to pay and must pay, the persons to whom territory may be allotted or an estate given must pay.

Furthermore, inasmuch as according to the order of one of the said ordinances, from each mark of silver which is to be coined there must be produced 67 reales, of which reales one is retained in the said Mint for all our officials thereof, and if this only may be retained in the Mint of the said New Spain, heedful that its expenditures are much larger than in these kingdoms, our said officials would not wish nor could willingly coin the said silver because of not having suitable recompense; therefore, we order and command as if it were our pleasure and will and until better informed we provide what is suitable for our benefit and the good of the Republic of New Spain, that the said officials who now and henceforth may be in the said Mint may produce and take from each mark of silver that is thus coined three reales, instead of one real which can be made and taken from each mark of silver in the Mints of these kingdoms of Castile; which three reales shall be apportioned by our Treasurer and the other officials of the said Mint just as and in the way and manner which is apportioned the said real by the said laws and ordinances of the said Mint.

Furthermore, in regard to the copper money, we charge and command you, upon having learned the opinion of some officials who have information about the design and coinage of the said copper, and you being a person who likewise has had experience in this matter, having been our Treasurer of the Mint of Granada, to order in our name the design and metal of the said copper coins, and to have it minted, and to send a report on it to our Council of the Indies; and the duty which our Treasurer and the other officials of our said Mint must levy for the making of said money must be likewise three times that which the officials who coin copper money in these kingdoms levy.

And because for the coining of the said money of silver and copper it is necessary that there be a suitable Mint, I command and order you to see whether in our Court Buildings in the City of Mexico there is a suitable place and equipment to make the said money with the precaution and security that is fitting, and, if in the said buildings there be such suitable place, you shall determine the place for rooms, enclosures, and flooring that may be necessary, and there not being

a suitable place in the said Court buildings for that purpose, nor in the Smelter, you will choose another site, which seems to you most suitable, and on it you will build at our expense a building that will be appropriate, and you will provide that the Indians whom you deem necessary to help with it receive suitable recompense.

And because by reason of some of the said laws and ordinances of these kingdoms, made by the Mints therein, it is ordered that a report be sent to our senior cashiers about those who are excused, coiners, and exempt, etc.; and because those of our Indies Council are wise in the administration of justice as well as in things relating to our estate, we command that all reports which used to be sent to the said senior cashiers, in conformance with the said laws, shall be sent to those of our Council of the Indies who reside in our court so that I may demand to see them and provide what is suitable for our benefit.

Therefore, we command, that with that fidelity and care which we trust in you and which you are accustomed to exercise in other matters in our service and which the office requires, that you, observing the order contained above, shall make the said money of silver and copper and for that purpose you shall name the officials it is customary to have in the other Mints, so that, together with the person who may have the power of the said Treasurer of the said Mint, you shall use the said functions in conformance with the laws and ordinances of the Mints of our kingdoms and in conformance with this order; and you shall have sent to us a report of the officials which you thus name and of their qualifications and abilities so that, upon seeing it (the report), I may make provision for the work as best suits our needs. Signed in the city of Madrid, the 11th of May, 1535. I THE QUEEN. By order of His Majesty.

A.G.I. 96-6-12

PLATES

I



EARLY SERIES R



EARLY SERIES
R (5d-6d) — G (8-11)

III



EARLY SERIES F (13-16)
P-M (19-20) — M-P (22-23b)



EARLY SERIES M-P

v



39



43



43b



51



59b



63



83



87



91c



107d



107f



107j



LATE SERIES — HALF REAL



LATE SERIES — ONE REAL

VII



LATE SERIES — ONE REAL



LATE SERIES — TWO REALES

IX



LATE SERIES — TWO REALES



46b



50f



54



58



62a



74



LATE SERIES — FOUR REALES

XI



78



82



86



86a



94



110



LATE SERIES — FOUR REALES



COPPER MARAVEDIES



COUNTERFEITS

