MEDALLION OF FRANKLIN PEALE

Among the numerous sons of Charles Willson Peale, painter and scientist, was Franklin, one of the few Peale children not named for a Renaissance artist. His name, however, was no less auspicious than those of his brothers and sisters, and his birth was probably more so. He was born October 15, 1795, in the Hall of the American Philosophical Society and was presented four months later to that distinguished group, with the request that the Society give him a name. It was decided that none could be more suitable than that of the first President of the Society—Franklin. In view of this spectacular introduction to life, it is unfortunate that history has granted him so little fame after his death.

Franklin Peale, however, was a man of no small reputation during his lifetime. He was well trained in mechanical and scientific subjects, and his home in Philadelphia was a gathering place of cultured people. After his father’s death in 1827, he was placed in charge of the Philadelphia Museum, which his father had opened in 1794 in the building of the Philosophical Society. He kept that position until 1833. In that year he resigned and took a position with the United States Mint as Assistant Assayer.

Peale’s appointment at the Mint came as the result of the desire of the Director to send a commissioner abroad to study European mints. Peale fulfilled the requirements better than anyone else available. His first duty, therefore, was to spend two years in Europe studying new methods used in the process of coining money, to examine and draw up plans of new machinery, to observe new arrangements in mint buildings, and to take note of the organization, management, and monetary policies of the important mints.

The reasons for such a trip at this time are not hard to find. The Philadelphia Mint was soon to move into a new building, and it was necessary for the Director to make a full report on the state of the Mint to the next session of Congress. It was considered, therefore, that this was the logical time for the institution to go as far as it could in catching up with all the latest scientific
developments. In addition, there was in 1833 the possibility that branch mints were soon to be established, a possibility that became fact in 1835.

The Director, Samuel Moore, received the approval, therefore, of Louis McLane, Secretary of the Treasury, to send Peale to Europe and was granted a $7,000 appropriation to defray his expenses.

It would take considerable study to estimate just how influential were the results of Peale's investigations. It is known, however, from his correspondence and from that of the Mint officials that they were of great importance. It will be seen in the letters and reports quoted that a number of his suggestions were adopted, principally those based on the actual scientific processes used in European mints. In general, however, recommendations which concerned monetary policy as a whole were set aside either permanently or for a very long while. It is valuable, nevertheless, to study Peale's correspondence, not only as an indication of coinage methods both in this country and in Europe, but also as an indication of the exchange of knowledge and ideas.¹

Most of the material on which this brief account is based and all of that from which the following selections have been drawn is to be found in the United States Mint at Philadelphia. There are several scores of letters from Peale and a long and well preserved report of his trip. It has been impossible to include all the documents, but a fair sampling has been made and is here presented in as logical and complete a manner as possible. The letters are reproduced exactly as they appear in the original, except for certain necessary omissions, no attempt having been made to change spelling or punctuation.

Dr. Samuel Moore²

Dear Sir

I have been given to understand, that in the contemplated change in the location of the Mint, there will be an opening for additional assistance. . . .

¹ The editor would like to point out, also, that these letters are a brief sampling of a very large and splendid collection of source material at the Philadelphia Mint. Scholars interested in the history of that institution and in the monetary policies of this country would do well to investigate the possibilities there. The Hon. Nellie Tayloe Ross, Director of the Mint, Washington, D. C., has charge of the records and has proved most co-operative.

² Dr. Moore was Director of the Mint from July 15, 1824, to May 26, 1835.
A variety of circumstances render me very desirous of vacating the situation that I have held for many years as Manager of the Phila Museum, it will therefore be agreeable to change even at a pecuniary sacrifice.

I have the honour to be

Respectfully your ob
t st
Franklin Peale

Phila
Thursday, 24th Jan\textsuperscript{y} 1833

* * *

Mint of the United States
Philad\textsuperscript{a} April 27th 1833

Sir

The design of employing on behalf of the Mint an Agent of the requisite qualifications to visit Paris & perhaps London with the purpose of examining certain processes relative to the precious metals, which was submitted to you in conversation during my visit to Washington . . . has occupied much of my attention since that time.

Such a purpose has been entertained for some years without having a favorable opportunity for offering it, or the objects in view required attainments and an aptitude in the individual employed, which are not often to be found disengaged from pursuits offering higher emolument. This impediment was happily removed by the . . . occurrence of finding the gentleman then named to you M\textsuperscript{r} Franklin Peale of this City at leisure from other engagements. . . . M\textsuperscript{r} Peale will sail from New York for Havre by the Packet of the 8th May with instructions to the various objects confided to him. . . .

I have the honour . . .
Sam\textsuperscript{l} Moore

Hon. Louis McLane
Secretary of the Treasury

* * *

Dr. Moore furnished Peale with a long letter of introduction dated May 6, 1833, a few excerpts from which are reproduced here, in order to give merely the principal objects of his visit.

. . . The prominent subjects of enquiry for which this mission has been recommended, are, as you are aware, the improved process for separating gold and silver, &

\textsuperscript{a} Peale was sent to Europe in the capacity of Assistant Assayer at the usual salary.
the assays of silver by the humid mode. In addition to
these, an attentive notice of the combinations of machin-
ery & manipulations, employed in any of the operations
of foreign mints, coming within your observation, will
claim your regard, together with whatever practises may
have been approved of on long experience of their
utility, for promoting economy.

The agent employed in the process of parting in the
Mint of the United States, has been usually the nitric
acid, as also, it is believed, in Europe until within late
years. The sulphuric acid has been, but to a small extent,
used for this purpose with us. Vessels of the character
required for its safe and successful application, have not
hitherto been readily obtained here, and the aggregate
expense of a suitable establishment has been perhaps re-
garded as disproportioned to the demand for this process
heretofore. Later years have, however, thrown into the
United States more frequent supplies of the precious
metals in a state requiring this operation. Under these
circumstances our attention has been drawn to the im-
provement in the vessels and combinations employed in
this process for some years past in France, and it
has been considered worthy of enquiring to determine on
the expediency of introducing this improved process into
the United States.

A careful examination is particularly recommended of
the combinations and machinery employed to facilitate
the processes of the melting room or the operations of
the coining department.

The method of milling employed in the Mint of the
United States, it is believed, is much the same as in
France and England. The principal it is understood was
first applied in France, and from thence transferred to
the British Mint, under an engagement to the inventor,
to preserve the operation secret. We have more to com-
municate than to learn probably under this head; and
the same remark is confidently made in regard to the de-
vice for cutting out planchets, introduced by the chief-
coiner. The process in use with us for hardening dies
employed here since 1796, which is also due to Mr. Eck-
feldt, it is believed has been adopted in England. All

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4 Separation of gold and silver mentioned above.
5 Platinum vessels were usually required.
6 It was expected he would also visit London and other great European
cities.
7 Mr. Jacob Eckfeldt was the Chief Coiner of the Mint, a distinguished
man of science in his own field. This statement of Moore is definite proof
that differs from us, however, in these long established institutions, will possess some interest, even if inferior or not meriting imitation. . . .

It is . . . confidently anticipated that in regard to the processes in contemplation in which it concerns the general community of Nations that the utmost perfection should be attained, nothing will be withheld in national establishments. This persuasion is the more readily entertained because the liberality it supposes is always cheerfully intended here. All intelligent foreigners of reputable character witness our processes without restraint. . . .

It may be that your researches shall develop little in regard to Mint operations, that can be profitably adopted here. It is however due to the character of this institution, that this assumption be not hastily relied on. The requirement of Congress that the Director shall report at the next Session on the whole subject of the Mint establishment, permits moreover an occasion peculiarly fit for the investigation now confided to you. . . .

* * *

Peale, on his arrival in Paris towards the end of May, received the cooperation of Edward Livingston, the Minister of the United States, in obtaining permission from the Duc de Broglie, Minister of Foreign Affairs, to examine the Paris Mint in detail. In the course of a letter of July 6, in which Peale notified Moore of his success, he states:

. . . It was with great satisfaction that I found the assayer a gentleman of very pleasing address and heartily disposed as far as I can judge to give me every facility. He is actually engaged in assaying by the humid method (which has entirely superseded the Cupel) for the verification of the coinage of the department of which there are seven in France where coin is struck and which are required to be verified and paid for according to the assay at Paris.

The Process of Parting is not practiced at the "Hotel des monnaies" or Mint at Paris but on the return of Mr Darcet from the County which is expected daily I shall be enabled to determine when my researches in this department may be most successfully prosecuted.

* * *

that the United States Mint was not lagging behind those of Europe in all respects.
Dr. Moore

Dear Sir

In my last I stated that a favorable answer had been received from the proper authorities here, and I am now in consequence daily prosecuting my practise in the art of assaying by the humid mode, which is remarkable for its delicacy, simplicity and the neatness and comfort of the operation.

My labour is much lightened by full descriptions accompanied by engravings of the fixtures that are used, as well as the arrangement of the Cupellation furnaces, and all the matter appertaining to assays, being published and sold at the Mint, these and other works I have purchased as of sufficient value to warrant the expenditure of 98 francs 50 centimes.

The apparatus for the humid process is also made in the Mint and the cost is 500 francs two months will be required for its construction. . . . The extent of my opportunities for acquiring information on the subject of parting by Sulphuric acid I cannot yet determine Mr. D'Arcet's absence will prevent for a short time my obtaining certain information. . . .

I regret to inform you that the information that you have received . . . is true the charge for instruction in this art, at the large refinery above noticed [that of M. Poisat] is enormous no less than 50,000 francs. this charge is evidently based on the supposition that I am a government agent who has funds of a lavish extent, . . .

Other offers have been made of the following character a competent person who has owned and conducted an establishment here is willing to go to America to establish a parting laboratory. he would require 20 000 francs and his expenses as compensation.

In all that is not connected with the government establishment I have found this inclination to extort. I need scarcely inform you that I have not nor shall not yield to this want of principle and liberalty.

The “Commissaire du Roi” who is at the head of the French Mint has answered to the enquiries which I addressed him since your last as follows

There is a great quantity of coin used in the arts but that they have no means of judging of the amount It is considered as merchandise and the owners can use it as they please, there being no law to prevent it, nor any method of controlling its loss from this source.
The political changes in France have been so frequent that there are with very few exceptions no old or smooth coin in circulation. The coin passes by [word indecipherable] alone, and is received in payments for its nominal value while even a mark remains visible upon it when the device is worn off it is remelted. It does not appear that they have any law on this subject.

There is not much to be gained in the mechanical department of the Mint of France, the rolling is performed by old and bad rollers driven by horse power, they have no drawing bench, and the planchets are individually scraped by a machine to the required weight and are individually weighed.

The letters on the edge are however put on at the same time that the coin is struck by an ingenious arrangement that has been in use about three years. I am now, in part, engaged in making a draft of this new improvement.

I have the honour...

Franklin Peale

Paris
July 19th 1833

* * *

In a letter of July 23, 1833, Dr. Moore states that he has attempted through friends to have Peale granted permission to study the sulphuric acid process in London if no information can be gained in Paris. He notes, however, that a reasonable fee for instruction would not be liable to objections. In addition he says:

... I would again remark that an impression of our being already in advance of the foreign Mints in many particulars should not prevent your noting the various processes and manipulations prevailing abroad so that if we ever had a Mint establishment to begin de Novo* you might be able on your return to devise a system comprising all that is best in those you had visited. ... 

* * *

* This seeming uncertainty is strange, since the Mint had already moved into its new building, according to Schair, and Westcott's History of Philadelphia, III, 1816, in May, 1833. He may have been referring to the branch mints to be established in 1835.
In spite of various difficulties Peale proceeded with his work and gives a few of its results in the following two letters to Dr. Moore.

Paris, August 5, 1833

... I have been much delighted in witnessing the operation of a new coinage press made by a Monseigneur Thouvelier of Paris, which is capable of striking from 60 to 80 five-franc pieces per minute all of which will invariably receive the same degree of pressure, regulated at will. The power required is that of two men with a child to feed and a relief of two others, or it may be better driven by steam without the addition of a single part and constantly at the above rate, at a trial at which I was present 62 pieces of five franc value struck in the minute by two men.

This press or a similar one suited to our coinage is offered for sale the price is 15,000 francs. the workmanship is exquisitely beautiful but I think this price too high and therefore cannot recommend its purchase, but as I have promised to make the above report and offer I beg your attention and reply.

In the meantime the circumstances being such as to prevent my making measurements I have made a draft of its essential parts and arrangement from memory in which I do not fear to have lost anything of consequence, ...9

I have had an interview with Mr D'Arcet he has offered his influence with Mr Poisat the owner of the large establishment for refinery mentioned in a former letter and assures me that there will be a reduction of the charge for instruction, but I have had information that the charge for instruction will not be less than 40,000 francs. I have not the most distant expectation that this premium can be paid and therefore look with some anxiety for your next letter, which must determine whether I go immediately to England to investigate my prospects as it regards this important part of my mission, and leave my investigations in the Mint here to be completed at a future time or not. ... * * *

9In a letter of August 31, 1839, from Robert Patterson, Director of the Mint following Dr. Moore, it is stated that such a machine was set up, according to Peale's specifications, in the parent mint and in all the branches, shortly after Peale's return from Europe.
Paris August 27th 1833

Dr Samuel Moore
Dear Sir

According to your wish I have procured the newest and best specimens of the coins of France from the five franc pieces downwards and as I had been desired by Mr Eckfeldt to procure them for him also, I take the liberty to send you two specimens and will thank you to hand him one of each. . . .

The Gold and Silver coins of the United States, Great Britain or Spain are not a legal tender in France. they circulate at various rates according to the demand in the market. an exact value cannot be fixed it varies often with the . . . course of exchange on Gold or Silver it fluctuates from three francs to thirty per thousand on Gold and one to ten francs for Silver. . . .

Your questions as answered above and the following remarks are from one of the principle exchange offices in Paris.

"The intercourse of business being active between France and England and the course of exchange varying often the coins are taken according to the value of Bills and generally much above the real value. The Spanish dollars and Doubloons are the coins most in demand in certain countries in and out of Europe, chiefly in the East and West Indies the inhabitants of these places especially the former prefer them at a much higher rate to American doubloons and Dollars though the latter be of a better quality"

"The American coins in general either of the United States of [or?] the Southern Republics are sold in France for melting into bars, their pieces vary according to the premium, but they are never considered as current The Silver coins of the United States by weight are estimated at a lower rate than those of Peru and Mexico. the Standard being about one per cent less in the American Dollars. It is acknowledged by the experiment of numerous assays that sovereigns are also of a higher standard than American Eagles. the English gold is 916 fine in the thousand Eagles 913 fine in the thousand."

This quotation will shew you the esteem in the market in which our coin is held & I have deemed it of sufficient importance to copy it for your information. . . .

10 Until recently the Mint in Philadelphia had in its possession a magnificent collection of coins. It was moved several years ago to the Smithsonian Institute.
Much delay and difficulty I am sorry to say has arisen in regard to the necessary information and steps relative to the process of parting by Sulphuric Acid. It appears that this process has become of immense importance, so much so that I have positive information that Rothschild is about to become a partner in the establishment with which I have been in treaty with the desire to make a monopoly of it.

I have been promised full documentary proofs (the originals of which I have seen) of its value and the prices that have been paid for its use and for instruction, with the guarantee of perfect initiation under articles of agreement subject to your approbation, which I herewith send to you. They give the most positive assurance that these documents will be satisfactory to our Government, and as this is the largest and best establishment in France, I have after conference with Mr. Harris\(^{11}\) signified my willingness to make such an arrangement.

As it will put us in possession of facts of importance and is altogether provisional and subject to your approbation of government as above I cannot doubt your approval.

I have taken measures also to ascertain the price of instruction in other refineries in Paris of which there are two in which this process is followed, and as I have gained nothing by avowing that it is for the Government that I am acting I apply to these as an individual in the hope that they may be more reasonable. Let the worst come to the worst if I should not be able to get this information in the practical and familiar manner that is so desirable, I shall witness the operation on the small scale before I leave France, having a positive promise to that effect from Monsr Briant the Manufacturer of Platinum vessels who is also an officer of the Mint of Paris.

This most important part of my mission has given me not a little anxiety, but I have been entirely unable to avoid the delay that has occurred. In the interim my time has been fully occupied in assisting daily at the assays by the humid way, in witnessing the assays by the Cupel, and general matters during the Mint hours and the remaining portions of the day in making drafts of everything that I judged useful, such as plans of an assay room and fixtures for humid assays. Ditto of Cupel fixtures, Cupel furnaces of full size of the "Virole.

\(^{11}\) Chargé d'affaires of the United States at Paris.
brisée”\(^{12}\) of Thouvelier coining press, of the Melting furnace & etc, the latter I am now engaged upon. . . .

In accordance with your instructions I have ordered a set of fixtures for humid assay the cost of which I mentioned in an early letter. . . . I have found the small crucibles for decanting and drying the cornets so neat and smooth as to be preferable to platinum, and have therefore procured a few dozen for samples, which I will send by the first opportunity, . . . I have not by any means concluded my researches in the Mint of Paris, but the business of parting is of such importance that I think it necessary to ascertain by personal examination whether I can obtain the necessary information in England at a cheaper rate than in Paris and I think it probable that by the next packet I shall advise you of that movement. . . .

Monsieur Rebel the only other Refiner in Paris agrees to give me every opportunity of observation and instruction. his works are good, and I have every reason to believe him perfectly competent. his charge is much more moderate 12,000 francs, and if any information can be gained in Paris it will be under his instruction.

I have the honour . . .

Franklin Peale

The next letter from Peale was written in London, October 17, 1833.

. . . On my arrival here I presented my letters to Mr Vail,\(^{13}\) and in a week was directed [?] by him to call on Lord Auckland the Master of the Mint. I found with him Mr Morrison deputy Master to whom our objects were stated. they tendered every facility on all that related to government transactions, but could say nothing on the subject of parting by Sulphuric Acid, it being practiced (as you have been informed) by Mr Mathison at the Mint but at his own discretion. . . .

Unfortunately my visit is at an unauspicious moment, in consequence of the state of exchange no bullion is sent to the Mint, and it is therefore completely and entirely idle . . .

The Deputy Master very kindly ordered a crucible of Gold to be melted and rolled . . . for the purpose of showing the machinery to a Prussian Gentleman who is here with the same objects as myself.

\(^{12}\) Process by which letters are stamped on coin at the time it is struck. 

\(^{13}\) Chargé d'affaires of the United States at London.
It is with great regret that I inform you that my application to M\textsuperscript{r} Mathieson has been answered in the negative. He does not desire to give any information and will not afford any facility except in a general way . . . thus my prospect of information on the parting with sulphuric acid in England is entirely closed . . .

You will understand from these statements what my prospects are in London. I have after due consideration resolved to make measurements and memorandums of all that may be desirable in the different departments and with these materials go back to Paris, . . .

I do this because the living is much cheaper in France, and I can revisit London when the Mint is in operation, of course, more advantageously than at this time.

By some strange inadventure, I find on referring to my notes of letters to you that I have not mentioned the results of my applications to the other refiners in Paris. There are three. The first would not on any account . . . give any information. The next, Monsieur Rebel, gave every facility including a residence at his house for the requisite time, at a charge of 12,000 francs. The last person evidently had some previous intercourse with M\textsuperscript{r} Poisat as his charge was the same (50,000 frs). . . .

Peale, because of the exorbitant fees, did not study the new process with any of the Paris refiners. He managed, however, to observe the process in the mint at Rouen where it was practiced quite extensively. He did not consider this completely satisfactory since he could receive no detailed instructions and was not allowed to make experiments himself; but he felt he had learned enough to reproduce the method on his return to Philadelphia.

On June 17, 1835, Peale submitted to Dr. Moore a 276 page report of his observations in Europe, together with his comments and recommendations. A few selections are reproduced here. It has been considered wise, however, to omit the descriptions of the various machines and methods as being too detailed and technical to entertain the general reader. It is sufficient to state that Peale included very careful accounts of the parting and assaying processes together with numerous instructions on the use of new machinery.

From a general survey of the organization of the Mint of France we are fully authorized in believing that the system is more complex than is consistent with the
simplicity of our institutions, but there are some points from which important benefits, it is un presumingly supposed, could be drawn. We allude to the manner of procuring the matrix for original dyes, and to the appointment of Engraver and Assayer by competition.

The first it will be readily seen ensures to the country the best talent that exists in it for the execution of the devices of the coins, which it will at once be acknowledged should mark the progress not only of mechanical skill but the state of the fine arts at the period of their emission. By calling to the aid of the officers of the Mint, who are fully in possession of all the qualities required in the mechanical employment, the taste and judgment of the educated eyes of artists and men of Science, we are morally certain of procuring to the coinage, the best of a series of Dyes, resulting from the contest with all the stimulants of professional rivalry of the artist Engravers who will thus seek the greatest and most flattering publicity, with all the energy that such a stimulus will inevitably excite. . . .

The immense territorial extent of our country renders it highly probable that Branch Mints may and should be established, in which cases, too much care cannot be exercised to ensure an uniform coinage both in standard and execution, these objects as well provided for, in the organization under notice as the nature of the operations will permit, but it is probable that a less number of Mints would supply the coinage of France and it has been thought judicious to reduce the existing number. . . .

It will be seen in the organization of Mints of both France and England that there are offices and incumbents, that are useless, and who render no services of importance for their appointment; it [is] therefore no part of our intention to advocate either one system or the other but merely to point out those portions in both that may be useful in case of legislation on our present system; it need scarcely be remarked that it is desirable to embody the multifarious laws at present existing into one general Mint Law, in which case the above remarks may be useful in directing attention to the points noticed. . . .

It is interesting to note that no law of this country has ever compelled such competitions. Provision is made for the use of outstanding artists at the discretion of the Director of the Mint and Secretary of the Treasury.

Branch Mints were established in 1835 at New Orleans, Dahlonega, and Charlotte. Peale probably based his recommendations on the practice of using branch establishments in France.

This has been done subsequently in the Mint Acts of 1837 and 1835.
Both in France and England as well as in most of the
governments of Europe, the ruling powers claim and
exercise the right to regulate the Standards of Plate and
Jewelry fabricated in their respective territories; this
claim is an abstract question that we are not called on to
argue, but will merely observe, that it has been said with
some reason, that all men should judge of merchandize
which they are disposed to but [buy?] be it Plate or
Broadcloth, and pay according to their judgment but it is
also equally reasonable to say that the Standards of
Jewelry and plate are not so evident to the usual means
of observation as other merchandize, and that it is desir-
able to maintain, for the facilities of trade manufacturers
and Mint operations, the Standards of the precious
metals in as uniform a State as possible, to which it
may be replied that no legislation on this subject, can
give perfect assurance to the purchaser against fraud
either of the manufacturers or vendor.

The Gold Smiths Company of London and the other
appointed offices in the United Kingdom, although they
may and no doubt do faithfully report the standard of
those articles presented to them, yet these articles are
in the greatest proportion in such an unfinished state,
that the consumer has no guaranty that the articles he
buys are the same or of the same value as those that have
received the sanction of the stamps of the Company, to
say nothing of the facile operation of counterfeits of
those stamps, which in the United Kingdom we have
some reason to believe is a usual operation of trade.

In France the examination is more detailed, the articles
being presented in a state nearer to finish, but in both
countries the frequent trials for counterfeits and evasions
of the law, shew that the object fails. The most marked
inconvenience attending an imperative law on this sub-
ject, appears to us to be this, that all responsibility of
character is removed from the manufacturer, for if his
plate or jewelry has once passed under the stamps or
punches of the Guaranty he has nothing further to de-
sire, the responsibility being shifted from him to the
parties making the examination.

Under a view of all these circumstances we would
recommend, that a Guaranty department be established
in the Mint or Mints of the United States and that all
Plate or Jewelry should conform to given standards, en-
acted by law, but would not recommend that this exami-
nation and report be compulsory, but at the will of either the maker or consumer.\textsuperscript{37}

It is probable that this mode of liquidation would give to the Plate and Jewelry of the country, an equal and uniform standard, which is certainly a most desirable object to accomplish, and that all the security that the government of the country can extend to the citizens is thus insured, at the same time that no individual responsibility of character is taken from the manufacturer, the law acting simply as a wholesome check upon his operations. . . . [A section follows in which Peale expresses doubt as to the value of the use of steam in moving the coinage presses, principally because of the necessary cumbersome machinery and variations in temperature.]

Of the machinery of the Mints of France we have here only to remark that that of Paris is below mediocrity with the exception of the presses, which though moved and fed by hand, are beautifully made and work well. . . .

There is much complexity in the various methods of stating standards as practised in assaying by the english mode . . . [we] respectfully suggest the propriety of the adoption of the Decimal system as practised in France, being perfectly adapted to do away with complexity & liability to error, and much more phylosophic. . . .\textsuperscript{18}

The other Mints that we have seen (in addition to the Royal Mint and one in Paris) are those of Rouen in France, at Dresden in Saxony, at Stutgard in Bavaria and Carlsruhe [Carlsruhe] in the Grand Duchy of Baden. We have also accurate information of the state of those at Berlin and Vienna, from all or any of which with the exception of that at Carlsruhe, nothing useful could be derived, as they are old or have not been built for their present destination, and are consequently not pleasing in architectural appearance or badly adapted to the purposes of their application. In all cases without a single exception they furnish accommodation to the officers of the establishment, having within their ample courts dwellings in some instances luxurious and in all comfortable. How far it may be consistent with our institutions to imitate this habit is left to the judgment of the authorities of our government, the Custom cer-

\textsuperscript{37} In the Act of June 13, 1906, provision was made for the regulation of fineness of gold and silver articles and penalties for falsification of the legal stamps to be used for such articles.

\textsuperscript{18} The metric system has never been adopted by the United States Government.
tainly has some advantages but may have objections of more weight.19

There follows a long section devoted to a description of the Organization of the Mint at London and Paris, and their branches, including the officers and salaries, the Goldsmith's Company of London, and detailed accounts of machinery and methods used throughout the whole coinage process. This latter would be of great value to the historian interested in the development of science as applied to practical pursuits.

19 This practice was followed quite extensively for some time, particularly in the Branch Mints.