M.R.O. 1—77,006—8-6-37.

(1) Number of pages 28

(2) Date of repair 13.9.89

(3) Initials of the Referencer

MADRAS RECORD OFFICE.

Government of Madras.

Financial **DEPARTMENT.**

G.O. No. 66	Press / Mis.
21-24.	
Dated 10-2- 1868.	

15/16

21-24

Not to be folded or roughly handled

Read the following papers :—

No. 21. From Mr. T. E. SCRIVEN, Madras, to the Right Honorable the Governor of Fort Saint George ; dated Madras, 30th December 1867.

Being aware that it is the desire of the Government of India to establish at the Madras Mint the system of assaying practised in Calcutta, I beg most respectfully to submit for your Lordship's perusal the enclosed testimonials, from which it will be seen that I have been taught assaying in both the humid and dry processes, and that, should your Lordship be pleased to confer on me an appointment in the Assay Department in the Madras Mint, the State will be saved a large amount of expenditure, and, at the same time, secure the services of a man who has devoted his time and energies in the Service, and for the benefit of Government, for twenty years.

2. The changes which are about to be made in the Assay Office, will, I humbly hope, favor this my application, and, in now venturing to address your Lordship, I do so because I am aware that it was the intention of the Government of India to cancel the appointment of Deputy Assay Master with the view of reducing expenditure in proportion to the work done in this Presidency.

3. In my petition to Colonel Wilkieson, Acting Mint Master, copy of which I beg to lay before your Lordship, I have clearly shown that, at the request of Dr. Shaw, the Assay Master, I was sent to Calcutta in November 1856, in order to make myself acquainted with the method of assaying there, and that, on my return to Madras, the apparatus which was received for the purpose was set up, and the members in the Assay Department instructed by me in the work. Your Lordship will see from this that there can be no difficulty in proceeding with the work at once.

4. There are other considerations which have prompted me to seek from your Lordship an appointment in connection with the Madras Mint. I was for twenty years in this Department, and have made coining operations in all its branches my special and constant study. There are numerous improvements, which, if I were allowed to introduce them into the Mint, would tend materially to reduce both labor and expense. The bringing to perfection the bi-colored stamping presses which were designed by me, as well as the salt weighing machines, to which I have referred in my petition to Colonel Wilkieson, will enable the Stamp and Salt Departments to work with greater facility and cheapness, and effect a considerable saving to the State.

5. I am at present employed in the office of the Consulting Engineer for Railways, and my salary is Rupees 300 per mensem.

6. Entreating that your Lordship will pardon me for trespassing on your time, I remain &c.

Transferred to the Chief Secretary to Government.
By order,

GOVT. HOUSE, GUINDY PARK,
4th January 1868.

(Signed) J. H. GARSTIN,
Private Secretary.

Referred to the Mint Master for any observations he may wish to offer as to the employment of Mr. Scriven in the Mint should an opportunity occur.

FORT SAINT GEORGE,
14th January 1868.

(Signed) R. S. ELLIS,
Chief Secretary.

No. 22. From the Mint Master, to the Chief Secretary to Government, Fort Saint George ; dated Madras, 17th January 1868, No. 464.

I have the honor to return Mr. T. E. Scriven's Petition to the Right Honorable the Governor and its enclosure, referred to me with your endorsement of the 14th instant.

2. Mr. Scriven solicits His Lordship "to confer on him an appointment in the Assay Department of the Madras Mint, whereby a large expenditure might be saved to the State," "as he "was aware it was the intention of the Government of India to cancel (abolish) the appointment "of Deputy Assay Master."

3. From my own knowledge of Mr. Scriven and the records of my office, I feel warranted in saying that he is a very good Assayer, and I doubt not that, if examined by competent persons,

he would be declared fully qualified ; but I understand the Resolution of the Government of India, in the Financial Department, No. 2823, 16th October 1866, to prohibit the appointment of any person to the fixed establishment of the Assay Department, unless he can produce a Certificate of qualification from the Right Honorable the Secretary of State for India, and, in regard to the substitution of an inferior appointment for that of Deputy Assay Master at Madras, the matter was fully considered some time since, and it was decided that an Assay Master and a Deputy Assay Master must both continue to be maintained.

4. Mr. Scriven was a very valuable man in the Mint, of long and varied experience, and he left entirely of his own free will. In the event of his old situation, Manager and Head Accountant, falling vacant, I would have no objection to re-appoint him to it, but it would not be convenient or expedient to accept the offer of his services in his leisure hours for the benefit of the Mint while he is employed in another Department, nor is the Mint Establishment in need of any extraneous aid.

5. The Presses including the engine-turned dies for bi-colored stamping were designed by Mr. Scriven and constructed entirely under his superintendence. They work efficiently, and will most effectually stop the forging of stamps which was believed to prevail ; and although it is probable, on account of the space they occupy and the number of men required to work them, I shall recommend their eventual supersession by a patent Machine from England, to be worked by steam power as in Calcutta, their construction reflects great credit on Mr. Scriven, and I would take the liberty of suggesting that, in acknowledgment of his ingenuity and skill, and as a reward for his services at various times in work beyond the limits of his own sphere of duty in the Mint. A handsome gratuity might with propriety be awarded him. It is not an unusual proceeding. A small gratuity of one month's salary was, in 1849, awarded him for the construction of a weighing machine ; and recently the Master of the Calcutta Mint recommended one of his establishment for a gratuity in recognition of his invention of a new mode of annealing copper coins which was expected to effect a considerable saving.

No. 23. From the Mint Master, to the Chief Secretary to Government, Fort Saint George ; dated Madras, 24th January 1868, No. 478.

In reply to docket in the Financial Department, No. 25, 23rd instant, I have the honor to state that I am not aware what was the Order of the Government of India on the recent proposal of the Master of the Calcutta Mint for the grant of a gratuity to one of his Assistants. A copy of his letter* recommending the gratuity is enclosed.

* No. 149, 28th May 1867.

2. The ground on which I recommended that a gratuity should be given to Mr. T. E. Scriven was not simply for an invention, but for considerable labor and thought, besides ingenuity, extending over a long period, in connection with various works in the Mint ; and I think that Rupees 1500, or six months' salary of the office of Manager and Head Accountant, the position he last filled in the Mint, would be a suitable recognition by Government of his services.

From the Officiating Mint Master, Calcutta, to the Secretary to the Government of India, Financial Department ; dated Calcutta, 28th May 1867, No. 149.

I have the honor to bring to the notice of His Excellency in Council that Mr. Doig, Head Mechanical Engineer of the Mint, has introduced an alteration in the method of annealing copper blanks, which is a great improvement on that formerly adopted.

2. Copper blanks (or discs) previous to being stamped are heated or annealed in a furnace, and used to be enclosed in iron tubes closed at the end and luted with clay. Mr. Doig proposed to place them in a cup with a cover luted with clay, which has been found to answer well as regards annealing copper blanks, and to be much more economical, as will be seen from the accompanying statement. The cost of annealing per lakh of pieces with annealing tubes is Rupees 6·2493, and with annealing cups as used by Mr. Doig Rupees 0·8142. The average coinage for five years has been 691½ lakhs per annum, so the average saving would be Rupees 3758 per annum.

Proceedings of the Madras Government, Financial Department,
10th February 1868.

3. I recommend that Mr. Doig should receive a recognition of his services in the shape of a gratuity. The utility of his invention is beyond a doubt, and as it may be extended to the Madras and Bombay Mints (in the latter of which at any rate tubes are used), the figures already given do not express all the advantages which Government may ultimately derive from it.

No. 24. ORDER THEREON, 10th February 1868, No. 66.

The Government are unable to comply with Mr. Scriven's application for an appointment in the Assay Department of the Mint.

(True Extract.)

Chief Secretary.

To the Mint Master.
Copy of the Order to Mr. Scriven.

Exd. J. H. Burns.

No. 149.

To The Secretary to the Govt. of India
Financial Department.

Sir

I have the honor to bring to the notice of His Excellency in Council that Mr. Doig Head Mechanical Engineer of the Mint has introduced an alteration in the method of annealing Copper blanks which is a great improvement on that formerly adopted.

2d. Copper blanks (or discs) previous to being stamped are heated or annealed in a furnace and used to be enclosed in iron tubes closed at the end and luted with clay Mr. Doig proposed to place them in a cup with a cover luted with clay which has been found to answer well as regards annealing Copper blanks and to be much more economical, as will be seen from the accompanying statement. The cost of annealing per lac of pieces with annealing tubes

tubes is Rs. 6.2493 and with annealing cups as used by Mr. Doig Rupees 0.8142 The average Coinage for 5 years has been 691½ lacs per annum, so the average saving would be Rupees 3758 per annum.

3d. I recommend that Mr. Doig should receive a recognition of his services with shape of a gratuity. The utility of his inventions is beyond a doubt, and as it may be extended to the Madras and Bombay Mints (in the latter of which at any rate tubes are used) the figures already given do not express all the advantages which Government may ultimately derive from it.

I have &c.
(Signed) J. A. Ballard
Offg Mint Master

Calcutta Mint
The 28th May 1867

True Copy:

Mint Master.

Fin. Dept. Bengal Letter No. 25 dated 23 Jan. 1868.

No. 478. 24th January 1868

From
Colonel J. Carpendale R.A.
Mint Master

To
The Chief Secretary
to Government.

Sir,

In reply to docket in the Financial Department No. 25 23d instant, I have the honor to state that I am not aware what was the Order of the Government of India on the recent proposal of the Master of the Calcutta Mint for the grant of a gratuity to one of his assistants. A copy of his letter* recommending the gratuity is enclosed on which I recommended that a gratuity should be given to Mr. J. B. Scriven on the grounds that his invention, but for which was not simply for an invention, but for considerable labor and thought besides ingenuity extending over a long period in connection with various works in the Mint, and I think

* No. 149 28 May 1867.

R. 125

FINANCIAL DEPARTMENT.

Extract from a letter from the Honorable the Court of Directors, dated 18th July 1849, No. 18 :

Letter from, dated 13th February 1849, No. 3, reports the construction, by the ordinary workmen of the Mint, of the Weighing Machine and Cutting Press which are calculated to add very materially to the economy and despatch of business in the fabrication of the smaller coins. The successful completion of this work is considered to reflect great credit on the Mint Master and his subordinates, two of whom, Messrs. Maddox and Scriven, have been granted gratuities of one month's pay, viz., Rupees 140 and Rupees 30 respectively.

"1. The attention which the Superintendent and Deputy Superintendent of the Laminating Department of the Mint devoted, in extra hours, to the construction of the machinery in question, fully merited the reward which you have thought proper to bestow upon them."

(True Extract.)

(Signed) J. F. THOMAS,

Chief Secretary.

No. 358.

Extract from the Minutes of Consultation, dated 7th September 1849 :

Ordered to be communicated to the Mint Committee, with reference to Extract from Minutes of Consultation dated 16th January last, No. 27.

To

THE MINT COMMITTEE.

(True Copy.)

J. T. SMITH,

Mint Master.

MADRAS, *January 19th*, 1855.

The bearer, Mr. T. E. SCRIVEN, has served in the Mint as Deputy Superintendent of the Laminating Department for seven years and a half, during which time he has been very regular in his attendance, praiseworthy in his conduct, and most useful in the performance of his own duties and a variety of others.

Mr. S. has attended a course of Chemical lectures at my recommendation, and been in the habit of performing easy practical operations in Chemistry under my direction. He has also been taught all the various methods of assaying silver and gold, in the former of which, by the humid processes, he is extremely skilful.

(Signed) J. T. SMITH, Lieutenant-Colonel,

Mint Master.

MADRAS, *February 13th*, 1855.

During the period that I acted as Assay Master at the Madras Mint, I became acquainted with the bearer, Mr. SCRIVEN. I found him a zealous, intelligent, and hard-working young man. I have since then had frequent opportunities of observing his anxiety to increase his stock of knowledge, which, as a Mechanic in the higher branches, and as an Assayer, was already very considerable. He attended a course of lectures on Inorganic Chemistry very diligently, and I have no hesitation in saying that he would be found a highly useful and intelligent servant in any scientific department of the service.

(Signed) J. E. MAYER,

Professor of Chemistry, &c.

Extract from Colonel F. C. COTTON'S *Report to Government, dated* OOTACAMUND, *2nd February* 1859:

"I have only now to name the office which is well conditioned, punctual, and prompt as other departments of the Mint. It is headed by one who has a right, from his antecedents, to be there. Mr. SCRIVEN was frequently employed by Colonel SMITH in trying all his valuable experiments; is a very good theoretical Chemist, and excellent manipulator. He has a knowledge, more or less, of all the processes that are gone through in the Mint, and in consequence understands all the questions that arise in the office, which one who had only learnt the duties of a Writer or Accountant could not. The pay of the office requires a revision like that of all the rest of the establishment, for there are old servants in it most inadequately remunerated."

MADRAS, *May 7th*, 1860.

Mr. SCRIVEN, Head Accountant of the Mint, having desired me to give him a testimonial, I have much pleasure in stating that in every employment held by Mr. SCRIVEN he has given the greatest satisfaction, and that, in mechanical matters, in assaying and accounts, he has shown himself to possess superior talents.

(Signed) J. H. BELL, Colonel,
Chief Engineer, late Mint Master.

Extract from Lieutenant-Colonel C. A. ORR'S *letter to the Acting Secretary to the Board of Revenue, dated* FORT SAINT GEORGE, *11th January* 1861, *No.* 320:

Para. 2. "Knowing how necessary economy is, I have named the smallest establishment that I think will suffice, and, with the same object, I propose to assign the management of the work, under my own direct supervision, to the Manager and Head Accountant of the Mint office, believing that it will be impossible to secure in any other individual, except at a very high rate of salary, the skill, zeal, and integrity which distinguish Mr. SCRIVEN, and which will be of so much advantage to the safety and successful working of stamping operations. As these will be carried on in a room adjoining the Mint office, the Manager will be able to give a large share of his attention to them, and to the safe custody and proper disposal of the paper, without detriment to his other duties, and I do not think an addition of Rupees 50 to his present salary will be an undue remuneration for his extra trouble."

MADRAS, *19th March* 1863.

Mr. T. E. SCRIVEN has asked me to bear testimony to his character as an intelligent and trustworthy public servant during the long period he has been employed in the Madras Mint. He has held various posts, and for the last six years has been at the head of the Mint office, where he has given uniform satisfaction. In 1856 he was selected by me, on account of his general ability and his practical knowledge of the art of assaying, to be employed as Superintendent of the Laboratory and Manager of the Assay office, but on his return from Calcutta, where he proceeded to learn the chloride process of assay at my suggestion, he was induced to take the more lucrative office of Manager in the Mint. I annex an extract of a letter from Mr. BOYCOTT shewing the favorable opinion he entertained of Mr. SCRIVEN. I can only add, from personal observation when acting Mint Master, that his duties were performed with great regularity and assiduity, and I think him well qualified to hold any situation under Government for which he may be considered competent.

(Signed) G. J. SHAW, M.D.,
Assay Master.

Letter from THOMAS BOYCOTT, ESQ., *Assay Master, Calcutta Mint, to the Assay Master, Madras Mint, dated 8th November* 1856:

"SIR,—I have the honor to inform you that Mr. SCRIVEN has given me notice of his intention to leave Calcutta for Madras by the Steamer which starts to-morrow.

2. I have observed, with much pleasure, Mr. SCRIVEN'S very regular attendance in my office. The careful, quiet way in which he has enquired into the work and performed it, and also my examination of him as to his knowledge, assures me that he is quite competent to become your first Assistant."

MEMORANDUM.

Being about to proceed to England on leave for a limited period, I have not thought it requisite to issue a Diary Order, as I should have done if I had been severing my connection with the Mint, but I feel that Mr. T. E. SCRIVEN, the Head Accountant and Manager of the Mint office, merits, in an especial degree, an expression of my opinion, and it gives me much pleasure to record that from his extensive experience of the working of the Mint in all its departments, his natural ability, good knowledge of practical mechanics, and the chemistry of metals, I found him a most valuable assistant. He has my fullest confidence, and by his attentive, regular, and zealous discharge of his duty, gave me entire satisfaction during the time I was Mint Master.

(Signed) J. CARPENDALE, Lieut.-Colonel,
Royal Engineers.

April 14th, 1865.

MEMORANDUM.

No. 548.

On vacating my appointment as Acting Mint Master, I had intended to have written a Memorandum detailing my opinion of all the principal Officers of Her Majesty's Mint at Madras, but on re-consideration I think it would be invidious to mention any one by name where every one has shown so much zeal and attention in carrying on the work in their several departments, and Colonel Carpendale (for whom I have been acting) must know the exact value of all these Officers. I must, however, make exception in the case of the Manager, Mr. Scriven, whose untiring energy and exertion for the good of the Mint and the Government he serves I cannot speak too highly of.

I cannot leave this country without recording my sincere and grateful thanks to the Manager, Mr. Scriven, the Superintendents of Departments, and others, for the able and zealous assistance that I have always received during the nineteen months that I have been in charge of the Mint.

(Signed) C. V. WILKIESON, Lieut.-Colonel,
Acting Mint Master.

Extract from a letter from Mr. J. MACKEY, *Acting 1st Assistant to the Accountant General, Fort St. George, dated 21st November* 1866, *forwarded to the Mint Master, Madras.*

Para 12.—"The Mint accounts are evidently prepared with great care and exactness under the supervision of Mr. Scriven, the Manager of that department of the Mint."

(True extract.)
(Signed) J. CARPENDALE,
Mint Master.

Extract from Diary Order, No. 589, *dated* 15*th March* 1867.

"Mr. T. E. Scriven, Head Accountant and Manager, Mint Office, is permitted to resign his situation from this day at his own request, to enable him to take up the appointment of Manager of the Office for Consulting Engineer for Railways."

(True extract.)
(Signed) J. CARPENDALE,
Mint Master.

No. 276.

FORT ST. GEORGE,
MINT, *9th January* 1858.

From

Lieutenant-Colonel F. C. COTTON, Engineers,
Acting Mint Master.

To

G. L. PRENDERGAST, Esq., S. P. BIRCH, Esq.,
and W. H. BAYLEY, Esq.,
Mint Committee.

GENTLEMEN,

Mr. Johnson the Head Accountant of the Mint having applied for a pension, it becomes my duty to lay before your Committee the arrangement I propose to make in consequence of his resignation; and in doing so I must call your attention to the enclosed* correspondence with the Assay Master, as my suggestions differ materially from the plan determined upon at the time those letters were written.

* Assay Master's letter, dated 9th February 1857, No. 61.
Mint Committee's letter, dated 12th February 1857, No. 40.
Assay Master's letter, dated 5th March 1857, No. 111.
Mint Committee's letter, dated 16th March 1857, No. 73.

2. Mr. Shaw recommended that Mr. Vanderwart, the present Manager of his office, should be placed at the head of the Mint office, in order that Mr. Scriven, the Deputy in the latter, should have the management of the Assay Department, as he was, from his knowledge of Chemistry and skill in assaying silver, better qualified for the appointment than Mr. Vanderwart. Major Bell assented to this arrangement, and Mr. Scriven was sent to Calcutta to make himself more fully acquainted with the chloride process of assay. Major Bell having agreed to the arrangement, it may seem presumptuous in me to suggest a change, but as I have that Officer's assurance that he did not approve of the plan though he admitted it under the idea that it was necessary, I do not hesitate to give my opinion upon the subject.

3. I have several great objections to the proposed arrangement. First, that Mr. Vanderwart is not qualified to be at the head of the Mint office. The head servant in the Mint office is styled the Head Accountant, which may lead to the supposition that any well-educated Clerk is suited to the appointment; but such is not the case. The head of the Mint office ought to be thoroughly acquainted not only with the accounts and rules of the Mint, but with all that is doing and required to be done in all its working departments. Of the latter, Mr. Vanderwart knows nothing, while Mr. Scriven, who commenced his service in one of the working rooms, and has taken an interest in all that has been done for the last 10½ years, has a knowledge of the Mint work in all its branches. He has not only turned his own good intelligence to account in acquiring this knowledge in the ordinary course of business, but having been employed by Colonel Smith in his experimental working, has had excellent opportunities of studying the various operations and their results.

4. The qualifications for which Mr. Shaw selected Mr. Scriven as his Manager were a knowledge of Chemistry and the chloride process of assaying silver. The former must be less required of the Manager of the Assay office than of the head of the Mint office; because it may be supposed that both the Assay Master and his Deputy will in general, be accomplished Chemists. In the present case, the Deputy Assay Master who is now holding the office of Assay Master, is remarkable for his acquirements in that branch of his profession. And with regard to any mode of assaying silver, I need hardly say that when once taught it is so purely mechanical that any one who gives his attention to it may attain the skill required in a few

weeks or days. The operations authorized are not allowed to be deviated from, and incessant practice must ensure skill in manipulation.

5. I have said that a knowledge of the working of the Mint should be possessed by the Manager of the office. This is highly advisable in every executive office, but especially so in the Mint, where, from there being no Assistant or Deputy, a newly-appointed Mint Master must for some time be dependent upon the information afforded him by his Manager, and I would here observe that I consider it very necessary that it should be established as a principle in the Mint that the Managership should be held by one who had begun his service in the working department. There is in the Mint, as elsewhere, a feeling that the office is the highest department, and that those who are engaged in the work are in an inferior position. This is the result of our setting a false value upon labor, and giving more for good writing than for skill in the most difficult trades. I am anxious to see this corrected, and I am certain that it is essential to the success of a Mint that every thing should be done to raise the position of the Artificer class. With this view, I have established a school in the Mint, in order that the Artificers may not be behind the office-people in their book knowledge, and I should be acting in direct opposition to my principle if I did not urge on this occasion the appointment of one who has been in the working department, and at the same time fitted himself for the management of the establishment.

6. I need not remind your Committee that the pay of the Head Accountant of the Mint is 250 Rupees a month, while that of the Assay office is 200. If Mr. Scriven is removed to the latter, he will be a loser of 50 Rupees a month in consequence of his higher acquirements.

7. Under these circumstances, I trust that your Committee will allow me to appoint Mr. Scriven to the head of my office, in which case I will make such temporary arrangements for his instructing the Assay Department in the chloride process as shall give Government all the advantage anticipated when he was sent to Calcutta.

(Signed) F. C. COTTON,
Acting Mint Master.

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Copy of a Petition addressed to Lieutenant-Colonel C. V. Wilkieson in May 1866.

To

Lieutenant-Colonel C. V. WILKIESON, R. E.,
Acting Mint Master.

Sir,—With much respect I beg to bring to your notice that although the work in this office, from many causes, has increased of late nearly four-fold, the rates of salary which are paid to the several members placed under my supervision have continued the same for years. The employès of every other branch of the Mint Department have had additions made to their salaries from time to time, but the employès in the office have not shared in the same good fortune.

You are so thoroughly acquainted with the peculiar and intricate nature of the Account transactions of the Department, that I feel assured the claims for promotion of the members employed in the office will receive from you the most favorable consideration.

I avail myself of this opportunity to submit for your kind and favorable consideration a statement of my own services.

In June 1847 I was admitted as a workman in the Laminating Department, and within a few months was promoted to the office of Deputy Superintendent of the Department. I took every opportunity to aid in completing the machinery designed to aid in reducing expenditure. I devoted my best energies to carry out the system of accounts framed by Colonel Smith, with a view not only to prevent the daily peculations, but to establish an effectual check over the daily excess of weight in silver. I mention this, because for years every effort to ascertain the cause of loss proved fruitless. A Committee of experienced Mint Officers had come to the conclusion that there could be no excess by manipulation, and when the new system of accounts to ascertain this was proposed, it was considered to be impracticable, as it entailed the weighing of the silver over and over, which even now, with improved balances, is found to be most tedious.

Besides my duties in the Laminating Department, I was engaged in the prosecution of a series of assays and experiments by which Colonel Smith established his views upon the practical results of coinage operations.

The manufacture of sulphuric acid, which formerly took months to produce in a fit state to be drawn from the chamber, is now done within a fortnight or three weeks; but in doing so I had to begin work, in order to avoid encroaching on my regular duties, before 5 o'clock in the morning every day until the experiment succeeded. I received no extra remuneration.

Administration Report, June 1859.—"A beneficial change has been "effected in the mode of manufacture. * * * * * By the former process, "a great portion of the sulphur remained unburnt and was necessarily "thrown away. By the latter, combustion is so complete as to ensure "every particle of sulphur being thoroughly consumed, and the "last supply of acid (about 2,000 lbs.) was wholly manufactured from "the refuse of previous operations. The acid is, at the same time, "obtained in a much purer state, and at a much lower cost."

In 1857, in compliance with the wishes of Colonel Bell and Dr. Shaw, I proceeded to Calcutta to make myself acquainted with the method of assaying practised there, viz., the "chloride process." On my return to Madras the entire apparatus received for assaying was set up, and the hands for working were instructed by me before operations could be commenced.

When the price of copper began to rise, I shewed Colonel Bell the possibility of melting the scissel and manufacturing the coin from it. I obtained his permission to make an experiment, and succeeded in producing ingots in a malleable form. Under Colonel Cotton this process was fully introduced.

The necessity for adopting this process arose from the difficulty experienced in obtaining a sale for the scissel without considerable loss to Government. I found that the bids at auction were so low as to leave no profit. I stopped the sale of scissel at once, and the whole stock of copper scissel within a short time was fused and converted into coin.

A very large order for waistplates for the Army was undertaken in the Mint in 1858. After a large sum of money was spent, it was found that the plates could not be made for anything near the estimated rate, nor within a reasonable period of time. I therefore begged Colonel Cotton to allow me to have the work done in a fashion different from those that had been tried, and succeeded in producing the plates not only within a very short time but at a very small cost. Colonel Cotton was quite satisfied with the success which had attended my efforts.

Acting Mint Master's Report, February 1859.—"The "price at which the waistplate could be made by "private manufacturers was 1 Rupee a set, which the "Mint undertook at less than half of that. * * * "It was no slight object thus to save the Govern- "ment 31,000 Rupees."

At the request of Colonel Orr, and under his instructions, I undertook the construction of the Mint buildings, (additions and improvements,) which up to that time was carried out by a native contractor. The planning and estimating of these works also now devolve on me. To execute the works with despatch and economy, I have oftentimes to be up early and travel to some distance out of Madras to collect material for building. No allowance is given to me for carriage hire.

The annealing of copper pieces for coinage was done formerly in copper tubes or cylinders; this was a very expensive way of doing the work. I obtained permission from Colonel Orr and tried iron cylinders, and found that it was a very good and cheap substitute for copper.

Mint Master's letter, No. 114, *dated 26th August* 1862.—"It has "been found that whereas an iron tube, on the average, anneals 2,309 lbs. "weight of blanks, one of copper was worn out after annealing 1,158 lbs. "Both metals are liable to rapid destruction by the high tempera- "ture of the annealing furnaces, but contrary, I must say, to my "expectations, iron is found to stand it better than copper, while it is "many times cheaper."

With Colonel Carpendale's permission I have paid much attention to the Die Department, with a view to improve the manufacture of the dies and seals, and to reduce expenditure. The sizes of the dies now are considerably smaller, and are made from the large stock of rejected dies of former years; and after this is exhausted, the annual consumption of valuable steel will be about one-fourth of what it has been hitherto. The process of finishing the dies has been simplified, and the dies themselves were longer in the presses, reducing thereby the labor of setting them. The seals also are finished with great facility, and every order can now be executed within proper time.

Years.	Rs.	A.	P.
1856-57	18,478	13	3
1857-58	93,117	0	0
1858 to 61	3,90,720	3	10
1861 to 63	1,72,479	6	3
1860-61	2,56,193	9	4
1863-64	2,30,800	13	8
1864-65	1,161,789	14	4
At 5 per cent.	58,089	0	0

The amount of copper and other articles sold by me at public auctions are shewn in the margin. The commission which would have been paid if sold otherwise has been saved to Government. In these sales I have always been very anxious to avoid risking Government property, and have endeavoured to realize the highest prices, and, by a careful study of the state of the market, have defeated the combination of native bidders.

The changes and improvements made by me in the construction of the salt weighing machines have been the means of preventing the rejection of the machines that have already been made at a cost of about 15,000 Rupees. The improved machines are now in use, and are considered invaluable. The decision of Government that salt should be received and issued by weight and not by measure, is now fully accomplished.

Collector of Nellore, to Revenue Board, April 1864.—"I regret it should be my duty "to make this report; but as the machines now work, our weighing into store is simply "*salt at discretion*, and, it is scarce necessary to add, Sales are the same."

Similar reports from other salt stations.

Mint Master's letter to Revenue Board, No. 96, *July* 1864.—"I am sanguine that "a further improvement, suggested by Mr. T. E. Scriven, of the Mint, will make these "machines capable of exhibiting perfectly accurate weighments."

From Collector of Nellore, to Revenue Board, November 1865.—"I should recommend "that the new machinery be introduced into all the stations as early as practicable."

Revenue Board, No. 491, *January* 1865.—"The Board consider the results satis- "factory."

The dies for impressing stamps on paper have been turned out by me, and by the additions which I have made to the Engine-turning lathe, it is complete for describing the most difficult patterns. The bi-colored stamps can now be made equal to any that can be obtained from England, and renders imitation impossible. The arrangements for impressing the stamps in two colors in a cheap, easy, and expeditious manner, devised by me, has met with your entire satisfaction.

I shall not trouble you with any further details of the services I have rendered to the State. I may add, however, that there are still many improvements which can be made in the working of the Mint, which I hope, with your sanction and support, to accomplish. These improvements will reduce a large amount of current expenses, and I sincerely trust that the Government will take into consideration all that I have done, and place me on the same footing, both as regards salary and position, as the Assistants in other departments.

I beg to remain, Sir,

Your obedient servant,

(Signed) T. E. SCRIVEN.

Colonel Wilkieson, in reply, stated that as he was "Acting," the petition would have more weight if submitted to Government through the Mint Master.

After this, I was permitted to improve the assorting machines and make them capable of turning out above a lac of pieces in a day in ordinary time. These machines could hardly do 50,000 pieces a day.

Also a small hand-press for impressing bi-colored stamps on private documents was made by me.

I shall not mention any more, but it was, and still is, my anxious desire to perfect the bi-colored stamping presses and to make a salt weighing machine better adapted than those in use at present, *i. e.*, quite portable, and the working parts to be out of the way of the salt, which helps in a very short time to destroy them.

The stamp and salt revenue are important, and it is needful that the machinery in use should be the best that can be made. If ordered by Government, I shall, with the permission of the Consulting Engineer for Railways and the Mint Master, devote a portion of my time in the morning before office hours to perfect the apparatus required.

Rec'd 10th February 1870 with 221
Ans. 23rd Feb 1870.

1870 81

To

The Right Honorable Francis
Lord Napier K.C.S.
&c. &c. &c.
Governor of Madras.

My Lord,

Being aware that it is the desire of the Government of India to establish at the Madras Mint the system of assaying practised in Calcutta, I beg most respectfully to submit for your Lordship's perusal the enclosed testimonials from which it will be seen that I have been taught assaying in both the humid and dry processes and that should your Lordship be pleased to confer on me an appointment in the Assay Department in the Madras Mint, the State will be saved a large amount of expenditure and at the same time secure the services of a man who has

devoted

devoted his time and energies in the service and for the benefit of Government for 20 years.

The changes which are about to be made in the Apaz Office will I humbly hope favour this my application, and in now venturing to address your Lordship I do so because I am aware that it was the intention of the Government of India to cancel the appointment of Deputy Apaz Master with the view of reducing expendi=ture, in proportion to the work done in this Presidency.

In my petition to Colonel Wilkieson Acting Mint Master copy of which I beg to lay before your Lordship, I have clearly shown that at the request of Dr. Shaw the Apaz Master I was sent to Calcutta in November 1856 in order to make myself acquainted with the method of apazing there, and that on my return to Madras the apparatus which was received for the purpose was set up and the members in the Apaz Department instructed by me in the work. Your Lordship will see from this that there can be no difficulty in proceeding with the work at once

21D

2

There are other considerations which have prompted me to seek from your Lordship an appointment in connection with the Madras Mint.

I was for twenty years in this de=partment, and have made coinage operations in all its branches my special and constant study. There are numerous improvements which if I were allowed to introduce into the Mint would tend materially to reduce both labour and expense. The bringing to perfection the bicoloured stamping presses which were designed by me as well as the salt weighing machines to which I have referred in my petition to Colonel Wilkieson will enable the stamp and salt depart=ments to work with greater facility and cheapness

cheapness and effect a considerable saving to the State.

I am at present employed in the office of the Consulting Engineer for Railways, and my salary is Rupees 300 per mensem.

Entreating that your Lordship will pardon me for trespassing on your time

I remain
with the greatest deference
Your Lordship's
most humble and dutiful servant

P. S. Scriven

Madras
30th December
1867

Recd 10th Jany 68.

Forwarded 8th Jany 68

from
Lieut P. S. Scriven

No 66

Public Works Dept
Recd 6th Jany 68

No 5

F.N 25
74

Encl:

Applies for employment in the Survey Department in the Madras Mint

Referred to the Mint Master for any observations he may wish to offer as to the employment of Mr Scriven in the Mint should an opportunity occur.

Fort St George
14th January 1868

for the Chief Secretary
Mint Master

Dept 14/1/68.
Rec'd 21/1/68.

Chief Secretary

3

Referred to the Public Secretary to Government

22

Transferred to the Chief Secretary to Government

for secretary
Public Works
Department

Fort St George
Public Works Dept
4th January 1868

25 d

4

No. 464. 17th January 1868.

From Colonel J. Carpendale R. E.
Mint Master

To The Chief Secretary
to Government

Sir,

Para 1- I have the honor to return Mr. J. E. Scriven's Petition to the Right Honorable the Governor and its enclosure, referred to me with your endorsement of the 14th instant.

2 Mr. Scriven solicits His Lordship "to confer on "him an appointment in the Assay Department of the "Madras Mint whereby a large expenditure might be saved "to the State," as he was aware it was the intention of the Government of India to cancel (abolish) the appointment of "Deputy Assay Master."

3. From my own knowledge of Mr. Scriven and the records of my office, I feel warranted in saying that he is a very good Assayer, and I doubt not that if examined by competent persons he would be declared fully qualified, but I understand the Resolution of the Government of India in the Financial Department No. 2823 16th October 1866 to prohibit the appointment of any person to the fixed Establishment of the Assay Department, unless he can produced a Certificate of qualification from the Right Honorable the Secretary of State for India, and in regard to the substitution of an inferior Appointment for that of Deputy Assay Master at Madras, the matter was fully considered some time since, and it was decided that an Assay Master and a Deputy Assay Master must both continue to be maintained.

4. Mr. Scriven was a very valuable man in the Mint of long and varied experience, and he left entirely of his own free will. in the event of his old situation, Manager and Head Accountant, falling vacant, I would have no objection to reappoint him to it, but it would not be convenient or expedient to accept the offer of his services in his leisure hours for the benefit of the Mint while he is employed in another Department, nor is the Mint Establishment in need of any extraneous aid.

The

5. The Presses including the engine turned Dies for bi-colored Stamping were designed by Mr. Scriven and constructed entirely under his Superintendence - they work efficiently, and will most effectually stop the forging of Stamps which was believed to prevail, and although it is probable, on account of the space they occupy and the number of Men required to work them, I shall recommend their eventual supercession by a patent Machine from England to be worked by Steam power as in Calcutta, their construction reflects great Credit on Mr. Scriven; and I would take the liberty of suggesting that in acknowledgment of his ingenuity and Skill, and as a reward for his services at various times in work beyond the limits of his own sphere of duty in the Mint, a handsome gratuity might with propriety be awarded him - It is not an unusual proceeding: A small gratuity of one Months salary was in 1849 awarded him for the construction of a weighing Machine, and recently the Master of the Calcutta Mint recommended one of his Establishment for a gratuity in recognition of his invention of a new mode of Annealing Copper Coins which was expected to effect a considerable saving -

I have the honor to be,
Sir,
Your most obedient Servant,
J Graham Dale
Mint Master

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From Mr T.E Scriven. Dy 30 Dec 1867 A
From the Mint Master Dy 17 & 24 Jany 1868 Nos 464 & 478

Order thereon 10 February 1868 No 66.

The Government are unable to comply with Mr Scriven's application for an appointment in the Assay department of the Mint.

W.H.S.

To the Mint Master dispd 5/2
Copy of the Order to Mr Scriven dispd 10/2

Finl 1868 Mint Master's Letter dated 17 January 1868 Department.

No 20

From
The Mint Master
Madras
To The Chief Secretary
to Government
Fort St. George

Dated 17th January 1868
Recd. 25th
No 25. No 464.

With three Enclosures

Returns Mr. T. E. Scriven's Petition to the Right Honble the Governor and states that he is very good Assayer but a Certificate of qualification from the Secretary of State should be produced for an appointment in the Assay Department and in the event of his old situation falling vacant he will have no objection to re-appoint him to it but the Mint is not in need of extraneous Aid and suggests that a handsome Gratuity be awarded for his ingenuity and skill at various times beyond his own duty.

With Order

R N 5
Gazette of India of 1866.
Page 1338.

079 days
87
21 & 24