

Purchase in England of an electro-magnetic radiation apparatus by Dr. J.C. Basu for the Physical Laboratory of the Presidency College

[Nos. 23-24]

No. 88, dated Simla, the 13th April 1897.

Memo by — C.H. A. Hill, Esq., Under-Secretary to the Government of India, Home Department.

Copy forwarded to the Government of Bengal, for information, in continuation of Home Department endorsement No. 378, dated 14th December, 1896.

Dated London, the 4th February 1897.

From — Lord George Hamilton, Her Majesty's Secretary of State for India.

To — His Excellency the Right Hon'ble the Governor-General of India in Council

I forward, for communication to the Government of Bengal, a copy of a letter from Professor J.C. Bose, and of the personal explanation given by him at the India Office, as well as of the reply which I have caused to be sent to him.

2. The amount of Messrs. Elliott Brothers' bill will be entered in the Account Current in due course.

Dated Maida Hill, W. the 18th January 1897.

From — J.C. Bose, Edsq.,

To — The Under-Secretary of State for India.

For my lecture before the British Association, and the Friday Evening Discourse before the Royal Institution, a number of delicate instruments has been constructed by Messrs. Elliott Brothers, the cost of which will come up to about £200. May I be permitted to ask Messrs. Elliott Brothers to present the bill to the India Office for payment?

Dated Whitehall, the 23rd January 1897.

Memo. by — P.P.H.

Dr. Bose called on me this morning. The following memorandum shows our conversation:-

Q. — What do you propose to do with these instruments after the Lecture?

A. — I shall take them to the Presidency College, Calcutta.

Q. — Of what use will they be there?

A. — Their primary use is to illustrate my lecture, but they will also greatly facilitate, and indeed render possible, further research, which would be impossible without them. I mean further research in the same line.

Q. — Is that the case with all the instruments?

A. — Yes. All are parts of one whole, and inter-dependent.

Q. — Did you get any sanction from Bengal for the purchase of these or any other apparatus?

A. — I have a letter authorising me to buy "direct from England without the intervention of the India Office, certain scientific apparatus for the Physical Laboratory of the Presidency College" (produced, read and returned to Dr. Bose). That relates to other instruments, however, which are required for magnetic and other work, — different work and a different line of research to that for which the instruments now in question will be wanted. These instruments will, however, replace with much greater efficiency some very rude apparatus which I had constructed in Calcutta out of a grant made to me for original research by the Bengal Government. This was a retrospective grant "for past expenses". I had spent a considerable sum in my past researches. The Lieutenant-Governor asked me to say how much I had spent, but I had no accounts nor vouchers, not having intended to apply for reimbursement. He then granted me Rs. 2,500 for past expenses, Rs. 1,000 for 1896-97 and Rs. 3000 for further years. I may, therefore, say that the Government paid for my rude instruments. I did not ask the Lieutenant-Governor to sanction these more accurate instruments, because I did not anticipate getting them made, but many things will now be possible, which I could not have attempted with my ruder apparatus.

Q. — Could you have ordered these instruments by specification from Calcutta?

A. — No, they are quite novel, nearly every part has had to be newly devised and perfected from experiments which I have made on the spot at the manufacturers. I may mention that one of the objects for which I was deputed to England was to deliver a Lecture before the British Association, and for that lecture I used as much of the apparatus now in question as was ready. My extension to leave was granted to enable me to read another Lecture before the Royal Institution; it is for that the whole of the instruments will be ready. That Lecture will treat of some further advance beyond the point at which I had arrived when I left Calcutta.

Dated India Office, the 2nd February 1897.

Memo. by — Horace Walpole, Esq.

I am directed by the Secretary of State for India to acknowledge the receipt of your letter of the 18th January, and in reply to state that as it appears from your personal explanations that the instruments in question are required for the Physical Laboratory in Calcutta, and to facilitate researches, the cost of which is accepted by the Government of Bengal, Messrs. Elliot Brothers will be paid, provisionally, upon presentation at this office. The matter will be reported to the Government of India, and the final adjustment of the charge, as between yourself and Government, will be left to the discretion of Lieutenant-Governor.

2. A grant of Rs. 13,500 was made by the Government of Bengal for the purchase of the following instruments: —

- 1) Storage cells and accessories.
- 2) High tension electric machine.
- 3) Lathe and mechanical tools.
- 4) Kerosine engine.
- 5) Electrograph.
- 6) Magentograph (no yet purchased)

Of these Nos 1, 2, 3 and 5 were to have been supplied by the instrument makers to the Store Department, India Office, by the last week of March 1897. The instruments were for the most part of special design to suit our special requirements.

3. The kerosene engine (No. 4 in the list) has been supplied to the Presidency College by Messrs. Hornby, through their sole agents in India (Messrs. Kilburn and Company). As regards the magnetograph, I was advised by experts in England to inspect other types of the apparatus as used in the magnetic observatory of Potsdam in Germany and in the observatory of St. Mam in Paris. The continental types possess certain advantages on the score of simplicity, and I should like to make a further reference to Government for instruction as regards the type to be adopted for magnetic work in Calcutta.

4. In addition to the above, the Secretary of State for India was pleased to make a grant of £200 on the subject to the sanction of the Government of Bengal, for the construction of the electromagnetic radiation apparatus exhibited before the British Association and the Royal Institution of Great Britain. The perfection of the above apparatus was rendered possible, with the help of the splendid mechanical resources at the disposal of Messrs. Elliott Brothers, London, who constructed the apparatus. The instrument would be of essential importance in the furtherance of some of the important researches undertaken at the Presidency College.

[No. 28]

No.2062, dated Calcutta, the 31st July 1897.

From — E.M. Konstam, Esq., Under-Secy. to the Govt. of Bengal, General dept.,
To — The Director of Public Instruction, Bengal

With reference to the correspondence ending with your letter No. 3605, dated the 14th July 1897, I am directed to say that the Lieutenant-Governor is pleased to sanction a grant of £200 for the purchase of an electro-magnetic radiation apparatus, which was constructed in England with the permission of the Secretary of State for India for the Presidency College Laboratory.

2. The charge will be met from savings in the Education Budget grant for 1897-98.