

## No. 3.

The AGENT-GENERAL to the Hon. the COLONIAL SECRETARY.

SIR,—

7, Westminster Chambers, London, S.W., 21st November, 1877.

In accordance with your letter of 15th June, in which you directed me to make further inquiries on the subject of the manufacture of gunpowder, and to report the result, I at once placed myself in communication with Messrs. J. and E. Hall, and had a long conversation with Mr. Beckwith, of that firm.

2. After a considerable interval I received from them the letter of which I enclose a copy. You will see by it the cost of a complete factory, such as I think would suit the requirements of the colony.

3. Through an introduction obtained from the India Office, I also had a lengthened interview on the same subject with Colonel Childers, Superintendent of the Madras Government Powder Factory, who happened to be in London on leave.

4. Colonel Childers was most kind in his desire to furnish me with information, and in his assurances that he would be happy to give any further information or render any assistance in his power.

5. I learnt from Colonel Childers that there are three factories in India, one in each Presidency, and that all are being increased. The Madras factory turns out from four to five thousand barrels of powder yearly, and its capabilities are being enlarged fifty per cent. In Great Britain the Government have only one factory, but powder is obtained largely from private makers. The manufacture of gun-cotton can be carried on at a powder factory. The machinery for making gun-cotton, Colonel Childers said, would not be expensive. Colonel Childers expressed a high opinion of Messrs. J. and E. Hall. They have supplied the factories for India, and he has not known any complaint concerning their work. He thinks that for the head of the factory, if carried out by the Government, it would be desirable to obtain the services of an officer of Royal Artillery, used to the work of managing a powder factory. He is of opinion that such an officer could be obtained for from £700 to £800 a year.

6. Colonel Childers is strongly of opinion that a powder factory would be safer and better in Government hands. He thinks that in countries where there are Native races it is inexpedient to encourage the private manufacture of powder. I am inclined to think that for many reasons it would be better the Government should undertake the manufactory itself. I think there would not be enough competition if left in private hands to insure the manufacture of a good and safe article; whilst, in order to procure private manufacture, some specific encouragement would have to be given. It seems to me that gunpowder and other explosives are best made under Government supervision.

7. I enclose also the copy of a correspondence with Captain Campbell-Walker concerning wood for charcoal.

8. Let me add, in conclusion, that should you require further information, I will willingly endeavour to obtain it.

I have, &amp;c.,

JULIUS VOGEL,

Agent-General.

The Hon. the Colonial Secretary, Wellington.

## Enclosure 1 in No. 3.

Messrs. JOHN and EDWARD HALL to the AGENT-GENERAL.

SIR,—

Dartford Iron Works, Dartford, 16th October, 1877.

Agreeably with your request, we have now the honor to submit our views on the various subjects to which you drew Mr. Beckwith's attention at his last interview with you.

From what we can gather amongst those in the trade of gunpowder manufacturing with whom we are acquainted, and to whom similar offers have been previously made, we do not anticipate that any firm who could spare sufficient capital from their already existing business here, would care to invest it in a similar undertaking in the colonies; but we should imagine that, were the factory once established by the Government in New Zealand, there would be little difficulty in transferring it into private hands there; and as the object of your Government is, we presume, to have the power of making gunpowder within its own territory, and so obviate the possibility of accident on board ship by explosion during transit from England or elsewhere, rather than—as in the case with some foreign Governments—to make a profit out of the monopoly, there would be no objection to such a transfer.

*Cost of a Factory.*—The extent, and consequently the cost, of a factory is regulated by the number of mills at work. To produce with certainty the quantity now required by the colony, it would be advisable to erect eight mills. These, with the other necessary machinery, would cost here about £15,000, present requirements being—22,000 lb. gunpowder (sporting), 324,000 lb. gunpowder (blasting), and 1,000,000 cartridges, equivalent to 13,400 lb. powder. If the motive-power be all steam, necessitating the employment of four engines, the additional outlay of about £6,000 will be necessary; but, doubtless, with the water facilities in New Zealand, a considerable portion—say, one-third—of this expense may be avoided. Working the hours you gave us—*e.g.*, eight per diem—a factory of eight mills would yield annually—say, 40,000 lb. sporting powder, 380,000 lb. blasting powder, and 20,000 lb. powder for cartridges. These would cost about £12,000—tools, rails, and trucks for factory.

*Freight.*—The total weight would be about 500 tons, and would cost—say, £2 per ton in all—about £1,000.

The above constitutes what would be generally considered as a complete gunpowder factory; but as, in addition thereto, you required further information, we beg to furnish you with the following particulars:—

*Tin Powder-flasks.*—Machinery for making the tin powder-flasks capable of producing eight per minute, £400.