

ALPHABETIC SERIES

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MADRAS RECORD OFFICE.

Government of Madras.

Revenue DEPARTMENT.

G.O. No.	<u>663</u>	Press ~~Mis.~~
Dated	<u>11-7-</u>	<u>18 87.</u>

Not to be folded or roughly handled

11TH JULY 1887, No. 663, REVENUE.

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

READ—the following letter from M. A. LAWSON, Esq., Government Botanist and Director of Cinchona Plantations, Nilgiris, to the Secretary to Government, Revenue Department, dated Ootacamund, 22nd June 1887, No. 16:—

I have the honor to inform you that the turbine and disintegrator, which were received only on the 16th March last, have been put up on the Government cinchona estate at Nativatam. They are both now in good working order; and the grinding of the bark has been commenced and about 10,000 lb. of powder have been already made.

2. The following are some statistics relating to the turbine and disintegrator, which may be of interest.

The length of the band connecting the turbine with the disintegrator is 35 feet.

The circumference of the driving wheel of the turbine is $3\frac{1}{2}$ feet.

The circumference of the driving wheel of the disintegrator is 11 inches.

When going at full speed, the band revolves at from 80 to 90 times per minute.

The turbine from 800 to 900 times. The disintegrator from 3,100 to 3,500 times.

The tank supplying the turbine is 130 feet above the turbine, and its dimensions are 31 feet $\times$ 21 feet $\times$ $5\frac{1}{2}$ feet, with a capacity of 3,580 cubic feet.

When the turbine is driven at full speed, the tank is emptied in 32 minutes. The discharge of water, or the amount used by the turbine, is therefore $1\frac{1}{2}$ cubic feet per second.

Using the 16 to 1 inch screws, the disintegrator, when driven at full speed, if properly fed, grinds up 600 lb. in 30 minutes.

For ordinary work, this pace is too great; and what I recommend is half full speed, or 600 lb. in one hour.

It takes nearly one hour to clear the box, which holds exactly 600 lb. and to pack the powder, so that I look to turning out only at the rate of 600 lb. in every two hours.

The working day is eight hours, so that the outturn will be 2,400 lb. per day, or a little over one ton.

3. The whole of the work has been executed by the native blacksmith and carpenter attached to the estate, and the way in which the work has been done has been approved of both by Colonel Hasted and Mr. DeWinton.

4. I have to thank Mr. DeWinton and Mr. A. C. Lord, the Sub-Engineer, for assisting me in taking levels of the ground over which the pipes connecting the tank with the turbine had to be laid. Also I am much indebted to Mr. Gammie, Superintendent of the Government Cinchona Plantations, Darjeeling, for much useful information as to how different parts of the machinery connected with the disintegrator could be most advantageously fixed.

5. The next point to be considered now is how the crude alkaloids may be most economically and expeditiously extracted from the powdered bark, and this Mr. Hooper is at work upon at the present time, and so soon as he shall have settled the question, which will be in the course of a few days, I will communicate the result to you.

ORDER—dated 11th July 1887, No. 663, Revenue.

Miscellaneous.

Recorded. The further communication promised is awaited.

(True Extract.)

(Signed) J. F. PRICE,
Ag. Secretary to Government.

To the Government Botanist.
„ the Commissioner of Revenue Settlement, Land Records and Agriculture.
„ the Commissioners of Land Revenue.
„ the Surgeon-General with Government.
„ Chamber of Commerce.
„ Editors' Table.

Exd. S. J. Pereira.

110 Copies.

Original

Govt. of (1887) Madras.
REVENUE.

Issued

Recd.

Encl.

G.O., 11th July 1887, No. 663.

JULY.

Disintegrator and Turbine.

Recording letter from the Government Botanist and Director of Cinchona Plantations stating that the — have been put up at Nadvatam and are in good working order.

16
From

Director's Office!

Cotacamund 22nd June 1887

M. A. Lawson Esq.

Govt Botanist and Director of

Cinchona Plantations.

To,

Nilgiris.

The Secretary to Government

Revenue Department.

Cotacamund

Sir,

I have the honor to inform you that the Turbine and Disintegrator, which were received only on the 16th March last, have been put up on the Government Cinchona Estate at Nadvatam. They are both now in good working order, and the grinding of the bark has been commenced, and about 10,000 lbs of powder have been already made.

2 The following are some statistics relating to the Turbine and Disintegrator, which may be of

of interest:—

The length of the band connecting the turbine with the Disintegrator is 35 feet.

The Circumference of the driving wheel of the Turbine is $3\frac{1}{2}$ feet.

The Circumference of the driving wheel of the Disintegrator is 11 inches.

When going at full speed, the band revolves at from 80 to 90 times per minute.

The Turbine from 800 to 900 times. The Disintegrator from 3100 to 3500 times.

The tank supplying the Turbine is 130 feet above the Turbine and its dimensions are 31 feet x 21 feet x 5 feet, with

with a Capacity of 3580 Cubic feet. 7

When the Turbine is driven at full speed, the tank is emptied in 32 minutes. The discharge of water, or the amount used by the Turbine is therefore $1\frac{1}{2}$ Cubic feet per second.

Using the 16 to 1 inch screws, the Disintegrator, when driven at full speed, if properly fed, grinds up 600 lbs in 30 minutes.

For ordinary work, this pace is too great, and what I recommend is half full speed, or 600 lbs in one hour.

It takes nearly one hour to clear the box, which holds exactly 600 lbs, and to pack the powder, so that I look to turning out only at the rate of 600 lbs in every two hours.

The working day is eight hours; so that the output will be 2400 lbs per

per day, or a little over one ton.

3. The whole of the work has been executed by the native black smith and Carpenter attached to the Estate; and the way in which the work has been done has been approved of both by Colonel Hustak and Mr. De Winter.

4. I have to thank Mr. De Winter and Mr. A. C. Lord, the Sub Engineer for assisting me in taking levels of the ground over which the pipes connecting the tank with the Turbine had to be laid. Also I am much indebted to Mr. Gamble, Superintendent of the Government Cutchera Plantations, Darjeeling, for much useful information as to how different parts of the machinery connected with the Disintegrator could be most advantageously fixed.

The

5.

The next point to be considered now is how the crude alkalis may be most economically and expeditiously extracted from the powdered bark; and this, Mr. Hooper is at work upon at the present time, and so soon as he shall have settled the question, which will be in the course of a few days, I will communicate the result to you.

I have the honor to be
Sir
Your Most Obedient Servant
M. A. Lawson
Jnt Botanist and Director

Revenue Deptt.

Revenue (1887) Circular



No. 4949.

For No. 663

Recorded. In further

Communication promised
is awaited.

has
4.7

From

The Govt. of British India
Secretary to Government

Revenue Department

Calcutta

No. 16

Dated 22 June 1887
No. 23

Enclosure. MB-

Subject

Disintegrator and Turbine

Reports that the—

have been put up at Nadwatala
and are now in good working
order and 10,000 lbs. of powder
have already been made.

P.T.O.

42

Note. Submitted that this
be printed and placed on
the S. T. & communicated
to the Chamber of Commerce.
The information given may
be useful.

has
4.7

4.7

5 The Govt. of British India
25 The Govt. of British India
10 The Govt. of British India
6 The Govt. of British India
1 The Govt. of British India
E.T. Dec 27-7-87.

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