

No. 169. Read the following Proceedings of the Board of Revenue, dated 27th June 1871, No. 2,582 :—

Read the following letter from the General Superintendent of Public Works Stores and Workshops, to the Acting Secretary to the Board of Revenue, dated Chepauk, 30th May 1871, No. 430.

With reference to Board's Proceedings No. 1,607, dated 18th April 1871, I have the honour to submit a brief report on the machines therein alluded to.

2. The *rice-hulling machine* consists of a pair of stones; the lower one is fixed to the frame-work, and the upper one revolves with a vertical spindle which, passing through the lower stone, is driven by level wheels from shafting in connection with the engine. Both stones are enclosed in a sheet-iron casing on the top, and in the centre of which is a hopper for feeding the grain, which, passing down through the centre of the upper revolving stone, is made to pass between the two stones (by the revolution of the upper one) which action is *supposed* to separate the *husk* from the paddy and deliver both at the opening in the side of casing for that purpose.

3. Should the grain (which is unboiled), when passing between the stones receive the slightest knock or sudden pressure, it is immediately broken, in which condition about 50 per cent. of the husked rice was delivered from the machine when working with the stones about $\frac{1}{8}$ th of an inch apart. If the top stone was raised higher, not more than 30 per cent. of the paddy was operated upon, the percentage of broken rice being much less.

4. The fault of this machine seems to be in the passing of the paddy between the two hand-stone surfaces in which the only thing that will yield to inequalities in working of the surfaces is the grain, the result being broken rice.

5. One of the surfaces should be of some elastic material such as cork or vulcanized India Rubber (as employed in the best English-manufactured machines), the object being to hold the grain to the abrading surface of the revolving stone, and at the same time afford a means of escape from any sudden and unequal action of the stone. The grain is rendered more elastic by being *steamed* before passing into the mill in preference to *boiling*, as it does not absorb so much water in the husk, and may be passed into the mill hot.

6. The *bone-crushing machine* has given very satisfactory results, for when working in the discontinuous manner that has been necessary (owing to the supply of bones not being continuous and in some instances insufficient for a day's work) the bones have been crushed for about Rs. 3 per ton, and I have not the slightest doubt that if the machine was continuously worked, the charge would not exceed Rs. 1-8-0 per ton.

7. This machine is very strong and simple in construction, consisting of two horizontal cylinders (made of a series of circular plates with serrated edges) revolving in opposite directions and suitably connected by means of strong cog-wheels.

*Proceedings of the Madras Government, Revenue Department,
14th July 1871.*

The bones are fed (by hand) from a tray or hopper on the top of the machine, from which they are passed down between the rollers and crushed by the teeth (or serrated edges) of the discs forming the cylinders falling into and oscillating tray, by the action of which the broken bones are separated into three sizes, but as the largest size consists of pieces of broken bone, held together by the dried flesh adhering to them, which, upon exposure as manure, would be reduced to the second size, so that really there are but two sizes delivered, both of which are pronounced suitable for manuring purposes.

SUBMITTED to Government in continuation of the Board's Proceedings, dated 15th May 1871, No. 2,024.

2. The Rice-hulling machine is evidently of defective construction, and the Board think it would be better to abandon or to sell it. The Board think it would make a very good corn-mill, and would be valuable in a wheat-growing country.

3. The bone-crushing machine, on the other hand, is a thoroughly effective and useful machine, very strong and simple in construction.

4. It is not, however, required for the purposes of Government, and the Board suggest that it be sold. As several firms export bones largely from this country to Ceylon, the Board expect there will be no difficulty in disposing of it at little or no loss.

5. The cost of these machines is given in the annexed memorandum. The Board suggest that the bone-crusher be advertised for sale for £85; an account of its original cost and capability being given.

Memorandum.

Bone-crushing Machine.

	£.	s.
Cost...	89	15
Packing charges and freight	12	16
Total...	102	11

Rice-hulling Machine.

	£.	s.	d.
Cost...	110	4	0
Packing charges	13	7	6
Total...	123	11	6

The charge for freight for Rice-huller cannot be given, as it was sent out with other cases of Government stores per *Tyburnia*, and freight not shown separately.

No. 170.

ORDER THEREON, 14th July 1871, No. 1,222.

Miscellaneous.

THESE proposals are sanctioned, except that not less than Rs. 1,000 should be asked for the Bone-crusher.

*Proceedings of the Madras Government, Revenue Department,
14th July 1871.*

2. Ordered that the following letter be despatched to the Government of Bombay:—

(Here enter 14th July 1871, No. 1,223.)

(True Extract.)

(Signed)

D. F. CARMICHAEL,

Acting Secretary to Government.

REVENUE DEPARTMENT,
FORT SAINT GEORGE,
11th July 1871

No. 171.

No. 1,223.

To

THE CHIEF SECRETARY TO THE GOVERNMENT OF BOMBAY.

Miscellaneous.

SIR,—I have now the honour to
reply to your letter No. 1,088 of 7th
March last.

First, I am to enclose copy of the Proceedings of the Board of Revenue
No. 2,582 of 27th June, which enclose full reports on the working of the Rice-
husking and Bone-crushing machines.

Secondly, copy of the Proceedings of the same Board, No. 1,607, of 18th
April last, advising the despatch to your address of sample bags of crushed bones.

Thirdly, the Board's Proceedings of 15th May, No. 2,024, furnishing some
particulars as to the value of such bones as manure, their cost free on board at
this port, etc.

Fourthly, the Proceedings of Government, 4th July, instant, recording the
Experiment with bone-dust at the Government Farm, Sydapet, near Mauras.

I have the honour to be,

Sir,

Your most obedient servant,

(Signed)

D. F. CARMICHAEL,
Acting Secretary to Government.

Ed. F. R. Bantleman.

Copy for Secretary

13 7 6
Total 123 11 6

The charge for freight for Rice Haller cannot be given as it was sent out with other cases of Government Stores per *Tyburnia* and freight not shown separately.

Ed. G. A. Turton.

14th July 1871

Rev 1871. Depon
Board of Revenue,
MADRAS.

PROCEEDINGS, 27TH JUNE 1871, No. 2,582.

Received. *14th July 1871* Encl.

JUNE.
No. 2,582

No 1222

Rice hulling and Bone crushing machines—now in Public Works Stores.—Report of General Superintendent of Public Works Stores and Works shops on working of, submitted to Government, with remark that they both be sold.

These proposals are submitted
2. Ordered that the following be
be despatched to the Govt of Bombay
14th July 1871

14th July 1871

*3 Oct 1871
4 June 1871*

No 1223

To Chief Secy
Bombay

Sir. Have now be honor to ref to
Letter No 1088 of 7th March last.

2. First, I am to enclose copies of the
Progs of the Bd Rev No 2542 of 27th
June, which enclose full reports
on the working of the Rice-hulling &
Bone-crushing machines.

Secondly; copy of the Progs of the same
Bd, No 1007 of 18th April last,
advising be despatch to your address
of sample bags of crushed bones.

Thirdly; the Bd's Progs of 15th May, No 2024
furnishing some particulars as to the
value of such bones as manure, their
cost free on board at the Port &c.

Fourthly; the Progs of Govt 4th July
instant, recording the experiments
made with bone-dust at the Govt Farm,
Sydapet, near Madras.

Ed. G.

14th July 1871

10/1
As to the machines
I would ask
1000 Rs for the
Bone Crusher.
With an view
Farmers be can
always utilize
it
Ed.

1117

Handy for
the working of the
River...

the working of the
River...

Handwritten notes and sketches in the left margin.

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