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MADRAS RECORD OFFICE.**Government of Madras.***Public Works* **DEPARTMENT.**

G.O. No. 1715	Press Mis.
671-672	
Dated 30-6-1963.	

Not to be folded or roughly handled

15

*Proceedings of the Madras Government, Public Works Department,
30th June 1863.*

No. 671. Read the following letter from W. FRASER, Esq., Civil Engineer, to Colonel W. I. BIRDWOOD, R. E., Secretary to Government in the Public Works Department, dated Chepauk, 16th June 1863, No. 13:—

SIR,

1. I have the honor to report that, agreeably to the Orders of Government No. 1,521, dated 13th June 1863, I inspected the experimental wind mill this morning.

2. I regret that I have to report unfavourably of both the contrivance and the construction, the latter is especially bad.

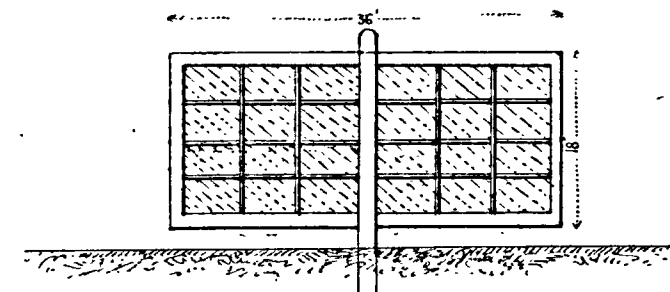
The horizontal wind mill is a form of wind machine which has not been much used for many years, as those who have investigated the relative merits of the two machines have given a decided preference to the vertical mill.

From time to time it has been brought forward with a variety of improvements and additions, but its advocates have never succeeded in displacing the vertical machine.

The latest serious improvement it underwent was, I believe, the substitution of "feathering," for fixed sails, so that the wind screen, which was a necessary part of the latter, could be dispensed with.

3. The original drawing of the mill under consideration shows that the intention was to have fixed sails; but the actual construction is for feathering sails.

For an experimental machine the size is too great; the framing for the sails being thirty-six feet from out to out and eighteen feet in height. Thus:—



These are not the proportions the sails should have, as with this construction diagonal bracing is impracticable.

On account of this, combined with insufficient scantling, and bad workmanship, the framing which has been made cannot support its own weight.

I have no hesitation in recommending that no further expenditure be incurred, that the machine be taken down.

	Rs.	A.	P.
The cost up to the present time has been	359	15	11
Deduct the value of materials which can be worked up or disposed of ..	73	0	0
Balance...	286	15	11

4. I have no doubt but that had Colonel Ouchterlony been able to give his personal attention to the construction of this machine, he would have seen and remedied its defects, and would have brought the experiment to a successful issue.

The object he aimed at should not be affected by failure in this particular case, as the introduction of wind machines into India, for a variety of industrial operations, would confer a vast benefit on the country. But results as high as those obtained in Europe, should not be expected from them, on account of the lightness of the Indian winds.

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5. I write this because I should like to see experiments made for the purpose of arriving at a cheap, simple, and effective machine, which could be easily understood and maintained by natives. By them, such machines would, I believe, be extensively used in raising water for irrigation; and, by Government, in draining the vast tracts of waste but valuable land which lie along the coasts.*

Should such experiments be decided on, one horizontal engine might be tried; but it should be on a smaller scale than the present one, and on a modified plan. The vertical machine however is likely to be found the most effective.

Peil's engine is very nice, but I think it is too complicated for general use in India.

Some modification of the old English post mills, or of those so extensively used in Germany and Belgium, would probably be the best.

The work might be under the general superintendence of Mr. Curley, but the Carpenter employed should have some notion of putting timber together.

* I proposed the drainage, in this way, of sixty to eighty thousand acres of rich waste land at Vedaranam, a place where there is a constant breeze. Such machines might also be used in draining the waste lands along the backwater at Ennore.

No. 672.

ORDER THEREON, 30th June 1863, No. 1,715.

Under the circumstances stated in this letter the Government direct that the wind mill therein referred to be taken down, and the materials sold to the best advantage.

(Signed) W. I. BIRDWOOD, Colonel, R. E.,
Secretary to Government.

Recd. 13th June 1863
289 x 290
From W. I. Birdwood
W. I. Birdwood Esq.
Civil Engineer
Secretary to Government
in the P.W. D.
Dated 16th June 1863.
Received 18th June 1863.
2 bills sent to the Store Dept.
Referring on the
Expenditure
W. I. Birdwood
pure 1863
With an Order
No. 1715 of 30 June.

1715
No. 1715.
Under the circumstances stated
in this letter the Government direct that the wind
mill therein referred to be taken down, and the
materials sold to the best advantage.
To the Officer in charge of
the Store Dept with 2 Bills
" Controled & Aud. P. 10. Acc. 4
Chopant
30th June 1863
No. 1715 of 172