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# MADRAS RECORD OFFICE.

## Government of Madras.

Public works DEPARTMENT.

G.O. No. 3066 Press Mis.

422-23

Dated 22 12 1862.

**Not to be folded or roughly handled**

2/11.1.44

## *Proceedings of the Madras Government, Public Works Department, 22nd December* 1862.

No. 422. Read the following letter from Captain L. PAXTON, Acting District Engineer, Tinnevelly, to J. D. SIM, Esq., Secretary to Government, Revenue Department, dated Vannarpettah, 27th November 1862, No. 748 :—

SIR,

1. In compliance with the request of his Excellency the Governor I have the honor to forward herewith an estimate of the probable expense of constructing a horizontal Windmill for purposes of irrigation, in this District.

2. I have estimated for making the different parts of the wood work larger than would be otherwise necessary, to allow of the coarse work of village carpenters; while a sufficient rate has been set down for the wood work, to allow of good material being used for the permanent parts of the machine.

3. I had intended sending the estimate sooner, but was anxious before doing so to try some experiments with a model, which I had constructed to ascertain if it were practicable to make any arrangements for the self-regulation of the sails, to provide for the violent gusts of wind which are very frequent in this District during the south-west monsoon.

4. The plan shown in the accompanying drawing answers well on the model, and would probably succeed in a full sized machine if carefully adjusted at first.

5. The outer portion of the sail is of cloth and furled, when the velocity of the mill, becomes sufficient, by the centrifugal force of a small weight attached by a loop to the stay of the opposite sail.

6. As the speed reduces the sail again is gradually blown out.

7. For the centre of the sail I believe that bamboo mat will answer better than cloth if strengthened by strips of bamboo sewn on to it.

8. The mill appears to work better if a space of three or four feet is left open at the inner end of the sail.

9. I intend when the weather allows of it to make further experiments with a second set of wings placed above and at an angle of 45° with the present set in the manner described by His Excellency, which besides increasing the power will, I think, make the mill work with greater regularity, as at present there seems a slight reduction of speed between each sail coming to the wind.

10. Some further experiments are also required to ascertain the best arrangement of the weight for furling the outer portions of the sails, as in the position shown in the drawing the sails do not blow out quite so readily as desirable, by placing it on a rope slanting slightly upwards instead of downwards this would probably be obviated.

11. I think that a windmill of this description might be constructed with advantage for use in the District and employed for clearing foundation of bridges, &c., from water, as when not required for that purpose it would be employed with slight modification to grinding chunam or similar purposes.

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No. 423. ORDER THEREON, 22nd December 1862, No. 3,066.

The Governor in Council considers it desirable that Captain Paxton should be allowed to carry on the experiments which he has commenced with a great deal of skill and judgment. He should be requested to complete his trials with the model and to report to Government the result and the cost of the experiments, which if satisfactory might tend to the construction of a simple and cheap mill.

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

No. 748.

Tinnevelly District Engr Office
Vannarpettah 27th Novr 1862

To

J. D. Sim Esqr
Secy to Govt — Revenue & Public Works Dept

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3. I had intended sending the estimate in former, but was anxious before doing so to try some experiments with a model, which I had constructed to ascertain if it were practicable to make any arrangements for the self regulation of the sails, to provide for the violent gusts of wind which are frequent in this district during the South west monsoon.

4. The plan shown in the accompanying drawing answers well on the model, and would probably succeed in a full sized machine if carefully adjusted at first.

5. The outer portion of the sail is of cloth
and furled, when the velocity of the mill
becomes sufficient, by the centrifugal force
of a small weight attached by a cord
to the clay of the opposite sail
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gradually blown out.
7. In the centre of the sail I believe that
Bamboo mat will answer better than
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a second set of trials placed above and
at an angle of 45° with the present sails
in the manner described by his Excellency
which besides increasing the power will
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greater regularity as at present
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for grinding Chunam or similar purposes

I have the honor to be
Sir
Your most obt Servt
[illegible] Captn
Asst Qr Mr Engineer Trincomally

I think it would be desirable to allow Captn Paxton to carry on the experiments which he has commenced with a great deal of skill & judgment - he might be requested to complete his trials with the model and to let the Govt know the result and the cost of the experiments - which if satisfactory might result in the construction of a simple & cheap Mill. - The more experiments which are made the better - I should not wish to limit the Govt to the single experiment making by Col Buckle

To The Depy Chief Engr S.C.

No 3066

The Governor in Council considers it desirable that Capt. Paxton should be allowed to carry on the experiments which he has commenced with a great deal of skill and judgment. He should be requested to complete his trials with the model and to report to Govt. the results and the cost of the experiments which if satisfactory might lead to construction of a simple and cheap Mill -

No 422-423.

13 Copies.

To The Depy Chief Engr S. Circle with ? Chepauk 22nd Decr 1862 } w Encls: Depr 23rd

C. 8th Decr 1862 No 15 ½

1862 Decr Proceedings of Govt for December No 3066

From the Acting Chief Engr, to the Secretary to Govt, Public Works Dept.

No 5/40

Dated 27 November, Recd 12 Decr 1862

Enclosures - Five

No 3066-22 Decr

Forwards & submits an Estimate of Rs 230 for constructing a ? for the ? of irrigation in the ? ? ? ? ? Governor ? in Order.