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MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

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Dated 9. 12	1862.

Not to be folded or roughly handled

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*Proceedings of the Madras Government, Public Works Department,
9th December 1862.*

No. 178. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, R. E., Deputy Chief Engineer, Southern Circle, to Colonel W. I. BIRDWOOD, R. E., Secretary to Government, Public Works Department, dated 18th November 1862, No. 105:—

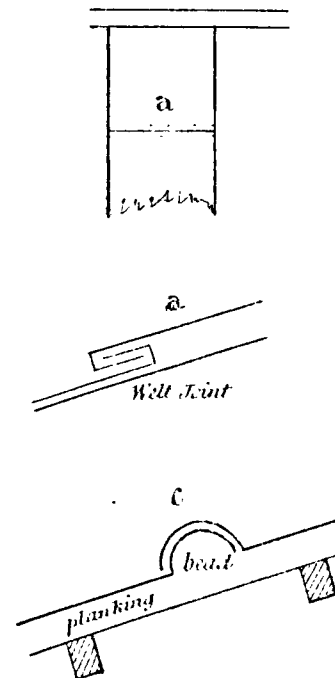
SIR,

1. I beg leave to address Government upon the subject of a new roofing material which I am of opinion would be found very useful and applicable for buildings at Wellington, Ootacamund, and other Hill Stations; and also possibly, for Stores, Arsenals and other non-inhabited buildings in the Plains.

2. It was first brought to my notice in England through its having been employed in re-roofing the Royal Repository at Woolwich; and on enquiry as to its efficacy the Commanding R. E. there, Colonel Ford, stated for my information that it answered exceedingly well, with the solitary defect that in putting it on sufficient allowance had not been made for expansion and contraction.

3. The material alluded to is called "Wetterstedt's Patent Metal." Its chief component is lead; but there is some admixture, the nature of which I do not know, which gives the alloy a toughness and ductility quite surprising, and admitting of its being rolled out into leaf of the most extraordinary attenuation. The consequence is that only timber of the lightest scantling is needed to carry a roof of this metal, and as the mode of its application is so simple that an ordinary Carpenter can lay it with ease, great economy is attained by its employment.

4. I used it myself in covering in an extensive verandah in my own house in England, and I can therefore testify from actual personal experience as to these advantages, and especially as to the extreme simplicity of its application. No plumbing whatever is required: the rolls which are made in considerable lengths are applied from the ridge downwards, unrolling towards the eaves and beaten smooth with a flattening hammer. If a continuation in length is required it is effected by means of a "welt-joint," *A A*; and in extending laterally the edges of the rolls are simply dressed over a bead, *C*, interlapping, and tacked to the bead with copper tacks. Where, however, great vicissitudes of temperature are experienced the "welt-joint" could be used laterally as well as longitudinally.



5. I consider the metal peculiarly well suited for the roof, of the Coonoor Church, which elegant little building has become seriously injured owing to the bad material employed in covering in the side aisles, and the roof generally: indeed I do not know what else can be used except iron to make it weather-proof owing to its peculiar pitch. Again for the projected additional Church at Ootacamund, for the Lawrence Asylum buildings, the Hospital, Magistrate's Office and for all

public buildings contemplated at Ootacamund, for the block of Barracks at Wellington the roof of which was recently destroyed by fire, for the Police Lines, Workshops, &c., &c., it appears to me to be peculiarly well suited.

6. Unfortunately I have no specimen in my possession to submit to Government, nor have I at hand any actual data of cost. I have however written to the manufacturers (at Limehouse, near London) requesting them to send out samples overland, and recommending them to ship a considerable quantity of the metal on their own account by Screw Steamer round the Cape, as I feel sure Government will approve of it when brought under their inspection.

*Proceedings of the Madras Government, Public Works Department,
9th December 1862.*

7. Under the circumstances represented I have therefore to request permission to suspend the operation of unroofing the Coonoor Church to carry out the repairs sanctioned to that building, until I learn from the manufacturers whether or not my recommendation has been attended to, and a shipment of metal made.

8. The estimate for the Coonoor Church is entered in the current Budget (Ecclesiastical No. 45) and although it is marked A it would have been necessary to solicit sanction for carrying the work out, as dilapidation is going on.

No. 179.

ORDER THEREON, 9th December 1862, No. 2,946.

1. The Government will be prepared to consider the subject of using "Wetterstedt's Patent Metal" when they have some definite proposal laid before them with fuller particulars of the advantages secured by its use, and its cost.

2. If the condition of the Coonoor Church be such as to necessitate immediate repairs, it is advisable that the work should not be delayed pending the receipt of a reply to the reference made to England relative to the new roofing material. The Government presume, however, that in making the recommendation contained in paragraphs 7 and 8, Colonel Ouchterlony has fully satisfied himself that the interests of Government will be promoted by the postponement of the work.

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

S. G. Office

18 November 1862.

N^o 105

From,

Lieutenant Colonel J. Ouchterlony R.E.
Deputy Chief Engineer S. Circle.

To,

Colonel J. Birdwood R.E.,
Secretary to Government P.W.D.

Sir,

I beg leave to address Government upon the subject of a new roofing material which I am of opinion would be found very useful and applicable for buildings at Wellington, Cochin, and other Hill Stations; and also possibly, for Stores, Arsenals and other non-inhabited buildings in the plains.

It was first brought to my notice in England through its having been employed in re-roofing the Royal Repository at Woolwich; and on enquiry as to its efficacy the Commanding R. E. there, Colonel

Ford.

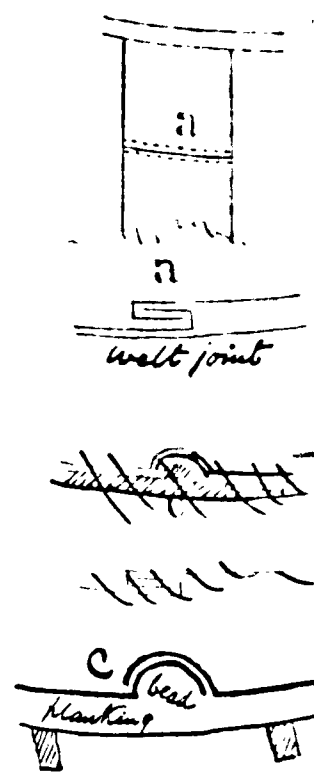
Public.

Ford, stated for my information that it answered exceedingly well, with the only defect that in putting it on sufficient allowance had not been made for expansion and contraction.

3. The material alluded to is called "Wetterstedt's Patent metal". Its chief component is lead; but there is some admixture, the nature of which I do not know, which gives the alloy a toughness and ductility quite surprising: and admitting of its being rolled out into leaf of the most extraordinary attenuation. The consequence is that only timber of the lightest scantling is needed to carry a roof of this metal, and as the mode of its application is so simple that an ordinary carpenter can lay it with ease, great economy is attained by its employment.

4. I used it myself in covering in an extensive verandah in my own house in England, and I can therefore testify from actual personal experience

as



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5. I consider the metal peculiarly well suited for the roof of the Looe Church, which elegant little building has become seriously injured owing to the bad material employed in covering in the side aisles, and the roof generally: indeed I do not know what else can be used except iron to make it weather proof owing to its peculiar pitch. - Again for the

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of the metal on their own account by a
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7
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ment of metal made.

8. The Estimate for the Common
Church is entered in the Current Budget
(Ecclesiastical at 45/ and although it
is marked A it would have been necessary
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out, as dilapidation is going on.

P. L. Office

8th Nov 1862

I have per

Architect Smith & Co.

Deputy Chief Eng. S. L.

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21. Colonel J. Buchterlongue

Deputy Chief Eng. D. G.

St. Paul
J. Burdwood R.R.

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Richardson on the subject

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The first will be proposed to consider the
subject of naming "Nationalists District medals when
they have some definite proposed law before them
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passing and its cost -

of the condition of the corner should be such as to necessitate immediate repair, it is advisable that the work should not be delayed pending the receipt of a reply to the reference made to England relative to the new roofing material for Government purposes. However, that in making the recommendations mentioned in Paragraph 8, Colonel Quibling has fully satisfied himself that the interests of Govt will be promoted by the procurement of the work.



13 Copies.
St. Henry Aug 29th. S. C. W. A. Sept 10th. Chatham }
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C. 24th Nov^r / 62. R. 2nd Dec^r