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# MADRAS RECORD OFFICE

## Government of Madras

*Public Works*

DEPARTMENT

|          |         |          |
|----------|---------|----------|
| G.O. No. | 2477    | Press    |
| B.P. No. |         | Mis.     |
|          | 141-142 |          |
| Dated    | 9-10    | 1951/873 |

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,  
9th October 1873.*

No. 141. Read the following letter from Colonel F. H. RUNDALL, R.E., Deputy Secretary to the Government of India, Public Works Department, (Irrigation,) to Colonel G. W. WALKER, R.E., Secretary to the Government of Madras, Public Works Department, (Irrigation Branch,) dated Simla, 6th September 1873, No. 595 I. :—

WITH reference to the accompanying copy of a letter received from the Government of the Punjab, No. 2,428 I, dated the 18th June last, I am directed to request that you will cause inquiries to be made among the Irrigation and Railway officers in Madras, and report, for the information of the Government of India, whether levelling instruments supplied by Messrs. Cooke and Sons have been found in use to be in any respect defective, and whether those of Messrs. Troughton and Simms are considered preferable.

From Colonel J. CROFTON, R.E., Joint Secretary to the Government of the Punjab, in the Public Works Department, Irrigation Branch, to the Secretary to the Government of India, Public Works Department, dated Lahore, 18th June 1873, No. 2,428 I.

Memorandum, No. 1,395 I., dated 9th May 1873, from Superintending Engineer, Sichind Circle, with enclosures.  
Memorandum, No. 685 I., dated 30th May 1873, from the Superintending Engineer, Lower Barce Doab Circle, with enclosure.

I AM desired to forward for information copies of correspondence as per margin, regarding levelling instruments made by Messrs. Cooke and Sons, which have now been in use in this department for over two years.

From these reports it appears that those specimens of them, which have been issued to the Canal officers, are generally inferior to Messrs. Troughton and Simms' instruments, and the peculiar method of adjusting the bubble does not stand the test of wear. The Roorkee officers appear to think differently, but their opinion is apparently based on a short trial at head-quarters. The only reliable test is actual working with an instrument for some time in the field in the hands of experienced levellers.

In the 3rd paragraph of his letter, dated 9th May last, Major Home mentions as one of the defects of these instruments that the lenses of the object-glasses are fixed in the ring, and cannot be separated for the purpose of cleaning. This is not, however, a novelty as he appears to think, but was the almost universal practice until the year 1851 when, so far as the Chief Engineer in this Department is aware, the first instruments were received from England for the Civil Engineer's Department in the Punjab, in which the lenses of object-glasses were so fitted as to be capable of separation for the purpose of cleaning.

The old plan of fixed lenses has long been known to be a great defect in instruments to be used in this climate, but the English makers did not until lately understand that it was so, and the improvements in the instruments (Troughton and Simms) of 1851 were made to special order.

No. 142. ORDER THEREON, 9th October 1873, No. 2,477.

IRRIGATION, No. 11.

ORDERED that the above letter be communicated to the District Engineer, Presidency, with a view to his reporting

in what districts Messrs. Cooke and Sons' levels have been used, and what opinion Mr. Doderet has formed of them.

(True Extract.)

Colonel, R.E.,  
Secretary to Government.

To the District Engineer, Presidency.

Exd. S. T. Austin.

Spare Copies.

GOVERNMENT OF INDIA.  
PUBLIC WORKS DEPARTMENT.  
IRRIGATION.

*5232*  
*C. C. N. 1555*

To

No. 595 I.

Dated Sept. 6<sup>th</sup> 1873.

Received 19 Sept 73

Recd 24<sup>th</sup>

*Sum*

Ordered that the above letter be communicated to the District Engineer, Presidency with a view to his reporting in what Districts Messrs. Cooke & Sons' levels have been used and what opinion Mr. Doderer

Calls for a report on Messrs. Cooke and Sons' Levelling Instruments.

has formed of them.

*Ordered that the above letter be communicated to the District Engineer, Presidency with a view to his reporting in what Districts Messrs. Cooke & Sons' levels have been used and what opinion Mr. Doderer has formed of them.*

*A. H. Macdonald - J. C. 16/10/73*

*Ch. Eng. to be sent to Mr. Doderer for his report.*

Op. 5232

Govt. of 1873 India

PUBLIC WORKS.

The District Commr.  
Presidency

Date

Recd.

Encl. /

G.O. 9<sup>th</sup> Oct. 1873 No. 2477-

No. 11/1142

Messrs. Clarke & Sons' Levelling  
Instruments. Letter from  
the Govt. of India calling  
for report on Messrs.  
Clarke & Sons' Levelling  
instruments, Comd<sup>d</sup> to  
the D. Commr., Presidency  
with instructions.