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# MADRAS RECORD OFFICE

Government of Madras

*Public works* DEPARTMENT

|          |      |       |
|----------|------|-------|
| G.O. No. | 1467 | Press |
| B.P. No. |      | Mis.  |
| 17-18    |      |       |
| Dated    | 2-6  | 1873  |

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,  
2nd June 1873.*

No. 17. Read the following endorsement of the Chief Engineer for Irrigation, dated Camp at Arimbaukum, 7th May 1873, No. 280 :—

From F. G. STONEY, Esq., to Lieutenant-Colonel J. MULLINS, R. E., Chief Engineer for Irrigation, Madras, dated 203, St. Vincent Street, Glasgow, 3rd April 1873.

I HAVE the honour to enclose a letter to the Controller of Public Works Accounts acknowledging receipt of £100 and extract from G. O., No. 457, dated 12th February 1873.

2. Having just received tenders from eminent manufacturers in Glasgow, I have now the honour to send a revised estimate of my patented valve made as complete as possible, in materials and arrangement, also the present cost of cast-iron pipes to suit my 2' 6" valves, all tested to high pressure before leaving the works. All the estimates are at present prices which are now extreme, and any alteration will most probably be to lower prices.

3. Messrs. Eddington and Company of Glasgow supply at present 2' 6" pipes, bored and turned at ends, tested, and coated with preserving mixture, at £ 9-10-0 per ton (in Glasgow), the pipes are 12 feet long and weigh 26 cwt. each.

4. The manufacturer's estimate for my patented 2' 6" valve, at present prices, is £ 80 to £ 85, (not for a single valve.)

5. The cost of the ordinary double action valve supplied to water works at home for 2' 6" pipes is £ 120 by same firm; this valve is complicated, and requires considerable force to work it.

6. At present prices my former double shutter equilibrium valve for deep tanks and suited to masonry will cost about the same or perhaps a little more than my patented sluice valve.

7. Work which I could have got in July 1871 for £ 18 to £ 20 a ton, I cannot now get less than £ 35 to £ 40 per ton, (manufacturer's prices.)

8. The cost of a first and single valve of either kind will, with patterns, etc., amount to about 50 per cent. more than the above prices.

9. Having stated these prices as I got them from the manufacturers, I have now the honour to submit to the Madras Government that I shall send out the best samples of each, and such appliances as may be ordered, and at such sums as may be deemed fair by the Government.

10. The £ 100 already received shall at once be devoted to the construction of the canal sluice, strengthened and improved in its action, but I do not at all anticipate that I can at present prices get a first one made for this sum.

11. I have the honour to send you by this mail (per book post) a copy of my paper on the patented valve, and to refer you to page 7 and plates 2 and 3, with the view of calling your attention to the arrangement for relieving the sluice, and to ask that the Government, in ordering a valve, will state whether they wish the clack valve and the small drain cock supplied.

SUBMITTED for the information of Government, with reference to G. O. of the 12th February 1873, No. 457.

2. In this letter Mr. Stoney reports the cost of the deep tank equilibrium valve, and of the patent equilibrium valve proposed by him as a substitute to be, at manufacturer's prices, about the same, viz., £ 80 to 85 each, and that the first valve of each kind will, including the patterns, come to about 50 per cent. more. An experimental valve of each kind may then be assumed to cost £ 125 and, under these circumstances, I think the prices, £ 150 each, named by Mr. Stoney in paragraph 8 of his letter of the 5th December 1872, do not leave a wider margin than may be properly allowed to that gentleman for the time and thought he has devoted to the subject. A deep tank valve of the kind referred to in paragraph 7 of my Note of the 20th December 1872 need not, I think, at present be made up, but I may mention that this arrangement slightly modified is one which will be suitable for the regulation of the discharge from the Perryaur Reservoir into the water shed tunnel, should that project be carried out. In lieu of the deep tank sluice valve I would adopt Mr. Stoney's suggestion to substitute the patent equilibrium valve, illustrations of which are given in the pamphlet, and the clack valve at the inner end of the pipe, with the slight modification mentioned in paragraph 9 of my Note of the 20th December last, as also the small drain cock at the bottom of the equilibrium valve should be provided.

3. An experimental set of head sluice valves has already been ordered; and as the original estimate for these, exclusive of patterns, was £ 48, against £ 47 for the deep tank valves, the price, £ 150, above stated to be reasonable for a single, and first, set of the latter, may be allowed for the former.

4. Mr. Stoney also reports the cost of the iron piping, 2½ feet in diameter, of which about 120 feet would be required in connection with the patent valve, to be, at the prices ruling when his letter was written, £ 9-10-0 a ton, and the weight 26 cwt. for a length of 12 feet, 120 feet of piping would therefore weigh 13 tons, and cost £ 123-10-0 at Glasgow. This length of piping should be sent with the valves. The total cost of the experimental valves will then be, exclusive of freight and insurance—

|                                                 | £             |
|-------------------------------------------------|---------------|
| Head sluice valves ... ..                       | 150           |
| Deep sluice patent valve ... ..                 | 150           |
| 120 feet 2½ feet pipes in 12 feet length ... .. | 123 10 0      |
| 2 per cent. commission ... ..                   | 2 9 5 say 126 |
| Total...                                        | 426           |

An advance of £ 100 has been made to Mr. Stoney, and I would suggest that the Controller be instructed to make a further remittance to that gentleman of £ 100, and that the balance, with addition of freight and insurance charges, be remitted on the receipt in this office of the invoice and bill of lading. The cases should be addressed to the General Superintendent of Public Works Stores, Madras.

(Signed) JOHN MULLINS, Lieut.-Colonel, R.E.,  
Chief Engineer for Irrigation.

No. 18. ORDER THEREON, 2nd June 1873, No. 1,467.

IRRIGATION, No. 1.

THE recommendations made by the Chief Engineer for Irrigation are approved, and the Controller of Public Works Accounts is authorized to make a further remittance of £ 100 to Mr. F. G. Stoney.

(True Extract.)

Lieut.-Colonel, R.E.,  
Joint Secretary to Government.

To the Chief Engineer for Irrigation.  
To the Controller of Public Works Accounts.

Exd. S. T. Austin.

Docures. 2.

Letter dated 3<sup>rd</sup> April 1873 from  
S. L. Stoney Esquire C. C.

A pamphlet on a new form of  
Equilibrium Valve.

Submitted for the information  
of Government with reference to L. C.  
of the 12<sup>th</sup> February 1873 N<sup>o</sup> 157.

In this letter Mr. Stoney reports  
the cost of the deep tank equilibrium  
valve, and of the patent equilibrium  
valve proposed by him as a substitute  
to be, at Manufacturer's prices, about the  
same, viz. £ 80 to £ 85 each, and that  
the first value of each kind will including  
the patterns come to about 50 per cent.  
more. An experimental value of each  
kind may then be assumed to cost  
125 £ and, under these circumstances,  
I think the price of £ 150 each named  
by Mr. Stoney in para 8 of his letter of  
the 5<sup>th</sup> December 1872, do not leave a  
wider margin than may be properly  
allowed to that gentleman for the time  
and thought he has devoted to the subject.  
A deep tank valve of the kind referred to  
in para 7 of my Note of the 20<sup>th</sup> December  
1872 need not, I think, at present be

made up, but I may mention that this arrangement slightly modified is one which will be suitable for the regulation of the discharge from the Pergam reservoir into the watershed tunnel, should that project be carried out. In lieu of the deep tank sluice valve, I would adopt Mr. Stoney's suggestion to substitute the patent equilibrium valve, illustrations of which are given in the pamphlet, and the Clack valve at the inner end of the pipe, with the slight modification mentioned in para. 9 of my letter of the 20<sup>th</sup> December last, as also the small drain cock at the bottom of the equilibrium valve should be provided.

3. An experimental set of head sluice valves has already been ordered; and, as the original estimate for these, exclusive of patterns, was £168 against £147 for the deep tank valves of the price, £150, above stated to be reasonable for a single, and first, set of the latter, may be allowed for the former.

4. Mr. Stoney also reports the cost of the iron piping 2½ feet in diameter, of which about 120 feet would be required in connection with the patent valve,

to be, at the prices ruling, when his letter was written, £9.10 a ton, and the weight, 26 hundred weight for a length of 12 feet, 120 feet of piping, would therefore weigh 13 tons, and cost £123.10 at Glasgow. This length of piping, should be sent with the valves. The total cost of the experimental valves with their bearings, exclusive of freight and insurance, £150. Head sluice valves 150. Deep sluice patent valve 150. 120 feet 2½ feet pipes in 12 feet lengths 123.10. 2 per cent Commission 2.9. say 126. Total £ 426.

An advance of £100 has been made to Mr. Stoney, and I would suggest that the Controller be instructed to make a further remittance to that gentleman of £100, and that the balance, with addition of freight and insurance, charges, be remitted on the receipt in this Office of the invoice and bill of lading. The cases should be addressed to the General Superintendent of Public Works Stores, Madras.

W. H. Mullins Lt. Col. R.E.  
Camp at Arimbantam } Chief Engineer for Irrigation  
7<sup>th</sup> May 1873 }  
To The Secretary to Government.  
D. W. (A)

No. 14, 67 P.M. d.

No. of the machine book.

Read the following:-

From the Chief Engr. for Engrs. (H.S. No 280/77 May/73)

The recommendations made by the Chief Engineer for Irrigation are approved, and the Controller of P.W. & R. is authorized to make a further remittance of £100 to Mr. J. L. Stoney.

W.L.  
May 7/5/73.

G.M.W.

The Ch. Engineer for Engrs.  
Controller  
Dated 9/6/73

At 6/1/73  
The Chief Engineer  
for Irrigation

To the Secretary to Govt.  
Public Works Dept.

Dated 7th  
Feb 9th May 1873.

No. 280

Enclosure 2.

Submits for information

from Mr. J. L. Stoney

regarding the patents

made by him for

compelling his friends

in materials and

at 1/487-2 Decr/73.

C/P. 2850

Govt. of 1873: 30th

PUBLIC WORKS.

To the Chief Engs for  
Irrigation

Dated

Recd.

Excl. 2

G. O. 2<sup>nd</sup> Series, No 1467.

Nov 17/18

Deep Tank Valves.

Approving of the proposal  
of the Chief Engs for rights  
to obtain a set of valves  
designed by Mr. Stoney  
& authorizing the Controller  
of P. W. Accts. to make a  
remittance of 100 £ to that  
gentleman -

17<sup>th</sup> 17-18.

Order to P. W. Accts.