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MADRAS RECORD OFFICE.

Government of Madras.

Public works DEPARTMENT.

G.O. No. 739	Press Mis.
297-99	
Dated 11 3	1871.

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
11th March 1871.*

Read the following papers:—

No. 297. From the Officiating Deputy Secretary to the Government of India, Public Works Department, (Irrigation,) to the Secretary to the Government of Madras, Public Works Department, dated Fort William, 13th February 1871, No. 49-I.

I AM directed to forward, for information and experiment if thought desirable by the Local Officers, the accompanying copy of a letter from Mr. Molesworth, regarding the construction of a module for measuring water for irrigation purposes.

No. 54.

No. 298. *Note by the Chief Engineer for Irrigation.*

PERHAPS the best way of ascertaining whether the syphon module, referred to in these papers, can be turned to practical account, would be to communicate the letter of the Government of India, with its enclosure, to the Superintending Engineers of the 1st and 2nd Divisions, with instructions to try this form of module on a small scale in the Eastern Deltas of the Godavery and Kistna, in connection with the experiments for ascertaining the quantity of water needed for rice cultivation.

2. The Workshops at Dowlaisheram and Bezwarah will enable the syphon module to be tried under more favourable circumstances than can elsewhere be obtained, and 100 Rupees might be granted from the Reserve under Agricultural in each case for making experimental syphons. I think tin will be the best material to use in the first instance, or until at least some data for the construction of such modules on a practical scale are deduced.

FORT SAINT GEORGE,
25th February 1871.

(Signed) J. MULLINS, Major, R.E.,
Chief Engineer for Irrigation.

No. 299. ORDER THEREON, 11th March 1871, No. 739.

IRRIGATION, No. 19.

THE arrangements suggested by the Chief Engineer for Irrigation are approved, and Rupees 100 from the Reserve under Agricultural for 1871-72 will be placed at the disposal of the Superintending Engineers of the 1st and 2nd Divisions, respectively, for the purpose of determining whether syphon modules can be used with advantage for the measurement of water for purposes of irrigation.

(True Extract.)

(Signed) CHARLES A. ORR, Colonel, R. E.,
Secretary to Government.

To the Superintending Engineers, 1st and 2nd Divisions.
.. Controller of Public Works Accounts.
.. Chief Engineer for Irrigation.

Ed. E. C. Shunker.

Dated 5th October, 1870.

Demi-official from—GUILFORD L. MOLESWORTH, Esq.,
To—COLONEL R. STRACHEY, R. E.

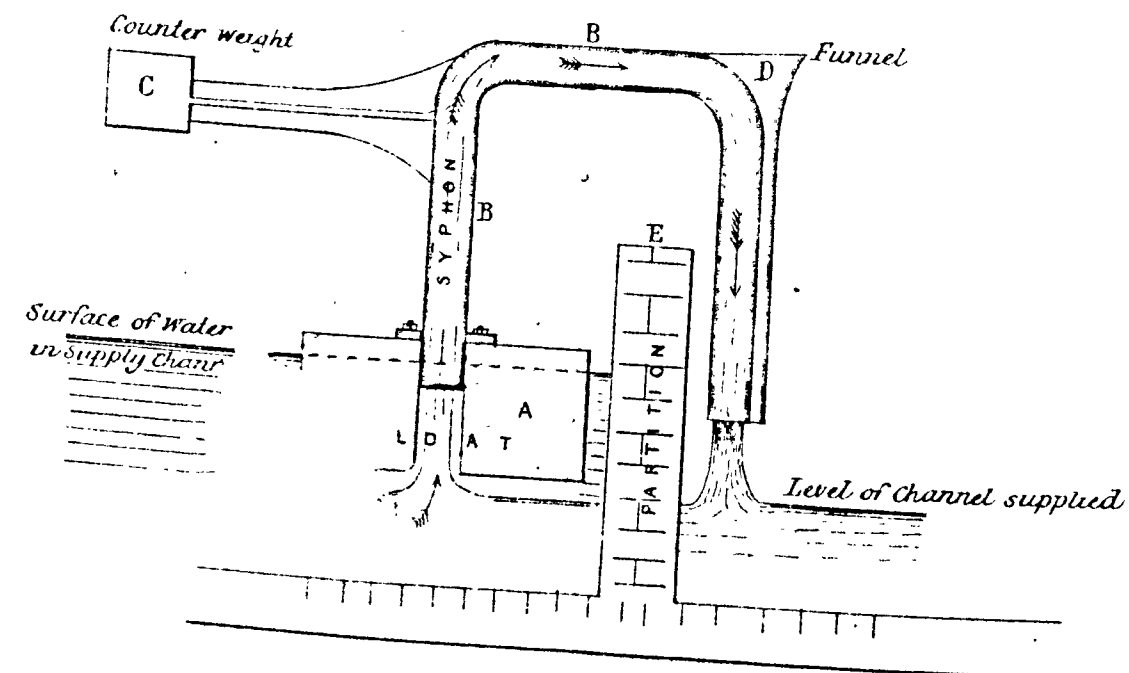
It has often struck me that a module for measuring water for irrigation purposes might be constructed so as to be free from the drawbacks which appear to exist in every proposal I have seen.

The chief difficulties are either—

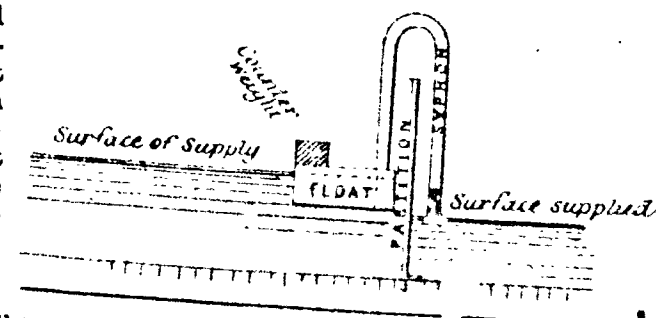
- 1st.—Liability to variation with varying level of water.
- 2nd.—Loss of head in dispensing.
- 3rd.—Liability to get out of order.
- 4th.—Derangement or erroneous results from silting.

The first drawback might easily be overcome were it not for the other difficulties. So far as I can learn, there does not exist a reliable module which is free from one or more of these objections, and a perfect module is a great desideratum. Ribera's module appears on the whole to be the best; but it involves considerable loss of head, besides which the result is liable to falsification by the formation of a mouth-piece of silt deposit. Modules of the "Milanese" type require constant attention, and with carelessness would give untrue results; and self-acting mechanical modules are apt to get out of order when in out-of-the-way places where they cannot be constantly examined and oiled.

I think that a module formed by a floating syphon would meet all the difficulties above enumerated. The accompanying sketch will give you an idea of my meaning.



A is a float of wood, on which a syphon pipe B is bolted (or fastened with screws); C is a counter-weight to balance the leg of the syphon (this might be dispensed with by weighting the float on one side); D is a funnel for starting the syphon after it has been emptied (after crop-time or otherwise); E is a wall or barrier which separates the main channel, from the branch which is supplied through the module. The length of the arm might be much shorter than that shown in sketch by placing the syphon at one side of the float, and substituting for the wall a thin barrier, such as a cast-iron plate, or plank partition as shown in the sketch. The syphon might either be constructed to give a certain amount with a certain immersion; or the float loaded until the required discharge was found by experiment. A module of this character would not be subject to variation of discharge with varying levels of water. It would entail no loss of head. There would be nothing in it that could possibly get out of order. The discharge would remain unaffected by silting, and as it would not draw from the surface, it would be unaffected by scum or floating substances. Should you think the suggestion worth anything, it might be well to give it a trial in India, where, I believe, such a module is much wanted. It might be made very cheaply of cast-iron.



The only possible cause of failure that occurs to me would be by drawing air-bubbles from the water, but that would take a long time, and could be remedied in a few minutes.

N^o 54

N: 54
Vote by the Chief Engineer for Irrigation

Perhaps the best way of ascertaining whether the
siphon module, referred to in these papers, can be
turned to practical account, would be to communi-
cate the letter of the Government of India, with its
enclosure, to the Superintending Engineers of the 1st &
2nd Divisions, with instructions to try this form of
module on a small scale in the Cactus Deltas of
the Godavary & Krishna, in connection with the ex-
periments for ascertaining the quantity of water needed
for rice cultivation.

2. The Workshops at Davlaishwaram and
Beyarah will enable the syphon module to be tried
under more favorable circumstances than can be
where he obtained, & 100 Rupees might be granted
from the Reserve under agricultural in each case
for making experimental syphons. I think this will
be the best material to use in the first instance, &
until at least some data for the construction of such
modules on a practical scale are deduced.

Fort S. George
 25th Feb 1871
 Voluntaries Major
 Chief Engineer for Irrigation
 The Secretary to Government
 P. H. Dep

Proceedings of the Madras Government.

Read the following

From

The Govt. of India. (H. E. No. 49 of 13th Feby/71)
Chief Engineer
for Irrigu. } (H. E. No. 54 of 25th Feby/71)

The arrangements suggested by the Chief Engineer for Irrigation are approved, and Rs 100 from the Reserve, under Agricultural for 1871-72, will be placed at the disposal of the Supy: Engineers of the 1st and 3rd Divisions, respectively, for the purpose of determining whether siphon modules can be used with advantage for the measurement of water.

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The Engineer
for Ingarden

enclosed

for purposes of irrigation.

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To
13 The Supr Engrs 1st 2d Divs
" Controller P. Dr. Accto
3 Chief Engrs for Irrig
a copy of the Encls letter design S

Decr 13/3/1

63 March 11 A. 65

for purposes of irrigation.

Wm. 1/2/71

CPR 904 2371
Govt. of 1871 Madras.

PUBLIC WORKS.

To the Superintending Eng^r
1st 2nd Divisions

13.5

Dated

Re

2

11 March 789.

No 299/299

Module. Paper orders on
the name of the Chief Eng^r for
supply on papers regarding
Mr. Moleworth's module
for measuring water for
irrigation purposes.

Do.
13/2/71

6.3 March 71 OR. 65