M.R.O. 1—77,006—8-6-37.

(1) Number of pages 10

(2) Date of repair 12-3-43.

(3) Initials of the Referencer

# MADRAS RECORD OFFICE.

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## Government of Madras.

Public works **DEPARTMENT.**

G.O. No. 4022 Press ~~Mis.~~

423-424.

Dated 20-12-1866.

***Not to be folded or roughly handled***

No. 423. Read the following letter from the Superintending Engineer, 3rd Division, to the Secretary to Government, Department Public Works, dated Bellary, 7th November 1866, No. 2,494 :—

1. With reference to the Orders as per margin,* I have the honor to forward, for the information of Government, an original docket† from the Deputy Assistant Quarter Master General of the Division, with copy of a report from the Officer Commanding Her Majesty's 76th Regiment. You will observe that the Major General Commanding the Division considers that it is not advisable that any further trials should be made, as the cost of the former trials had been so great.

* No. 2,571, dated 4th September 1865.
„ 2,769 „ 20th „ „

† No. 2,165, dated 5th November 1866.

2. I would, however, beg that this department may be permitted to make a trial, as a high wind was blowing when the former trials were made, and as there was no cover to the pan of course a longer space of time was necessary to bring the water to the boiling point. The cost of making the trial would not exceed Rupees 3.

3. A plan of the boiler, &c., is herewith forwarded.

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Memorandum from the Deputy Assistant Quarter Master General, Ceded Districts, to the Superintending Engineer, 3rd Division, dated Bellary, 5th November 1866, No. 2,165.
Your Docket No. 2,406 of 3rd instant.

Forwards copy of last report on Bug Boilers, received from Officer Commanding 76th Regiment. Since the cover has been put on no trial has been made, as the trials which have already been made have cost so much the Major General does not consider it advisable another trial should be made.

By Order,
(Signed) R. D. THORPE, Captain,
*Dy. Asst. Quarter Master General.*

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Memorandum from the Officer Commanding Her Majesty's 76th Regiment, to the Deputy Assistant Quarter Master General, Ceded Districts, dated Bellary, 18th May 1866, No. 628-2 M.

Reports as follows on another experiment made with a Bug Boiler :—

1*st.*—It took four hours to boil it full of water.

2*nd.*—It took 416 lbs. of wood to boil the water.

3*rd.*—The fire does not get round the bottom of the boiler for the want of ventilation on the sides, and it is not near enough to the boiler.

4*th.*—The chimney would not draw with the perforated tin fixed in it, and it had to be removed.

(True Copy.)
(Signed) R. D. THORPE, Captain,
*Dy. Asst. Quarter Master General,*
*Ceded Districts.*

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No. 424. ORDER THEREON, 20th December 1866, No. 4,022.

MILITARY WORKS, No. 27.

The Government are not surprised to learn that the Bug Boiler reported upon in the foregoing papers was found to require an excessive expenditure of fuel to boil the water within it, as they

observe, from the unskilful mode in which it is set, that the fire, instead of being placed in a properly constructed grate so that the air should pass through it and carry the flame against as large a surface as possible of the bottom of the boiler, is simply put upon the floor, and whatever heat is generated from it is carried by the draft directly to the flue. Moreover, only a small part of the boiler, equal to three feet in diameter, is exposed to what little heat can reach it. If the same boiler be set somewhat in the mode shown in the accompanying plan, there is little doubt that a comparatively moderate supply of fuel will suffice to heat it.

(True Extract.)

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

To the Superintending Engineer, 3rd Division, with Plan.
,, Military Department.

Exd. S. T. Augustin.

to the Boiler.

4th The Chimney would not draw with the perforated Tin fixed in it and it had to be removed

(Signed) H C Brewster Col
Commg 76th Regt

(True Copy)

H. Thorpe. Capt
Dept Ordnance Co

Your most obdt

Bellary
18th Day of May 1866
Received 19th Do

From
The Offr Commanding
Hearts 76th Regt

To
The D A Genl
Ceded Districts

No 628
2 M

Report as follows
On another Experiment
made with a Buy
boiler.—
1st It took 4 hours
to boil it full of Water.
2d It took 416 lbs
of wood to boil the
Water.
3d The fire does not
get round the bottom
of the boiler for the
want of ventilation
on the sides, and is
not near enough

P N 4648/66

Proc. 20th Decr 1866 Ins. No 423.

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No 2494

Supdg. Engrs Office 3rd Dn
Bellary 7th Novr 1866.

From
The Superintending Engineer
3rd Division

To
The Secretary to Government
Public Works Department

Sir,

With reference to the orders as per margin, I have the honor to forward for the information of Government an original Docket from the Deputy Assistant Qr Mr General of the Division with Copy of a report from the Officer Commanding H. M. 76th Regiment. You will observe that the Major General Commanding the Division considers that it is not advisable that any further trials should be made, as the cost of the former trials had been so great.

2571 of 4th Septr 1865
2769 " 20th " "

No 2165 Dt 5 Novr 1866

2. I would however beg that this Department may be permitted to make a trial as a high wind was blowing when the former trials were made and as there was no cover to the Pan, of course a longer space of time was necessary to bring the water to the boiling point. The cost of making the trial would not exceed Rs 3.—

3. A Plan of the Boiler &ca is herewith forwarded.

I have the honor to be
Sir
Your most obdt servant.
A. S. Alberg Major R.E.
Superintending Engineer
3rd Dn

Circulate.
Print all the papers.

Public Works (Department
No. 4022

Proceedings of the Madras Government

Under date the 20th Decr. 1866.

Read the following

From
The Superintending Engineer
of the 3d Division (H.E. No. 2494 d/7th Nov. 1866)

The Government are not surprised to learn that the bug boiler reported upon in the foregoing papers was found to require an excessive expenditure of fuel to boil the water within it, as they observe, from the unskilful mode in which it is set, that the fire, instead of being placed in

N.
J.P.
W.

No. 423
12th Decr. 1866 Pr. 17th

No. 7060 (P.) Dept.
Proc. Govt. for Decemb.
Ry. No. 4048
From
The Supt. Engr.
3d Division
To The Secy. to Govt.
Pr. Dept.
No. 2494
Dy. Nov. 1866
Dec. 12
Ry. 16
Ex. 3
Bug Boilers
Reports the results of the trials of above as communicated by the Military Fund Notice No. 4022. 20th Decr. 1866.

1866
In Mil. Govt. Office of D.
Bellary 5th Nov. 1866
No. 2165
From Capt. R. D. Thorpe
Dep. Ins. Govt.
To The Supt. Engineer
3d Division
Bellary.
Your Docket No. 22456
of 3d Instant
Forwards Copy of last report on the boilers received from Of. 76 Ry. since the Court has been put on no trial has been made to the trials which have already been made have cost Commd. the Major General does not consider it advisable and the trial should be made.
By order
[illegible]

in a properly constructed grate so that the air should pass thro' it and carry the flame against as large a surface as possible of the bottom of the boiler, is simply put upon the floor, and whatever heat is generated from it is carried by the draft directly to the flue. Moreover, only a small part of the boiler, equal to 3 feet in diameter, is exposed to what little heat can reach it. If the same boiler be set somewhat in the mode shown in the accompanying plan, there is little doubt that a comparatively moderate supply of fuel will suffice to heat it.

To the Supg Engineer, 3d Dn
with plan
" Emily: Dept

W.B.

23
3

Desp. 21st December

P. W 1866 Dep^t

Bo: of Govt for Deer

No 4022

Bo: of the Alcoran Govt

D/ 28th Dec 1866

The Supr. Engr
furnished with certain
instructions relative to the
Experiment lately made
with Bug Boilers at Bil-
lary -

No 423-424.

12th Dec 1866 No. 172