

(1) Number of pages 18
(2) Date of repair Sept
(3) Initials of the Referencer bsn

TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

Public. DEPARTMENT

G.O. No.	(76) (185-7)	Press.
B.P. No.		Mis.
Dated 25. 1. 1881.		197

V.B

Not to be folded or roughly handled

SPECIFICATION

Of a Cleanse Boiler and Furnace
or other Vegetable matter filed Pursuant to Act of 1859.

1859.

✓ This invention is entirely new and comprises a fuel and clearing out ashes or refuse boiler besides possessing the advantage of evaporating up steam very rapidly entirely dispensing with manual labour for stoking purposes. The boiler is either a vertical or upright one with interior or to its size the furnace or furnaces being of any size containing fuel.

There is a flue (S) which leads from the External Flue or Pasing (D) which is an external shell of the boiler in order to prevent This casing may be made either of iron or Pasing (D) leads on the gases to the top with the chimney whence it escapes upon a Baseplate or Frame (F) castiron but which can if required be made of wood and is fitted with circular fire bar connecting towards the bottom of the boiler.

4 In the usual way through the Door (P) shown at (R) in the drawing by taking the closing the opening at (C) and allowing the heated gases to pass out through the opening at (A) as shown and most convenient and useful.

Another modification of the

rate and means of

there is a line to go around the heating surface. The external Flue which communicates The boiler rests the drawing is of made of brickwork spaces between them

of stoking (not when
having another cord
or machinery moving
the burnt husks or
fixed grate below
another. This grate or
Hopper (A) or the

The Fuel
to give stiffness to
at (M) the Slope Valve
cock at (P) and
at (S) in the dra

In working
husk Sawdust or
Hopper (A) a few

power supplied,
convenient.

Another
a shut, slide or valve
a fire in the furnace
slide or valve in A
speed or quantity required

in the drawing) is a fixed circular grate
grate on top of it made to revolve by gear
in furnace a self clearing one as much of
could be allowed to pass through the
over the openings come directly over one
supplied with fuel either through the
a door or doors as is shown at (K) and fired

are introduced to promote circulation as well as
or internal flue. The safety Valve is shown
J) the Feed Water chest at (O) the Blow off
Firebars at (R) and Tenter gauge glass

Boiler (shown in the drawing) Safety-
Vegetable matter is first supplied to the
in lighted in the Furnace (H) with wood
where sufficient is ~~not~~ the Service or

small engine or by any other means most
working this Boiler and Furnace is having
the bottom of the hopper A and after kindling
with wood, coals or other fuel, to open the shut,
using it to fall by gravitation into H at a sufficient
whether or refuse can also be removed by allowing

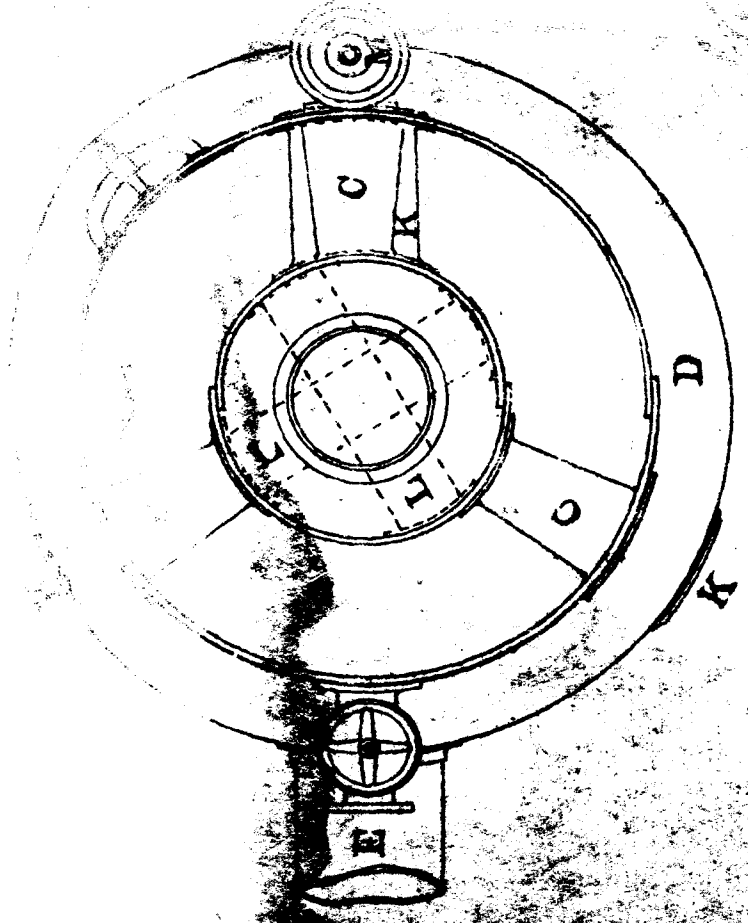
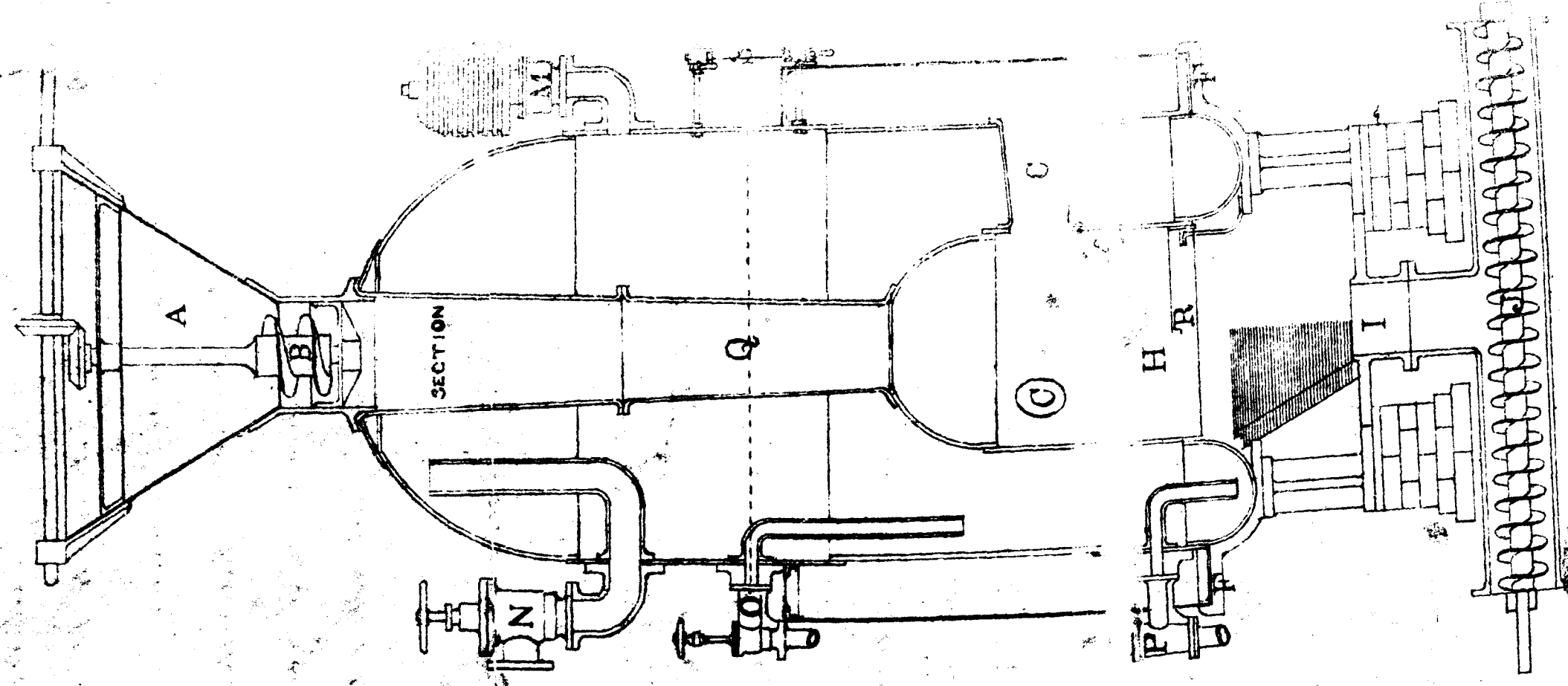
H. The latter method is adopted where power is not convenient to be
had, or during the time that steam is being raised to drive the power which
is to be used for the pump and cleaning gear.

Dated at
the 31st day of

By P. Russell

1880

BOILER FOR BLENNING PAIDY-HON
SAW-DUST OR OTHER VEGETABLE MATERIAL



Scale 1/1600

each
over

2
185-9

3
185-7

3/5-7

Public (1881) Dept
(Specification)
Register No. 128 of 1880.

RECEIVED in the Office of the Secretary
Government of India in the Home, Revenue
Agricultural Department on the 5th of January
1881.

F. Danks

10/9/81

Under Secretary to the Govt. of India.

Recd 19 Jan /81.

No. 118.
No. 19

COPY forwarded to the Government of Fort
St. George in conformity with Section 10 of
Act XV. of 1859.

F. Danks

Under Secretary to the Govt. of Ind

FORT WILLIAM;
HOME, REV. & AGRI. DEPT.
(PATENTS),
The 14th of Jan 1881.

14
1881

Joseph Green Cooke Locomotive
and Carriage Superintendent and
Nottingham Railway Locomotive
and sincerely declare that I am in
possession of an invention for the application
of Carbonated Atmospheric air for lighting
or illumination purposes generally, and
particularly for lighting Railway Carriages
Stations, Signals, &c. which invention I
believe will be of public utility; that I
am the inventor thereof, and that the same
is not published, known or used in India
or in any part of the United Kingdom
of Great Britain and Ireland to the best
of my knowledge and belief; and that to the
best of my belief the instrument in writing
under my hand hereunto annexed particularly
describes and explains the nature of the
said invention, and in what manner the
same is to be performed.

The 14th day of January 1881
J. Green Cooke

185

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4351
Specification of an invention for the
Application of Carburetted Atmospheric
Air for lighting or illuminating purposes
generally and particularly for lighting
Railway Carriages, Stations Signals &c.

The invention consists in the
method or mode of producing a regular
and constant current of atmospheric air
at a required pressure and temperature, which
is afterwards carburetted and converted
into illuminating gas for lighting purposes
generally, and particularly for Railway
Carriages, Stations Signals &c. The
invention also includes a method for
supplying the kerosene or inflammable oil
or spirit for carburetting the air, in such
a manner as to effectually avoid and
prevent any waste of spirit or danger
from taking fire during the operation of
charging the apparatus with the inflammable
spirit.

The invention does not require drawings
to describe it, and the various parts may
be varied in form and design to suit
circumstances and localities. The manner
of producing the stream or current of air
is

6/5/57 (2)
is as follows:-

A vertical pipe or pipes of suitable length and diameter is or are placed vertically, the upper end or ends being slightly bell mouthed or conical and open to the air, the lower end or ends being below the level of water or other liquid in a closed airtight tank or receiver. In to the upper end or ends of the vertical pipe or pipes an intermittent or pulsating supply of water or other liquid is made to fall which drives before it downwards, the air contained in the vertical pipe or pipes, also the air which enters the pipe or pipes between the interruptions or pulsations of the water or other liquid.

In this manner the air and the water or other liquid pass downwards together into the airtight tank or receiver, the air being therein collected in the upper part behind the water or other liquid and the surplus water or other liquid above a certain required level, allowed to escape through an inverted syphon or other suitable org, i, to be pumped up to an upper tank and used over again or allowed to run to waste as circumstances may require.

The air thus collected is conducted by a suitable pipe to the gas burners where
by

3)
by means of a suitable annular Chimney or Chamber, or spiral coil of pipe over or surrounding the gas jet or flame, till becomes heated, and is conveyed from thence to a Chamber filled with some suitable absorbent material saturated with Gasoline or other suitable inflammable oil or spirit from which the air takes up the vapour of the Gasoline or spirit and becomes inflammable gas; the gas thus formed is conducted in the ordinary manner to the burners for illuminating purposes.

The manner of saturating the air with the spirit of gasoline or other inflammable oil or spirit as above described is not new, and does not form part of the invention, but the manner of charging the carburetting Chamber with gasoline or other inflammable oil or spirit is new, and forms part of the invention herein described and is as follows:- The gasoline or other suitable spirit is put into a drum or can of suitable material and dimensions, such drum has a conical top terminating in a stop cock and an elbow pipe; the end of the elbow pipe is fitted with a screw which fits into an union nut tightly placed and attached to another stop cock on the carburetting Chamber. To charge the Chamber with gasoline or other suitable spirit the can or drum is screwed to the Chamber by the union nut, the drum is then inverted and both stop cocks opened, at the same time, the gasoline or

or other oil or spirit then flows by gravity into the Carbonizing Chamber saturating the absorbent material it contains with the gasoline or spirit, the drum is then reversed or brought back to its lower or former position and the surplus gasoline or spirit or that portion which has not been absorbed in the Carbonizing Chamber finds its way back into the drum. The stop cocks are then both closed and the drum unscrewed from the union nut and removed. The union nut as described is as a swivel and allows the drum or can to be inverted or turned both in upwards and vice versa at pleasure. In this manner the vapour of the gasoline or other inflammable air or spirit cannot escape and both waste of material and risk of taking fire during the operation of charging are effectually avoided and prevented.

Lucknow

Jan 28th 1881

J. H. Cooke

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Pat. 1000 / Depo
(Specification)
Register No. 1000 of 1836.

Received in the office of the Secretary to the
Government of India in the Home, Revenue and
Agricultural Department on 25/1/81
1836.

F. D. Drake

Secretary to the Govt. of India.

No. 119

Recd. 25/1/81

No. 24

Copy forwarded to the Government of Fort
St. George in conformity with Section 10 of
Act XV. of 1859.

F. D. Drake

Secretary to the Govt. of India.

FORT WILLIAM;
HOME, REV. & AGRI. DEPT.
(PATENTS).
The 25/1/81

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Public Department.

PROCEEDINGS of the MADRAS GOVERNMENT.

and the following endorsement of the ^{Under} Assistant
Secretary to the Government of India, Home Department.

Hereby 25/1/81, No. 19224.

ORDER THEREON 25/1/81 No. 76

The following Notice will be published in the Gazette once.

Notice is hereby given that there have been received in the Office of
the Chief Secretary to Government, where any of them may be inspected
at all reasonable times, a copy of a fee of one Rupee, copies of the
Specification of the invention, and which the following are brief descriptions

A Steam Boiler, Furnace for burning Paddy
Husk, Saw dust or other vegetable matter
by Mr. J. H. Drake, Engineer, Rangoon.
In the application of Carburetted atmos-
pheric air for lighting or illuminating
purposes, and particularly for lighting
Railway carriages, station signals &c.
by Mr. Joseph C. Cooke, Locomotive &
Carriage Dept. of the Rohilkhand Railway, Lucknow

Act XV of 1859.

in accordance with Section X,

25/1/81

21.1.81

Public (1881) Sept
No 76 mi
dated 25th Jan'y /81