

D. McDorrell,
Steam-Boiler Cleaner.
Nº 53,091. Patented Mar. 6, 1866.

Fig 2

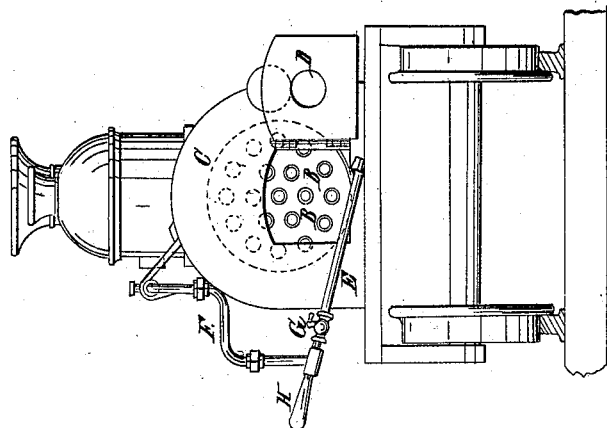
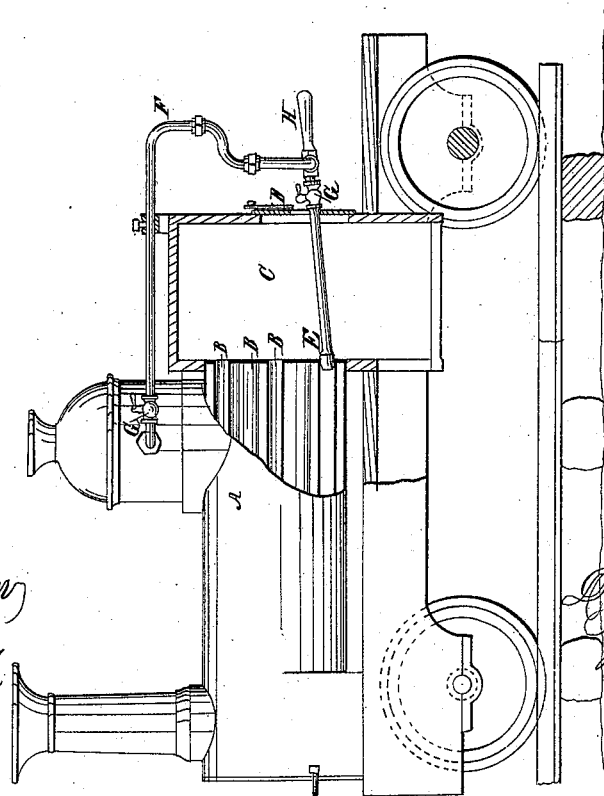


Fig 1.



Witnesses:

Jm C Lyon
Wm Hewin

Inventor:

D McDorrell
By Wm H. Co
attys

UNITED STATES PATENT OFFICE.

DANIEL McDOWELL, OF KINGSTON, WEST INDIES.

IMPROVEMENT FOR CLEANING TUBES OF BOILERS.

Specification forming part of Letters Patent No. 53,091, dated March 6, 1866.

To all whom it may concern:

Be it known that I, DANIEL McDOWELL, of Kingston, Jamaica, West Indies, have invented a new and useful Improvement in Devices for Cleaning Flues of Steam-Boilers; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a locomotive to whose boiler an apparatus made according to my invention is applied. Fig. 2 is an end view of the locomotive, also showing the apparatus.

Similar letters of reference indicate like parts.

This invention relates to an improved arrangement for cleaning the flues of tubular boilers, whether of locomotive or other engines or tubular boilers used in other connections. The flues of such boilers very rapidly become foul with deposits of soot, ashes, and cinders, which choke some of them, and consequently diminish the steam-generating capacity of the boiler. If the flues are not well and properly cleaned a great waste of fuel is one of the results.

This invention is intended to accomplish the cleaning of the flues with ease, expedition, and economy of time and labor; and it consists in the arrangement of the steam-pipe F with a nozzle or jet pipe, E, in the manner hereinafter described. The pipe may be gas-pipe or any other which will endure the pressure of the steam, which in locomotive engines is often very great, and it is made with joints at convenient places therein, so as to be capable of being turned in any direction. A cock is placed on the pipe near the boiler to shut off steam from the apparatus when not in use, and another cock is placed on the nozzle, or near it, to shut off steam when moving from tube to tube. It may be applied to the tubes through the smoke-box or through the fire-box, and by its use a boiler containing one hundred tubes can be cleaned in five minutes, and done so perfectly that any adhering particles of crust

and dirt will be removed and the flame and heated air from the fire be allowed to act with full effect on the clean surface of the metal, thereby saving a considerable amount in fuel.

I have shown my invention applied to the boiler of a locomotive.

A designates the boiler, and B its flue-tube. F is a metallic pipe with suitable joints to enable the fireman to turn it about to apply its nozzle or jet pipe (seen at E) through the fire-box C of the engine, or through the smoke-box. The pipe is here shown connected to the dome of the boiler, and near the place of its connection therewith the pipe has a cock, G, and another cock is placed in the pipe F. In the door of the fire-box C is an opening, D, which may be closed by a smaller door, and through this opening in the door the pipe E is inserted and its end presented within the flue-tubes B one after the other when steam has been admitted to the apparatus.

The apparatus is easily controlled and operated by means of its handle H. The pipe E may or may not be inserted into the tubes. It will accomplish good results if it is brought to the distance of about an inch of their ends and passed from one to the other, when it will clean them and blow the dirt up the chimney. When the pipe is applied to the other end of the tubes the dirt will be blown into the fire-box.

I disclaim the rubber tubing for this purpose. Such tubing could not endure the heat of the fire, and therefore could not be used when the furnace is in active operation.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent—

The arrangement of the jointed pipes F with the nozzle-pipe E and the auxiliary opening D, whereby to clean the flues or tubes of steam-generators, as herein set forth.

The above specification of my invention signed by me this 6th day of October, 1865.

DANIEL McDOWELL.

Witnesses:

A. C. HENDERICK,
STEPHEN LAUDI KNAPP.