G. Davis,

Feeding Boiler Furnaces.

No. 10,104. Patented Oct. 11, 1853.

Fig 1.

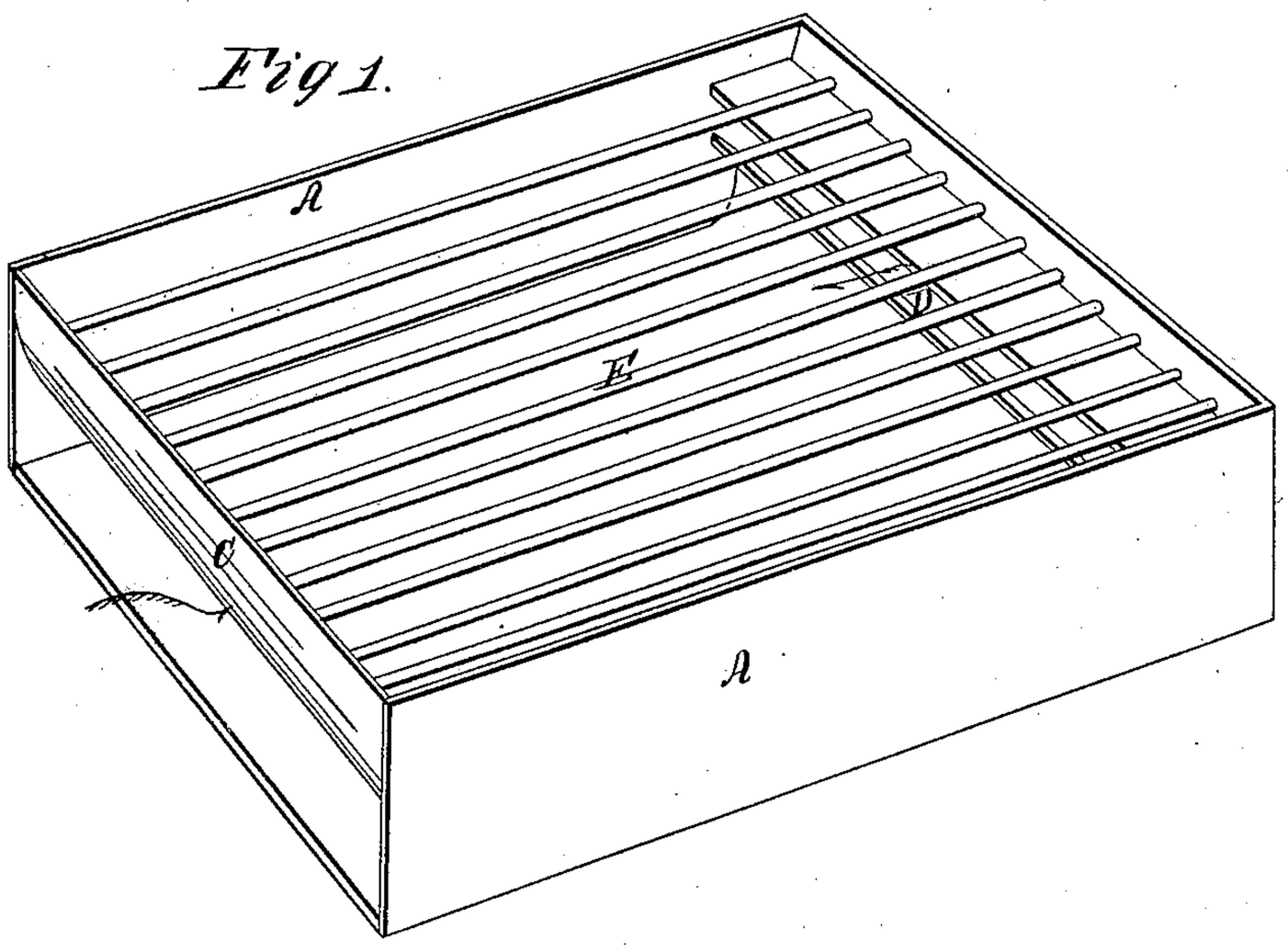
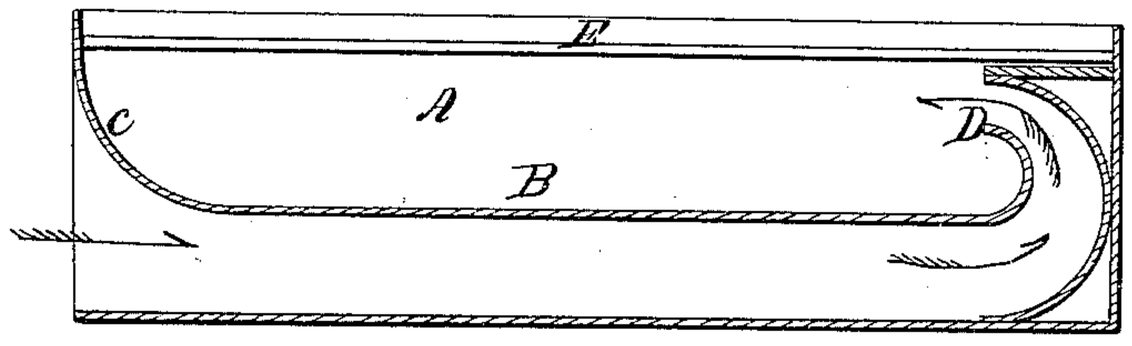


Fig 2.



UNITED STATES PATENT OFFICE.

GILMAN DAVIS, OF ROXBURY, MASSACHUSETTS.

ASH-PAN FOR LOCOMOTIVE-ENGINES.

Specification of Letters Patent No. 10,104, dated October 11, 1853.

To all whom it may concern:

Be it known that I, GILMAN DAVIS, of Roxbury, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Ash-Pans for Locomotive-Engines; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part thereof, in which—

Figure 1 represents the ash pan complete, and Fig. 2, a longitudinal vertical section through the same.

Similar letters in both figures denote like parts.

Ash pans for locomotives, as heretofore constructed catch up the current of air in front, and direct it up through the grate bars into the fire box, for increasing draft. The difficulty in this plan arises from the fact, that, when under motion, if the fire doors be opened, the flame or the "backlash" from the fire frequently dashes out in such volume as to not only divert the flame from the boiler or flues, but to seriously burn and incommode the engineer.

The nature of my invention consists in furnishing the ash pan with a division plate or second bottom, between which and the bottom the air is taken in, and curved around at the rear of the ash box or pan, so as to give the current of air caught up, a direction opposite to that as heretofore practised, by which means I prevent the back lash of the fire when the furnace doors are opened to throw in fuel, and protect the engineer from the fire or flame.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

The outer shell A, of the ash pan, may be constructed in any well known substantial manner, and attached to the locomotive in the usual manner. A partition or division plate B, divides the pan horizontally, and the front end of said plate is curved upward, as seen at *c*, to form a funnel shaped opening for taking in the air. The rear of the division plate is curved upward as seen at D, so as to leave a space between it and the rear of the ash pan, through which space the air rushes, as indicated by the arrows. By this method the air or draft is thrown forward or from the furnace doors, through the grate bars E, and entirely protects the fireman from the back lash of the fire, when the doors are opened for replenishing the fire. I have represented this air space as being single or extending entirely across the ash pan; it may however be divided into a series of air passages by pipes, tubes or otherwise, the object being to give the draft a direction from the furnace doors, instead of toward them as heretofore.

Having thus fully described my invention what I claim therein as new and desire to secure by Letters Patent is—

The taking in of the air in front of the ash pan and introducing it into the fire box in a direction opposite to the furnace doors; to protect the fireman from the back lash of the fire when said doors are opened, by means substantially such as herein described.

GILMAN DAVIS.

Witnesses:

JOSEPH LEEDS,

JOSIAH QUINCY.