

(No Model.)

T. A. BUCKLAND.
LOCOMOTIVE FURNACE.

No. 347,683.

Patented Aug. 17, 1886.

Fig. 1.

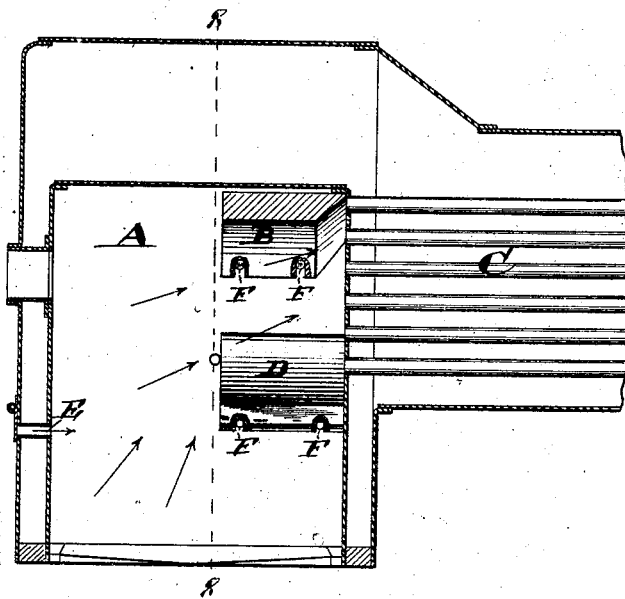


Fig. 2.

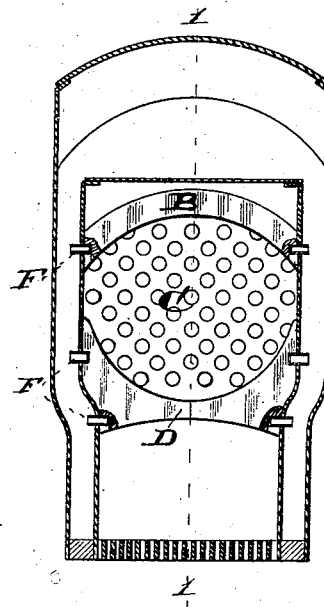
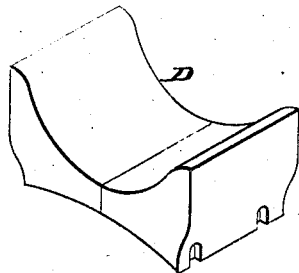
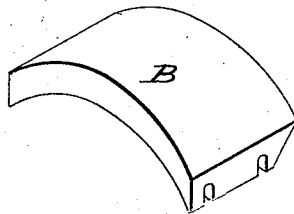


Fig. 3.



Attest:
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by C. D. Moody atty

UNITED STATES PATENT OFFICE.

THOMAS A. BUCKLAND, OF ST. LOUIS, MISSOURI.

LOCOMOTIVE-FURNACE.

SPECIFICATION forming part of Letters Patent No. 347,683, dated August 17, 1886.

Application filed March 29, 1886. Serial No. 197,037. (No model.)

To all whom it may concern:

Be it known that I, THOMAS A. BUCKLAND, of St. Louis, Missouri, have made a new and useful Improvement in Locomotive-Furnaces, of which the following is a full, clear, and exact description.

The improvement relates to that class of locomotive-furnaces having diaphragms within the furnace for the purpose of producing a more perfect combustion of the fuel within the furnace.

It consists in a tubular-shaped or a substantially tubular-shaped flue formed of fire-clay, and extending horizontally or substantially horizontally from the vicinity of the flues backward toward the rear end of the furnace, substantially as is exhibited in the annexed drawings, making part of this specification, in which—

Figure 1 is a vertical longitudinal section on the line 1 1 of Fig. 2. Fig. 2 is a vertical cross-section on the line 2 2 of Fig. 1, and Fig. 3 is a view in perspective of the tiles used in forming the flue in question.

The same letters of reference denote the same parts.

The locomotive-furnace A is of the usual form.

B represents a tile, preferably slightly arched, which extends from the vicinity of the flues C rearwardly and horizontally, and substantially at the level of the top of the flues C.

D represents a tile extending from the vicinity of the flues, at the level of the bottom thereof, rearwardly and horizontally. This tile, which may be made in one or more parts, is preferably concave in its upper surface, and with the side walls of the furnace and the upper tile, B, which also may be made in one or more pieces, forms the tubular flue in question.

Two important advantages accrue from this improvement: The tiles become more highly heated than the furnace-walls, and smoke from the fuel is, in consequence, more thoroughly consumed. At the same time the flues C remain in full view, and can be reached for cleaning or repair without having to move the tiles.

Air can be admitted to the furnace through openings E in the rear wall of the furnace.

The tiles can be supported in any desirable manner and by means of plugs F, as shown.

I claim—

A locomotive-furnace having a tubular-shaped flue in rear of the flues and against the flue-sheet, and formed mainly, if not entirely, of tiling, substantially as described.

Witness my hand this 25th March, 1886.

THOMAS A. BUCKLAND.

Witnesses:

C. D. MOODY,
B. F. REX.