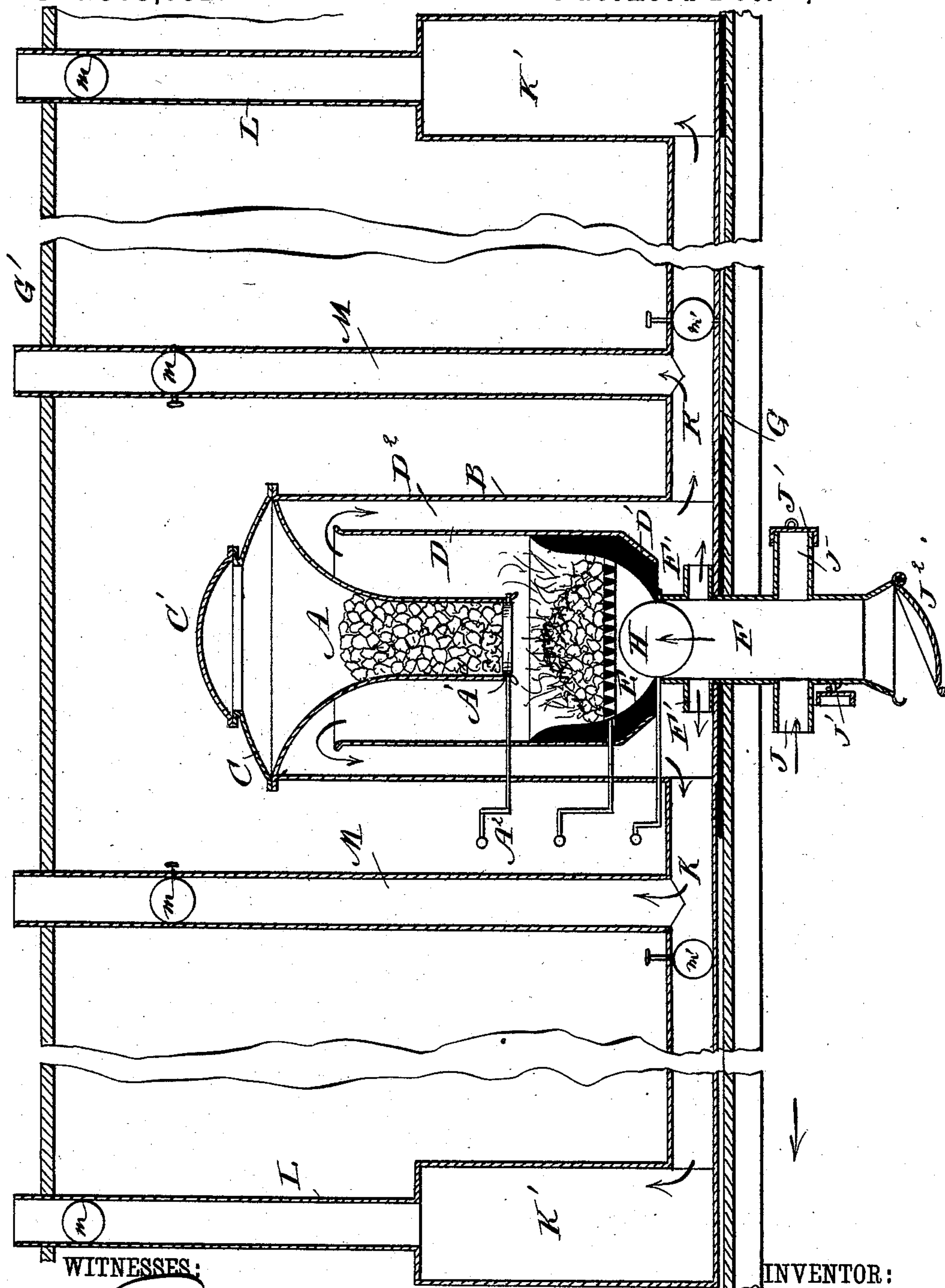


M. H. STOCKWELL.  
COAL STOVE OR HEATER.

Patented Dec. 4, 1888.



**WITNESSES:**

C. Nevins.

C. Sedgwick.

**INVENTOR:**

M. H. Stockwell.

BY

Munn & Co.

**ATTORNEYS.**

# UNITED STATES PATENT OFFICE.

MATHEW H. STOCKWELL, OF ALTOONA, WISCONSIN.

## COAL STOVE OR HEATER.

SPECIFICATION forming part of Letters Patent No. 393,932, dated December 4, 1888.

Application filed April 18, 1887. Serial No. 235,226. (No model.)

*To all whom it may concern:*

Be it known that I, MATHEW H. STOCKWELL, of Altoona, in the county of Eau Claire and State of Wisconsin, have invented a new and useful Improvement in Coal Stoves or Heaters, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawing, forming a part of this specification, in which similar letters of reference indicate corresponding parts in the figure.

The figure is a longitudinal sectional elevation of my new and improved coal stove or heater applied to a railway-car, showing the roof and floor of the car.

The invention will first be described in connection with the drawing, and then pointed out in the claim.

I construct the heater with a central fuel-magazine, A. This is supported by the outer shell or casing, B, of heavy boiler-iron. The magazine is closed at the top in the figure by a permanent annular top, C, and lid C'. Surrounding the magazine A is the fire-pot D, lined at the bottom with fire-clay, D'. The fire-pot D reaches nearly to the top of the casing B and is of less diameter than the said casing, to form the space D<sup>2</sup>, down which the heat and products of combustion pass after passing over the top of the fire-pot D. The fuel is retained in the magazine A by the pivoted bottom-plate, A', which may be opened by the crank-rod A<sup>2</sup> to supply the grate E with fuel. The draft is supplied through the pipe F, which is connected to or is an extension of the bottom of the fire-pot D, and in the figure reaches down through the bottom G of the car. The pipe F may be closed more or less by the damper H, and said pipe is provided below the bottom of the car with the openings or short horizontal pipes J, arranged in line with the length of the car, so that the motion of the car will cause a strong current of air to enter the pipe F. The pipe J, toward the rear of the car, will always be closed by a cap, J', or suitable damper, and the bottom of the pipe F may be closed by the door

J<sup>2</sup>, so that the current of air entering the pipe F must ascend to the fire-pot D and pass thence up and then down through the heater. At the bottom of the casing B are fitted the side pipes, K, which lead to the heating-drums K', located some distance from the casing B. A smoke-flue, L, leads from the top of each drum K' through the top G' of the car, and between the casing B of the body of the heater and the drums K' are arranged the smoke-flues M, connected to the pipes K, which serve also as small auxiliary heating-drums. In each of the flues L M is fitted a damper, m, by which said flues may be closed more or less, as circumstances require, to regulate the heat, and in the pipes K, between the flues N and drums K', are fitted dampers m', so that the heat may be entirely cut off from the drums or regulated as desired.

The pipe F and the pipes K may in warm weather be used for cooling the heater off when there is too much fire by causing a blast of air to be continuously forced through the pipes K M L and drums K' of the car when the car is in motion, and for this purpose I fit in the pipe F, below the damper H, the horizontal pipes F' F', which direct the air toward the pipes K. When used for cooling purposes, the damper H will be partially closed, so that the air will not pass through the heater before entering the pipes K.

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

The fire-pot D, and the draft-pipe F, entering the bottom thereof, and the damper H at its juncture with the fire-pot, the opposite passages or pipes J J, entering the draft-pipe F below the floor, and the opposite pipes or passages F' F', entering the said draft-pipe F above the floor, in combination with the flues K and pipes M and the annular smoke-chamber D<sup>2</sup>, substantially as described.

MATHEW H. STOCKWELL.

Witnesses:

E. M. BARTLETT,  
JOSEPH H. HALL.