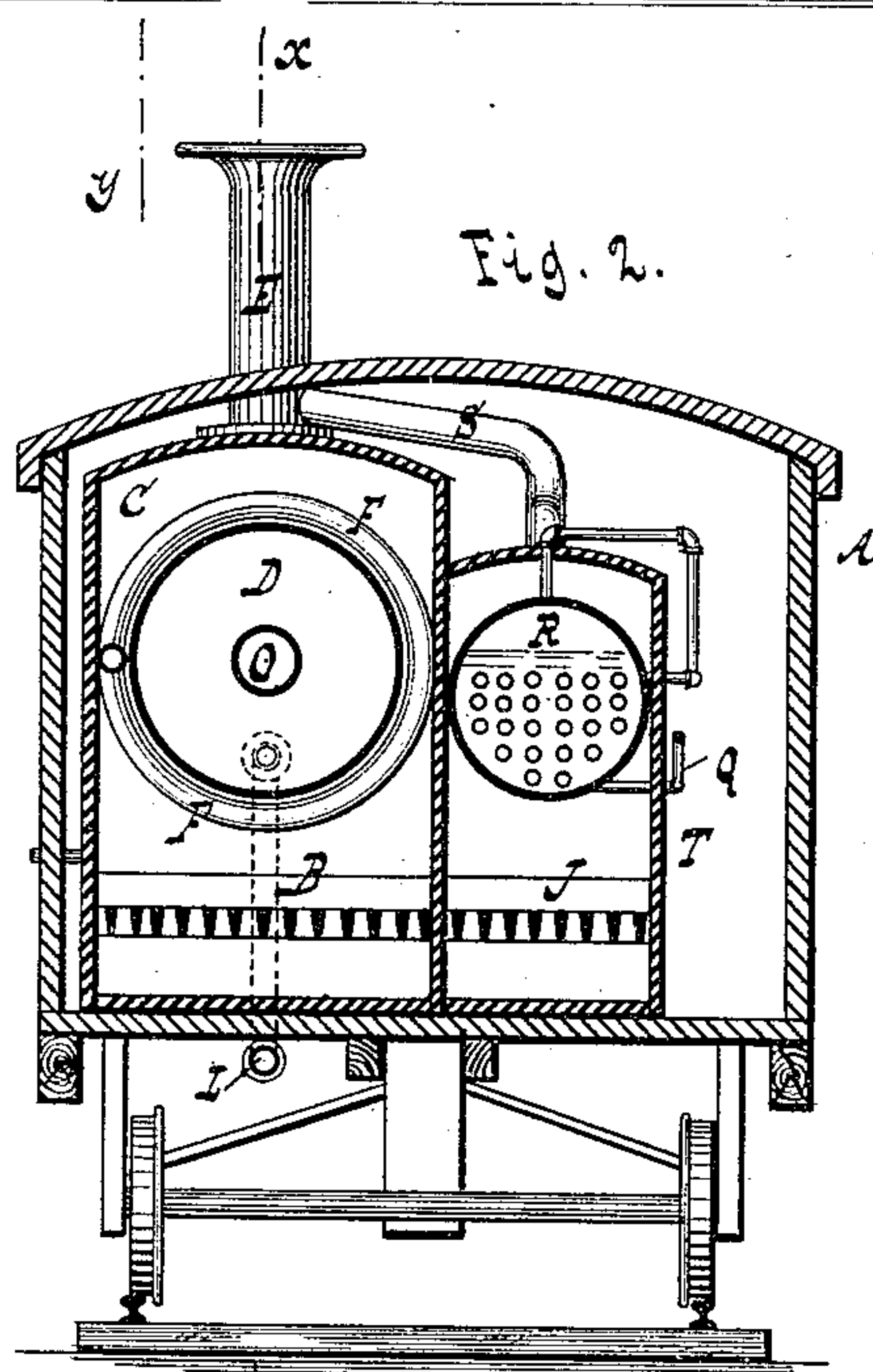
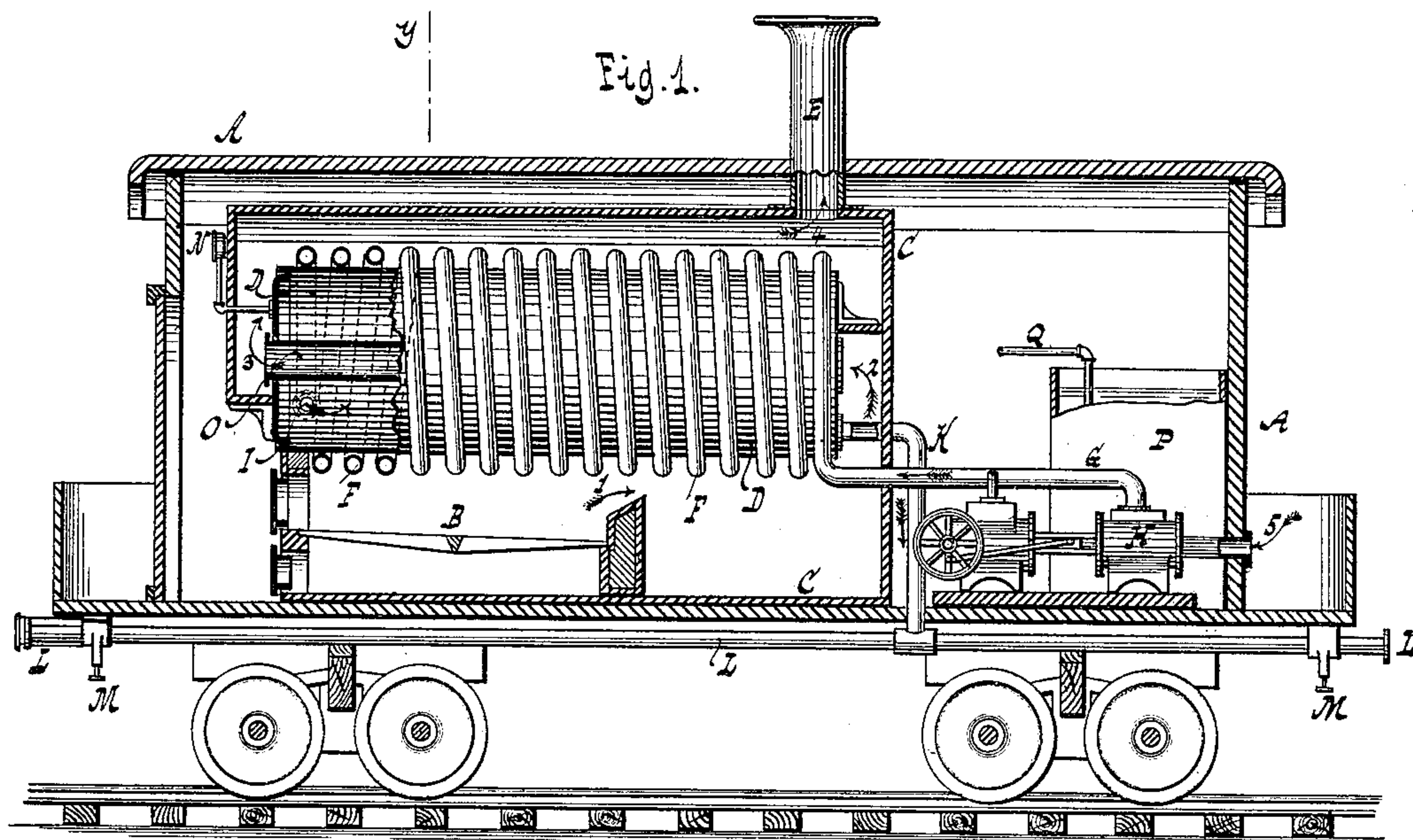


(No Model.)

S. A. DARRACH.
HEATING CARS AND VEHICLES.

No. 372,605.

Patented Nov. 1, 1887.



WITNESSES:
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UNITED STATES PATENT OFFICE.

SAMUEL A. DARRACH, OF NEWARK, NEW JERSEY.

HEATING CARS AND VEHICLES.

SPECIFICATION forming part of Letters Patent No. 372,605, dated November 1, 1887.

Application filed February 24, 1887. Serial No. 228,732. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL A. DARRACH, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented new and useful Improvements in Heating Cars and Vehicles, of which the following is a specification.

This invention relates to improvements in heating cars, vehicles, and other conveyances, as set forth in the following specification and claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a section in the plane $x x$, Fig. 2. Fig. 2 is a section in the plane $y y$, Fig. 1.

Similar letters indicate corresponding parts.

In the drawings, the letter A designates the body of a car or wagon. By making the body A of fire-proof material the body A is not liable to catch fire. The body A has a compartment, C. In the compartment C is a fire-place, B, adapted to heat a drum or receiver, D. About the drum D rests a coil or pipe, F, communicating with an inlet, G. As indicated by arrow 5, Fig. 1, air can be caused to flow into the inlet-tube G by a pump or mechanism, H, of any well-known construction. From the inlet-tube G the air flows through the coil F, and thence through the inlet I into the drum D. From the drum D the air flows through the outlet-pipe K to the tube L. By connecting the tube L with suitable heating tubes or spaces in a car or cars or vehicles connected or coupled to the car A a car or a train of cars can be heated. As the fire is at the fire-place B in a fire-proof body, A, such fire is not liable to set fire to any object outside of the body A.

The products of combustion pass from the fire-place B in the direction of arrows 1 and 2, and through the channel O, extending longitudinally through the drum and open at each end, and thence, in the direction of arrows 3 and 4, to the chimney or outlet E. The drum D and the air in the drum D and in the coil F are thus thoroughly heated. A pressure-gage, N, properly applied, will indicate the pressure of air in the drum D.

The pump H may be operated by suitable motive power—such as that from a boiler, R, in the compartment T. The products of combustion from the fire-place J of the boiler R pass through the outlet S to the chimney E.

A tank, P, having a feed-pipe, Q, can be used to feed the boiler R.

In case it is desired to use the device as a cooling apparatus, the fire in the fire-place B can be extinguished and cool air or fluid can be forced through the apparatus. In this case the drum D might be cooled by a cooling medium—such as ice placed in the channel O.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the body A, containing the compartment C, having the fire-place B and chimney E, the drum D, arranged in said compartment, the pipe F, coiled around the exterior of the drum and connected at one end with the interior thereof, the inlet-tube G, connected with the tube, a forcing-pump, H, connected with the inlet-tube, the distributing-tube L at the bottom of the car, and the outlet-pipe K, connecting one end of the drum with the said distributing-pipe, substantially as described.

2. The combination of the body A, containing the compartment C, having the fire-place B and chimney E, the drum D, arranged in said compartment, the channel O, extending longitudinally through the drum and at each end in the said compartment, the pipe F, coiled around the exterior of the drum and communicating at one end with the interior thereof, the inlet-tube G, connected with said coiled pipe, a forcing mechanism, H, connected with one end of the said inlet-tube, the distributing-tube L at the bottom of the car, and the outlet-pipe K, connecting one end of the drum with the said distributing-pipe, substantially as described.

3. The combination of the fire-proof body A, containing the compartments C and T, the drum D, arranged in one compartment, the pipe F, coiled around the exterior of the drum and communicating at one end with the interior thereof, the inlet-tube G, connected with said coiled pipe, the forcing-pump H, connected with the said inlet-tube, and a boiler arranged in the other of said compartments and connected with the pump, substantially as described.

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

SAMUEL A. DARRACH. [L. s.]

Witnesses:

W. HAUFF,
E. F. KASTENHUBER.