

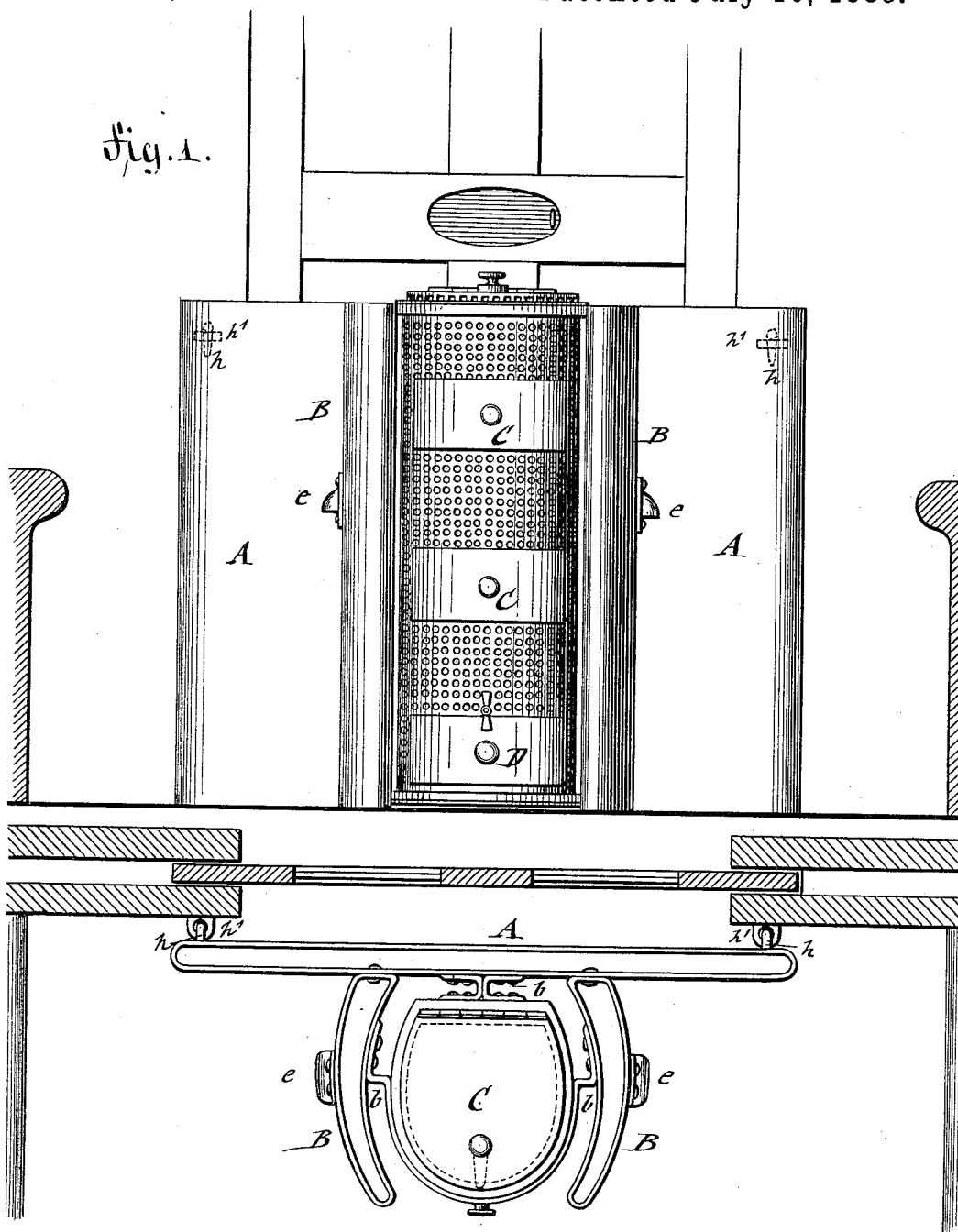
(No Model.)

2 Sheets—Sheet 1.

E. HENN.
CAR HEATER.

No. 385,932.

Patented July 10, 1888.



WITNESSES.

F. N. Rosenbaum.
Carl Kay.

Fig. 2.

INVENTOR.
Eduard Henn.
BY *Amel & Pagen*
ATTORNEYS.

(No Model.)

2 Sheets—Sheet 2.

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fig. 3.

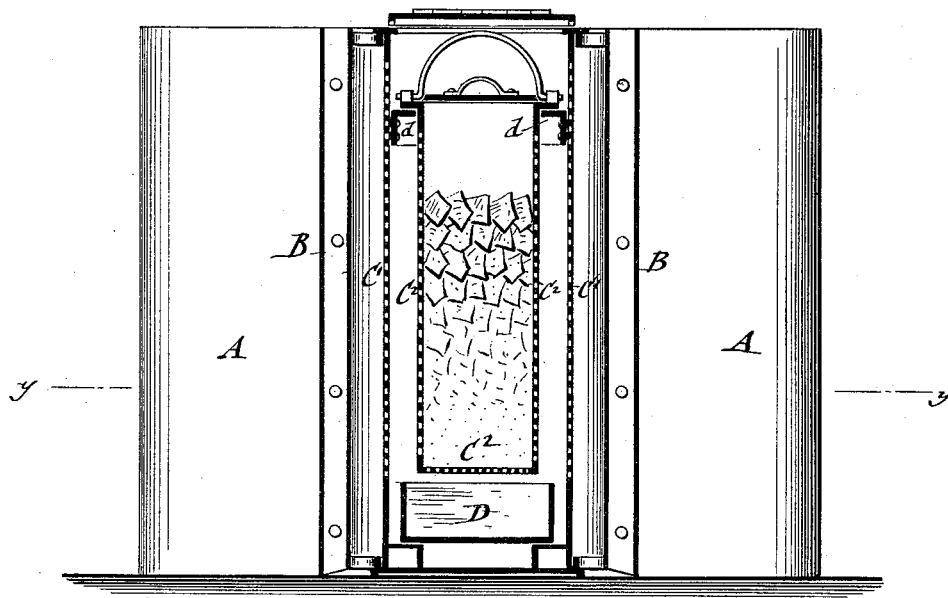
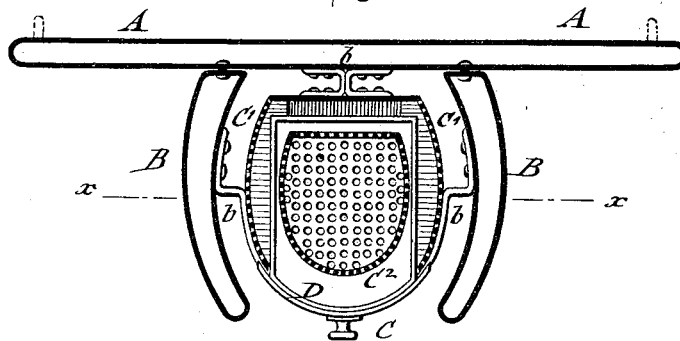


fig. 4



WITNESSES:

W. N. Rosenbaum.
Carl [Signature]

INVENTOR,

Edward Henn.

BY

Loquex Paegener.
ATTORNEYS.

UNITED STATES PATENT OFFICE.

EDUARD HENN, OF JERSEY CITY, NEW JERSEY.

CAR-HEATER.

SPECIFICATION forming part of Letters Patent No. 385,932, dated July 10, 1888.

Application filed April 6, 1887. Serial No. 233,562. (No model.)

To all whom it may concern:

Be it known that I, EDUARD HENN, of Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Car Heaters, of which the following is a specification.

This invention has reference to a car heater that is to be suspended from the casing of the front door of the car and readily removable from one door of the car to the other, according to the direction in which the car is running. The car-heater is designed to be heated by means of artificial fuel, by which a slow combustion takes place without shaking up of the fuel, but which gives off sufficient heat to keep the air in the car at the required degree of temperature, while sudden changes of the same are prevented, as the heater keeps the front door of the car closed during the entire trip.

The invention consists of a car-heater that is composed of an interior upright fire-pot, which is suspended by a top rim or flange from a seat of a perforated shell or casing that is provided below the fire-pot with an ash-pan, in which the ashes that drop through the perforated bottom of the fire-pot are collected. At both sides of the perforated casing or shell are arranged hollow sheet-metal guard-walls, to which the heater is attached by brackets. The guard-walls are attached to a hollow sheet-metal panel that is suspended by hooks from fixed eyes of the door-frame of the car.

In the accompanying drawings, Figure 1 represents a front elevation of my improved car-heater, shown in position at the front door of a car. Fig. 2 is a plan of the same with the front part of the car drawn in horizontal section. Fig. 3 is a vertical central section of the heater on line *x x*, Fig. 4; and Fig. 4, a horizontal section on line *y y*, Fig. 3.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents a double-walled panel made of stout sheet metal, to the front wall of which are attached hollow forwardly-extending guard-walls that are, like the main panel A, open at the upper and lower ends.

Between the guard-walls B is supported the stove or heater proper, the guard-walls serv-

ing to prevent the radiation of heat in lateral direction toward the seats of the car, so that passengers can sit at both sides of the heater without being annoyed by the heat of the same. The heater C is attached by supporting-brackets *b b* to the hollow main panel A and guard-walls B B and composed of an exterior perforated casing or shell, C', and an interior fire-pot, C'', that is flanged at the upper end and suspended from the seat *d* at the upper part of the shell C'. The shell C' is provided with a hinged lid at the top and the fire-pot with a removable lid and a hinged bail, which latter facilitates the removal of the fire-pot for the purpose of removing the ashes from the same. The bottom and sides of the fire-pot are perforated to give access of air to the fuel in the same for keeping up combustion.

Below the fire-pot C'' is arranged a fire-pan, D, that slides on suitable ways, and is drawn out at the front of the heater for removing any ashes that have dropped into the same from the fire-pot. The fire-pot C'' is charged with slowly-burning artificial fuel, which keeps up a slow combustion and furnishes an intense heat, the air being drawn in through the openings of the shell C', heated by contact with the walls of the fire-pot, and delivered at the upper part of the heater to the car. The hollow panel A and guard-walls B serve also to some extent for heating, as the walls next to the heater are warmed by radiation, whereby the temperature of the air inclosed by the same is raised without being heated to the same degree as the air that is heated by direct contact with the fire-pot. The outer walls of the panel A and guard-walls B, however, are perfectly cool, so as not to annoy the passengers. The exterior walls of the guard-walls B B are provided with handles *e e*, by which the entire structure is taken hold of, so as to be removed from one door of the car to the other, according to the direction in which the car is running, the heater being attached by hooks *h* at the top of the main panel A to eyes *h'* of the door-casing, it being always applied to the front door, so as to close the same during the winter season and prevent the ingress of passengers and the admission of the cold air through the same. The heater is only made of such a height that it does not interfere with the opening and sliding panel in the

car-door through which the money is handed in by the passengers on the front platform on paying their fare. The heater supplies sufficient heat to keep the car perfectly warm without requiring any attention from the conductor. It can be readily removed from one door to the other or taken out entirely when the car arrives at the stables, so as to be cleaned, stored away, or transferred to another car, so that only the cars actually in use are supplied with heaters. The heater takes up no seating-space in the car and forms a neat attachment of the same.

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

1. The combination, with the casing of a car-door, said casing having fixed eyes, of a panel extending across said door and having hooks for engaging said eyes and a heater supported by said panel, substantially as set forth.

2. The combination, with the casing of a car-door, said casing having fixed eyes, of a panel extending across said door and having hooks for engaging said eyes, hollow guard walls or wings attached to said panel, and a heater supported by said panel and guard walls, substantially as set forth.

3. The combination of a hollow panel, hollow guard walls or wings attached to said panel, and a heater supported by brackets on said panel and guard-walls, substantially as set forth.

4. The combination of a hollow supporting-panel, hollow guard-walls attached to said panel, a heater supported on said panel and guard-walls and composed of a perforated exterior shell, an interior perforated fire-pot, and an ash-pan below said pot at the lower part of the shell, substantially as set forth.

5. The combination of a movable panel provided with hooks for suspending it from a fixed structure and a heater attached to said panel, substantially as described.

6. The combination of a movable panel provided with hooks for suspending it from a fixed structure, a heater attached to said panel, and guard-walls, also attached to said panel and extending outward therefrom on opposite sides of the heater, substantially as described.

7. The combination of a movable panel provided with hooks for suspending it from a fixed structure, a heater attached to said panel, and hollow guard-walls, also attached to said panel and extending outward therefrom on opposite sides of the heater, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

EDUARD HENN.

Witnesses:

MARTIN PETRY,
PAUL GOEPEL.