

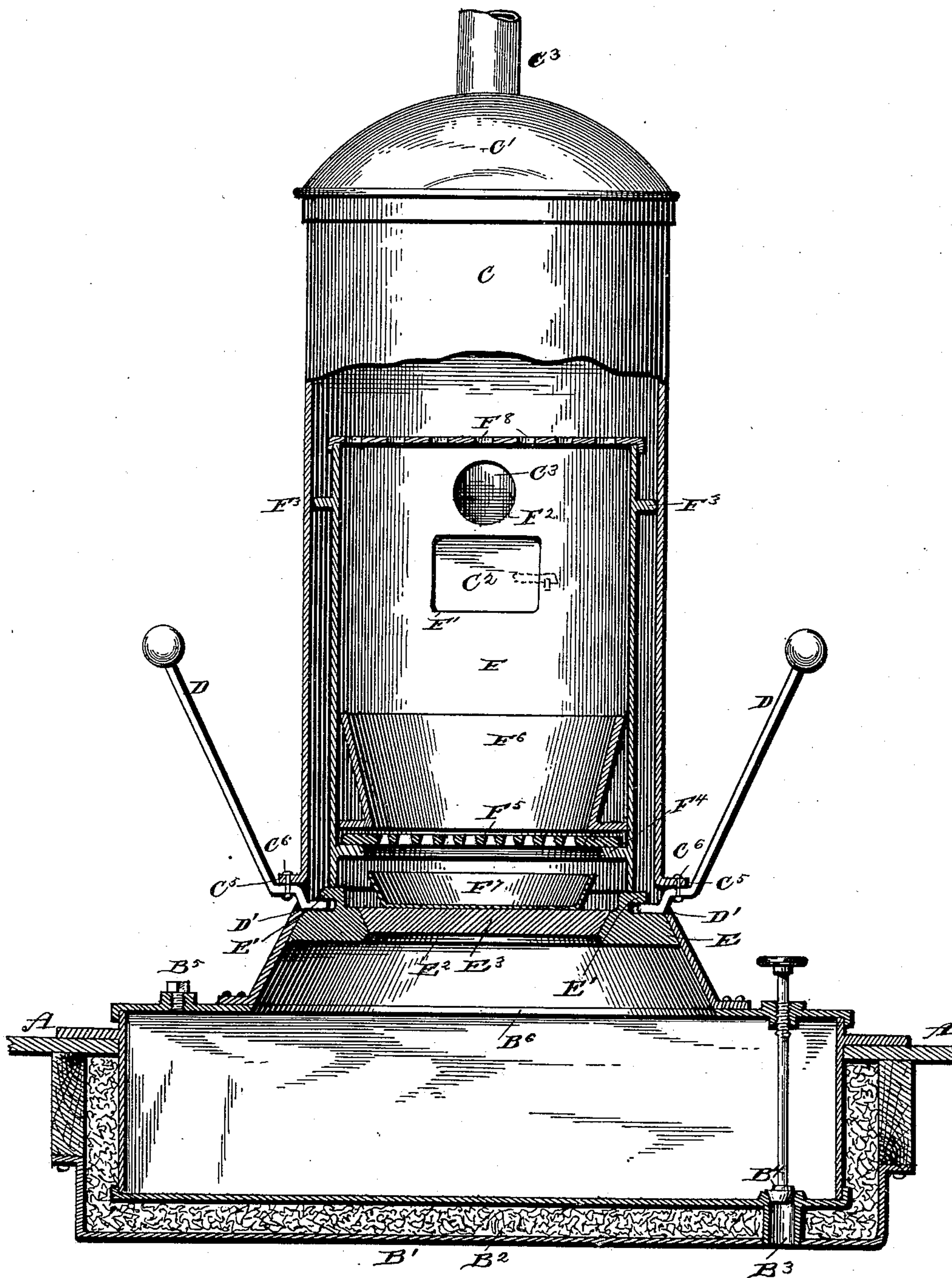
(No Model.)

H. R. ALBRECHT.

CAR HEATER.

No. 397,886.

Patented Feb. 19, 1889.



Witnesses:
S. C. Hill.
W. S. Duval.

Inventor:
Henry R. Albrecht.
E. B. Stocking
Attorney

UNITED STATES PATENT OFFICE.

HENRY R. ALBRECHT, OF MOLINE, ILLINOIS.

CAR-HEATER.

SPECIFICATION forming part of Letters Patent No. 397,886, dated February 19, 1889.

Application filed April 11, 1887. Serial No. 234,385. (No model.)

To all whom it may concern:

Be it known that I, HENRY R. ALBRECHT, a citizen of the United States, residing at Moline, in the county of Rock Island, State of Illinois, have invented certain new and useful Improvements in Car-Heaters, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to car-heaters, and more particularly to that class thereof in which water is utilized to extinguish the fire in case of accident.

Among the objects of the invention is to provide a heater which in case of accident (such as collision or overturning of the car, &c.) will automatically assume such position as to permit of the inflow of water, whereby the fire will be extinguished, and in which the fire will be entirely cut off from falling out of the stove into the debris and setting fire thereto.

With these general objects of the invention in view the same consists in certain features of construction, hereinafter described, and particularly pointed out in the claims.

Referring to the drawing, which is a vertical central partial section of a car-heater constructed in accordance with my invention, A represents the bottom or floor of a car, which is recessed to receive a water-tank, B, set therein, which tank is surrounded by a jacket, B', between which and the tank is a filling of sawdust or other material, B², for the purpose of preventing the water in the tank from freezing. An opening, B³, provided with a valve-seat, is formed in the bottom of the tank and jacket, and adapted to receive a valve, B⁴, to which is fixed a rod, screw-threaded in and passing through the top of the tank, and provided with a suitable hand-wheel for controlling the valve. By means of this valve water admitted through the opening B⁵ or forced in through the opening B³ may be passed off.

Mounted upon and communicating with the tank B through an opening, B⁶, therein is an outer casing or cylinder, C, formed with a dome, C', a fuel-poke, C², and an uptake, C³.

At each side of the cylinder, near its bottom and diametrically opposite each other, are formed laterally-projecting lugs C⁵, which are perforated for the reception of bolts C⁶,

which form bearings for and pass through holes formed near the lower ends of weighted levers D, which are laterally bent at their lower ends to form catches D'.

Mounted on the lower or catch ends of the levers D by means of an annular flange, E', or it may be simply diametrically-located lugs under which the ends of the levers take, is an annular casting, E, formed to fit the base of the cylinder C, and with an opening, E², formed as a valve-seat, into which a valve-plate, E³, is adapted to be seated.

Mounted upon the casting E—in this instance upon the annular flange E' thereof—is the fire-cylinder F, which is formed with openings F' F², communicating with the fuel-poke and uptake in the outer cylinder. Lateral guiding-lugs F³ are formed on the fire-cylinder, so that said cylinder may freely slide within the outer cylinder or casing, C. An annular flange, F⁴, is formed in the fire-cylinder F, upon which is mounted the grate F⁵ and fire-box F⁶. Interposed between the grate F⁵ and valve-plate E³, and mounted upon the latter, is an ash-pan, F⁷.

For the purpose of permitting of a free circulation of products of combustion into the cylinder C, perforations F⁸ are formed in the top of the fire-cylinder F, through which products of combustion may pass into the outer cylinder and into the dome C'.

The operation of the invention will be readily apparent from the above description, in that any sudden lateral jar, such as caused by a collision, will cause the weighted levers D to oscillate upon their pivots and be withdrawn from under the flanges E', formed on the annular casting E, thus allowing the cylinder F and its contents containing the fire to fall through the opening B⁶ into the water-tank, whereby the fire will be immediately extinguished.

In case the car is derailed, and consequently overturned or thrown upon its side, the valve-plate E³ will fall from its seat in the annular casting E, and water will be allowed to pass through the opening E² into the fire-cylinder. In this instance the fire-cylinder falls to the opposite position—namely, toward the dome of the cylinder C—thus practically closing all communication with the outside, either through the uptake, fuel-poke, or other doors

or openings formed for draft, removing the ashes, &c. The fire thus wholly maintained within the inner cylinder is quickly and positively extinguished by the flow of water from the tank B thereon.

Having thus fully described my invention and its operation, what I claim is—

1. In a car-heater, the combination of a water-tank having an outer heating-cylinder mounted thereon provided with a fuel-poke and uptake, with a fire-cylinder mounted for longitudinal movement in said heating-cylinder, and provided with apertures or openings communicating with said fuel-poke and uptake, whereby by reason of said longitudinal movement of the fire-cylinder the communication may be broken, substantially as specified.

2. In a car-heater, the combination of an outer heating-cylinder having pivoted weighted levers projecting therein, said cylinder being mounted upon and communicating with a water-tank, with an annular cast-

ing, as E, provided with a valve-seat and connecting-flange mounted on said weighted arms, and a fire-box mounted on said casting, substantially as specified.

3. In a car-heater, the combination of an outer heating-cylinder having loosely-pivoted weighted arms, as D, projecting therein, with an annular casting provided with a flange mounted on said arms, and a fire-cylinder mounted on said casting and provided with perforations at its top, substantially as specified.

4. The cylinder C, having the lugs C⁵ and bolt C⁶ and weighted arms D, in combination with the casting E, having the opening E², formed with a valve-seat, and the valve-plate E³, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY R. ALBRECHT.

Witnesses:

WM. E. GORTON,
J. B. CORNWALL.