C. C. NEWTON.

Railroad Car and Coach Heater.

No. 205,570. Patented July 2, 1878.

Fig. 1.

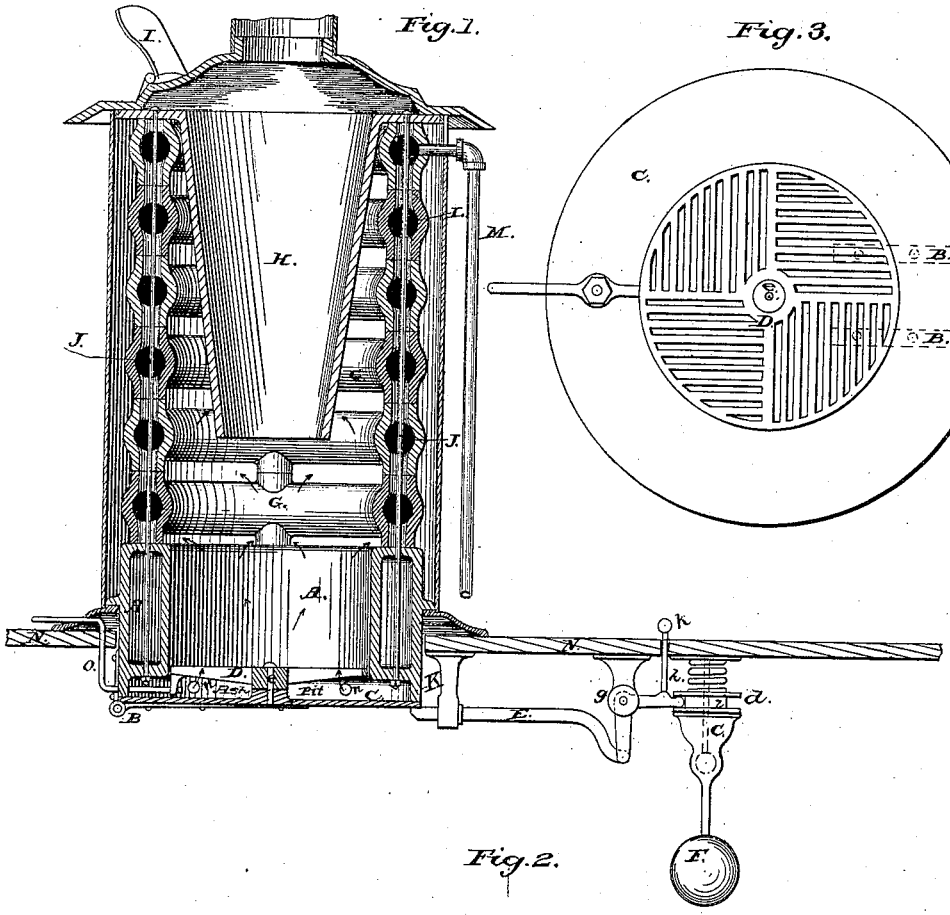


Fig. 3.

Fig. 2.

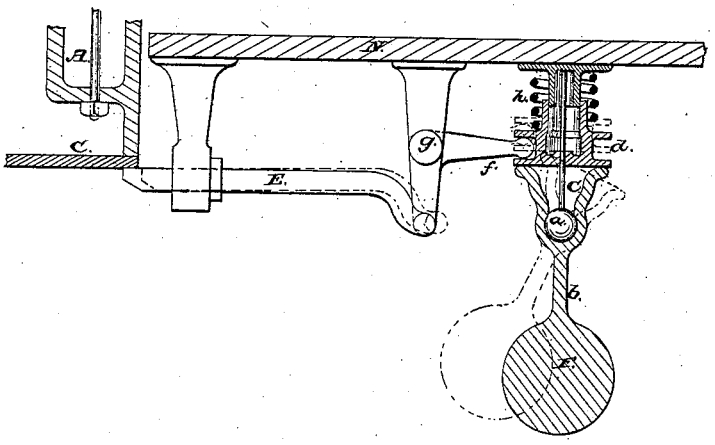
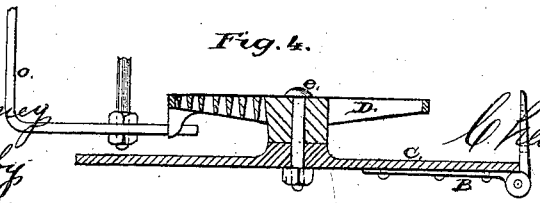


Fig. 4.



Attest:

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UNITED STATES PATENT OFFICE.

CHARLES C. NEWTON, OF CLEVELAND, OHIO.

IMPROVEMENT IN RAILROAD-CAR AND COACH HEATERS.

Specification forming part of Letters Patent No. **205,570**, dated July 2, 1878; application filed June 23, 1877.

To all whom it may concern:

Be it known that I, CHARLES C. NEWTON, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain Improvements in Railway-Car and Coach Heaters or Stoves, of which the following is a specification:

My invention relates to that class of car-stoves in which the fire is dumped on the ground when the car is jammed or tilted, or its level changed from whatever cause.

The grate and ash-pit are so constructed by means of certain hinges and a catch that when the said catch is drawn back the said grate and hinged door will swing outwardly underneath the car, thus allowing the fire to fall out of the heater. Said catch is operated by means of a weight or ball and lever, so arranged that when the car tips in the act of being overthrown the said weight acts upon the lever, pulling back the catch holding up the bottom of said heater, and thereby causing said bottom to swing out downwardly, depositing the contents of the heater on the ground, all of which can be seen by referring to the drawings.

Figure 1 is a sectional view of my heater in an upright position, also showing the weight and catch-bar holding the grate and hinged door in place. Fig. 2 is an enlarged view of the movement for operating the catch-bar. Figs. 3 and 4 are enlarged views of the grate and door.

A is a cast-iron water-tank, having the depending flange K, to which is fastened the door C by the hinges B B. D is the grate, fastened to the hinged door by the pin *e*, upon which it rotates in the act of shaking. This grate is raised a suitable distance above the door to form an ash-pit.

E is the catch-bar, which is operated by the weight F. *a* is a ball-and-socket joint attached to the weight F by means of the lever *b*. *c* is a circular lip or flange connected with and extending up from the ball-and-socket joint *a* and resting against the movable plate *d*, in which is a groove, *i*. *f* is the crank, one end of which is caught in the groove *i*, and swinging upon the pin *g* as a fulcrum. The other end of said crank is attached to and moves the catch-bar E.

The movable plate *d* is held in position by means of a sleeve, over which it slides, and by the coil-spring *h*, which presses the plate *d* upon the flange *c*, so that as the weight is moved the lip *c* raises the plate *d*, which holds the end of the crank *f*, thus drawing back the catch-bar E, as may be seen by the dotted lines in Fig. 2.

G G are tubular rings containing steam generated in the tank A, and are held together by means of the bolts J J. L L are openings by which steam passes from one ring to another. H is the feed-pot, into which the fuel is put. I is the front door. *n n* are air-holes. M is the pipe by which steam is conveyed through the car. *k* is a rod extending into the car through the bottom of the same, whereby the trigger can be actuated and the fire dumped by any person from inside the car.

I claim—

1. In a car-stove, the combination, with the hinged door of the ash-pit, of a trigger or catch-bar and suitable mechanism, whereby the door may be automatically opened and the contents of the stove deposited on the ground.

2. The combination, with the hinged door of the ash-pit and trigger or catch-bar, of the ball-and-socket movement with the weighted lever, whereby said door is opened and the fire dumped on the ground when the car tips on its side or its level changes from whatever cause.

3. The combination of the hinged door and the grate supported thereon and secured thereto by the pin *e*, upon which it rotates, a suitable space being provided between the door and grate to serve as an ash-pit.

CHARLES C. NEWTON.

Witnesses:
ULRIC H. BIRNEY,
FRANK H. STRIEBY.