

(No Model.)

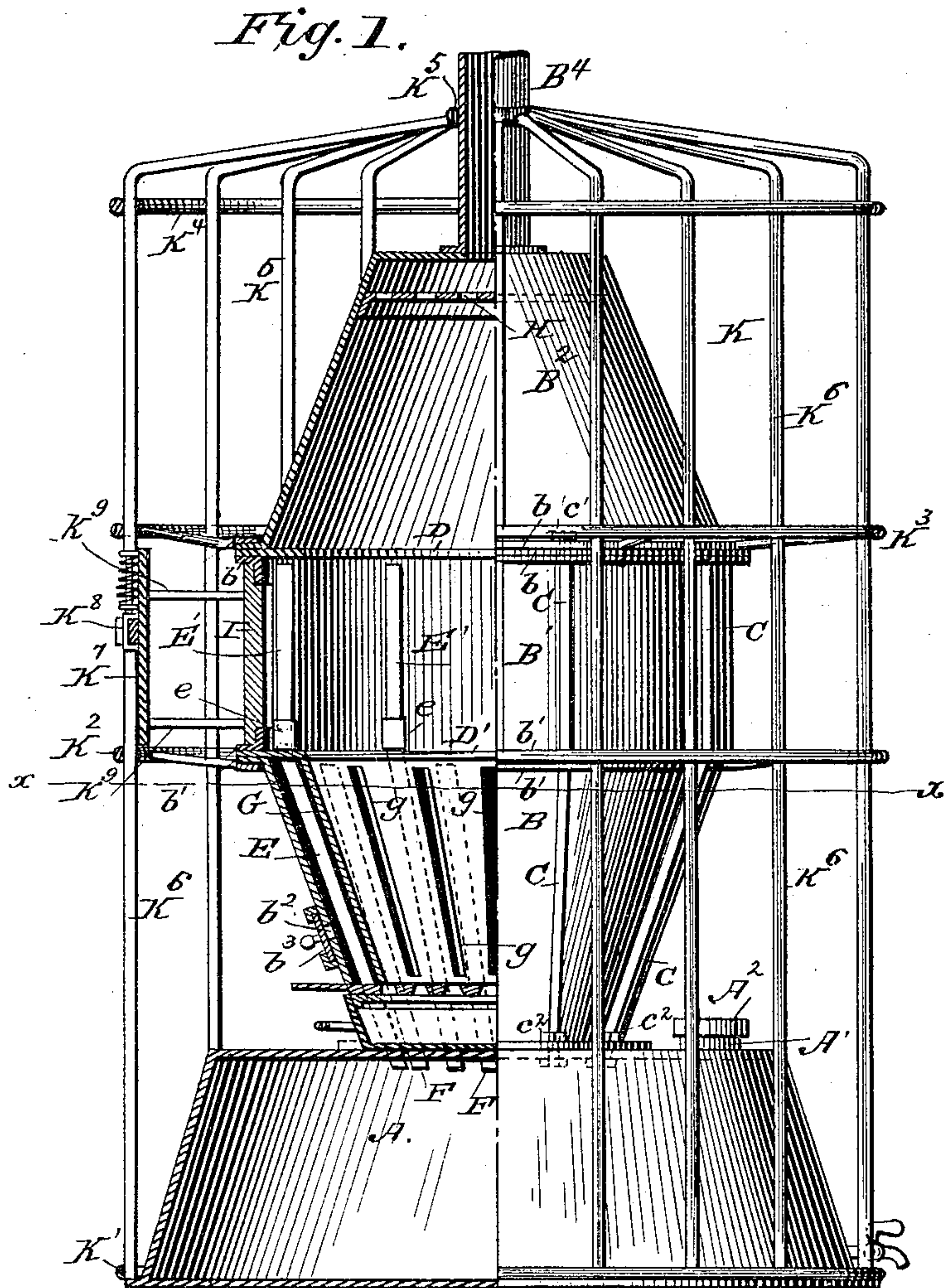
2 Sheets—Sheet 1.

G. W. CARTER & W. T. PICKETT.

CAR HEATER.

No. 388,180.

Patented Aug. 21, 1888.



WITNESSES:  
*Fred G. Dietrich.*  
*John C. Kemmer.*

INVENTOR:  
*G. W. Carter,*  
*W. T. Pickett.*  
BY *Munn & Co.*  
ATTORNEYS.

(No Model.)

2 Sheets—Sheet 2.

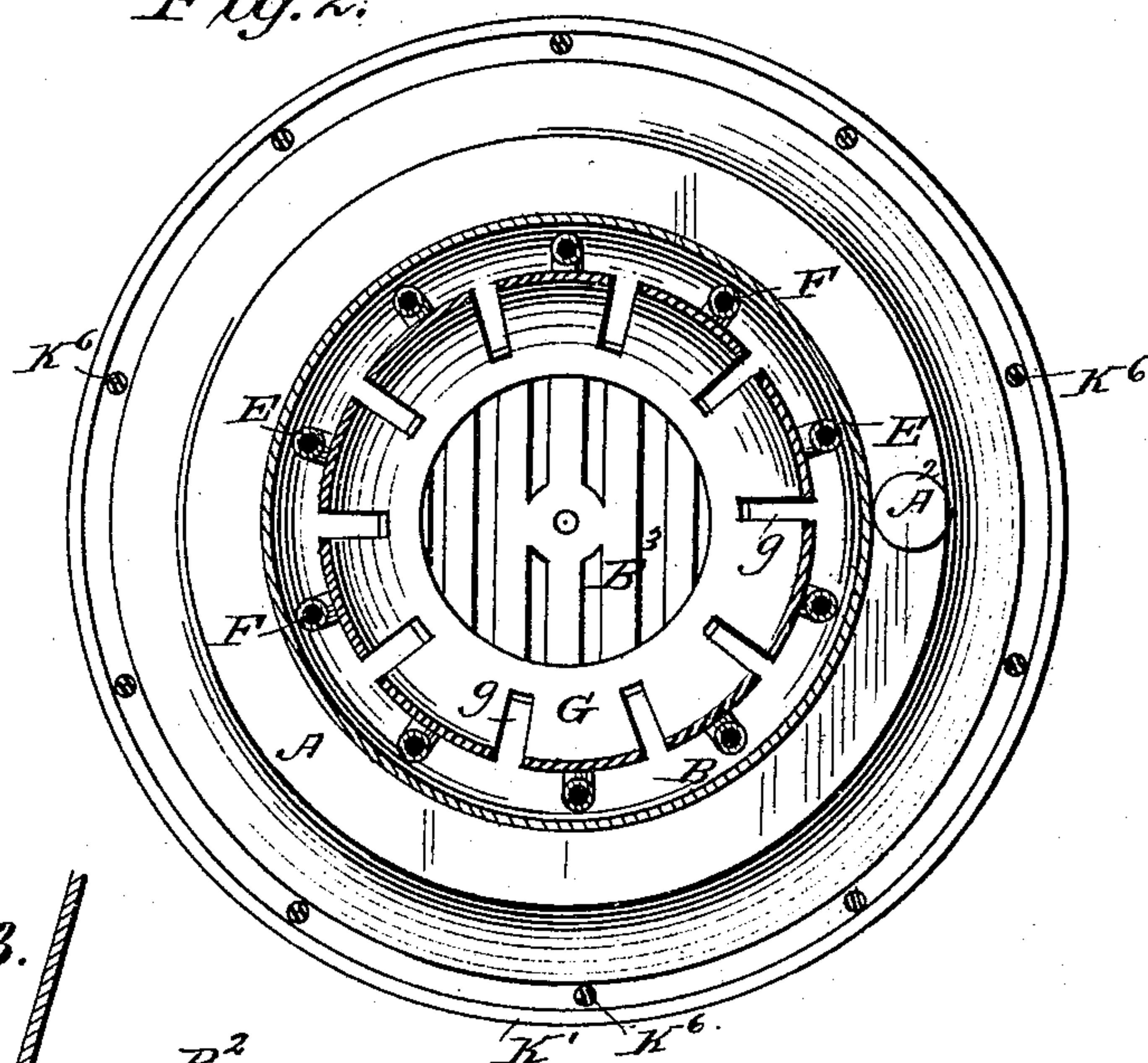
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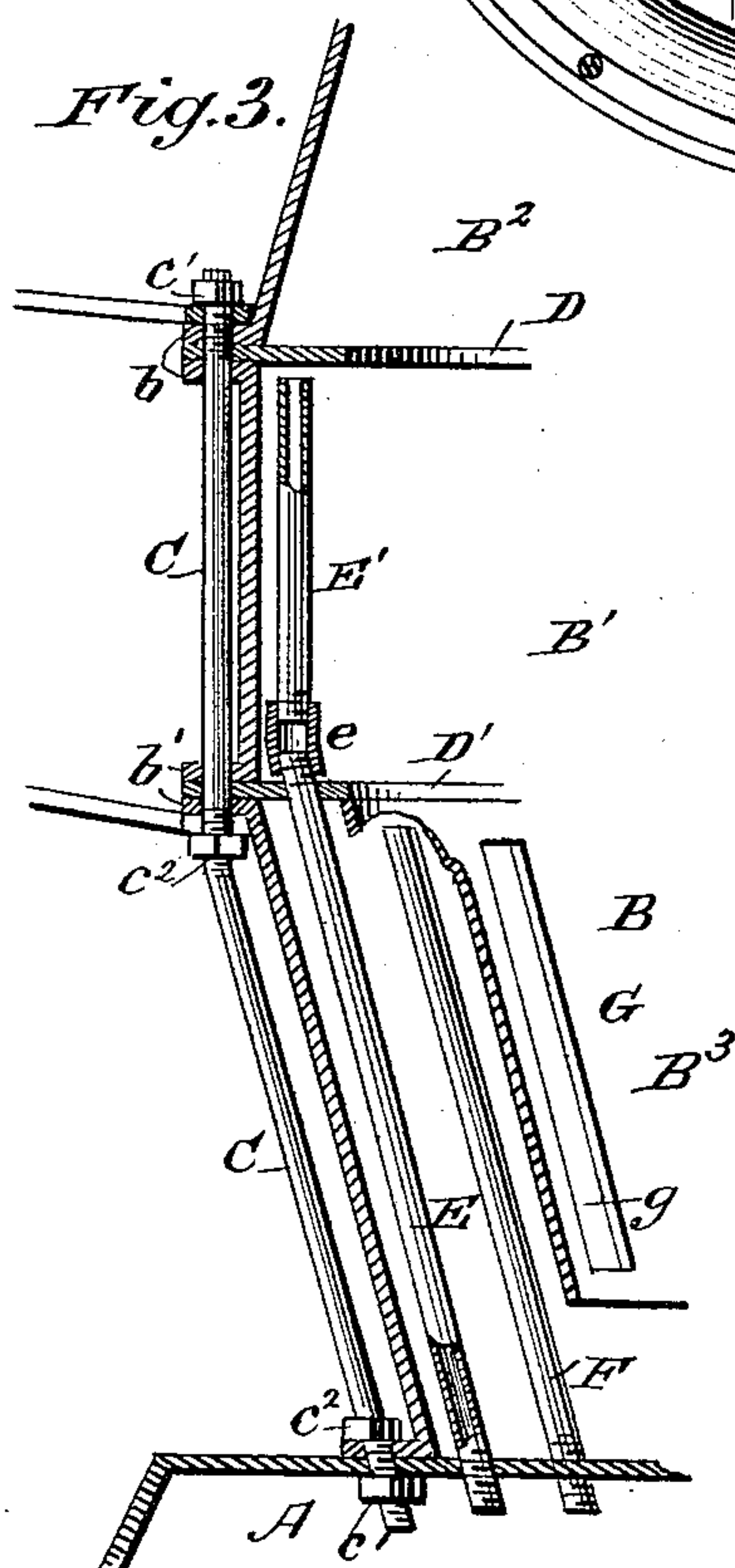
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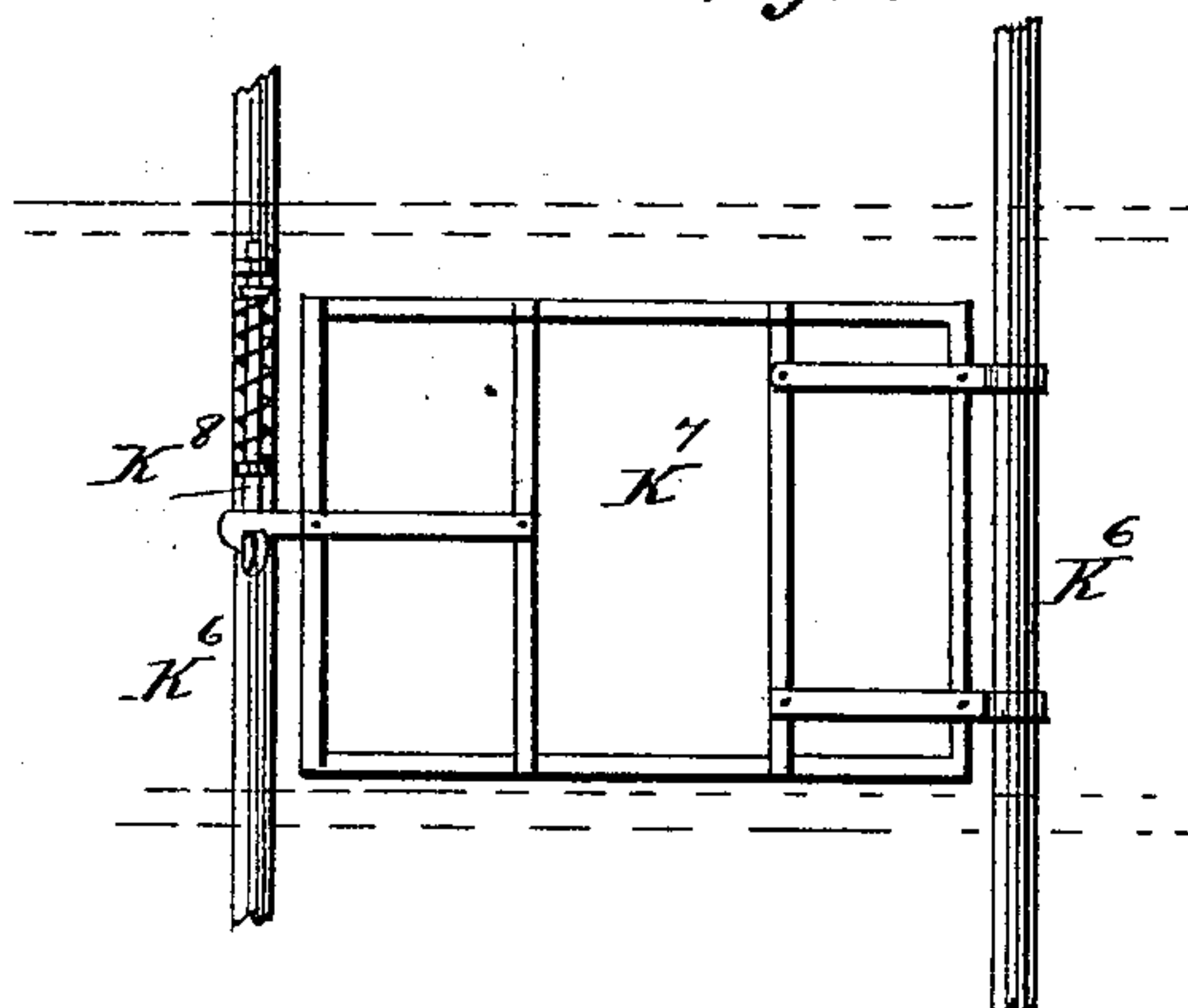
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



WITNESSES:

*Fred G. Dieterich*  
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# UNITED STATES PATENT OFFICE.

GEORGE WASHINGTON CARTER AND WILLIAM THOMAS PICKETT, OF  
CANYONVILLE, OREGON.

## CAR-HEATER.

SPECIFICATION forming part of Letters Patent No. 388,180, dated August 21, 1888.

Application filed July 13, 1887. Serial No. 241,209. (No model.)

*To all whom it may concern:*

Be it known that we, GEORGE WASHINGTON CARTER and WILLIAM THOMAS PICKETT, of Canyonville, in the county of Douglas and State of Oregon, have invented a new and useful Improvement in Car-Heaters, of which the following is a specification.

Our invention relates to self-extinguishing stoves for railroad-cars, wherein a water base or reservoir is connected by pipes which conduct the water from the base to the interior of the stove, and wherein a guard or casing outside the stove prevents the contact of the heated surfaces of the stove with combustible material.

The improvements consist in certain constructions and combinations of parts, hereinafter particularly described, and designated by the claims.

In the accompanying drawings, Figure 1 is a central sectional elevation through the stove; Fig. 2, a longitudinal section in the line  $xx$  of Fig. 1. Fig. 3 is a detail section, and Fig. 4 is a face view, of the door and spring-lock.

The shell of the stove is composed of a cylindrical or slightly-conical base and water-reservoir, A, an inverted conical base-section, B, a cylindrical middle section, B', and a conical crown-section, B<sup>2</sup>, and the said base-section, middle section, and crown-section are provided with flanged edges  $b$   $b'$  and united to each other and to the base-reservoir A by tie-bolts C, which pass through the cover of the reservoir and through the flanges  $b$  of said sections, having nuts  $c'$  and lock-nuts C<sup>2</sup> upon the ends of said bolts to draw the said sections and base-reservoir closely together.

A deflection-ring of sheet metal, D, is secured between the flanges  $b$  of sections B' B<sup>2</sup> of the stove-shell, and a similar ring, D', is secured between the flanges  $b'$  of the sections B B'. Tubes E pass through the top plate,  $a$ , of the base-reservoir A and through the deflection-ring D', and are coupled by joints  $e$ , with extensions E', which project upwardly therefrom around the middle section, B', of the stove and terminate beneath the deflection-ring D. Tubes F pass through the top plate,  $a$ , of the

base, alongside of or between the pipes E, and terminate beneath the deflection-ring D'.

The pipes E conduct water from the reservoir A to the top of the fire-chamber B<sup>2</sup> of the stove, and the pipes F conduct water from said reservoir to the middle portion of the said fire-chamber B<sup>3</sup>, and the water will thus be conducted by said pipes and deflected by the plates D D' to the middle as well as at the top of the mass of burning coals. The pipe-joints  $e$  will permit the pipe sections E E' to be easily connected with and removed from the stove for repairs and for convenience of construction.

An inner casing, G, is secured to the base and to the upper end of the base-section B, inside of the pipes E F, to protect the said pipes and the outer shell, B, of the stove from direct contact with the burning coals. Draft-openings  $b^2$ , covered by a sliding plate,  $b^3$ , are formed in the base-section B, and slits  $g$  in the inner casing, G, admit the air to the combustion-chamber and to the mass of burning coals upon all sides. The pipes E F' will thus be protected against clinkers and the intense heat of the coals, the outer shell will be kept comparatively cool and will not be heated to a sufficient degree to set fire to or burn any object which may fall upon it in case of wreck or accident, and the draft and air supply to the combustion-chamber will be evenly distributed around the burning coals.

A grate-bar section, H, at the upper end of the stove is riveted to the crown-section B<sup>2</sup> beneath the chimney B<sup>4</sup> to receive the coals and prevent them from falling through the chimney and being emptied upon the car when the stove is overturned. A door, I, hinged to the middle section, B', of the stove and secured thereto by a latch and by a safety device hereinafter described, will provide means of access to the interior of the stove, and an inlet-tube, A', and cap A<sup>2</sup> provide means for filling the water-reservoir.

An outer guard-casing, K, composed of a base-ring, K', which fits and encircles the bottom of the reservoir A, and similar rings, K<sup>2</sup> K<sup>3</sup>, and a crown-ring, K<sup>4</sup>, located one above the other, are riveted to bars K<sup>5</sup>, placed in an up-



right position around the stove, bent at the crown-ring  $K^4$ , and extended radially over the crown-section  $B^2$  of the stove to meet and be riveted to the stove-pipe ring  $K^5$  of the guard-

5 casing.

The guard-casing will protect falling timbers or persons falling against it in the time of wreck or accident from contact with the heated surface of the stove.

10 The stove-shell and water-reservoir may be made of wrought-metal plates riveted together, and will withstand great pressure or strain without being torn apart or broken.

The guard-casing  $K$  has a door,  $K'$ , located 15 opposite the stove-door, provided with a spring-actuated latch or lock,  $K^8$ , to securely hold the door of the guard-casing, and said door  $K'$  is formed with projecting rods  $K^9$ , which press against the stove-door and hold it securely 20 closed.

We claim as our invention and desire to secure by Letters Patent—

1. The combination, with the enlarged base-

reservoir  $A$ , of the base-section  $B$ , middle section,  $B'$ , and crown-section  $B^2$ , each provided 25 with flanges and tie-rods or bolts  $C$ , located outside of and around the stove, passing through the base and through said flanges, substantially as described.

2. The combination, with the water-reser- 30 voir base  $A$ , of the stove-sections  $B B' B^2$ , rings  $D D'$ , secured between the sections  $B B'$ , and pipes  $E$ , communicating with the reservoir, passing through the ring  $D$ , and terminating below the deflector-plate  $D'$ , substantially as 35 described.

3. The combination, with the water-reser- voir base  $A$ , of the stove-sections  $B B' B^2$ , rings  $D D'$ , secured between the sections  $B B'$ , pipes 10  $E$  passing through, and pipes  $F$  terminating beneath the ring  $D$ , substantially as described.

GEORGE WASHINGTON CARTER.

WILLIAM THOMAS PICKETT.

Witnesses:

CHARLES W. STUART,  
CHARLES BEALMAN.