

J. STONE.
Grate for Car Stove.

No. 81,118.

Patented Aug. 18, 1868.

Fig. 2.

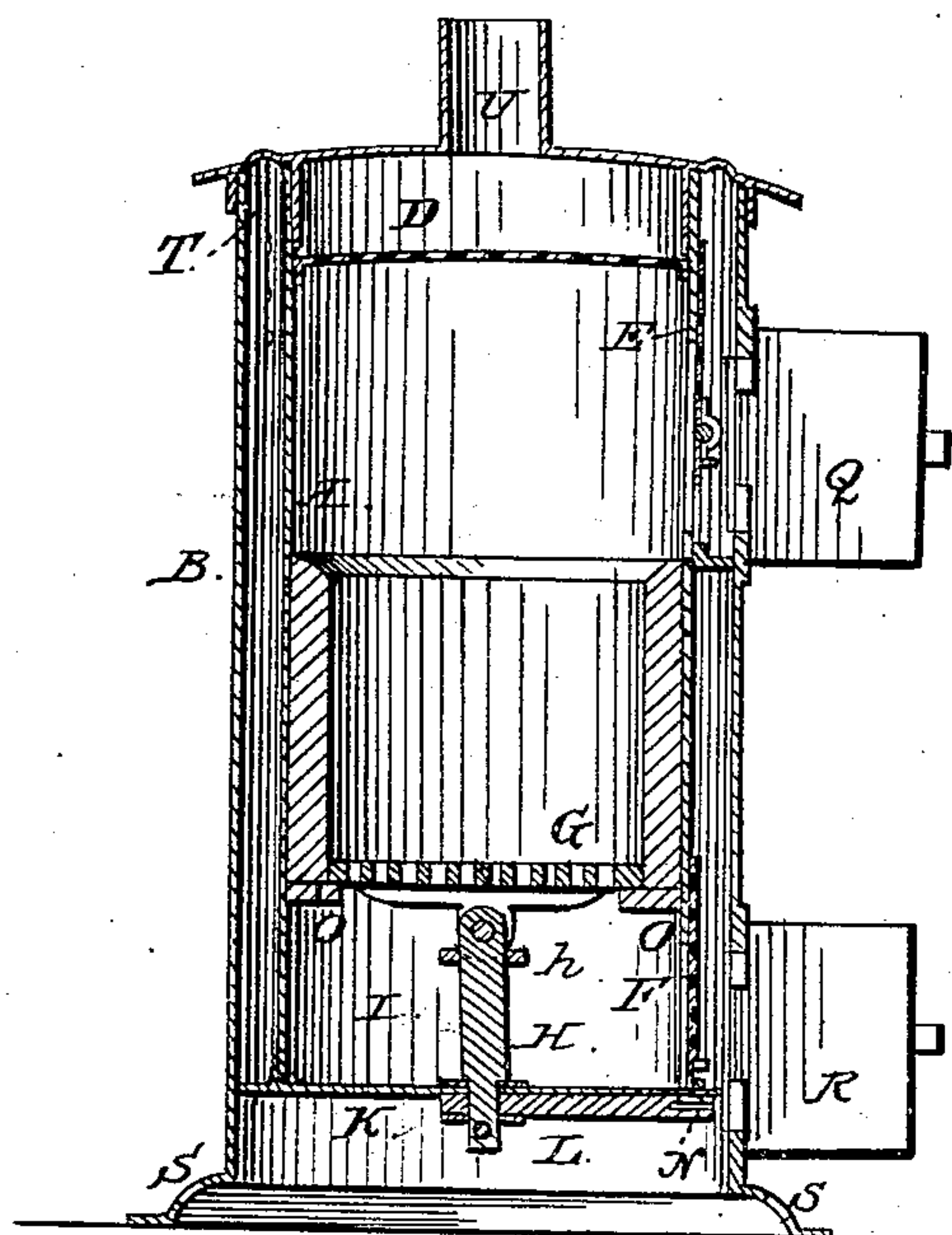


Fig. 1.

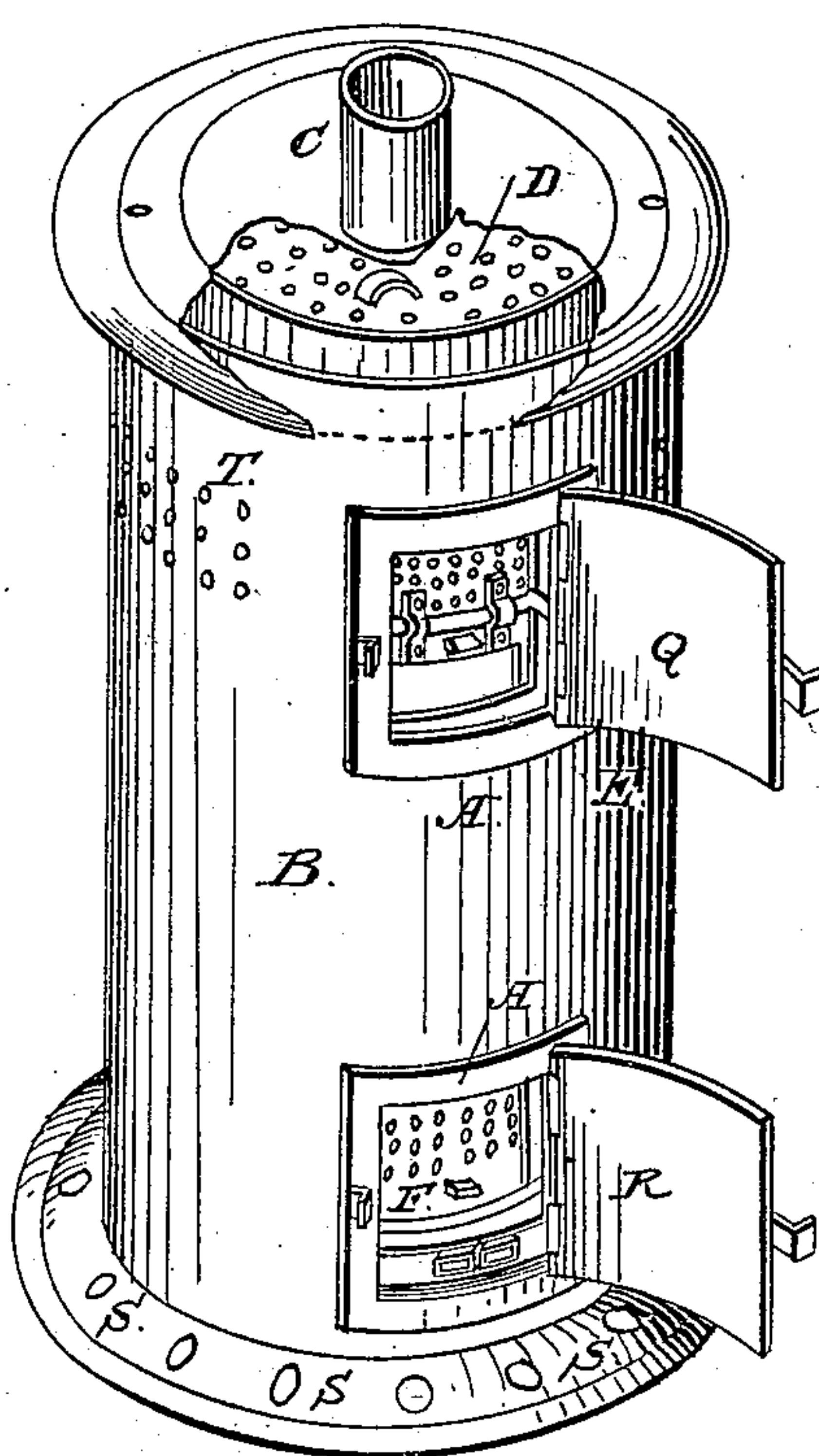
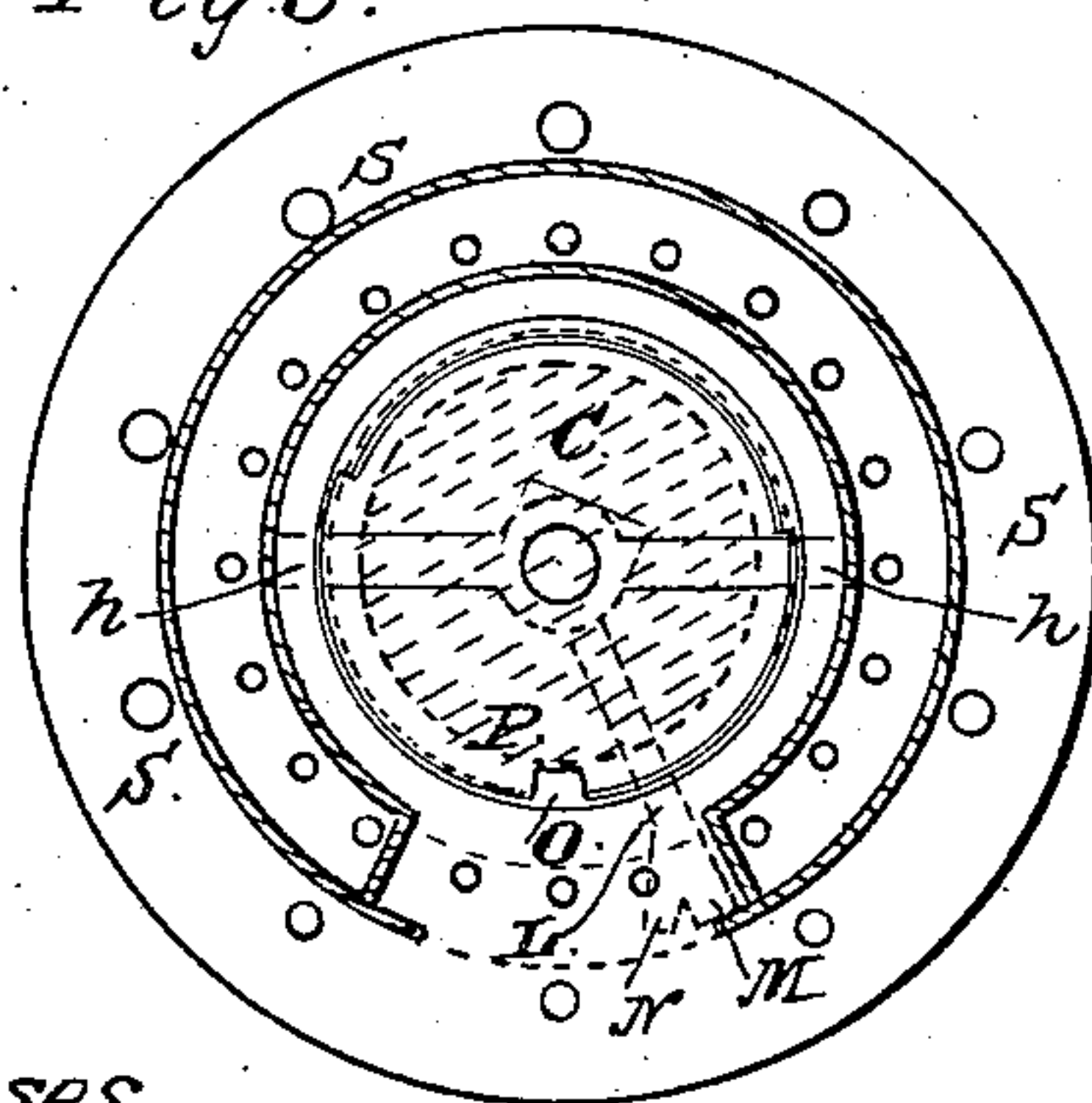


Fig. 3.



Witnesses.

Wm A Barnado
J. H. M. Kean

Inventor

Jacob Stone
by Crosby Halsted Gould
his Attorneys

United States Patent Office.

JACOB STONE, OF BELVIDERE, NEW JERSEY, ASSIGNOR TO HIMSELF AND
ABRAM F. RANDOLPH, OF WASHINGTON, DISTRICT OF COLUMBIA.

Letters Patent No. 81,118, dated August 18, 1868.

GRATE OF RAILROAD-CAR STOVES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JACOB STONE, of Belvidere, in the county of Warren, and State of New Jersey, have invented certain Improvements in Stoves Suitable for Railroad-Cars; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practise it.

The object of my invention is to furnish a stove adapted for use in railroad-cars, and which, by reason of its peculiarities of construction, will not, in case of accidents or overturning of the cars, permit any fire to escape from it.

Figure 1 is a perspective view,

Figure 2 a vertical section, and

Figure 3 a bottom view of a stove made in accordance with my invention.

A represents the body of the stove, and which I make of wrought boiler-iron, and B is an exterior cylinder surrounding the stove, and which I prefer to make of Russia iron.

Between the fire-chamber of the stove and the top cover, C, which covers at the same time both the inner and outer cylinder, I place a perforated wrought-iron head or partition, D, and bolt the same securely to the inside of the stove. The perforations are for the purpose of allowing a draught, but the head is intended to prevent any possibility of escape of fire or heated coals in case of an upset or concussion.

E and F are two sliding doors upon the stove, arranged to slide up and down, but not to swing upon hinges, as customary. These doors are also perforated finely, to admit air, and may be bolted securely after the stove is supplied with fuel, so as not to need to be opened until the car has stopped at a station.

G represents the grate, which is centrally hinged to an upright post, H, which is supported in a cross-bar, I, and is made long enough to pass down through the ash-chamber, J, and through the bottom, K, of said chamber, and upon which it rests and is sustained, as shown, and beneath this bottom it is connected with a lever, L, at whose outer end are two sockets, M and N, the former to receive a handle, for the purpose of agitating and raking the fire, without opening the lower door of the stove, and the latter to receive the same handle, in order to turn the grate a little farther around, in order to upset the same when the grate is to be emptied, this upsetting being caused by bringing a projection, O, on rim a, to coincide with a notch or opening, P, in the grate.

It will thus be perceived that, without the need of incurring any risk arising from accident because of opening a door to rake, or even to overturn the whole fire, if need be, the fire in my stove can be managed and regulated without opening any door at all, all cinders and dropping coals being constantly kept confined beyond all possibility of escape, except when fresh coal is to be put in, which need only be done when the car is not in motion.

The outer doors, Q R, upon cylinder B, are not made with perforations, and should be made to fit snugly. S S are air-inlet holes, near the base of cylinder B, to admit air into the space between the stove and the cylinder, and T T are side perforations, near the top of the cylinder, to allow this air, after becoming heated by irradiation from the stove, to pass out into the car.

The cover C is so made as to fit snugly upon both cylinders, and cover them entirely. U is the smoke-pipe, rising from the centre of this cover.

In case of an overturning of the car, it will now be seen that, even if the outer cylinder be torn away by the accident, or the cover C displaced, or the stove be turned upside down, not a particle of fire can escape from any part of the stove, nor can the stove-cylinder or its head, D, be fractured, as neither of them are made of cast iron or fragile material.

The post H confers great strength, in case of accident, by bracing the grate at its centre, and thus preventing its fracture under severe shocks.

I claim the combination, with a car-stove grate, of a central post, arranged to be turned in its bearings, and to which the grate is centrally hinged, substantially as and for the purpose set forth.

I also claim the combination of the grate with the central post, when the latter extends downwards through the ash-chamber, and beyond its bottom plate, and is supported in the latter, so that the grate may be agitated or upset, substantially in the manner set forth.

JACOB STONE.

Witnesses:

H. M. KRUMER,

N. R. CURRIE.