(No Model.)

J. T. HOUCHENS.

STOVE FOR RAILWAY CARS.

No. 386,825. Patented July 31, 1888.

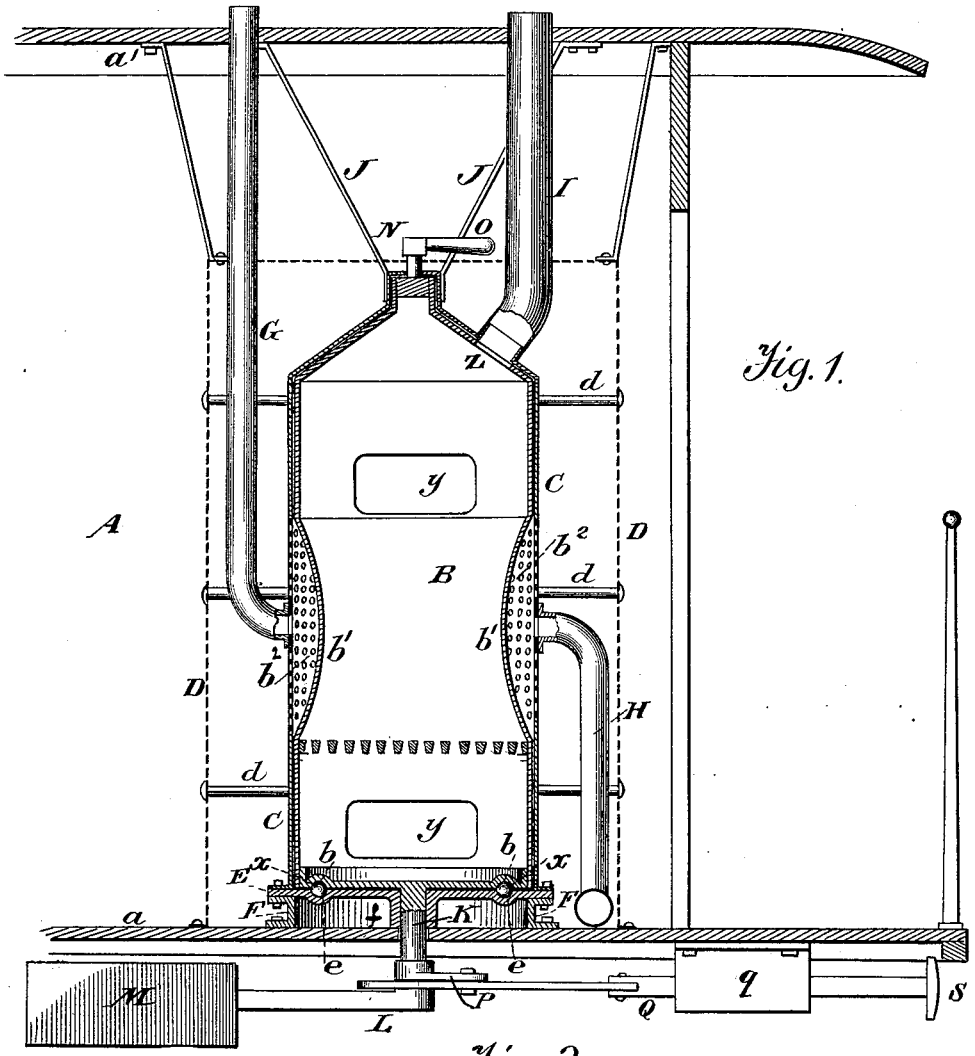
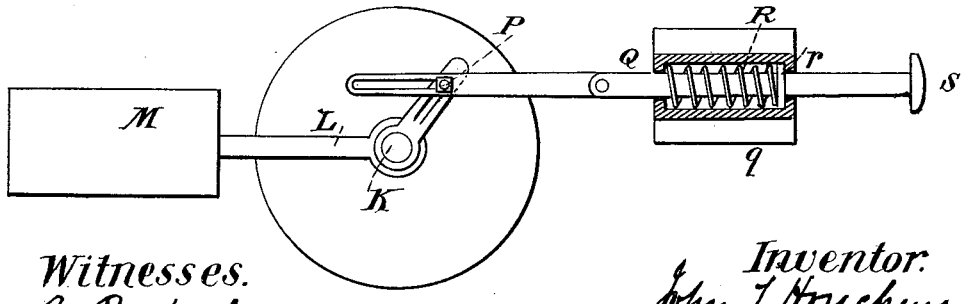


Fig. 1.

Fig. 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

JOHN T. HOUCHENS, OF BALTIMORE, MARYLAND.

STOVE FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 386,825, dated July 31, 1888.

Application filed March 18, 1887. Serial No. 231,390. (No model.)

To all whom it may concern:

Be it known that I, JOHN T. HOUCHENS, of the city of Baltimore, and State of Maryland, have invented certain new and useful Improvements in Stoves for Railway-Cars, of which the following is a specification, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The object of my invention is to provide a stove which will not discharge its contents in the event of the car containing it being overturned.

In the drawings, Figure 1 is a vertical section of a stove embodying my improvement, and Fig. 2 is a plan of a part of my invention inverted.

Similar letters of reference indicate similar parts in the respective figures.

A represents the car, the floor of which is denoted by *a* and the roof by *a'*.

B is a stove, and C a casing of wrought-iron surrounding it. Sufficient space is provided between the stove and the casing to enable the former to revolve within the latter. In the bottom of the stove is a groove, *b*. The stove rests on a plate, E, which also has a groove, *e*, registering with the groove *b* on the bottom of the stove, and several balls, *x*, are put in these grooves, thus allowing the stove to revolve freely on the plate E. The plate E is supported by a casting, F, bolted to the floor of the car, and which forms an air-space, *f*, between the plate E and the floor. The casing C is flanged at the bottom and, together with the plate E, is bolted to the casting F. The stove B is contracted in the middle, as shown at *b'*. The casing C conforms to the shape of the stove except at this contracted part, where it continues in a straight line, thus forming an air-chamber, b^2. The casing C is perforated at this point to allow the heated air to escape. A pipe, G, leads from the chamber b^2 through the roof of the car, by means of which cold air is supplied to the chamber. A pipe, H, leads out from the chamber and conveys hot air along the side of the car. The stove B is provided with the usual apertures, *y y*, for feeding and for the removal of ashes; but there are no doors to these apertures. The casing C is also provided with similar apertures, which can be made to register with those in the stove, and the said latter apertures are provided with doors in the usual way. An aperture, Z, is provided in the upper part of the stove for the escape of smoke. The aperture Z registers with the one in the casing C, with which the smoke-pipe I connects. The casing C is firmly held at its upper end by means of braces J J, bolted to it and to the roof of the car.

D is a wire work fender surrounding the stove. This fender is secured to the floor and ceiling of the car and attached to the sheet-iron casing by means of the studs *d*. The object of the fender is to prevent persons from being burned by coming in contact with the stove in the event of accident. The studs *d* will keep the wire-work from being forced toward the stove in case the whole apparatus gets adrift in a collision, as will be readily understood.

A pintle, K, firmly attached to the bottom of the stove, passes loosely through the plate E and the bottom of the car and has attached to it a lever, L, which carries a weight, M. Attached to the upper part of the stove is another pintle, N, which passes through the casing C and the wire-work fender D. The pintle N is provided with a handle, O, for the purpose of revolving the stove when it may be necessary in order to make the apertures in the stove and casing register. The weighted lever is so arranged that when the apertures in the stove and the casing register it will lie in a direction longitudinally of the car.

Referring to Fig. 2, P is an arm secured to the pintle K, and Q is a jointed bar supported in a box, *q*, attached to the bottom of the car. The bar Q has a head, S, which acts as a bumper. The bar extends back toward the end of the car to within a short distance of the ordinary bumper attached thereto. A spiral spring, R, surrounds that part of the bar which is in the box, and the bar has a collar, *r*, against which the spring bears. The bar Q is slotted, as shown, and is connected to the arm P, which is also slotted, by means of a bolt which is loose enough to allow it to have play in the slots. This play is necessary in order to allow the stove to be turned independently of the bar Q.

The apparatus will operate as follows: Supposing the car should turn over on its side, the weighted lever would fall to a vertical position, thus turning the stove around, so that

the apertures therein would not register with the apertures of the casing, and thus prevent the burning coals from scattering. Should there be a collision of sufficient force to cause the cars to telescope, the bar Q would be driven forward and carry the pin P with it, thus revolving the stove, and if it should be overturned or set adrift the burning coals could could not be scattered.

Having described my invention, I claim—

1. In combination with a fixed base-plate supported from the floor of a car having a central hole therein, a stove having a pintle at its bottom which passes through the hole in the said base-plate, and another pintle at its upper end, and a fixed casing which surrounds the said stove fastened at its lower end to the said base-plate and at its upper end provided with a hole in which the upper pintle rests, the said stove and its pintles being adapted to turn independently of the said casing and the base-plate, substantially as and for the purpose specified.

2. In combination with the floor of a car, a plate supported from the said car-floor having a central hole therein, a revoluble stove on or over the said base-plate having a pintle which projects through the hole in the said base-plate and through the floor of the car, carrying an arm with a weight at its end, and a casing which surrounds the said stove, substantially as and for the purpose specified.

3. A stove contracted in the middle and a casing surrounding said stove, combined with a pipe for conveying cold air to the chamber formed by the casing and the contracted portion of the stove, and a pipe for conveying the heated air therefrom, substantially as described.

4. A stove having a pintle projecting through the floor of the car, said pintle having an arm attached thereto, and a casing surrounding said stove, combined with a bar, mounted in a box attached to the floor of the car, attached to said arm and adapted to revolve the stove in the event of the cars telescoping, substantially as described.

In testimony whereof I have hereunto set my hand and seal.

JOHN T. HOUCHENS. [L. S.]

Witnesses:
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