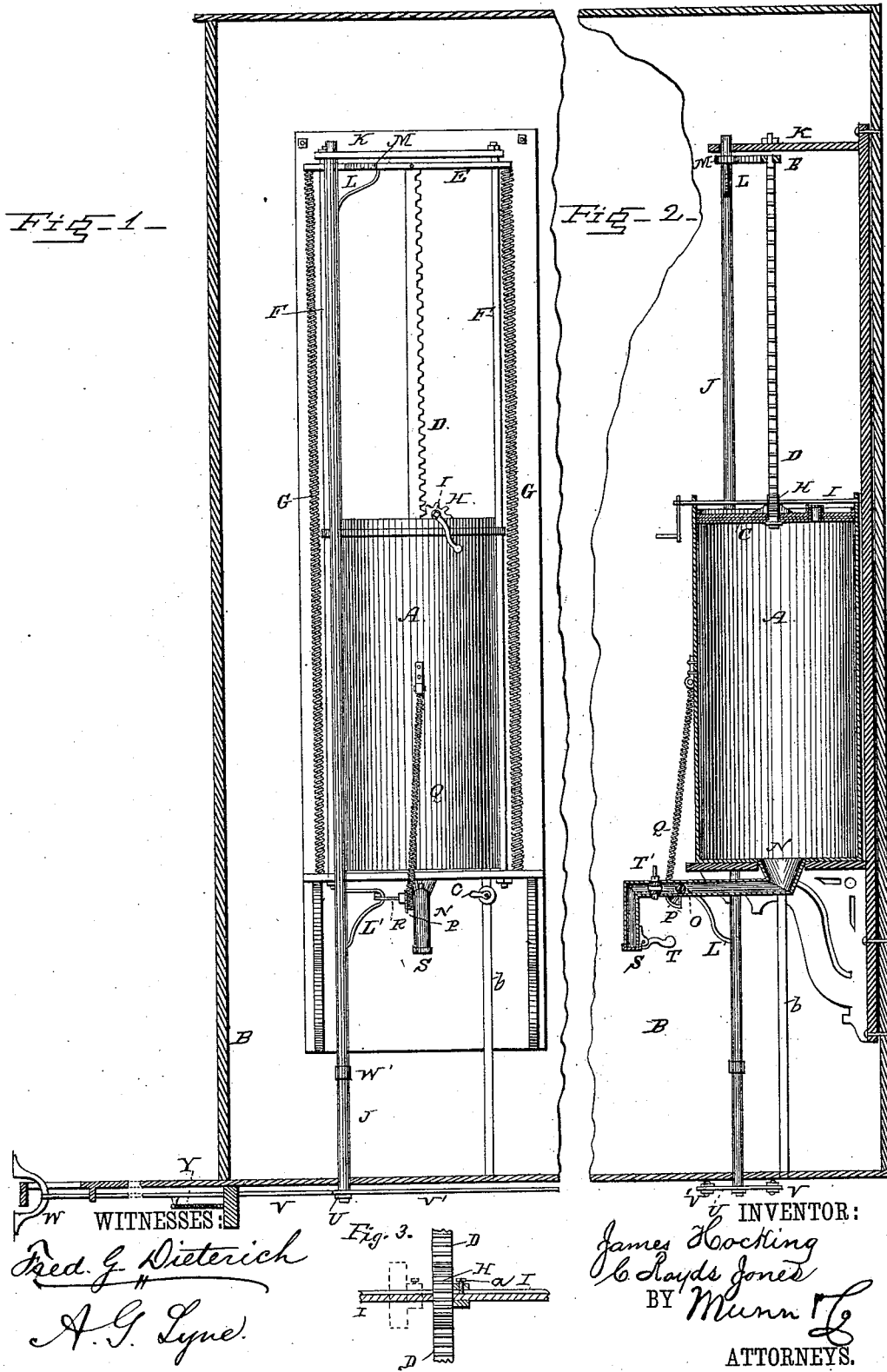


(No Model.)

J. HOCKING & C. R. JONES.  
FIRE EXTINGUISHER FOR RAILROAD CARS.

No. 306,615.

Patented Oct. 14, 1884.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

JAMES HOCKING AND CLEMENT ROYDS JONES, OF DENTON, NEBRASKA.

## FIRE-EXTINGUISHER FOR RAILROAD-CARS.

SPECIFICATION forming part of Letters Patent No. 306,615, dated October 14, 1884.

Application filed January 19, 1884. (No model.)

*To all whom it may concern:*

Be it known that we, JAMES HOCKING and CLEMENT ROYDS JONES, of Denton, in the county of Lancaster and State of Nebraska, have invented a new and useful Improvement in Fire-Extinguishers for Railroad-Cars, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, forming part of this specification.

This invention relates to devices for automatically discharging a tank of water or other fire-extinguisher into a railway-car stove in case of a collision or other serious accident to a passenger-train.

The invention consists of the construction hereinafter described and claimed.

In the drawings, Figure 1 is a sectional view of part of a railway-car, showing a side elevation of our invention; and Fig. 2 is a similar view, showing a rear elevation of the same, partly in section. Fig. 3 is a detail view.

A indicates an upright cylinder, supported on a suitable shelf secured to the wall of a car, B. The cylinder is provided with a piston, C, having a rack-bar, D, secured thereto, and to the upper end of the said bar is secured a cross-head, E, which is adapted to move on guide-rods F, and is connected to spiral springs G, the lower ends of which are attached to the supporting-shelf or other stationary part. The piston is thus adapted to be lifted against the action of the springs G in a manner well known in this class of inventions; and the object of the rack-bar is to facilitate this lifting of the piston by means of a pinion, H, supported on a crank-shaft, I, which is journaled in the upper end of the cylinder. The pinion is made adjustable on the shaft I by means of a set-screw, a, so that it may be shifted on the same to throw it in and out of gear with the rack-bar at will.

J is a rod passing up through the floor of the car, and supported at the upper end in a plate, K, in which it is adapted to be oscillated. The upper end of this rod is provided with an arm, L, which is adapted to be turned with the rod under a lip, M, on the cross-head E, to support the piston in the upper end of the cylinder against the action of the springs

G. The bottom of the cylinder A is provided with a discharge-pipe, N, having a cock O, which is provided with a segment, P, to which a spiral spring, Q, secured to the cylinder is connected, and an arm, R, which is adapted to be set against the tension of the spring by a second arm L', on the rod J, so that when the rod is turned by means hereinafter described the cock will be opened by the action of the spring Q. At the same instant the piston is released and forced downward by the springs G. The pipe N is intended to open in a stove, (not shown,) and is provided with a cap, S, adapted to be held on the end of the pipe by a weighted lever, T, to keep out soot when the device is not in actual use. The action of the piston upon the water or other substance in the cylinder will force the cap S from the end of the pipe to let the liquid or other substance escape into the stove.

T' is a cock in the pipe N, which is to be closed by a hand-wrench preparatory to filling the tank with liquid. The lower end of the rod J, under the car-floor, is provided with a cross-bar, U, to opposite ends of which two rods, V V', are connected and extended to the ends of the car. The outer end of the rod V is shown as provided with a bumper, W, against which the next adjacent car will strike in a collision, and thereby oscillate the rod J. The rod V is provided with a retaining-spring, Y, for holding the bumper to its normal position when not in action, and to prevent jarring from tripping the mechanism.

The rod V' is to be arranged to operate in the same manner as the rod V, and as many rods J may be attached to said rods, or like rods, as there are stoves in the car. The oscillation of the rod J by the mechanism above described will open the cock in the pipe N, and release the spring-actuated piston, and thereby cause the contents of the cylinder to be forced into the stove to extinguish the fire. The rod J is divided at W', and provided with a sleeve, as shown, which is to be adapted to couple the two parts of said rod together, so that the rotation of the lower part will be communicated to the upper part to trip the mechanism. The advantage of so dividing the rod is to enable the upper part to be turned in

setting the device without affecting the lower part.

The tank is to be provided at its upper end, formed by the piston, with an opening, through  
 5 which it is to be filled, said opening being closed by a screw-cap. It is also to have a discharge-pipe, *b*, passing down through the floor of the car, and provided with a cock, *c*,  
 10 by which it may be emptied at will otherwise than through the stove.

What we claim is—

1. The combination, with the spring-actuated piston and the spring-actuated cock, of the rod *J*, having arms *L L'* for holding the  
 15 piston in a raised position and the cock in a closed position, respectively, and means for

oscillating the rod to release the piston and cock, substantially as shown and described.

2. The combination of the cylinder, the piston, the piston-rod, the cross-head, the two  
 20 spiral springs connected to the cross-head, and the two guide-rods for the cross-head, substantially as shown and described.

3. The combination of the car-body, the rod *J*, having coupling *W'*, the cross-bar *U*, the  
 25 rod *V*, the bumper *W*, and the spring *Y*, substantially as shown and described.

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Witnesses:

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