

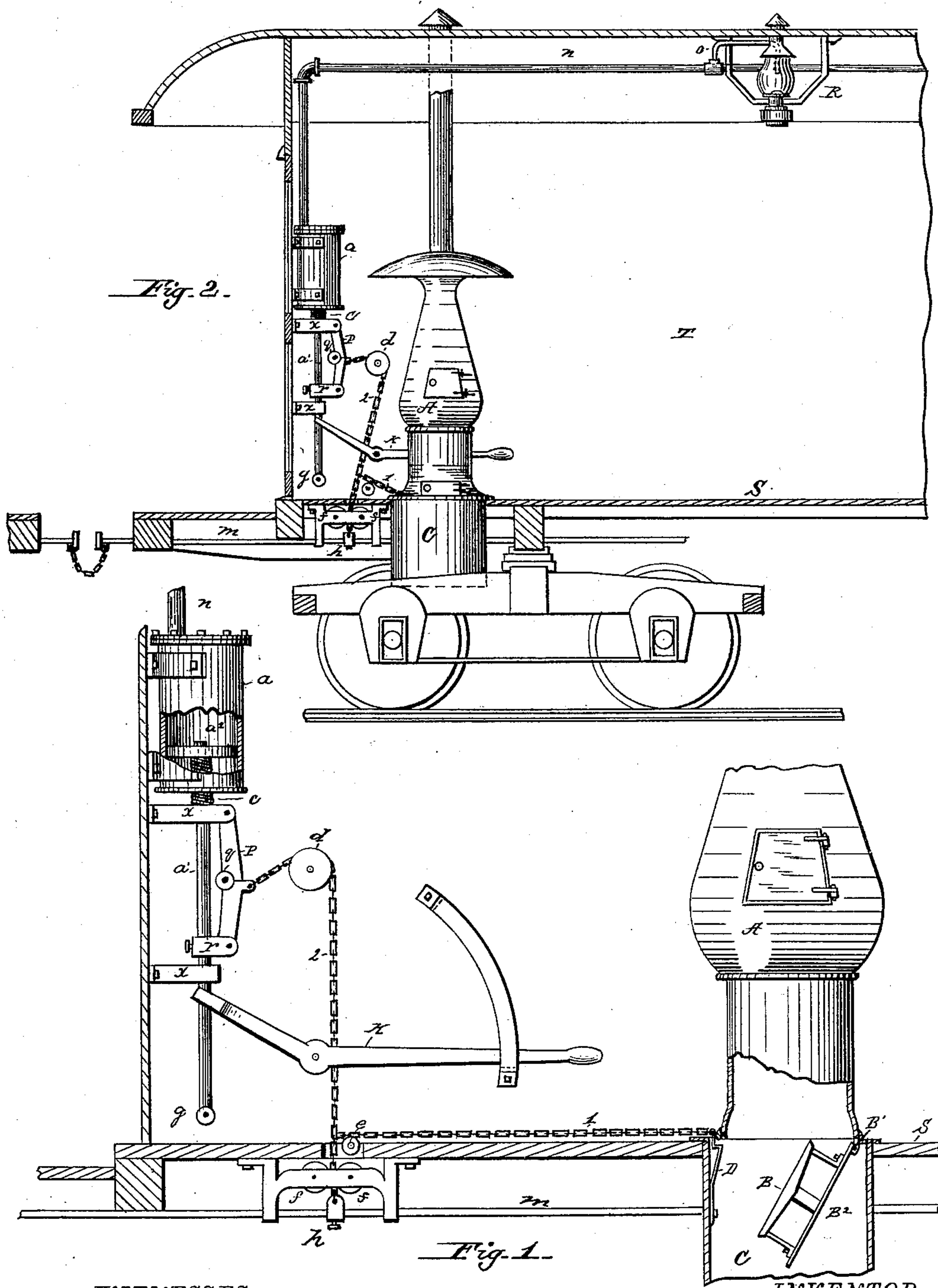
(No Model.)

G. W. ROBINSON.

FIRE EXTINGUISHER FOR CAR HEATERS.

No. 384,642.

Patented June 19, 1888.



WITNESSES.
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FIRE-EXTINGUISHER FOR CAR-HEATERS.

SPECIFICATION forming part of Letters Patent No. 384,642, dated June 19, 1888.

Application filed September 27, 1887. Serial No. 250,946. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. ROBINSON, a citizen of the United States, residing at Marshall, in the county of Calhoun and State of Michigan, have invented a new and useful Improvement in Fire-Extinguishers for Railway-Cars, of which the following is a specification.

The invention has for its object to provide means whereby the fire in car-stoves can be quickly extinguished in case of an accident to the passenger-train, to prevent the fire of the stove from igniting the surrounding wood-work of the car, and also to provide means whereby the lamps can be extinguished at the same time.

My invention relates more particularly to the mechanism whereby air is suddenly compressed and discharged through pipes in a downward current upon the flame of the lamps, thereby extinguishing them, and also the arrangement of the stove-bottom by which means I am enabled to discharge the contents of the stove, including the grate, into a reservoir directly beneath the stove, and which is to contain water or other fire-extinguishing liquids; and also the device whereby the above results are attained automatically when the car assumes an improper position in reference to the car next attached.

In the accompanying drawings, of two figures, Figure 1 is an elevation, partly in section, of my improved extinguisher. Fig. 2 shows it in position in the car with its connection to the car next attached, and also its application to the lamps.

Similar letters refer to similar parts.

Referring to Fig. 1, a is a cylinder closed at the upper end and open at the lower. a^2 is a piston with piston-rod a' , guided by studs x and x , and carrying stud r and friction-roller g . Said piston and rod are forced toward the upper end of the cylinder by means of a spring, c , coiled around the rod a' and operating against the piston a^2 and the stud x , thus forcing the air contained in the cylinder above the piston into the pipe n and through the branch pipe o , discharging it into the lamp-chimney in a downward direction upon the flame, thus extinguishing it.

By means of the lever k operating against

the friction-roller g on the rod a' the spring is compressed and the piston brought down. The jointed bar P is the means by which I lock the piston in this position until required to act. This bar is pivoted one end to the stud x and the other to the stud r on the piston-rod, and jointed in the center in such a manner as to allow the point q to pass only a little beyond a straight line drawn between the end pivots. It will be seen that when the point q has passed to right of said line the lock is broken and the piston released.

Again referring to Fig. 1, A represents a stove, beneath which is a reservoir to contain water or other fire-extinguishing liquid. A plate, B^2 , is so hinged as to close the bottom of the stove from the under side, and is held in position by a spring-catch, D . The grate B rests upon this plate, to which it may be bolted. The spring-catch D passes up through the rim of the reservoir and terminates in an eye. By applying force to this eye the catch becomes disengaged from the plate B^2 and allows it to fall into the reservoir, carrying with it the grate and fuel which must depend upon it for support.

Referring to Figs. 1 and 2, m represents a rod extending the entire length of the car and beneath the floor S , which is provided with suitable bearings to admit of an easy end or sliding motion, and carries an eye. (Shown at h .) To this eye is attached a chain, 2, passing up between two pulleys, f and f , over pulley d , and attached to the jointed bar P , as shown. It will be seen that when the rod m is moved in either direction the chain 2 is brought in contact with one of the pulleys f , and thus drawn down, causing the jointed bar P to become unlocked, as before described.

The chain 1, Figs. 1 and 2, is attached to the eye of the spring-catch D , and, passing over the pulley e , is also attached to the chain 2. Again, when the rod m is moved in either direction the chain 2 is carried down between the pulleys f and f , as before described, carrying with it the chain 1, thus causing the spring-catch D to become disengaged from the plate B^2 , allowing it to fall into the reservoir, as shown in the drawings. The rod m is also provided with suitable bumpers at each end, and may be attached, by means of a chain, to a

like device on the next car, as shown, or to a staple provided for the purpose.

Having thus described my invention and its operations, what I claim, and desire to secure by Letters Patent, is—

10 1. The cylinder *a* and piston *a*², in combination with pipe *n*, extending from said cylinder to a lamp, a spring, *c*, which tends to actuate said piston and force air through said pipe, the piston rod *a*¹, provided with a stud, a fixed stud, *x*, on the body of the car, a jointed bar, *p*, attached at its ends to said studs, and a chain and rod extending from said jointed bar to the next car, substantially as set forth.

15 2. A cylinder, piston, piston rod, and pipe for conducting the expelled air to a lamp, in combination with a spring which tends to force said piston toward said pipe, a lever, *k*, which engages said rod to retract said piston against

the tension of said spring, a device for holding said piston thus retracted, and a chain attached to said device to release it, for the purpose set forth. 20

3. The longitudinally-movable rod *m*, attached to one car and connected with a similar rod of another car, in combination with chains 1 and 2 and their pulleys, a hinged grate, a catch for holding said grate horizontal, released by said chains, a reservoir beneath said grate, an automatic air-forcing device for extinguishing lamps, and a bar for holding said air-forcing device out of operation, chain 2 being connected to said bar and serving to release said piston, substantially as set forth. 25 30

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Witnesses:

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