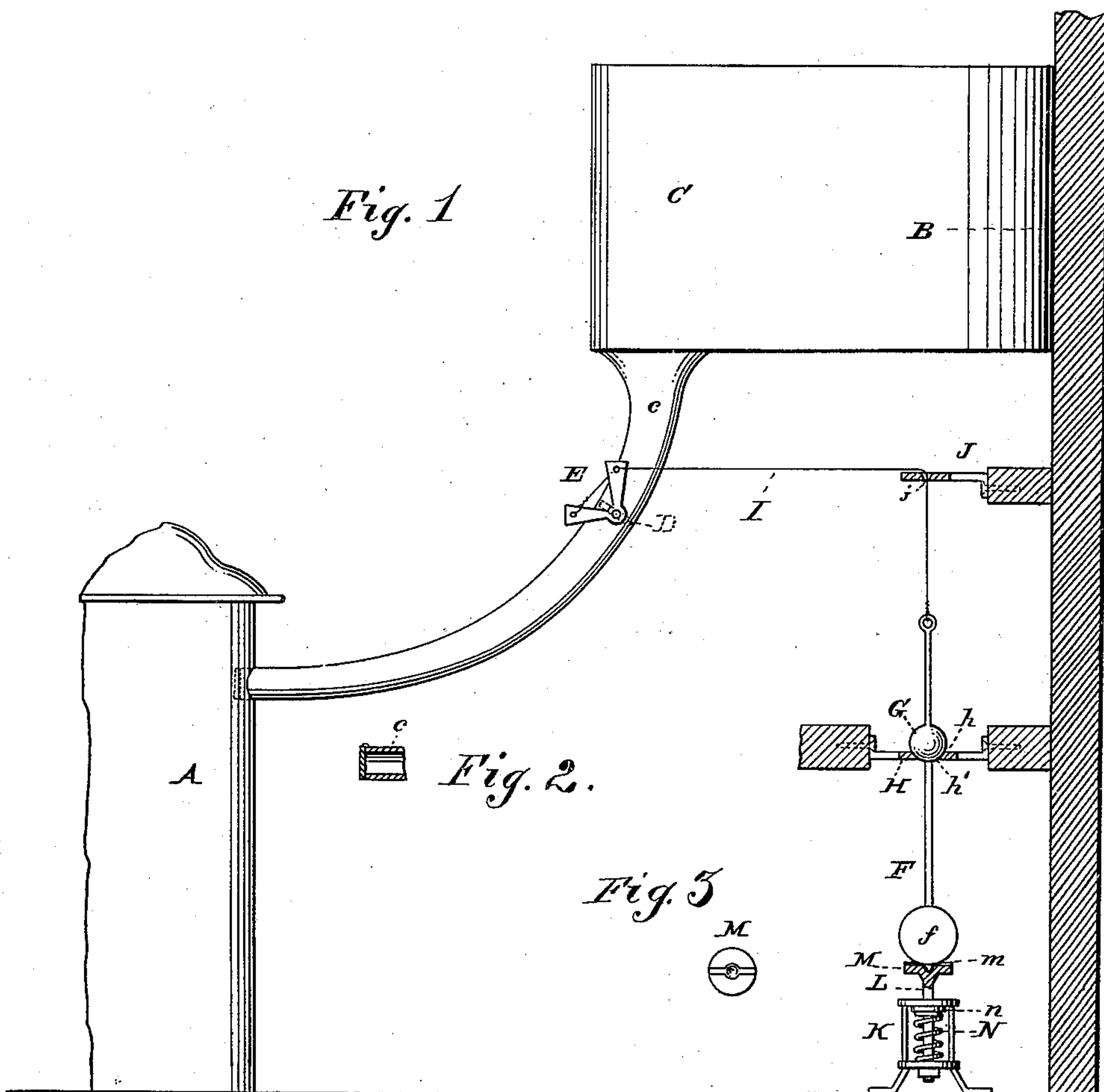


(No Model.)

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AUTOMATIC FIRE EXTINGUISHER FOR RAILROAD COACHES.

No. 376,046.

Patented Jan. 3, 1888.



WITNESSES

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AUTOMATIC FIRE-EXTINGUISHER FOR RAILROAD-COACHES.

SPECIFICATION forming part of Letters Patent No. 376,046, dated January 3, 1888.

Application filed June 25, 1887. Serial No. 242,526. (No model.)

To all whom it may concern:

Be it known that we, A. CARSON RUMBLE, JOHN SYMINGTON, and NORTON STRONG, citizens of the United States, residents of Santa Fé, in the county of Santa Fé and Territory of New Mexico, have invented certain new and useful Improvements in Automatic Fire-Extinguishers for Railroad-Coaches; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings represents a side view of the invention, with certain supporting parts necessarily in section. Fig. 2 represents the pipe *c* in section and the flap-valve in its end within the stove. Fig. 3 represents a plan view of the plates *M* for the support of the pendulum-bar.

The invention relates to improvements in fire-extinguishers for cars; and it consists in the construction and novel combination of parts, as hereinafter set forth.

Referring to the drawings, *A* designates the stove within the car, and *B* the wall of the car, to which is secured at a proper height above the stove a tank, *C*, filled with any efficient extinguishing-fluid. The tank *C* communicates with the stove through the pipe *c*, said pipe having a flap-valve over its end within the stove to prevent the products of combustion from entering the pipe.

D is a valve fitting within the pipe *c* at a suitable point, with its diametrical stem journaled in the sides of the pipe and having on the outwardly-extended end of said stem the angular lever *E*.

F is a pendulum, having the bob *f* and at a suitable point of its length the sphere or ball *G*, which rests in the socket *h* of a bracket, *H*, secured to a proper support within the car, so that the pendulum-rod, which passes through an opening in the socket *h*, can swing freely. The ball *G* forms, with the opening in the socket, a ball-and-socket joint, so that the pendulum can turn freely in all directions.

I is a wire cord passing through a slot in the upper arm of the angular lever *E* and secured

to the lower arm. The said cord runs to and through an eye, *j*, in a bracket, *J*, secured to a proper support, the eye being vertically above the pendulum and a suitable distance therefrom. The wire cord descending from the eye *j* has its lower end secured to an eye in the upper end of the pendulum-rod, so that when the car inclines in any direction, leaving the pendulum vertical, the valve will be opened by means of the wire cord and allow the extinguishing-fluid to descend upon the fire in the stove.

To prevent the pendulum moving with every slight oscillation of the car, and at the same time securing it perfect freedom of action, the following device is attached below it: *K* is a frame secured to a suitable support and having the vertical bar *L* journaled in its upper and lower rails. The said bar has on its upper end a plate, *M*, provided with a central conical recess crossed by a transverse groove, which receives the cone-point *m* on the lower end of the pendulum-bar. The bar *L* is forced upward by the coil-spring *N*, that surrounds it, between the lower rail of the frame *K* and an adjustable collar, *n*, upon it below the upper rail of said frame. The usual inclinations of the car when on the track will not cause the point *m* to disengage from the recess; but the inclination in the act of falling will do so. The shock of a collision is also sufficient to disengage the point *m* from said recess.

Having described our invention, we claim—

1. The combination of the tank situated at a higher level than the stove, the pipe connecting the bottom of tank and the stove, the oscillatory valve having its diametrical rod journaled at both ends in the wall of said pipe, so as to close the pipe when the valve is in its normal position, the pendulum provided with a ball or sphere at a suitable point in its length, the bracket having a circular opening that forms, with said sphere, a ball-and-socket joint, the angular lever on the extended end of the valve-rod outside the connecting-pipe, and the wire or rope connecting the end of the arm of the pendulum above the ball-and-socket joint with the angle-lever and acting on the end of the vertical arm thereof, substantially as specified:

2. The combination, with the tank above

the level of the stove, the connecting-pipe, the oscillatory valve having its diametrical rod journaled at both ends in the wall of the pipe, and the angle-lever on the extended end of said rod outside the pipe, of the pendulum, the ball-and-socket joint formed by the sphere G and the opening in the bracket h, the bracket J, secured at one end to a proper support above the pendulum, and the wire or rope secured to the top of the pendulum, passing thence through an opening in the bracket J, and having its other end so secured to the angle-lever as to act on the end of the vertical arm thereof, substantially as specified.

3. The combination, with a pendulum turning on a ball-and-socket joint, having a conical point at the lowest part of its bob, the lever, valve, and connecting-wire, of the plate having a recess to receive said point, the bar carrying said plate and pivoted in a suitable frame, and the spring forcing said bar upward

and engaging the recess and conical point, substantially as specified.

4. The combination, with the pendulum having a conical point at the lower end of its bob, the ball-and-socket joint on which said pendulum turns, the oscillatory valve, and the angle-lever on the extended end of said valve-rod, of the plate having a recess to receive said point, the bar carrying said plate and supported by a suitable frame, and the spring forcing said bar upward and engaging the recess and conical point, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

A. CARSON RUMBLE.
JOHN SYMINGTON.
NORTON STRONG.

Witnesses:

JNO. P. VICTORY,
C. M. CREAMER.