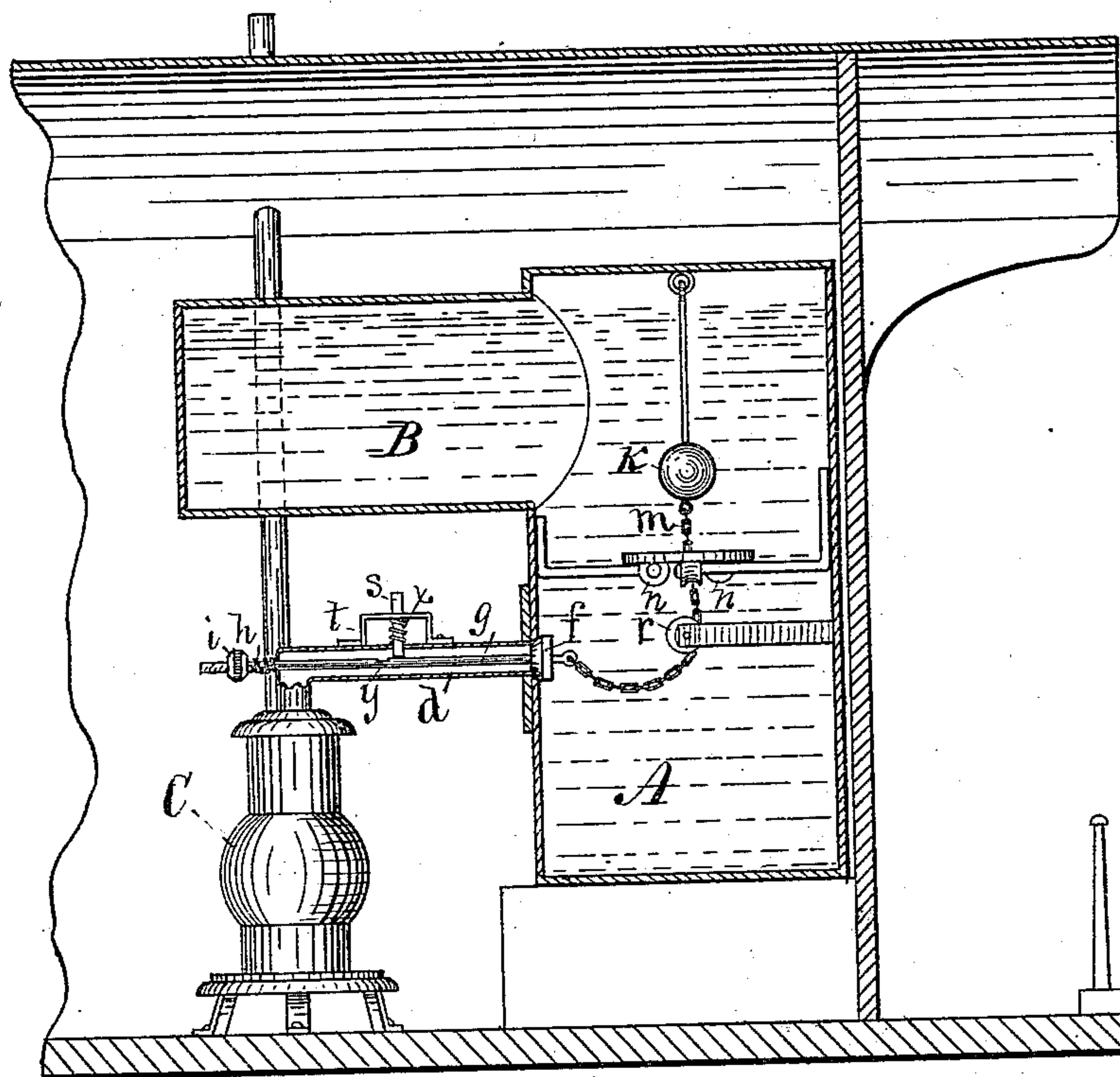


J. BERG.
Fire-Extinguisher for Railway-Cars.

No. 226,220.

Patented April 6, 1880.



Witnesses:

R. G. Orwig,
Frank W. Heers.

Inventor:

John Berg,
By *Thomas G. Orwig,*
Attorney.

UNITED STATES PATENT OFFICE.

JOHN BERG, OF GRINNELL, IOWA.

FIRE-EXTINGUISHER FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 226,220, dated April 6, 1880.

Application filed February 3, 1880.

To all whom it may concern:

Be it known that I, JOHN BERG, of Grinnell, in the county of Poweshiek and State of Iowa, have invented an Improved Fire-Extinguisher for Railway-Cars, of which the following is a specification.

My invention relates to that class of devices that are designed to be combined with a stove or car-heater in a car to prevent the dangers and accidents and loss of life and property incident to the use of stoves and heaters in railway-cars.

Heretofore reservoirs filled with water have been connected with a stove in a car in such a manner that when the car is thrown out of its normal level position on the track a valve that restrained the water would be automatically opened by force of gravity to allow the water to escape from the reservoir and to deluge and extinguish the fire in the stove while the car inclined laterally relative to the track; but no sufficient provision has been made for deluging the fire in the stove when a car becomes inverted or is turned upon end, as frequently occurs in the breaking of bridges; and my object is to form and combine a stand-pipe reservoir with a car and stove or heater in such a manner that it will be operative whenever the car is placed in any abnormal position whatsoever; and to accomplish this desideratum I form an L-shaped reservoir, and combine it with a car and a stove by means of a conduit, a valve-opening and a valve-locking device, as hereinafter fully set forth.

My drawing represents a section of a car containing my apparatus, and illustrates the construction, application, and operation of my complete invention.

A is the main portion of my stand-pipe reservoir, fixed in a vertical position in the corner of the car. It is preferably made of boiler-iron, and may vary in size as desired.

B is a branch extending horizontally from the top portion of the vertical part A.

C represents a stove or car-heater, fixed to the car-floor in a position contiguous to the reservoir A, and underneath its branch B. *d* is a tube connecting the reservoir with the

stove. *f* is a valve in that end of the tube that enters the reservoir. *g* is a valve-stem that extends through the tube *d*. *h* is a spring on the end of the stem outside of the tube, that exerts its force to hold the valve closed.

i is an adjustable nut or thumb-screw placed on the end of the stem to retain the spring in its place and to compress the spring as required to regulate its force.

k is a pendulum-weight suspended from the top and center of the vertical portion of my reservoir. This suspended weight is connected with the valve *f* by means of a chain, *m*.

n n and *r* are pulleys mounted in the reservoir immediately underneath the suspended weight *k* in any suitable way, for the purpose of directing and facilitating the movements of the chain when it is operated by the weight to pull open the valve *f*.

s is a bolt mounted on top of the tube *d* by means of a bearer, *t*.

x is a spring that presses the bolt downward through an opening in the tube *d*, to engage the valve-stem *g*.

y is a notch in the valve-stem, designed to admit the end of the bolt when the valve *f* is open, and to thereby prevent the valve from being closed without first disengaging the bolt *s* from the valve-stem.

In the practical operation of my invention, thus constructed and applied, it is designed to keep the stand-pipe reservoir A B filled with water at all times when there is fire in the stove C; and when, from any cause, the car is turned sidewise or endwise or inverted, the suspended weight *k* will, by force of gravity, pull upon the chain *m*, and thereby withdraw the valve *f* from the tube *d*, and also, at the same time, move the stem *g* sufficiently to allow the bolt *s* to drop into the notch *y* of the stem, and thereby retain the valve in an open position, as required, to allow water in the reservoir to be discharged into the stove through the conduit *d*, regardless of the positions the car, the reservoir, and the stove may assume relative to the track after the valve has been opened by the action of the suspended weight *k*.

I claim as my invention—

The stand-pipe reservoir A B, the stove or
car-heater C, the tube *d*, the valve *f*, the stem
g, having notch *y*, the spring *h*, and nut *i*,
5 the suspended weight *k*, the chain *m*, the di-
recting-pulleys *n r*, the bolt *s*, bearing *t*, and
spring *x*, arranged and combined in a car,

substantially as shown and described, to op-
erate in the manner set forth, for the purposes
specified.

JOHN BERG.

Witnesses:

ERASTUS W. SMITH,
FRANK W. HEERS.