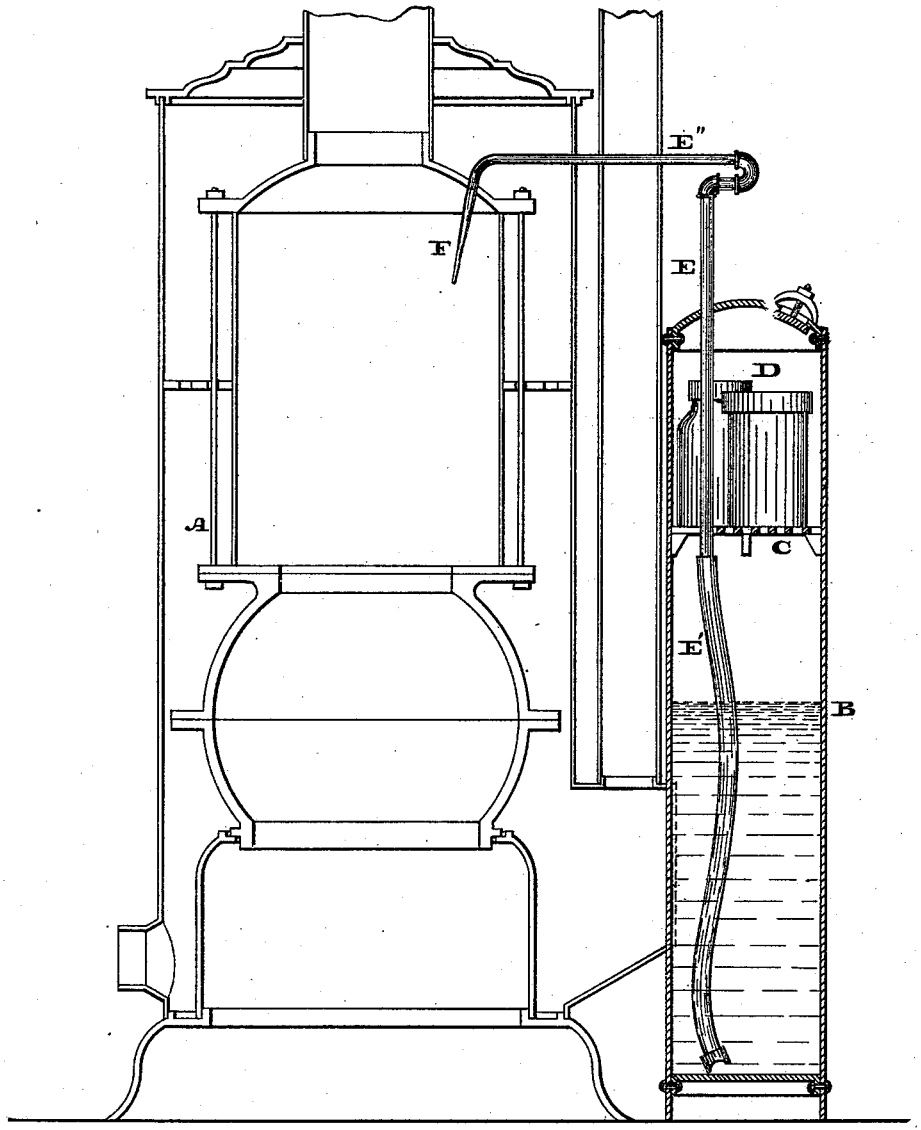
P. P. QUACKENBOSS.

Fire-Extinguisher for Car-Stoves.

No. 208,200. Patented Sept. 17, 1878.



Witnesses:

M. P. Grant,

W. F. Kircher

Inventor:

P. P. Quackenboss,

by John A. Wiedersheim,

ATTORNEY.

UNITED STATES PATENT OFFICE.

PHILIP P. QUACKENBOSS, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN FIRE-EXTINGUISHERS FOR CAR-STOVES.

Specification forming part of Letters Patent No. **208,200**, dated September 17, 1878; application filed August 16, 1878.

To all whom it may concern:

Be it known that I, PHILIP P. QUACKENBOSS, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Means for Extinguishing Fires in Railway-Car Stoves, which improvement is fully set forth in the following specification and accompanying drawing.

My invention relates to an automatical fire-extinguisher for a railway-car stove, in which, in the event of the stove being upset or displaced by accidents, carbonic-acid or other suitable gas is automatically generated and injected into the fire-chamber of the stove so as to extinguish the fire.

The invention consists of an upright cylinder connected to the stove and containing a loosely-fitted diaphragm and a pipe, one end of which projects into the cylinder and the other end is inserted in the fire-chamber of the stove, whereby, when the stove is upset or displaced, the diaphragm loses its support, and the chemicals previously placed thereon are precipitated into the water of the cylinder and the gas is generated.

Referring to the drawing, in which the figure is a vertical section of apparatus embodying my invention, A represents a stove, which may be of ordinary form and construction. B represents an upright cylinder, which is properly supported and connected to the stove by brackets or other suitable means. Within the cylinder is rested a perforated diaphragm, C, on which are placed jars or vessels D, said diaphragm being loosely held in position.

E represents a pipe, which is passed through the diaphragm C, and has connected to its lower end a flexible pipe or tube, E′, reaching to the bottom of the cylinder B. The pipe E is also passed through the cap or covering-plate of the cylinder, and has attached to it a branch, E″, whose outer end is provided with a nozzle or jet, F, which is passed through the wall of the stove, so as to project into the fire or combustion chamber thereof.

The operation is as follows: Sulphuric acid and bicarbonate of soda in proper quantities are placed separately in the jars D, (but other gas-generating chemicals may be employed,) and they remain passive in the jars under ordinary circumstances. A suitable quantity of water is introduced into the cylinder B, the height whereof is determined by the locality of the diaphragm C, which, as has been stated, supports the jars D, and, being perforated, prevents violent upward washing of the water.

In the event of accidents, the stove may either be upset, displaced, thrown on its side, or "telescoped," and the wood-work of the car is liable to be ignited. In this case the acid and soda will be overturned or discharged from the vessels D, and precipitated into the water, whereby the gas is generated. The gas-impregnated water, seeking an outlet, is forcibly directed through the pipes E E′ E″, into the fire or combustion chamber of the stove, and diffused therein over or through the burning mass, which, thus being deprived of oxygen, is quickly extinguished, and all danger of communication of the fire to the adjacent wood-work is overcome.

By raising the cylinder to the level of the pipe leading into the stove, any liquid containing the constituents of carbonic-acid gas to be generated by combustion, known by the technical name of the "dry compound," can be used to flow into the stove instead of being injected under pressure, and by its combustion extinguish the fire almost as quickly.

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

1. The combination, with a railway-car stove, of an automatical fire-extinguisher, the same consisting of an upright cylinder containing a loosely-fitted diaphragm and a pipe, one end of which projects into the said cylinder and the other end is inserted into the fire-chamber of the stove, substantially as and for the purpose set forth.

2. The combination, with a railway-car stove, of the cylinder B, provided with the loosely-fitted diaphragm C, and the pipe E, having the flexible tube E′ and jet or nozzle F, substantially as and for the purpose set forth.

PHILIP P. QUACKENBOSS.

Witnesses:

JOHN A. WIEDERSHEIM,

A. P. GRANT.