

(No Model.)

F. A. WHITE.

AUTOMATIC FIRE EXTINGUISHER FOR RAILROAD CARS.

No. 254,785.

Patented Mar. 7, 1882.

Fig. 1.

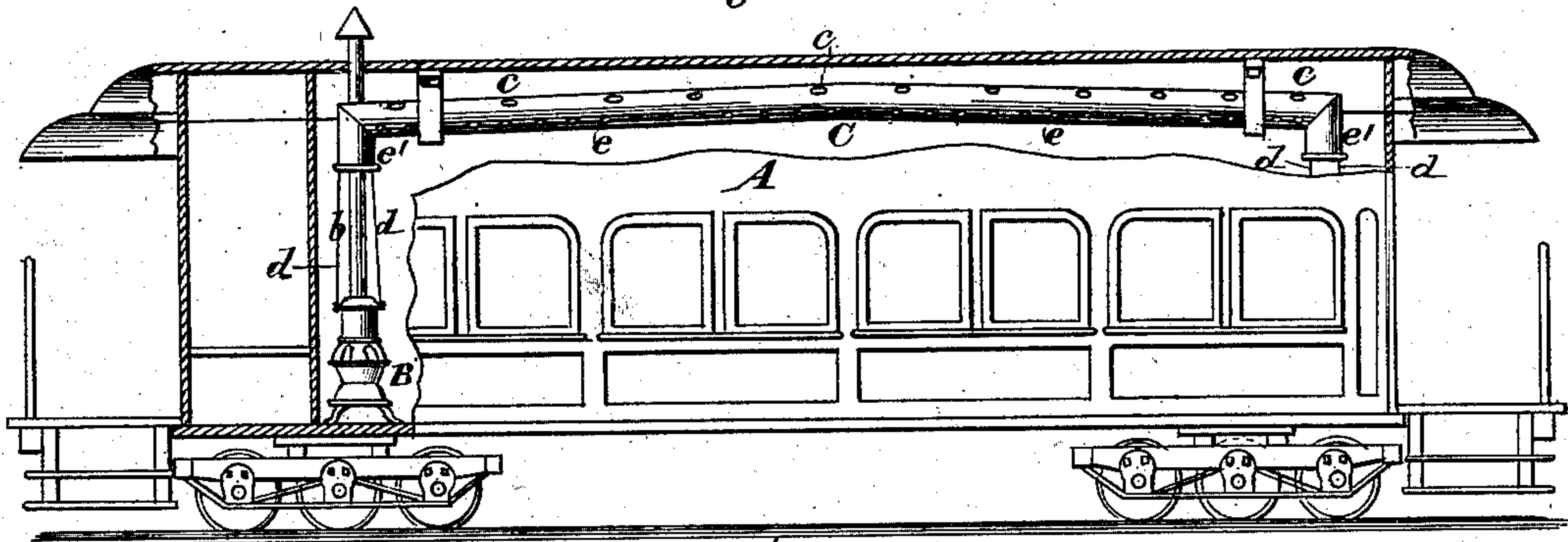


Fig. 2.

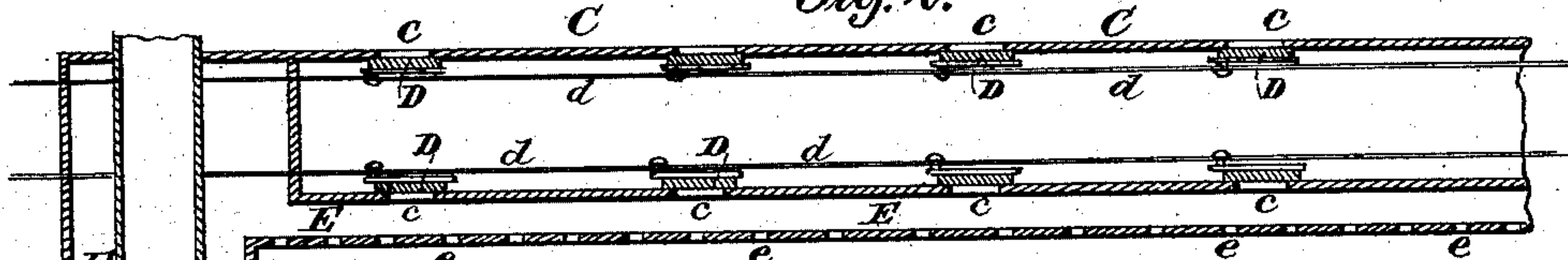


Fig. 3.

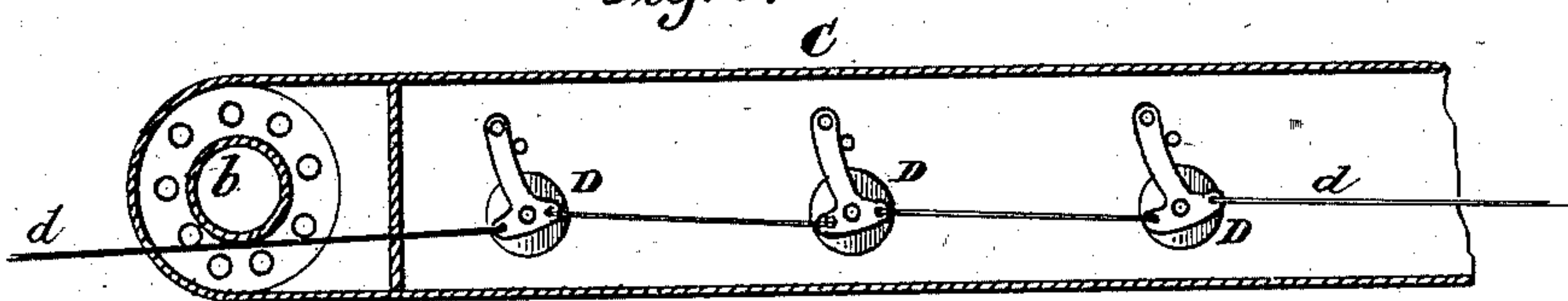


Fig. 4.

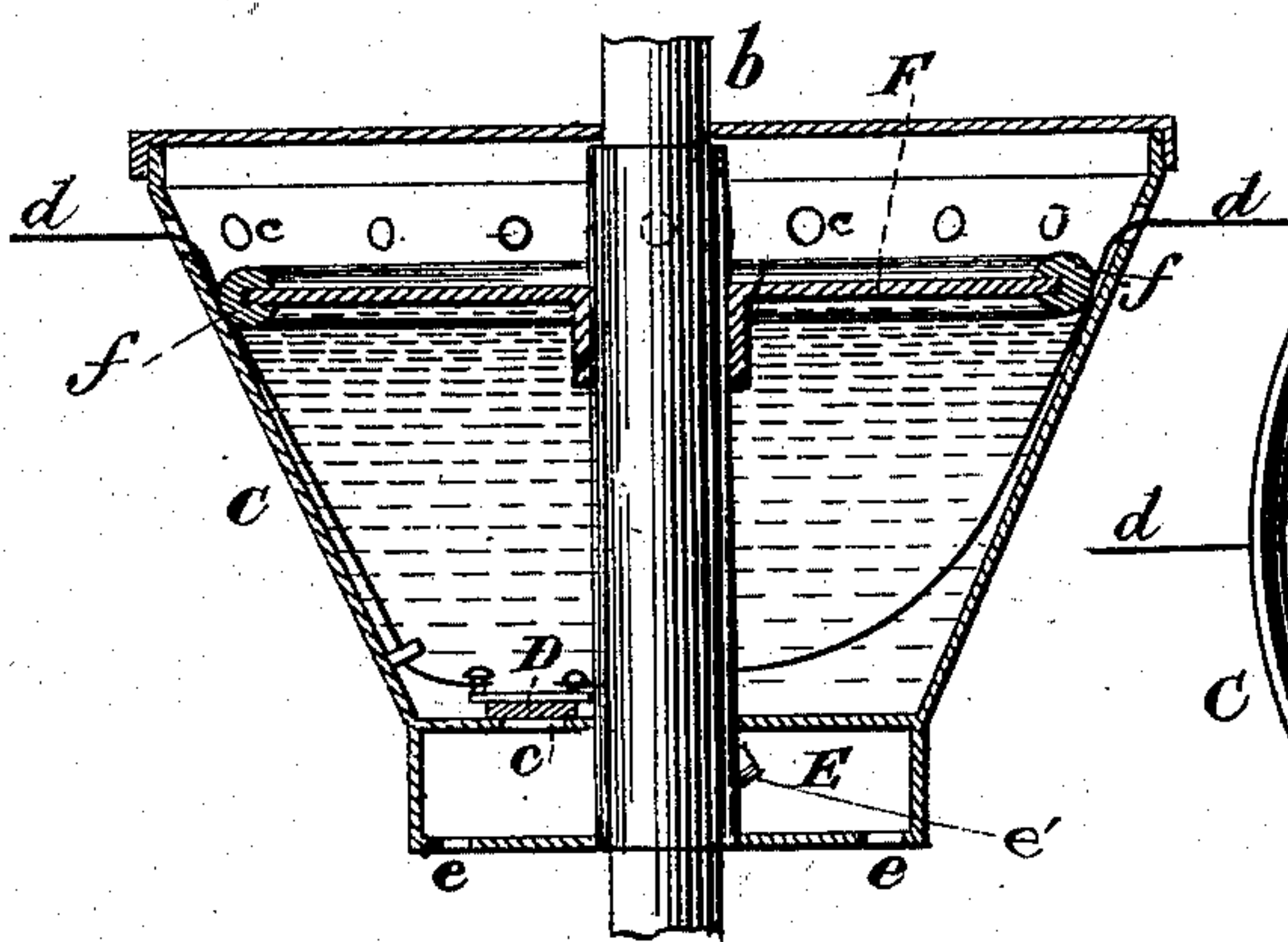
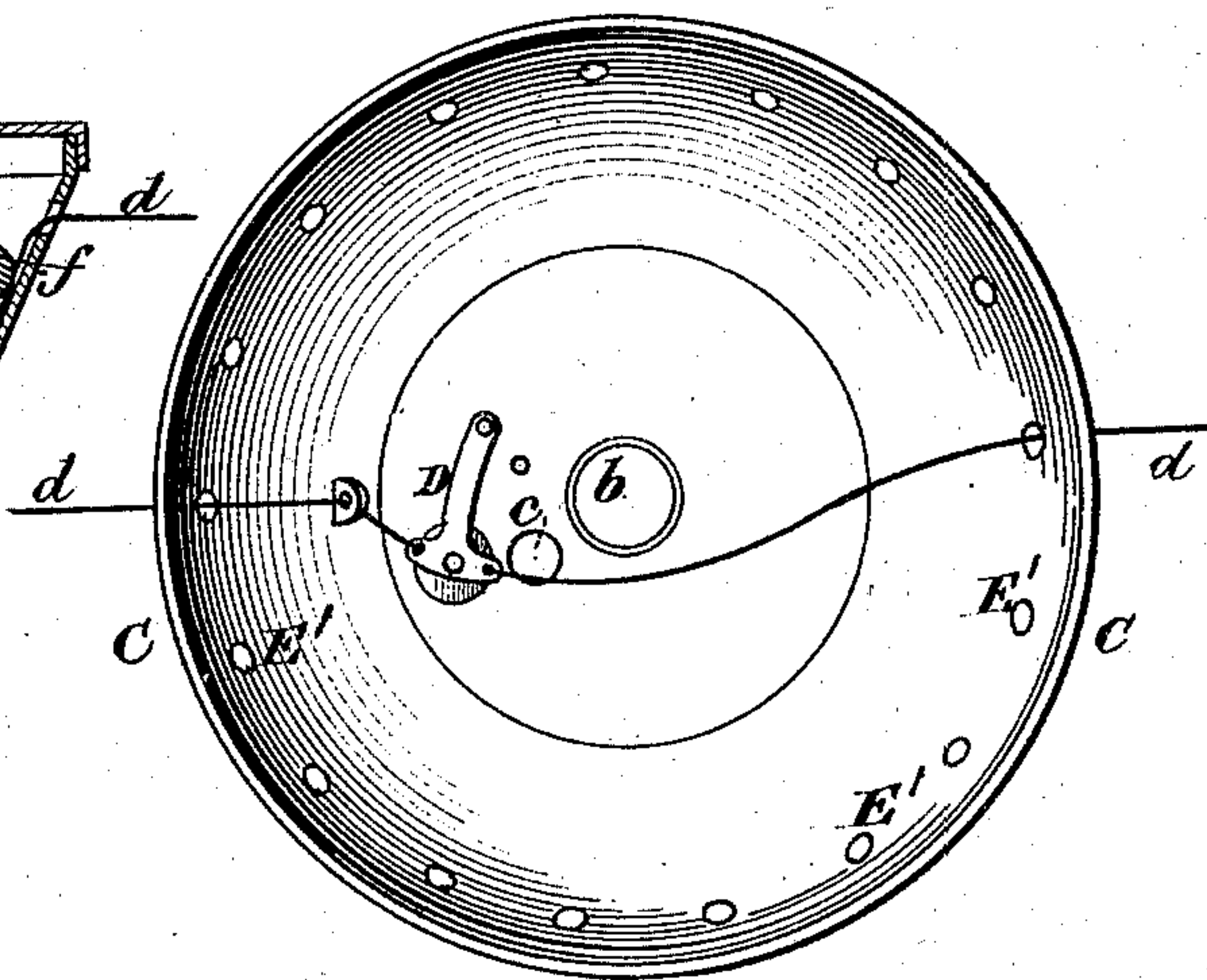


Fig. 5.



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FRANK A. WHITE, OF CORTLAND VILLAGE, NEW YORK, ASSIGNOR OF ONE-HALF TO WM. B. STOPPARD, OF SAME PLACE.

AUTOMATIC FIRE-EXTINGUISHER FOR RAILROAD-CARS.

SPECIFICATION forming part of Letters Patent No. 254,785, dated March 7, 1882.

Application filed February 13, 1882. (No model.)

To all whom it may concern:

Be it known that I, FRANK A. WHITE, of Cortland Village, in the county of Cortland and State of New York, have invented certain new and useful Improvements in Automatic Fire-Extinguishers for Railroad-Cars; and I do hereby declare that the following is a full, clear, and exact description of the invention, which 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 the letters of reference marked thereon, which form a part of this specification.

My invention has relation to automatically-acting fire-extinguishers for railroad-cars, especially adapted for service in case of accident; and the novelty consists in the construction, adaptation, and arrangement of parts, as will be more fully hereinafter set forth, and specifically pointed out in the claims.

Experience teaches that in the frequent collisions and like accidents in railroad-trains the danger of loss in life, limb, and property is augmented by the accompanying disaster of fire from overturned stoves, broken oil-lamps, &c. In view of this fact the objects of this invention are to afford such a construction of a fire-extinguishing device, adapted for service in cases of such accidents, that the train will carry its own fire-extinguishing material, and that such material, being properly housed or confined, will be released by the arbitrary and unfailing action of proper mechanism, and deposited in such manner and places as to extinguish the fire at the point of time before it has gained such headway as to be out of control.

To this end the invention consists essentially in tanks or reservoirs adapted to contain water or proper chemicals in solution, said tanks being provided with valves or stops having connection with such proper portions of the car or its furniture, or the like, in such a manner that the confined water or the like will be automatically liberated by the said connections in case of collision, and deposited not only in sufficient volume upon existing fire in stoves, &c., to extinguish them, but also in other or all parts of the car.

To properly proportion the exits of the water

to different portions of the car a continuous fluid-distributing chamber is formed, such chamber connecting with the interior of the tank through the valves hereinbefore mentioned, and with the interior of the car and with the interior of the stove flue or funnel through properly proportioned perforations or channels, as will be set forth and shown.

For convenience I will describe my invention as embracing a single tank arranged longitudinally with the car; but it will be understood that the location and number of tanks may be varied at will.

The invention is fully illustrated in the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side view of a car, partly in section and partly in elevation, showing the tank arranged longitudinally and connecting with the stove flue or funnel; Fig. 2, a central longitudinal section, showing the distributing-chamber and its connections with the tank and the stove-flue; Fig. 3, a horizontal section of the tank proper, looking downward, showing the pivoted valves and their connections. Fig. 4 is a central vertical section of a modified construction, the tank surrounding the stove-funnel, and connected with the interior of said funnel and with the area surrounding the stove; and Fig. 5, a top plan view of the same, the top removed and the valve open.

Referring to the said drawings, in which similar letters of reference indicate like parts in all the figures, A represents an ordinary passenger-car, and B an ordinary car-stove. These may be of any desired construction, and constitute no part of my invention, it being understood that my extinguishing device is a car attachment adapted to be applied to cars now in use.

C represents the reservoir, arranged longitudinally in the upper part of the car, and connecting with a stove-flue at each end of the car, if desired, or arranged above the stove, as circumstances, having the objects stated in view, may dictate. This reservoir is provided with apertures *c*, arranged above, below, or upon either side, said apertures being governed by pivoted or other valves D, connected

together by a cord or wire, *d*, the ends of which project through opposite sides or ends of the reservoir. The apertures *c* connect the interior of the reservoir C with an adjacent distributing-chamber, E, having perforations *e* and a connection, *e'*, to the flue *b* of the stove B, as shown in Figs. 2 and 4.

To prevent smoke or gas as products of combustion from entering the car through the chamber E *e*, the passage *e'* may be controlled in one direction by a simple clap-valve, *e''*, or a spring and valve, it being understood that the gravital force of the water will force it open in the other.

As shown in Figs. 4 and 5, the reservoir is located directly above the stove, and is provided with a series of apertures, *c*, between which and the surface of the contained water is located a diaphragm-valve, F, having a flexible periphery, *f*, which bears upon the inclined sides of the reservoir. By this construction the water, in case of the capsizing or overturning of the car, would displace the diaphragm-valve F and the water pass out of the apertures *c*.

The operation of the device will be obvious. The cord *d*, by one of its ends, may be run over friction-pulleys or through pipes, and be connected to the stove by levers or otherwise in such a manner that the displacement of the stove in case of collision immediately opens the system of valves, the water or liquid chemicals pour into the chamber E, are distributed through the car or around the area of the stove through the perforations *e*, and in sufficient quantities through the channel *e'* and flue *b* to deluge the fire in the stove B, or, if the stove be capsized, upon the burning coals in that vicinity.

The cord may be attached to other portions of the car or its furniture without departing from the principle of the invention, the object aimed at being to open all the valves as nearly simultaneously and instantaneously as may be.

Modifications in details of construction may

be made without departing from the principle or sacrificing the advantages of my invention, the essential features of which are obvious from the foregoing description, taken in connection with the drawings—as, for instance, the operating-cord may be arranged in the distributing-chamber instead of the tank.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a railway-car fire-extinguisher, a reservoir for the fire-extinguishing medium, provided with valved apertures at top and bottom, in combination with the fluid-distributing chamber and operating cords or wires for releasing the valves, the ends of said cords or wires being secured to the stove, as and for the purposes specified.

2. In a railway-car fire-extinguisher, a reservoir for the extinguishing medium, provided with valved apertures at the top and bottom thereof, in combination with a fluid-distributing-chamber having suitable perforations and means for operating the valves which control the apertures in said reservoir, substantially as shown and described.

3. A reservoir for the fire-extinguishing medium and a fluid-distributing chamber, communicating with each other by valved apertures, in combination with a stove-flue, with which said distributing-chamber also communicates, the opening between said chamber and stove-flue being suitably valved, substantially as set forth.

4. The reservoir C, having apertures *c*, and distributing-chamber E, having perforations *e*, in combination with the stove-flue having channel *e'*, valves D, and operating cord or wire *d*, as set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

Witnesses: FRANK A. WHITE.
L. P. HOLLENBECK,
B. A. BENEDICT.