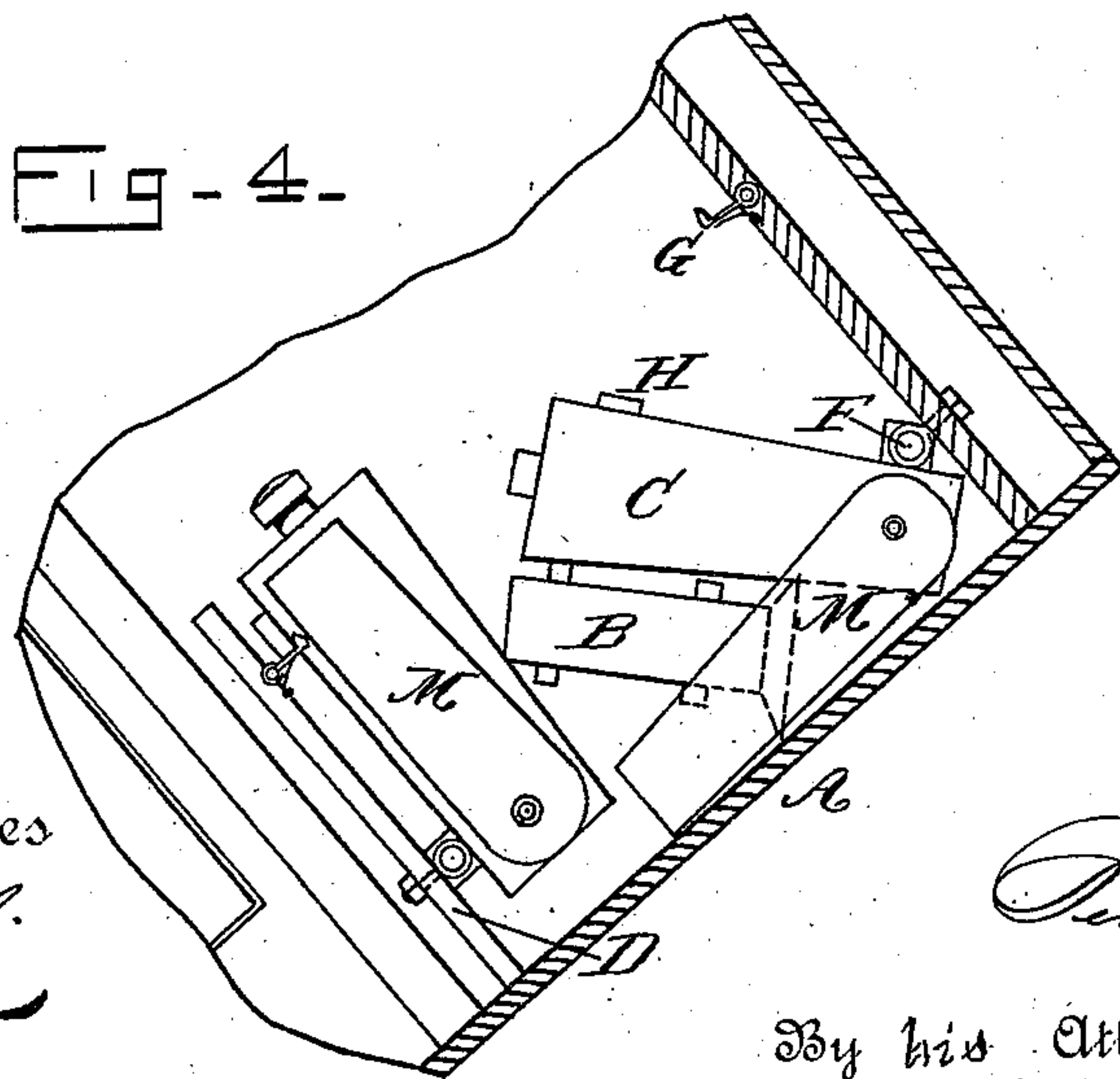
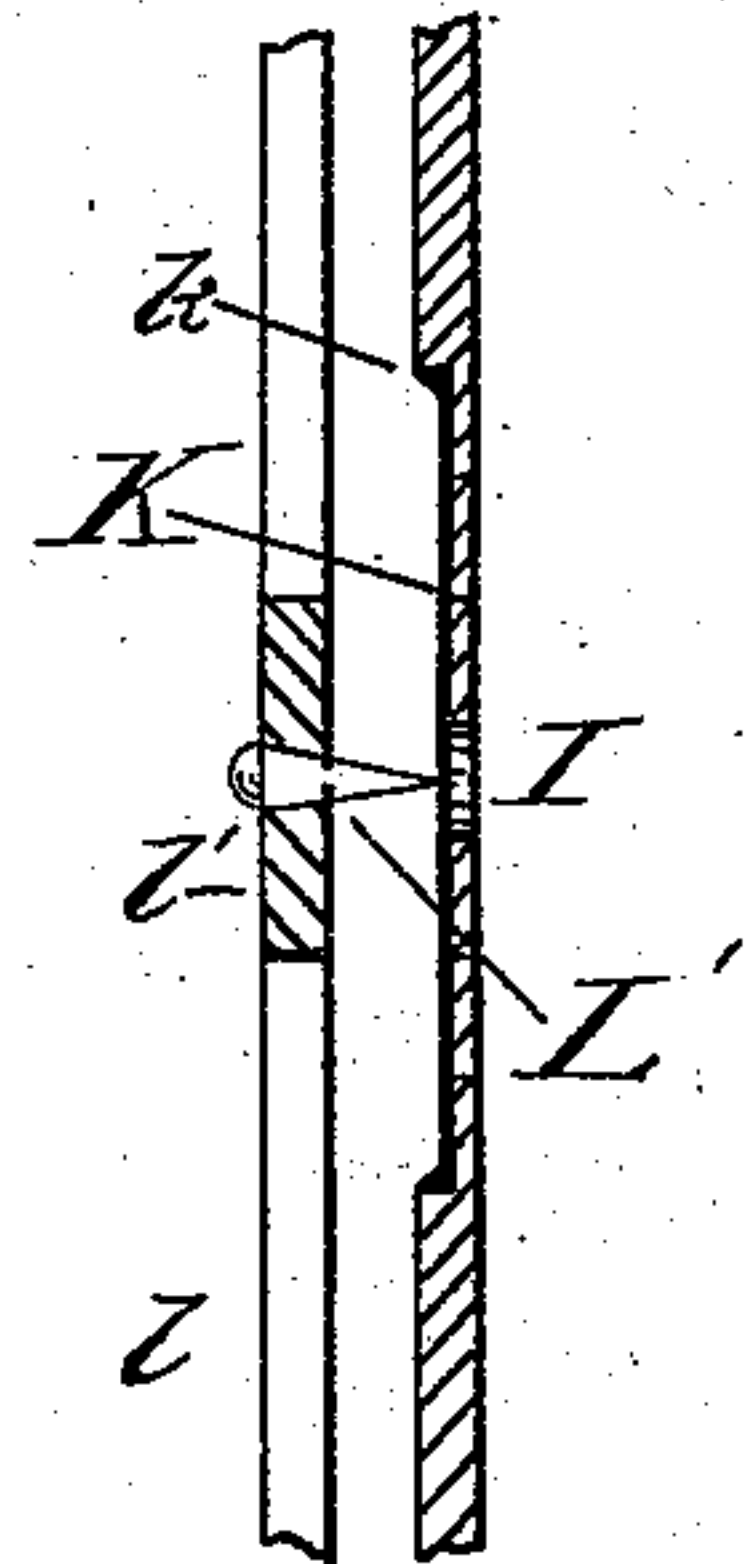
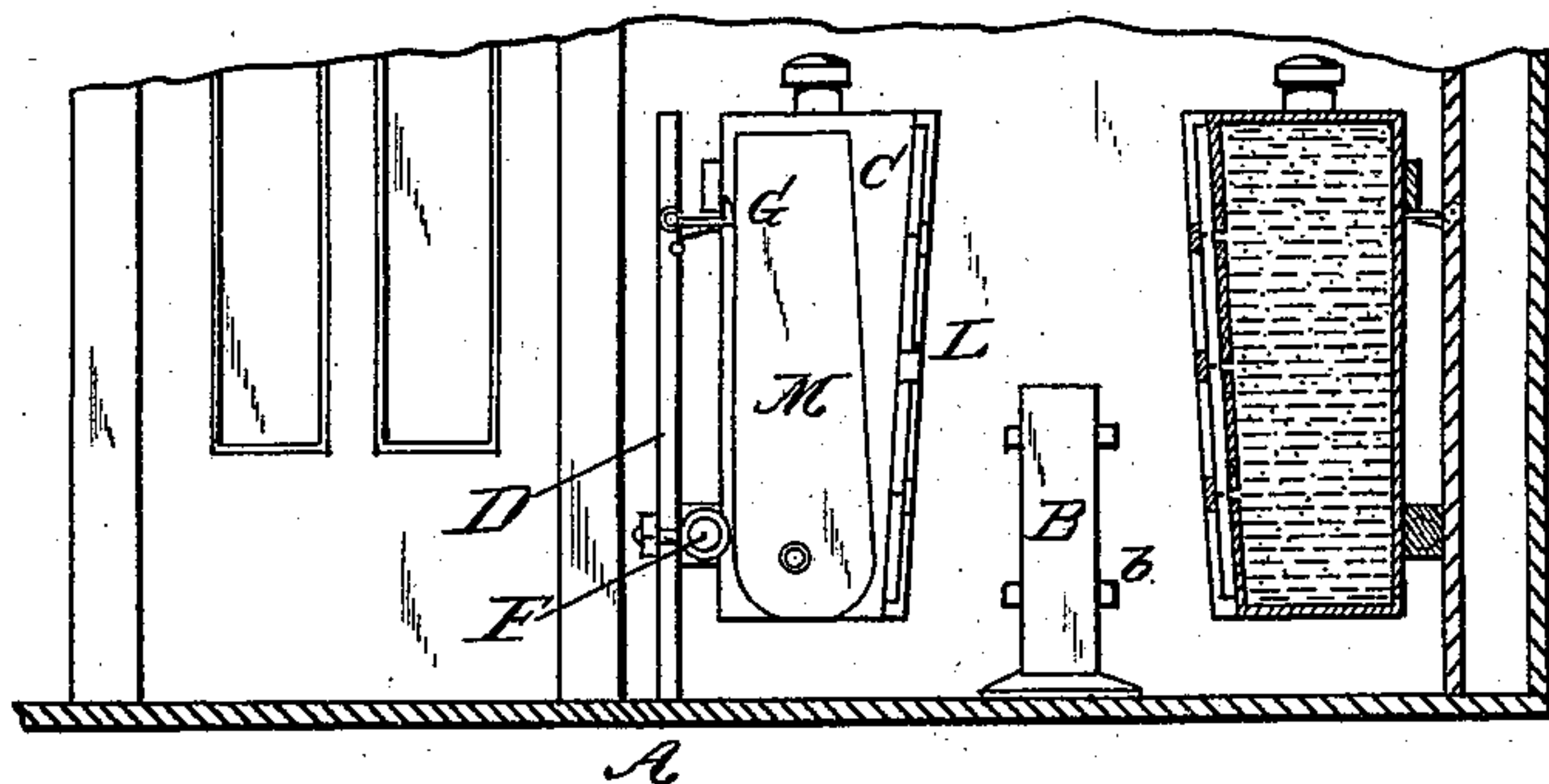
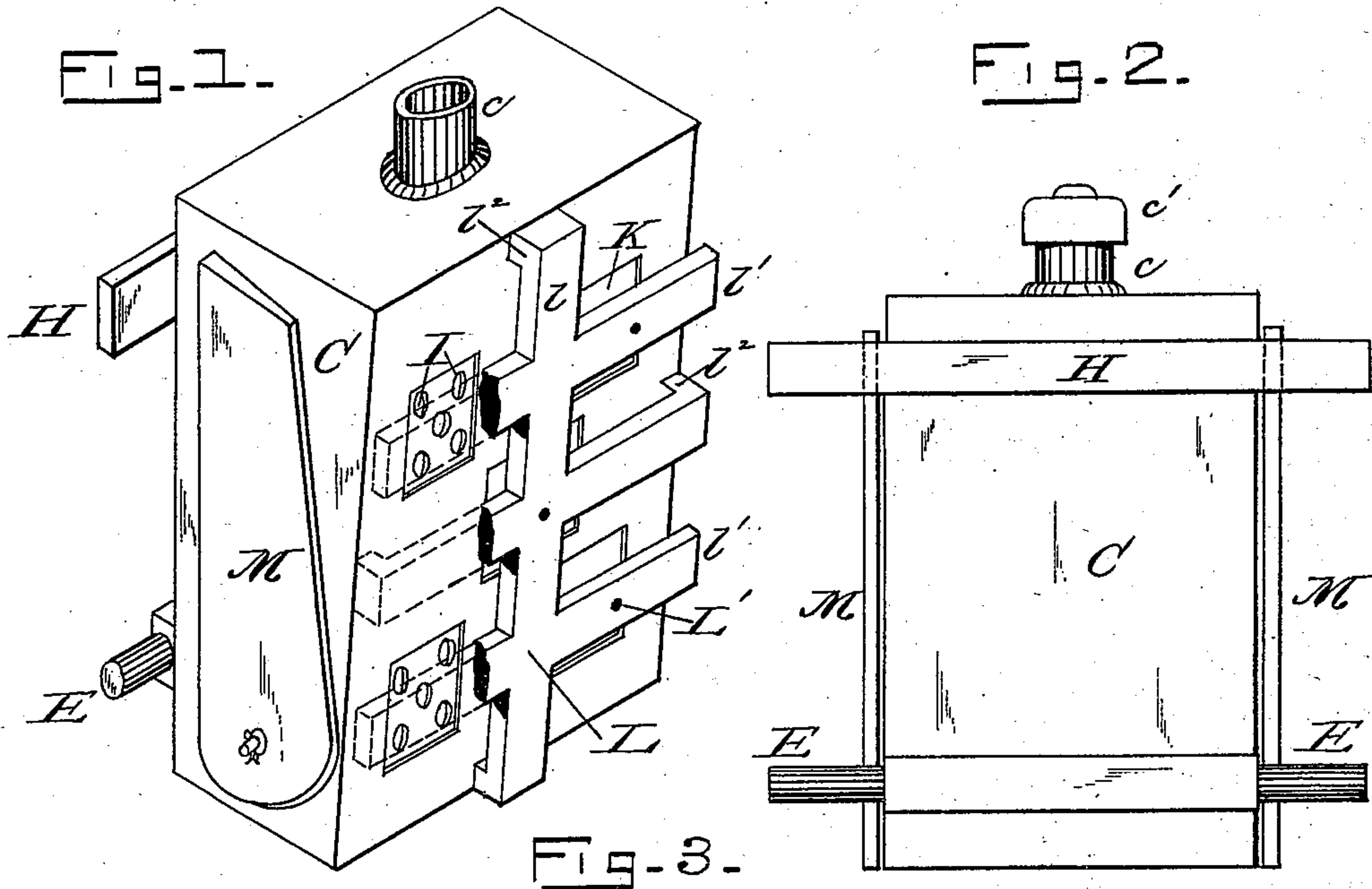


(No Model.)

B. MILLHAUSER.

APPARATUS FOR EXTINGUISHING FIRES IN RAILWAY CARS.  
No. 376,749.

Patented Jan. 24, 1888.



Witnesses  
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# UNITED STATES PATENT OFFICE.

BENEDICT MILLHAUSER, OF SCRANTON, PENNSYLVANIA.

## APPARATUS FOR EXTINGUISHING FIRES IN RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 376,749, dated January 24, 1888.

Application filed March 25, 1887. Serial No. 232,368. (No model.)

*To all whom it may concern:*

Be it known that I, BENEDICT MILLHAUSER, a citizen of the United States, residing at Scranton, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Apparatus for Extinguishing Fires in Railway-Cars, of which the following is a full, clear, and exact description.

My invention relates to improvements in apparatus for heating cars; and its object is to provide means for promptly and effectually extinguishing the fire in a car-heating stove in case the car should be accidentally derailed and upset.

To this end my invention consists in one or more reservoirs of water suitably located near the stove, and so arranged that when the floor of the car is inclined beyond a certain predetermined angle from its normal position one or both of these reservoirs will be thrown against the stove, thereby breaking certain frangible portions of the reservoir and allowing the water to flood the fire.

The amount of fire contained in an ordinary coal-stove is not great, and requires but a comparatively small quantity of water to extinguish it. My invention aims to accomplish this at the outset, before the fire has time to spread to the neighboring wood-work and get beyond control.

The novel features of my invention will be brought out in the following description, and more particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a perspective view of one of my reservoirs, certain parts being broken away. Fig. 2 is a rear elevation of the same. Fig. 3 is a cross-section of a car, showing the relative positions of the reservoirs and the stove. Fig. 4 is a similar view showing the car overturned and one of the reservoirs thrown against the stove. Fig. 5 shows a detail of construction.

Similar letters refer to corresponding parts in all the views.

Upon the floor of the car A stands the stove B, which may be of any desired construction, but is preferably provided with one or more ribs, *b*, as shown. At one or both sides of the stove are located the reservoirs C, one of them

being detachably secured to the side of the car, and the other similarly secured to strong stanchions D, firmly fixed in the floor of the car near the aisle, as shown in Fig. 3, which is a view looking toward the end of the car. These reservoirs C are preferably made of cast-iron in the shape of shallow rectangular boxes, having a neck, *c*, and a cap, *c'*, at the top. They may be slightly wedge-shaped, as shown, in order to render them top-heavy. Each reservoir is provided with two gudgeons, E, at or near its lower rear corners, which turn easily in strong eyebolts F, secured in the sides of the car and in the stanchions D. A detachable fastening device—such as a spring-hook, G, engaging with a cross-bar, H—retains the reservoir in an upright position.

In the front of each reservoir is a series of holes, I, preferably arranged in sets, as shown. A sheet of thin non-combustible frangible material, K—such as copper, brass, iron, glass, or the like—is placed over these holes and attached to the reservoir by a water-tight joint. This is preferably done by forming a shallow recess in the reservoir to receive the sheet of frangible material, which may then be secured by solder, *k*, or otherwise, as clearly illustrated in Fig. 5. In order to insure the breaking of this frangible material, a gridiron, L, which is preferably made of cast-iron or some other brittle material, is attached to the front of each reservoir. It may consist of a longitudinal bar, *l*, and several cross-bars, *l'*. It is held slightly away from the face of the reservoir by lugs *l''* on the ends of the bars. The bars are armed with sharp spurs *L'*, located over the holes I in the reservoir. In the drawings only one spur is shown for each set of holes; but it is obvious that a separate spur may be provided for each hole, if desired.

On each end of the reservoir C is pivoted a wide iron wing, M, the back of which is heavy, so that it normally tends to fall back and rest against the gudgeon E.

The operation of my apparatus is illustrated in Fig. 4. When the car upsets, the wings M drop down, partially or wholly inclosing the space between the two reservoirs and confining the coals that may escape from the stove. The weight of the reservoir detaches it from the fastenings G, and the heavy box of water



falls against the stove, shattering the gridiron L and driving the spurs L' through the thin sheet of frangible material K, thereby releasing the water, which instantly floods the stove and extinguishes the fire. Should the stove be thrown against the other reservoir, it will break the gridiron and cause the water to escape from that reservoir to aid in putting out the flames. The ribs b on the stove assist in breaking the gridirons L. If the shock is excessively severe, the reservoir itself may be broken, thereby emptying the water all the more suddenly. The fire is thus checked and extinguished in its incipency, before it has time to spread.

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

1. The combination, with a car-heating stove, of one or more reservoirs of water detachably secured to the car and provided with non-combustible frangible portions, whereby when the car is overturned the reservoir will be thrown against the stove and the frangible portion thereof broken to release the water, substantially as and for the purpose set forth.

2. The combination, with a car-heating

stove, of a reservoir of water having its lower end pivoted to the car and its upper end held by detachable fastenings, the reservoir being provided with a non-combustible frangible portion or portions, substantially as and for the purpose set forth.

3. The combination, with a car-heating stove, of a reservoir, C, having holes I, frangible material K, and a gridiron, L, provided with spurs L', substantially as and for the purpose set forth.

4. The combination, with stove B, of reservoir C, provided with gudgeons E, wings M, holes I, frangible material K, gridiron L, and spurs L', substantially as and for the purpose set forth.

5. The combination, with car A, provided with stove B, stanchions D, eyebolts F, and detachable fastenings G, of reservoirs C, having gudgeons E, wings M, holes I, frangible material K, and gridirons L, consisting of the bars l', provided with lugs l'' and spurs L', substantially as and for the purpose set forth.

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Witnesses:

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