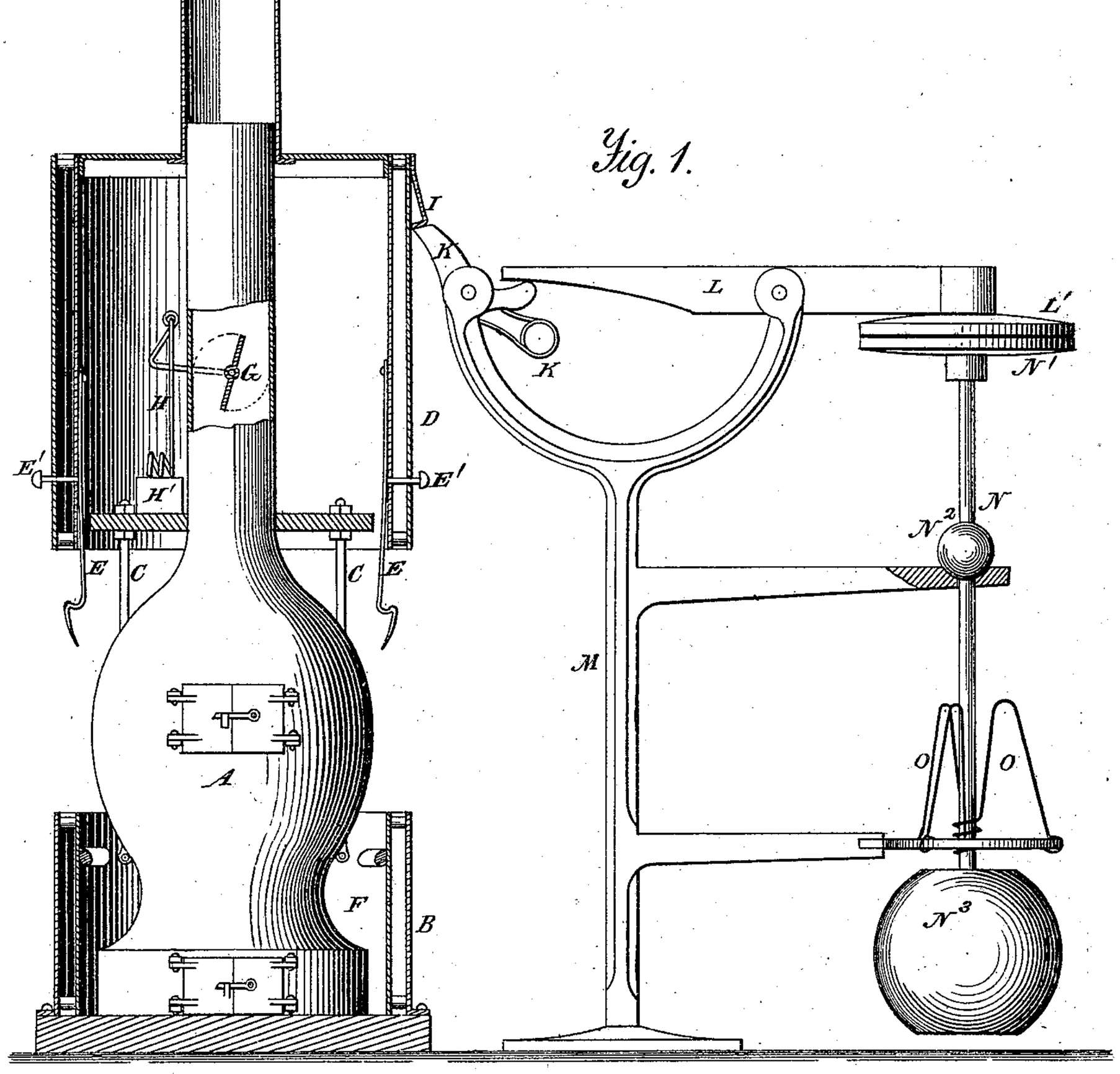
2 Sheets—Sheet 1.

G. W. DISMAN.

CAR-HEATER.

No. 189,086. Patented April 3, 1877.

Fig. 1.



Witnesses.
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Inventor.
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2 Sheets—Sheet 2.

G. W. DISMAN.

CAR-HEATER.

No. 189,086. Patented April 3, 1877.

Fig. 2.

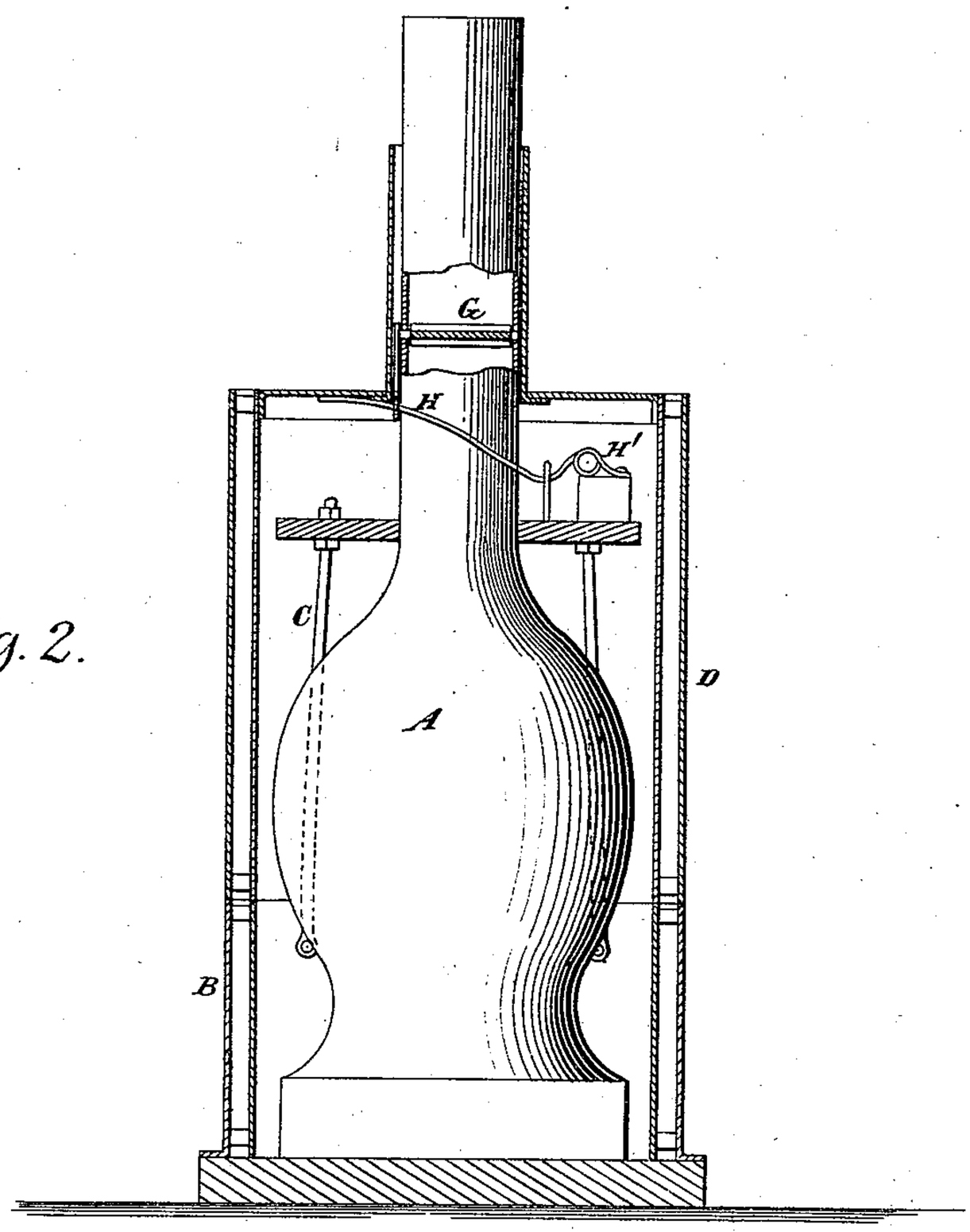
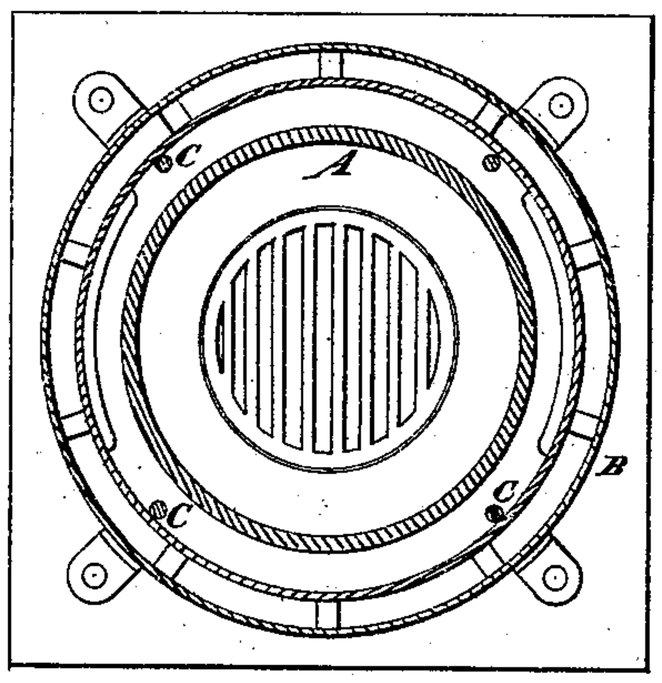


Fig. 3.



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UNITED STATES PATENT OFFICE.

GEORGE W. DISMAN, OF LIMA, OHIO.

IMPROVEMENT IN CAR-HEATERS.

Specification forming part of Letters Patent No. **189,086**, dated April 3, 1877; application filed February 1, 1877.

To all whom it may concern:

Be it known that I, GEORGE W. DISMAN, of Lima, in the county of Allen and State of Ohio, have invented a new and useful Improvement in Car-Heater Cases, of which the following is a specification:

The object of this invention is to provide a car-heater case for railway-cars, which, in case of the overturning or wrecking of the car, will not permit the escape of the fire from the stove or heater. It consists in inclosing the stove in a jacket, which is normally suspended, but which on the tipping or colliding of the car will fall and be locked automatically to the base, and, at the same time, will automatically close a damper in the pipe, thus effectually preventing the escape of the fire from the stove or heater.

In the annexed drawings, making a part of this specification, Figure I is a sectional elevation of the stove-jacket and dropping mechanism, showing the jacket raised. Fig. II is a similar elevation of the stove alone, showing the jacket down, and Fig. III is a horizontal section of the stove and jacket.

The same letters are employed in all the figures in the indication of identical parts.

A is any desired stove, inclosed in a casing of sheet-iron, made double and with an intervening air-space, the two shells being held apart by bolts, which may be hollow. The lower section B of the jacket is bolted firmly to a solid wrought-iron base, which is permanently fastened to the bottom of the car. A number of rods, fastened to the base of the lower section of the jacket, extend up to and attach to the top piece or cap which covers the stove, and hold it down, and, at the same time, serve as guides for the movable section D of the jacket. To this are attached, on opposite sides, spring-catches E, which, when the section D falls, engage detents F on the base, and hold the two sections securely together. Two or more of these catches may be employed. The bolts E′ project through the jacket, and enable the spring-catch to be released.

G is the damper, hung on a crank, to which is attached the elastic rod H, the lower end of which is coiled at H′ to form a spring, the tension of which tends to open the damper, and will do it when the crank is free.

The jacket-section D is supported by a projection, I, which engages the point of a bell-crank, K. It has its pivot on one arm of the bifurcated stand M, the other arm serving as a fulcrum for the lever L, one end of which rests on the free end of the bell-crank K. On the other end is a disk, L′, which overlies a similar disk on the upper end of the vertical rod N. This rod is suspended upon an arm of stand M by means of a ball, N^2, forming a universal joint, on which it swings freely.

On the lower end of the rod is a weight, N^3, which swings in a frame on an arm of the stand M. The frame supports a series of bent-wire springs, the tension of which is such that they will support the weight N^3 against the ordinary oscillation of the car, but will yield when the car deviates from the vertical, or in case of a sudden shock, as in case of collision, when the momentum of the ball will deflect the rod, and cause the disk N^1 to incline so as to lift the disk L′, and depress the free end of the lever L, tripping the detent, and allowing the section D of the jacket to fall instantly by gravity. The spring-catches E will hold the sections tightly together.

In the fall of section D its top will press down the crank, and close the damper. Thus all the fire and incandescent fuel is securely retained within the jacket.

The double wall and intermediate space will prevent the outer jacket from becoming heated to such a degree as to set fire to any wood-work with which it may come in contact.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A movable jacket, in combination with a heater and automatic catches for securing the jacket, and a tripping device for causing the jacket to fall in case of accident to the car, substantially as set forth.

2. In combination with the movable section D of the jacket, a damper, G, placed in the pipe normally open, but which will be

closed automatically upon the fall of the jacket, substantially as set forth.

3. The tripping device, consisting of the lever L, disk L′ N^1, and rod N, freely-swinging weight N^3, and springs O, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE W. DISMAN.

Witnesses:
HINCHMAN S. PROPHET,
F. T. MCHENRY.