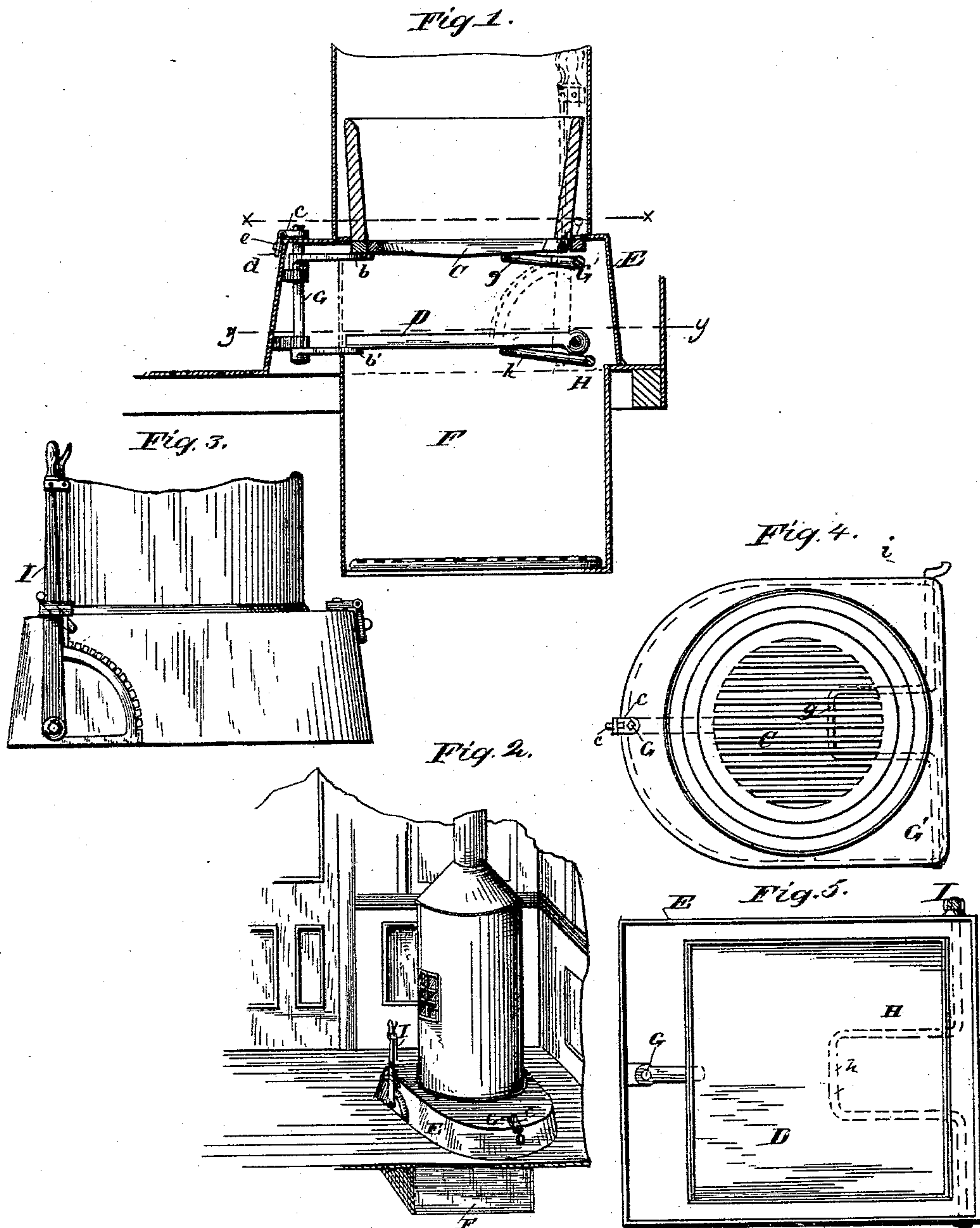


(No Model.)

R. J. McAULEY & H. B. FRISBIE.
HEATING STOVE FOR RAILWAY CARS.

No. 414,653.

Patented Nov. 5, 1889.



Witnesses.
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UNITED STATES PATENT OFFICE.

ROBERT J. MCAULEY AND HENRY B. FRISBIE, OF CLEVELAND, OHIO, ASSIGN-
ORS OF ONE-THIRD TO WILLIAM J. WHITE, OF SAME PLACE.

HEATING-STOVE FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 414,653, dated November 5, 1889.

Application filed October 1, 1888. Serial No. 286,846. (No model.)

To all whom it may concern:

Be it known that we, ROBERT J. MCAULEY and HENRY B. FRISBIE, citizens of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Heating-Stoves for Railway-Cars; and we 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.

The invention relates to heating-stoves for railway-cars, and is an improvement on our patent dated August 7, 1888, No. 387,558. In said patent the invention has reference especially to automatic mechanism for dumping the contents of stoves onto the ground and extinguishing the fire at one and the same time, but does not cover or include mechanism whereby the same result may be accomplished by hand and the grates returned to their former place. This improvement, therefore, involves, more especially, hand mechanism as connected with some of the features shown and described in the patent above referred to.

In the accompanying drawings, Figure 1 is a sectional elevation of a stove embodying our improvement. Fig. 2 is a perspective view of the invention. Fig. 3 is a side view showing lever to operate the device; and Figs. 4 and 5 are horizontal sections on lines $x x$ and $y y$, respectively, on Fig. 1.

The base E, grate C, trap-door D, bottomless chamber F, and some other parts are substantially the same as shown in the patent upon which this invention is an improvement, and, as already indicated, the purpose of this improvement is to provide means to handle and operate the stove in emergencies, as when a car is detached from a train or when for any cause the automatic mechanism fails to work, or in other cases that may arise, as well as to provide means for restoring the parts to their place and locking them there, whether released automatically or by hand. To these ends we employ the vertical shaft G, set in bearings on the inside of the base E and having arms $b b'$, which extend beneath the grate C and trap-door D, respectively. The top of shaft G extends a short

way above the base and has rigidly fixed thereon a short lever c , to which is attached on vertical pivots a latch d , having an opening to drop over a stud e on the base E, so that when the grate and trap-door are raised and rest on the arms $b b'$ the latch will be in position to engage said stud, and the parts will be in their normal position as in use. This is essentially the supporting mechanism for the grate and false bottom. Now, in order to further support the said parts or to drop the same, as when the stove is to be discharged of its contents, we employ two crank-shafts G' and H and a lever I for operating them. The shaft H lies in bearing in base E and is bent centrally to throw a yoke or arm h in beneath the trap-door D, and has the handle I rigidly fixed on one of its outer ends, it being immaterial which end. The shaft G has a similar elbow or arm g projecting beneath the grate C, and at the end next to lever I a crank i , formed thereon to be engaged by said lever, but otherwise free therefrom. The lever I is held in raised position by a drop-catch j , engaging teeth on the segmental rack fixed on the side of the base.

In operation both the lever I and the lever c for controlling shaft G are formed so convenient to each other that a person can take hold of the lever I with one hand and the lever c with the other and operate both simultaneously, if need be, or either separately. If the arms $b b'$ are carried from under the grate and trap-door, those parts will still be supported by the elbow-shafts if they are not turned down; or said shafts may be turned down and the grate and trap-door supported exclusively on arms $b b'$. When the grate and trap-door are down, the lever I, through the shafts G H, serves to bring said parts back to position, so that the arms $b b'$ may be turned beneath the same and practically take the weight thereof.

Obviously the mechanical details herein described need not be closely followed, as they are susceptible of change without affecting the spirit of the invention.

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

1. A car stove or heater having downwardly

opening or dumping bottoms pivoted at one side, catches at one side for holding each bottom in raised or closed position, a shaft connected with each bottom to raise and support the same, and a single hand-lever to operate said shafts, substantially as set forth.

2. A car stove or heater provided with bottoms pivoted to open downward, a separate shaft provided with an arm for supporting each of said bottoms in raised position, and a single lever to control said shafts, substantially as set forth.

3. In a car-stove, a grate and a closed bottom, each pivoted on the same side to swing downward, catches substantially opposite the pivot-point for holding said grate and closed bottom in raised position, two shafts, one connected with each said grate and closed

bottom, and a single lever rigidly fixed on one of said shafts and bearing against a crank on the other, substantially as set forth.

4. In a car-stove, a base, two downwardly-swinging bottoms pivoted in said base, a vertical shaft with horizontal arms to support said bottoms, and a lever and lock connected with the top of said shaft, in combination with an arm connected with each of said bottoms near their pivot-point, and a lever to operate said arms and raise said bottoms, substantially as set forth.

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