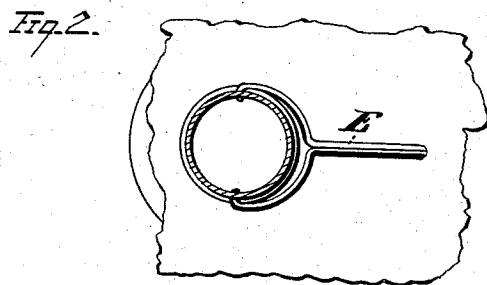
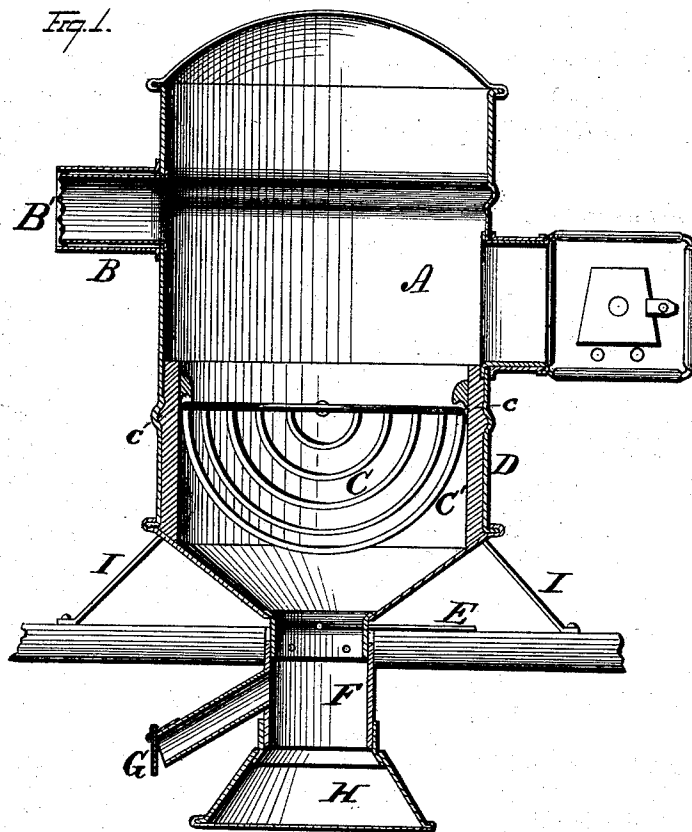


R. F. RANKIN.
Railroad-Car Stoves.

No. 156,944.

Patented Nov. 17, 1874.



WITNESSES.

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UNITED STATES PATENT OFFICE.

RANSOM F. RANKIN, OF COLUMBUS, OHIO.

IMPROVEMENT IN RAILROAD-CAR STOVES.

Specification forming part of Letters Patent No. **156,944**, dated November 17, 1874; application filed April 22, 1874.

To all whom it may concern:

Be it known that I, RANSOM F. RANKIN, of the city of Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Railroad-Car Stoves; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in stoves, and is designed more especially for such as are used in railway-cars.

In the drawings, Figure 1 represents a longitudinal section of my invention; and Fig. 2, a plan view, showing my device for regulating the presentation of the draft or ventilating pipe.

My invention consists of the following parts and combinations, as hereinafter specified and claimed, wherein—

A is the body of the stove, which is preferably and mainly of a cylindrical form; but it may be of any desired pattern. Across the exit-flue B is placed the screen B'. A suitable door is provided to the stove-body A, which is designed to be locked tightly in any suitable way, so as to prevent its opening in case of accident. The screen B' is designed to prevent the escape of fire in a similar exigency. The grate C is made to swing or rock upon the pivots *c*, and is encircled by the cylindrical fire-pot D. The grate C is so formed as to provide an air-space, C', between it and the fire-pot D, the object of this provision being to preserve the grate C, the fire-pot D, and the lower portion of the stove-body A from the usual destruction by excessive heating. The cylindrical fire-pot D may be duplicated when desired, and thus the stove-body A be indefinitely saved. From its lower cylindrical portion the stove-body A diminishes to a size suitable for the insertion or attachment of the ventilating-flue F, which may be arranged to turn or revolve within the stove-body A, or without and around its lower extremity, as may be deemed preferable, and in either way may be operated by the handle E, or any suitable equivalent of the same. The ventilating-flue F is made to pass downward from the

lower extremity of the stove-body A through the floor of the car, when it is curved or bent to one side, and its lower end is left open, its mouth being on a plane back of the perpendicular, so that its door, when hanging perpendicularly, shall swing away from it. To the upper portion of the mouth of the ventilating-flue F is hinged the door G, which is so arranged that it cannot completely close the opening of the pipe, although it may nearly do so. The door G is made to swing passively upon its hinge. The flue F may be continued, when desired, in a direct line below its bent portion, and to its extremity may be attached a closed removable pan or receptacle, H, for catching and containing the ashes and cinders which will fall from the grate C through the pipe F. The stove-body A is securely attached to the floor of the car by suitable braces or legs I.

It is a well-known fact, when a train of cars is "snowed in" or otherwise detained, that, owing to the want of ventilation or draft, the fires inevitably go out, and much suffering ensues. My device is intended not only to insure a perfect draft when the car is not in motion, but also to accomplish a uniform and regular draft when the car is in motion.

By means of the handle E or its equivalent the flue F is so controlled as that its mouth shall present in the direction of travel, or in any other desired direction. The handle E is so placed as to be operated from within the car. When the train is not in motion the door G will hang in a vertical position, and away from the mouth of the ventilating-flue F, and thus afford sufficient draft. When the car is in motion, however, the resistance of the air against the door will close the flue in proportion to the amount of said resistance, thereby giving a uniform ventilation to the stove, preventing all overdraft, and accomplishing an automatic or self-regulating draft. It will also be seen that the cool air, in passing up through the ventilating-flue F and around the grate C, will act materially in preventing the grate C and the fire-pot D from becoming unduly heated or burned, thereby securing great durability of parts that are generally soon destroyed. It will also be seen that in my stove I have done away with the use and existence

of the ordinary poker-hole, and I have thereby obviated what has heretofore been a cause of great annoyance and damage, inasmuch as portions of the ashes (which have heretofore been poked out and removed from within the car in the usual old-style manner) become deposited in the upholstery of the car, making a grit, which is the cause of material damage, and has long been recognized as a serious objection.

The removable ash-pit H is designed as a receptacle for holding the ashes, cinders, and debris discharged from the stove in all cases when it is deemed preferable to discharging them directly through the ventilating-flue F to the ground, through which said ventilating-flue F it is my design to discharge them when the removable ash-pit H is dispensed with.

By means of the rocking or swinging grate C the jarring caused by the motion of the cars will be sufficient to free the grate of debris and keep the fire fresh and active.

I claim as my invention—

1. The curved flue F, projecting from the stove downward through the floor of the car, provided with a mouth whose plane is inclined from the perpendicular, in combination with

the swinging door G, said door hanging vertically to swing away from the mouth of the flue F, substantially as shown and described.

2. In combination with the flue F, made to turn or rotate either within or without and around the lower extremity of the stove-body A, the handle E for operating said flue from within the car, substantially as and for the purpose described.

3. In combination with the bent flue F, the closed removable pan or receptacle H, substantially as and for the purpose described.

4. In combination with a stove placed within the car, the draft-supply flue F, passing down from the bottom of said stove through the floor of the car, attached to and turning loosely around said stove, and provided with the inclined flue and door G and receptacle H, substantially as and for the purpose described.

In testimony that I claim the foregoing I have hereunto set my hand this 14th day of April, 1874.

RANSOM F. RANKIN.

Witnesses:

B. F. STAGE,
H. COIT.