J. Q. C. SEARLE.

Railroad Car Stoves and Heaters.

No. 136,773. Patented March 11, 1873.

Fig. 1.

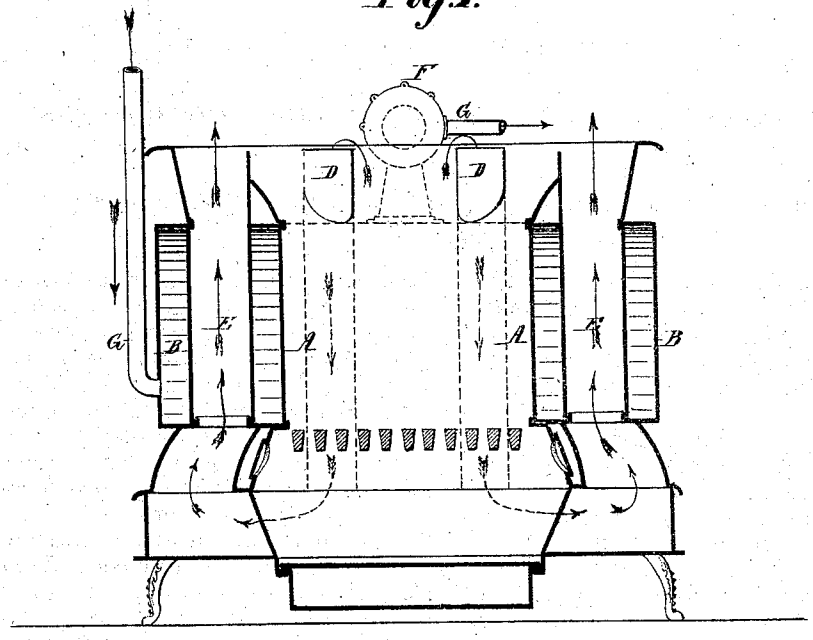
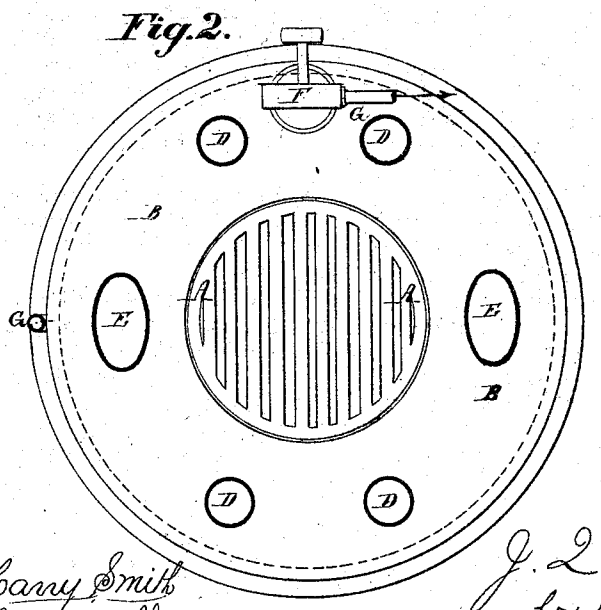


Fig. 2.



Witnesses. Harry Smith
Thomas McElwain

J. Q. C. Searle
by his Attys
Howson and Sons

UNITED STATES PATENT OFFICE.

JOHN Q. C. SEARLE, OF TOPEKA, KANSAS.

IMPROVEMENT IN RAILROAD-CAR STOVES AND HEATERS.

Specification forming part of Letters Patent No. **136,773**, dated March 11, 1873.

To all whom it may concern:

Be it known that I, JOHN Q. C. SEARLE, of Topeka, county of Shawnee, State of Kansas, have invented certain Improvements in Stoves and Heaters, of which the following is a specification:

My invention has for its object the maintaining of a supply of water at such a heat that it can be utilized by circulating it through pipes in a dwelling, railroad car, or cabin, in which the stove or heater is situated. I attain these results by surrounding the fire-pot A with a water-reservoir, B, containing flues for the passage of the products of combustion, and by the employment of a pump, F, by which the heated water may be caused to circulate through heating-pipes communicating with the reservoir. As the reservoir B forms the walls of the fire-pot, the water must necessarily be heated rapidly, while it protects the pot from the injurious effects of the heat. I cause the products of combustion to descend through the flues D D into a smoke-chamber at the base of the stove or heater, and to ascend through flues E, all these flues passing through the reservoir, so that the water may derive additional heat from the products of combustion. When it is desirable to utilize the heated water by causing it to impart heat to the room, car, or cabin, in which it is situated, I combine with the reservoir a rotary or other suitable pump, F, and a circulating pipe or pipes, G, so that a determined flow of water may be maintained through the reservoir and pipes, the latter being continued to such points as may be desired.

This plan may be adopted with special advantage in railroad cars, as the pump can be readily driven from one of the axles, and it insures a determined circulation, which cannot be interrupted by frost as in other water-heating apparatus used on railroad cars.

I claim as my invention—

1. The combination, with a water reservoir surrounding a fire-pot, of flues D E extending through the said reservoir, and so arranged that the products of combustion shall pass down through one flue or set of flues and up through the other, substantially as described.

2. The combination, with a water-heating reservoir, and with a pipe or pipes communicating therewith, of a pump, or its equivalent, for creating and maintaining a determined circulation through the said reservoir and pipes.

3. The combination, of the said pump, or its equivalent, with a railroad-car stove and a water-reservoir, and with devices for operating the pump.

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

JOHN Q. C. SEARLE.

Witnesses:

WM. A. STEEL,

HARRY W. DOUTY.