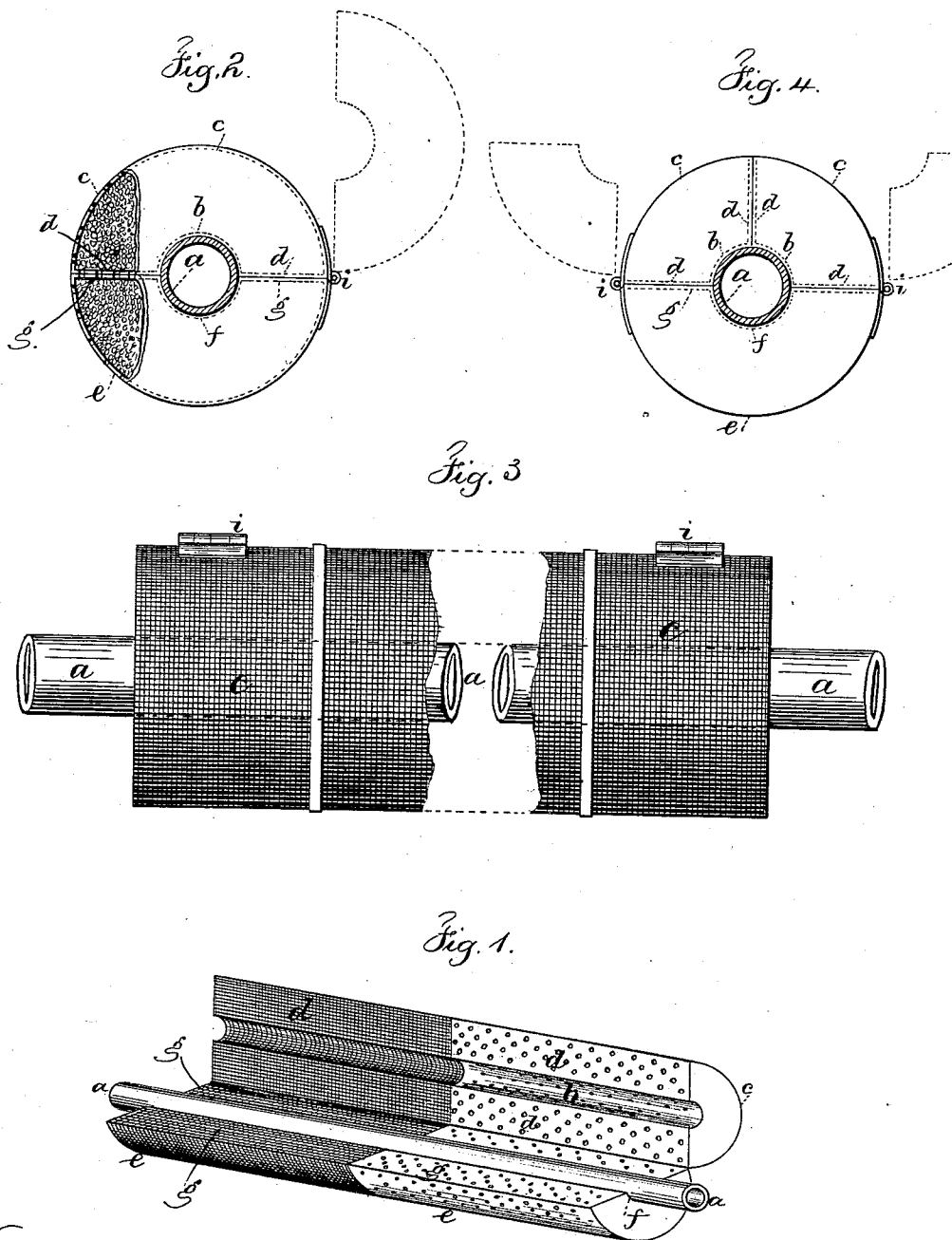


(No Model.)

W. B. POPE.
Heater for Cars.

No. 240,267.

Patented April 19, 1881.



Witnesses

Chas H Smith
Harold Terrell

Inventor.

William B. Pope
for Lemuel W. Percell
Att.

UNITED STATES PATENT OFFICE.

WILLIAM B. POPE, OF NEW YORK, N. Y.

HEATER FOR CARS.

SPECIFICATION forming part of Letters Patent No. 240,267, dated April 19, 1881.

Application filed July 19, 1880. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. POPE, of the city and State of New York, have invented an Improvement in Heaters for Cars, &c., of which the following is a specification.

Sand has been introduced between two cases, leaving a central space for the heating devices, such as a slug of metal or a steam-pipe. In this character of heater the sand prevents the rapid radiation of heat and promotes its continuity, but it also prevents the car from becoming heated with rapidity when the heat is first applied. In practice it is found important to heat the car rapidly when first brought into use after remaining over night or out of use, and then to supply the heat more gradually to maintain the proper temperature of the car.

My improvement is made for accomplishing these objects; and it consists in combining with the steam-heating pipe a compound case that can be opened to allow of direct radiation in heating up a cold car rapidly, or closed to retain the steam-heat to a greater or less extent and render the heat more continuous and less in volume; and I use an open-work case made in sections, filled with pebbles or similar substances that are large enough to prevent them from falling through the perforations of the case, and at the same time air is allowed to circulate between the pebbles and through the perforations of the case.

In the drawings, Figure 1 is a perspective view of my heater. Fig. 2 is an end view partially in section. Fig. 3 is a plan of the same, and Fig. 4 is an end view of a modification of the compound case.

The steam-pipe *a* is of usual character, and *b* is an inner and *c* an outer semi-cylindrical case, united by radial plates *d* to form a half-case at one side of the steam-pipe. The other half-case is similarly made of the outer case,

e, inner case, *f*, and radial plates *g*, and the two half-cases are united by hinges at *i*, so that the top section of the case may be swung back from over the steam-pipe to allow the heat to radiate directly; or the lower half-section may be swung down, or the top portion may be made with two quarter-sections, as seen in Fig. 4. In any instance the cases can be opened or closed, according to the condition of the car. The filling of these cases is gravel or pebbles in preference to sand, for the purposes before mentioned, and the cases are either made of sheet metal or perforated with numerous small holes or of wire netting, so as to allow of the air circulating through the casing and between the pebbles and thereby conveying the heat from the steam-pipe to the atmosphere with the required rapidity.

I claim as my invention—

1. The combination, with a steam-heating pipe, of a surrounding case made in two or more sections, containing pebbles or similar material, and capable of being opened to expose or partially expose the steam-pipe when required, substantially as specified.

2. The combination, with a steam-heating pipe, of a perforated or open-work case and a filling of pebbles or other particles of matter, between which the air may circulate, as set forth.

3. The combination, with a heating-pipe, of a surrounding case made in sections so as to be opened and of perforated or open-work material, and a filling of pebbles or similar material, substantially as set forth.

Signed by me this 14th day of July, A. D. 1880.

WILLIAM B. POPE.

Witnesses:

WILLIAM G. MOTT,
GEO. T. PINCKNEY.