(No Model.) 2 Sheets—Sheet 1.

E. RICHARDS.

BUGGY HEATER.

No. 457,214. Patented Aug. 4, 1891.

Fig. 1.

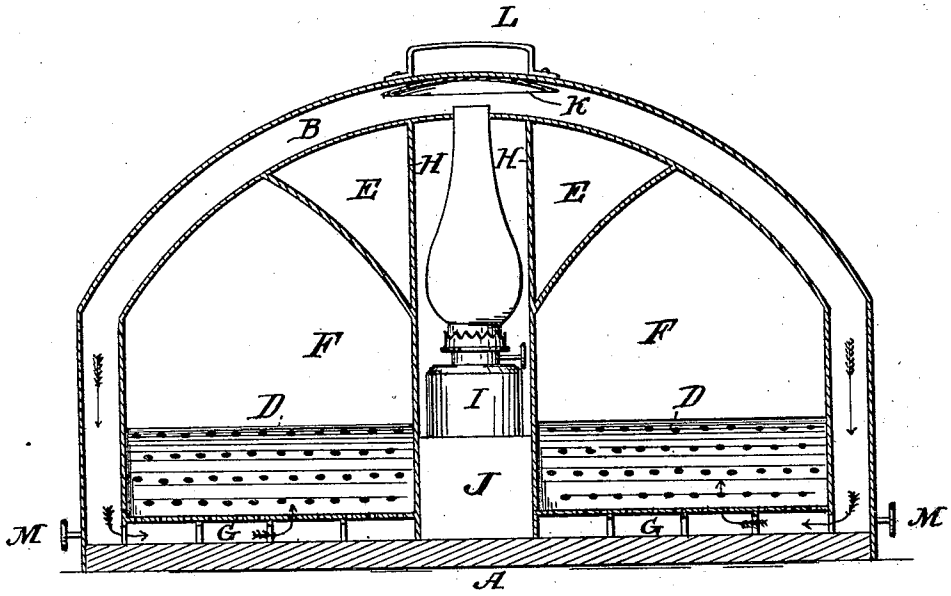
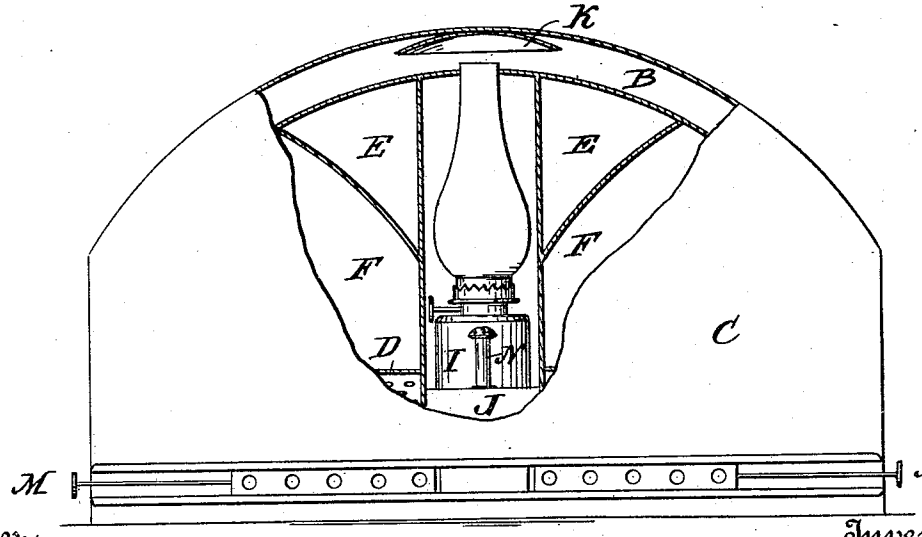


Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

E. RICHARDS.

BUGGY HEATER.

No. 457,214. Patented Aug. 4, 1891.

Fig. 3.

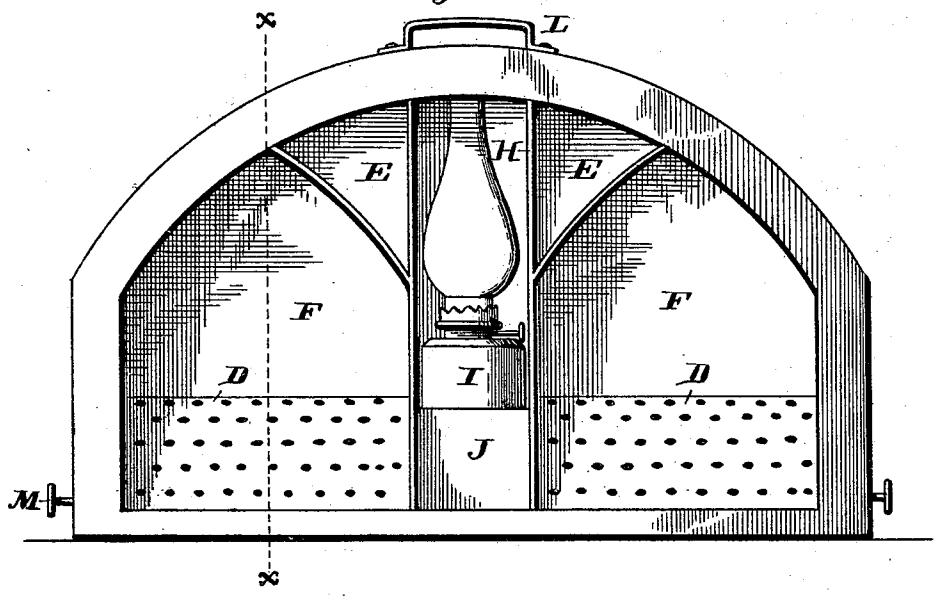
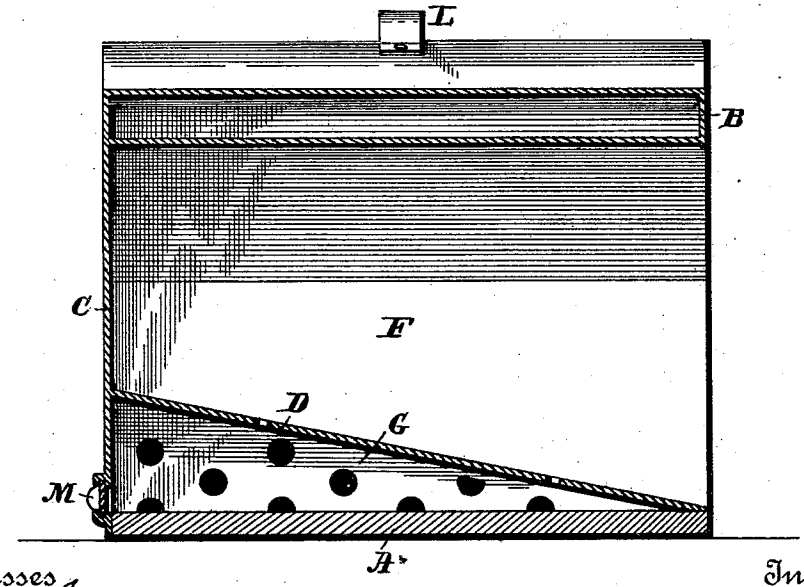


Fig. 4.



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UNITED STATES PATENT OFFICE.

EMANUEL RICHARDS, OF GOODLAND, KANSAS.

BUGGY-HEATER.

SPECIFICATION forming part of Letters Patent No. 457,214, dated August 4, 1891.

Application filed June 2, 1890. Serial No. 353,934. (No model.)

To all whom it may concern:

Be it known that I, EMANUEL RICHARDS, a citizen of the United States, residing at Goodland, in the county of Sherman and State of Kansas, have invented certain new and useful Improvements in Buggy-Heaters; 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 appertains to make and use the same.

This invention relates to foot-warmers, and aims to provide a device in which the heat is supplied from an ordinary coal-oil lamp and is utilized to the best possible advantage, being conducted over the top, down the sides, and up through a perforated bottom into the foot-warming compartments, one being provided on each side of the lamp.

The improvement consists of the novel features, which will be hereinafter more fully described and claimed, and which are shown in the annexed drawings, in which—

Figure 1 is a vertical longitudinal section of a foot-warmer embodying my invention. Fig. 2 is a rear view, parts being broken away, of the device. Fig. 3 is a front view of the invention. Fig. 4 is a cross-section on the line X X of Fig. 3, looking to the left.

A represents the base, which is of hard wood.

B represents an arched flue to conduct the heat around the heater, which is of sheet-iron. The back plate, marked C, of the arched flue is closed, and with the sides are secured to the base, while the front end is open so as to receive the feet inside. The inclined floor-rests (marked D) are perforated sheet-iron, resting upon perforated iron sleepers to form hot-air flues around and under the feet, then ascending through the foot-rests.

E represents two racks, one in each oven, upon which can be placed food or small garments to be kept warm.

F represents the ovens for feet.

G represents the continued hot-air flue under the foot-rests.

H represents the lamp-tube to shelter it from the feet.

I represents the lamp which not only gives heat but also light to those riding.

J represents the oil-vessel, which can be drawn out of the lamp-tube with the lamp for cleaning, filling, &c. The lamp is placed in the center each way of the heater and between the lamp I and the back plate.

C is an air-tube four inches high with perforated cap, marked N, to admit air to the oil-vessel and allow generated gas to escape. The top of the chimney extends one-half inch into the air-flue. Fastened to the top plate of flue is a heat distributer or deflector K over the lamp I to keep the top plate from getting too hot and save the robe from being burned.

L represents the handle by which the heater can be easily carried, the entire weight not exceeding twelve pounds. At the bottom of the back plate C, opposite the hot-air flue G, is a row of holes to admit air if needed, which can be closed with slides at will and which can be moved from each end by handle M. The arched flue B extends from one side of the base A to the other and is composed of two parallel walls, between which the flue is formed. The flues G are formed between the base A and the perforated foot-rests D D, and communicate at their outer ends with the lower ends of the flue B. The racks E E spring across the angles between the sides of the tube H and the crown of the arched flue B, and form compartments for the purposes specified.

It will be observed that the lamp is of ordinary construction, receiving its draft in the usual manner, and the front of the warmer being open, except the arched flue B and the base-flues G G; hence it is obvious that the lamp will be abundantly supplied with air.

The racks E E, in addition to forming warming-compartments, serve to brace the structure.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A foot-warmer comprising a base, an arched flue connected at its ends to the base, a central lamp tube or chamber, perforated foot-rests on each side of the lamp-tube forming flues between them and the base, which flues have communication at their outer ends with the lower ends of the said arched flue, a lamp in the lamp-chamber having communication with the arched flue, and a deflector at

the crest of the arched flue directly opposite the lamp, substantially as described, for the purposes specified.

2. A foot-warmer composed of a base, an arched flue connected at its ends with the base, a central lamp-tube, perforated foot-rests on each side of the lamp-tube forming flues G G, which communicate at their ends with the ends of the arched flue, the lamp in the lamp-tube, and racks sprung across the angles between the sides of the lamp-tube and the arched flue to brace the structure and forming warm-compartments, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

EMANUEL RICHARDS.

Witnesses:

H. E. DON CARLOS,

H. M. KELLOGG.