(No Model.)

C. A. RICKARD & J. A. LOWRIE.

FOOT WARMER.

No. 567,166. Patented Sept. 8, 1896.

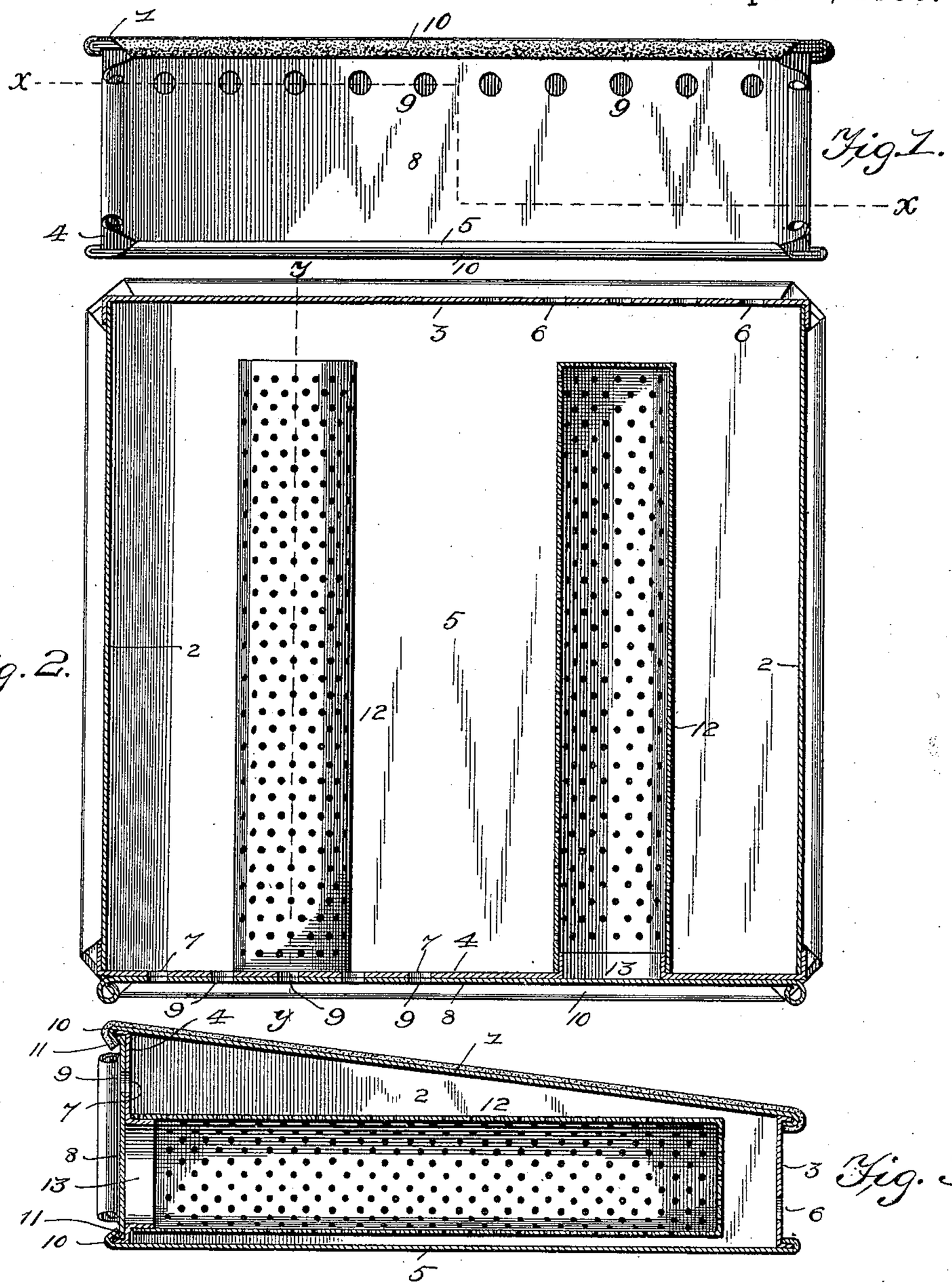

Fig. 1.

Fig. 2.

Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

CLYDE A. RICKARD AND JOHN A. LOWRIE, OF SEVILLE, OHIO.

FOOT-WARMER.

SPECIFICATION forming part of Letters Patent No. 567,166, dated September 8, 1896.

Application filed May 23, 1895. Serial No. 550,397. (No model.)

To all whom it may concern:

Be it known that we, CLYDE A. RICKARD and JOHN A. LOWRIE, citizens of the United States, residing at Seville, in the county of Medina and State of Ohio, have invented a new and useful Foot-Warmer, of which the following is a specification.

This invention relates to that class of heaters principally designed for warming the feet in vehicles, and which, with slight changes, are adapted for warming other parts of the body whenever required; and the object of the invention is the provision of a heater of the character described which will be simple in construction, compact in arrangement, and consequently inexpensive.

With this and other objects in view the improvement consists of the novel features which hereinafter will be more fully set forth and claimed, and which are illustrated in the accompanying drawings, in which—

Figure 1 is a rear elevation of the heater. Fig. 2 is a plan section on the line X X of Fig. 1. Fig. 3 is a vertical section on the line Y Y of Fig. 2.

The heater is preferably rectangular in shape, and comprises a shallow box or casing, whose top 1 slopes gradually from front to rear for convenience and comfort in supporting the feet. The sides 2 extend parallel and are connected at their ends to the front 3 and back 4, respectively, and at their top and bottom edges to the top 1 and bottom 5, whereby a substantial structure is obtained. This box or casing is preferably formed of sheet metal, so as to resist the action of the heat and prevent fire. The front 3 is provided near its lower edge with a series of draft-inlets 6, by means of which a sufficient quantity of air is admitted within the box or casing to support combustion of the fuel. The back 4 has a corresponding series of openings 7 along its upper edge for the escape of the heated air, and by means of which a circulation of pure air is obtained through the box or casing, and these openings 7 are controlled by a sliding damper 8, by means of which the draft is regulated and the consequent consumption of fuel controlled. This damper 8 is a metal plate, having a series of openings 9 to correspond in position, size, and number with the openings 7, so as to register therewith, and by sliding the said plate or damper to one side or the other the openings 7 and 9 are brought more or less out of register, or entirely closed, as desired, whereby the proper consumption of the fuel can be accomplished. The rear edge portions of the top 1 and the bottom 5 extend beyond the outwardly-flanged edges of the back 4, and are bent thereover to hold the parts in fixed relation, and are recurved, as shown at 10, to form ways to receive the flanged edges 11 of the plate or damper 8, to hold the latter in proper relation and guide it in its movements. By this means a substantial joint is had between the back, top, and bottom, and a simple and inexpensive means is provided to guide the damper in its movements and hold it in place, the said damper operating between the flanged edges of the back and held in place by the recurved edges of the top and bottom.

One or more fire-boxes 12 are placed within the box or casing, and consist of tubes of reticulated or perforated metal, and may have permanent attachment with the heater or be removably connected therewith, as desired and as shown in Figs. 2 and 3. These tubular fire-boxes have permanent attachment with the back 4 and open at their outer ends through the said back for the admission of fuel therein, said openings 13 being closed by the plate or damper 8.

The fuel designed to be used in the heater is a carbon stick of special manufacture, and which when ignited will burn slowly and give off sufficient heat to attain the desired result. The fuel after being ignited is placed within the tubular fire-box through the opening 13, the damper 8 being slid to one side so as to disclose the said opening, and after the fuel is in position the damper is moved, so as to close the opening 13 and retain the fuel in place within the tubular fire-box.

It will be seen that the air enters the openings 6 in the front of the box or casing, passes within the latter, reaches the fuel through the openings or perforations in the sides of the fire-boxes, and escapes through the openings 7 in the back 4, and by controlling said openings 7 by a proper adjustment of the damper 8 the rapidity of the combustion of the fuel can be regulated as desired.

It will be understood that the heater can be constructed and provided in different styles and shapes, according to the required need. Therefore it will be seen that in the embodiment of the invention various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new is—

1. A heater of the character set forth, comprising a casing having the top and bottom edges of its back outwardly flanged, and having the rear edge portions of its top and bottom projecting beyond and bent over the outer flanges of the back and recurved, forming guideways, and having air-openings in its front and back, a damper comprising a plate having its edge portions outwardly flanged to operate in the said guideways, and between the flanged edges of the said back and having openings to correspond in position and number with the openings in the back of the casing, and a tubular fire-box having perforated sides located within the casing and projecting across the path of the air-currents therethrough, substantially as described for the purpose set forth.

2. A heater for the purposes specified, comprising a casing having openings in its sides for the passage of the air therethrough, a tubular fire-box located within the casing and having its outer end opening through a side thereof having air-openings, and a damper slidably mounted against the side of the casing supporting the fire-box to close its open end and to regulate the draft-openings, substantially as set forth.

3. The herein-specified heater, comprising a casing having the top and bottom edges of its back outwardly flanged, and having the rear edge portions of its top and bottom projecting beyond and bent over the outer flanges of the back and recurved, forming guideways, and having air-openings in its front and back, tubular fire-boxes located within the casing and having connection with the back and opening therethrough, and a damper comprising a plate having its edge portions outwardly flanged to operate in the guideways formed by the recurved edge portions of the top and bottom and between the flanged edges of the said back, and having openings to correspond in position and number with the draft-openings in the said back, and adapted to close the open ends of the fire-boxes and to regulate the draft-openings, substantially in the manner and for the purpose specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

CLYDE A. RICKARD.
JOHN A. LOWRIE.

Witnesses:
W. G. BRUMBAUGH,
HUGH BRUMBAUGH.