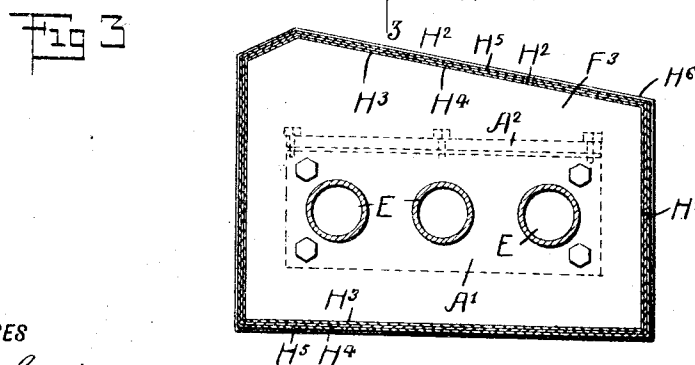
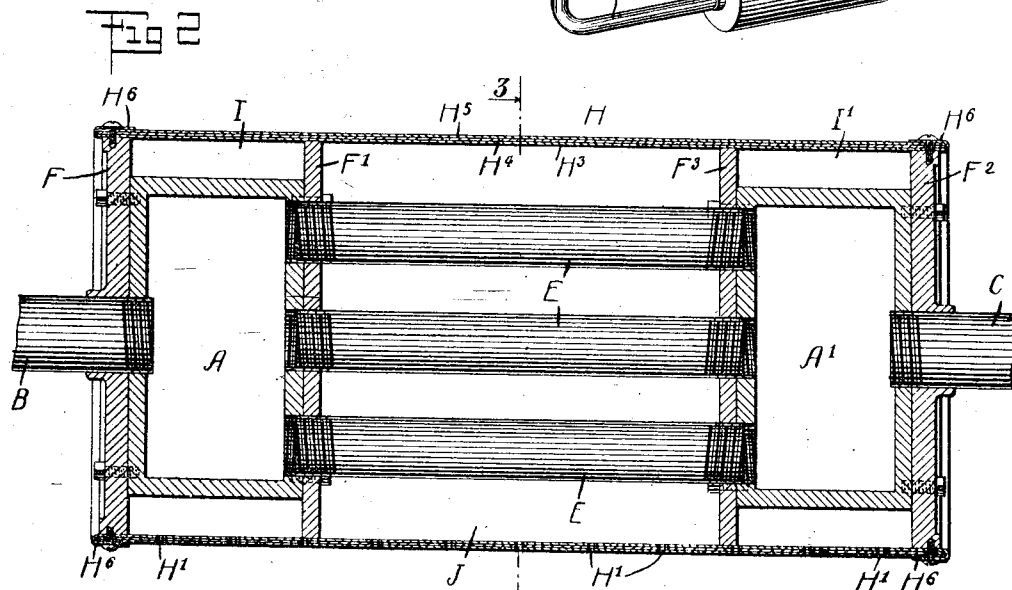


1,062,925.



WITNESSES  
C. J. Hachenberg  
Rev. J. Koster

INVENTOR  
John Philipcik Jr.  
BY Munn & Co.  
ATTORNEYS

# UNITED STATES PATENT OFFICE

JOHN PHILIPCIK, JR., OF NEW CANAAN, CONNECTICUT.

FOOT-WARMER.

1,062,925.

Specification of Letters Patent.

Patented May 27, 1913.

Application filed August 29, 1912. Serial No. 717,720.

*To all whom it may concern:*

Be it known that I, JOHN PHILIPCIK, JR., a citizen of the United States, and a resident of New Canaan, in the county of Fairfield and State of Connecticut, have invented a new and Improved Foot-Warmer, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved foot warmer, more especially designed for use in automobiles, aeroplanes and other vehicles, and arranged to utilize the exhaust gases from the motor and to prevent overheating of the feet or burning of the shoes of the user.

For the purpose mentioned use is made of two end chambers, of which one is connected at the outer end by a pipe with a source of heat supply and the other is provided at its outer end with an outlet pipe, spacing plates attached to the outer and inner ends of each end chamber and projecting beyond the front, rear, bottom and top thereof, connecting tubes connecting the inner ends of the chambers with each other, and a shell inclosing the said spacing plates and provided with openings for the passage of air.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the foot warmer as applied; Fig. 2 is an enlarged sectional plan view of the foot warmer; and Fig. 3 is a transverse section of the same on the line 3—3 of Fig. 2.

In the construction of the foot warmer use is made of two end chambers A and A', of which the chamber A is provided at its outer end with an inlet pipe B connected with the exhaust of an internal combustion engine or a similar motor, so that the exhaust gases pass through the pipe B into the chamber A. The other end chamber A' is provided with an outlet pipe C provided with a muffler D for carrying off the exhaust gases. The chambers A and A' are connected with each other by pipes E so that the gases can pass from the chamber A into the chamber A'. Spacing plates F and F' are bolted or otherwise fastened to the outer and inner ends of the chamber A, and similar spacing plates F<sup>2</sup>, F<sup>3</sup> are bolted or otherwise fastened to the outer and inner ends of the other end chamber A'. The spacing plates F, F', F<sup>2</sup>

and F<sup>3</sup> project beyond the top, bottom, front and rear of the chambers A and A', as plainly indicated in Figs. 2 and 3, and the tops of the said spacing plates are preferably beveled in a downward direction toward the seat G occupied by the user of the foot warmer, as will be readily understood by reference to Fig. 1. A shell H passes around the spacing plates F, F', F<sup>2</sup> and F<sup>3</sup> and is fastened by screws or other means to the outer spacing plates F and F<sup>2</sup>, as indicated in the drawings. By the arrangement described the shell H is spaced from the chambers A and A' and forms with the same heating compartments I and I', and the shell also forms with the tubes E a heating compartment J. The front and the top of the shell H are provided with apertures H' and H<sup>2</sup> opening into the compartments I, I' and J so that air can circulate through the said compartments and be heated by contact with the chambers A and A' and the pipes E. The shell H is formed, preferably, of three layers H<sup>3</sup>, H<sup>4</sup> and H<sup>5</sup>, of which the layer H<sup>3</sup> is made of sheet metal, the layer H<sup>4</sup> is made of asbestos or similar material, and the outer layer H<sup>5</sup> is made of felt or a similar fabric. The ends of the inner layer H<sup>3</sup> are formed into bent over flanges H<sup>6</sup> inclosing the outer ends of the middle and outer layers H<sup>4</sup> and H<sup>5</sup>, as plainly indicated in Fig. 2. By the arrangement described, the feet of the user resting on the inclined top of the foot warmer are not liable to be over-heated or the shoes burned, but the air circulating through the compartments I, I' and J is highly heated and in escaping from the shell heats the surroundings thus keeping the user warm, especially the feet.

By reference to Fig. 2 it will be noticed that the pipes E extend through the inner spacing plates F' and F<sup>3</sup> and may be threaded therein as well as in the inner ends of the chambers A and A', and the pipes B and C pass through the outer spacing plates F and F<sup>2</sup>.

In the construction of the chambers A and A' use is preferably made of covers A<sup>2</sup> bolted or otherwise fastened to the top of the chambers, which are otherwise each cast in one piece.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

1. A foot-warmer, comprising end cham-

bers spaced apart, an inlet pipe connected with the outer end of one of the said chambers, an outlet pipe connected with the outer end of the other chamber, spacing plates attached to the outer and inner ends of each chamber, the spacing plates extending beyond the front, rear, top and bottom of the said chambers, pipes connecting the said chambers with each other at their inner sides, and a shell inclosing the said spacing plates and forming with the said chambers end heating compartments, and forming with the said pipes a middle heating compartment.

2. A foot warmer, comprising end chambers spaced apart, an inlet pipe connected with the outer end of one of the said chambers, an outlet pipe connected with the outer end of the other chamber, spacing plates attached to the outer and inner ends of each chamber, the spacing plates extending beyond the front, rear, top and bottom of the said chambers, pipes connecting the said chambers with each other at their inner sides, and a shell inclosing the said spacing plates and forming with the said chambers end heating compartments and forming with the said pipes a middle heating compartment, the tops of the said spacing plates and the top of the shell being inclined.

3. A foot warmer, comprising end chambers spaced apart, an inlet pipe connected with the outer end of one of the said chambers, an outlet pipe connected with the outer end of the other chamber, spacing plates attached to the outer and inner ends of each chamber, the spacing plates extending be-

yond the rear, front, top and bottom of the said chambers, pipes connecting the said chambers with each other at their inner sides, and a shell inclosing the said spacing plates and forming with the said chambers end heating compartments, and forming with the said pipes a middle heating compartment, the said shell being provided at the front and top with apertures at each heating compartment.

4. A foot warmer, comprising end chambers spaced apart, an inlet pipe connected with the outer end of one of the said chambers, an outlet pipe connected with the outer end of the other chamber, spacing plates attached to the outer and inner ends of each chamber, the spacing plates extending beyond the front, rear, top and bottom of the said chambers, pipes connecting the said chambers with each other at their inner sides, and a shell inclosing the said spacing plates and forming with the said chambers end heating compartments, and forming with the said pipes a middle heating compartment, the shell being formed of three superimposed layers, of which the inner is made of sheet metal, the middle one of asbestos and the outer one of a fabric material.

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

JOHN PHILIPCIK, JR.

Witnesses:

LEIGHTON BISHOP,  
MATTHEW L. CRABB.