Sept. 7, 1926. 1,598,736

C. N. McDONALD

EXHAUST WATER HEATER

Filed Sept. 8, 1925

Fig. 1.

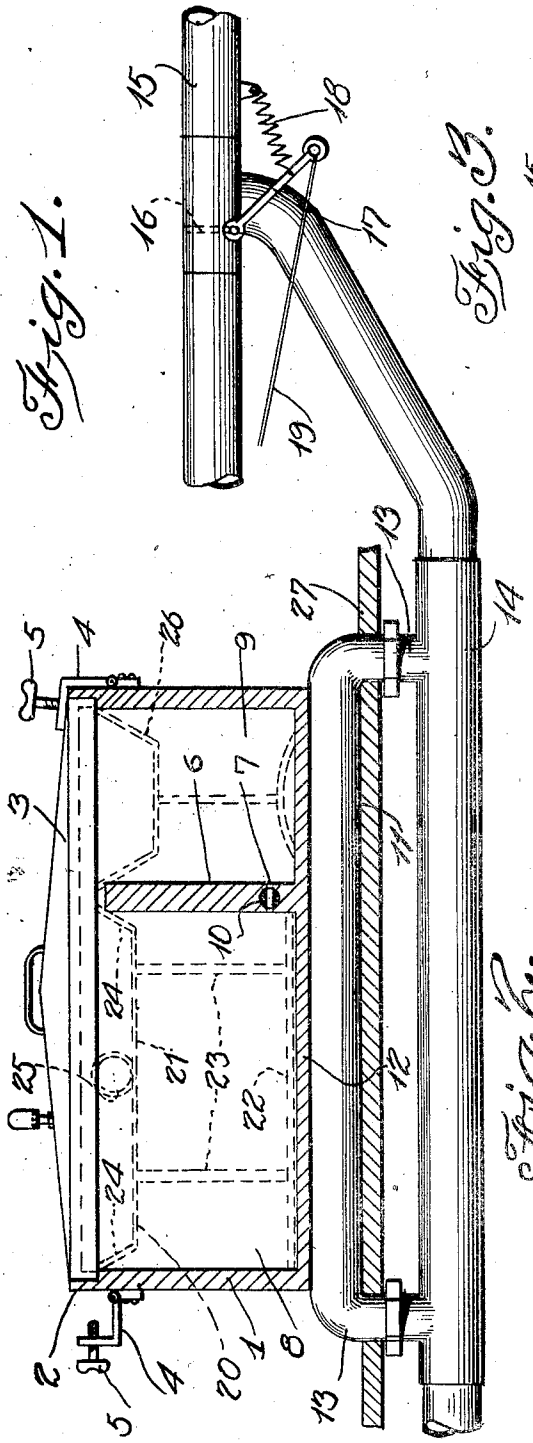


Fig. 3.

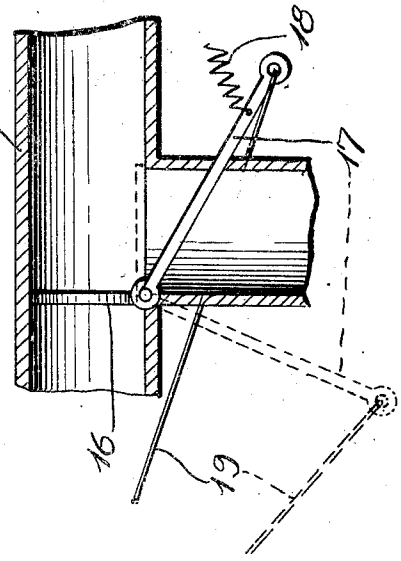
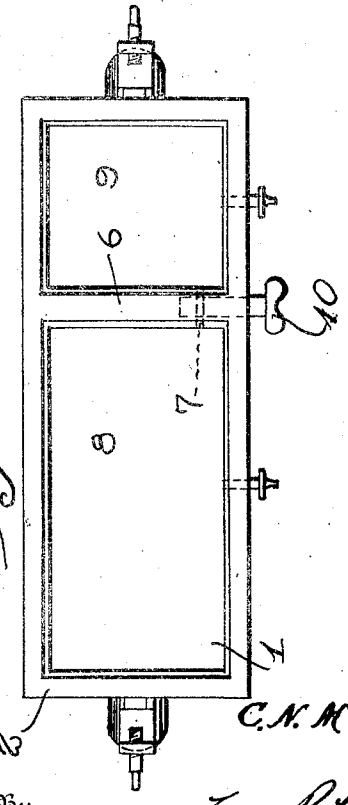


Fig. 2.



Inventor

C. N. McDonald

By

Fred P. Gorin

Attorney

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UNITED STATES PATENT OFFICE.

CLYDE N. McDONALD, OF RENTON, WASHINGTON.

EXHAUST WATER HEATER.

Application filed September 8, 1925. Serial No. 55,186.

This invention relates to a water heater adapted to be removably secured to a convenient part of an automobile, for example, the running board, and heated by the exhaust gases from the engine under the control of the driver, so that during the travel of the vehicle, water may be heated for use as such or for cooking purposes.

The improved heater is divided into compartments with manually controlled communication so that water, if desired, may be heated in one compartment and admitted to the other only when sufficiently heated for the desired cooking effect.

The invention is illustrated in the accompanying drawings, in which:

Fig. 1 is a view in section, partly in elevation, showing the improved heater in applied position and connected in the exhaust gas system.

Fig. 2 is a plan of the heater with the cover removed.

Fig. 3 is an enlarged broken view showing the control of the exhaust, the pipe being shown in section.

The improved heater comprises a receptacle 1 of appropriate size, with the upper edge of the outer wall 2 appropriately formed to cooperate with a cover 3 removably secured by brackets 4 hinged to the wall 2 and having set screws for cooperation with the cover, whereby it may be held in place against separation during the travel of the vehicle. The interior of the receptacle 1 is provided with a transverse partition 6, the upper edge of which is slightly below the upper edge of the outer wall. This partition is formed near its lower end with an opening 7, whereby communication may be established between the compartments 8 and 9 on the opposite sides of the partition. The opening 7 is controlled by a valve 10 operable from beyond the outer wall, as shown in Fig. 2. The receptacle includes a heating space 11 underlying the bottom 12 of the receptacle, and this heating space is in communication by pipe connections 13 with an auxiliary exhaust pipe 14. The pipe 14 is led to the main exhaust pipe 15 and a flap valve 16 is provided at the juncture and operated through a lever 17 arranged exteriorly of the pipe so that at will the exhaust gases may be directed through the auxiliary exhaust and hence to and through the space 11 or through the main exhaust to the exclusion of the heater. The lever 17 is connected by a spring 18 to a fixture so that the lever is normally influenced in position to open the auxiliary exhaust pipe to the exhaust gases, and a wire or like connector 19 leads to the dash of the vehicle so that the operator by fixing the end of this connector in appropriate position may direct the exhaust gases through the main exhaust 15, or by releasing the connector permit the spring to direct the exhaust gases through the auxiliary exhaust and so through the heater.

A carrier 20 is adapted to be placed in the larger compartment 8 of the heater, said carrier including upper and lower screen surfaces 21, 22, connected by supports 23, the upper screen surface having upturned marginal walls 24. The carrier is conveniently handled by means of a ring 25 and provides a means for subjecting articles on the lower screen surface to the action of hot water for cooking and to subjecting articles on the upper screen surface to a steaming action. A percolator or like utensil 26 is adapted to be placed in the smaller compartment 9 and the heated water admitted thereto as desired through the opening 7.

The heater is arranged to be supported on a convenient part of the automobile, as the running board 27, for example, in which event the auxiliary pipe 14 will underlie the running board and the pipe connections 13 extend through the same.

It will be apparent from the above description that with an appropriate quantity of water in the larger compartment of the heater, the driver may at will direct the exhaust gases from the engine to heat this water and that it may be readily utilized for cooking purposes, or if desired, may be withdrawn for any use through valve controlled outlets, as faucets 28 communicating with each compartment.

I claim:

A heater to be secured to the running board of a vehicle, including a receptacle having a bottom wall, a heating space below

said wall through which the exhaust gases may be directed at will, a central partition rising from the bottom wall and terminating below the top of the receptacle, a valve in said partition whereby communication between the spaces on the opposite sides of the partition may be controlled from beyond the receptacle, a cover plate for the receptacle, and means for removably securing the cover plate in closing relation on the upper edge of the receptacle.

In testimony whereof I affix my signature.

CLYDE N. McDONALD.