Feb. 8, 1927. 1,616,792

F. W. GERLINGER

AUTOMOBILE HEATER

Filed March 22, 1926 2 Sheets-Sheet 1

Fig. 1.

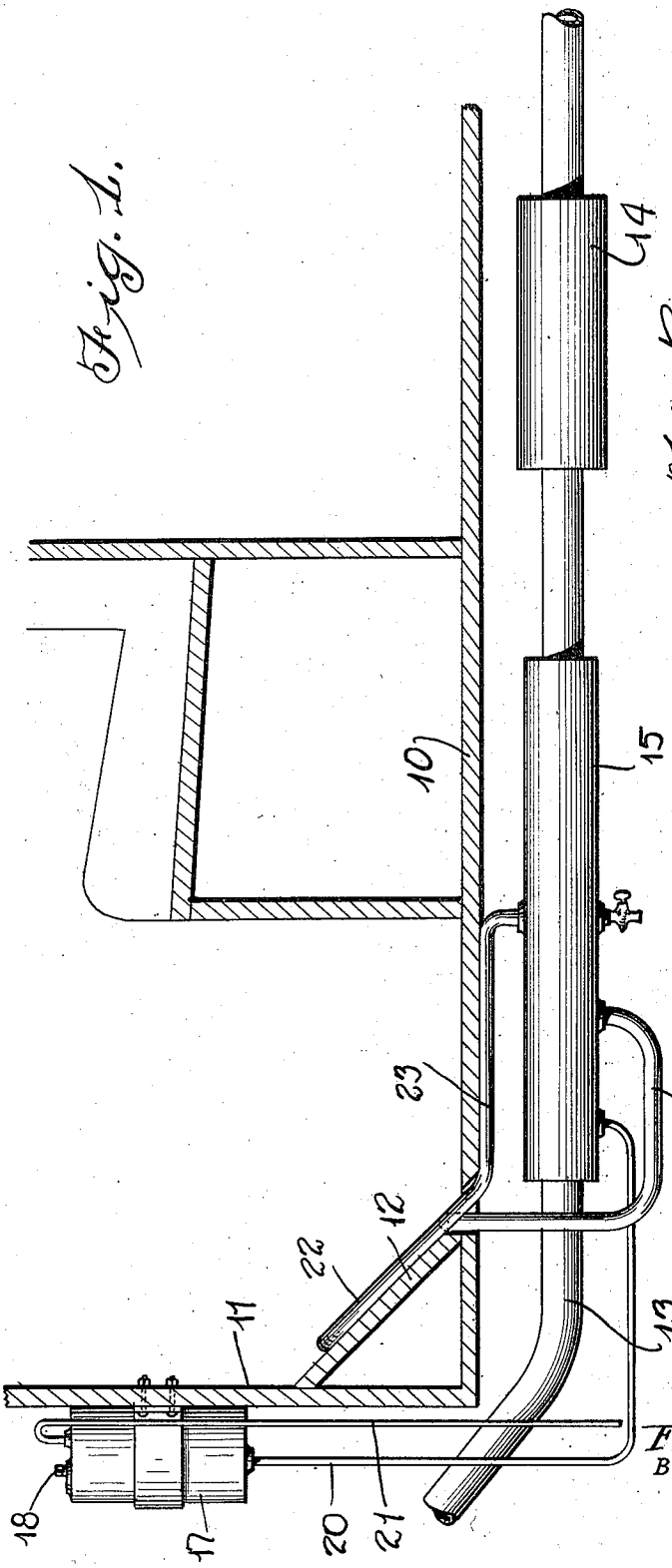
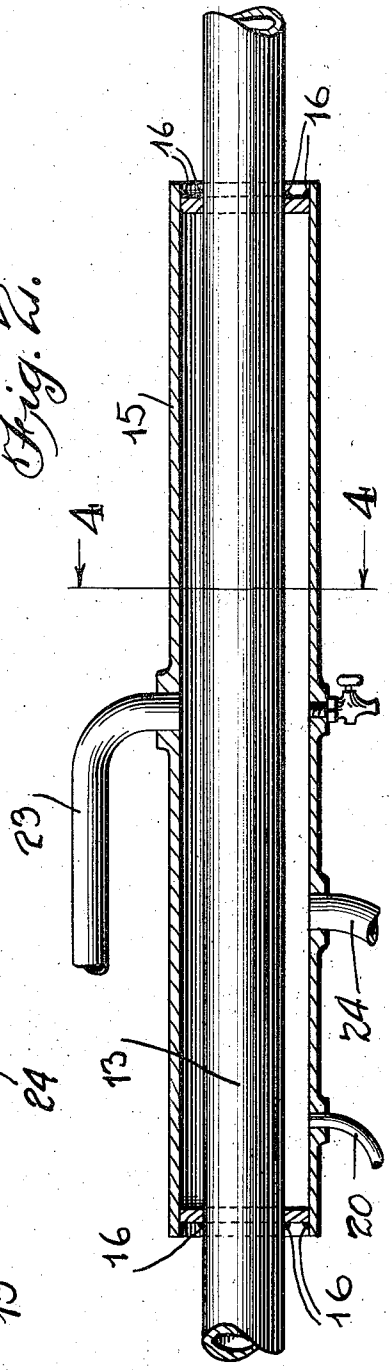


Fig. 2.



INVENTOR
Frederick W. Gerlinger
BY
L. N. Mills
ATTORNEY

Feb. 8, 1927. 1,616,792

F. W. GERLINGER

AUTOMOBILE HEATER

Filed March 22, 1926 2 Sheets-Sheet 2

Fig. 3.

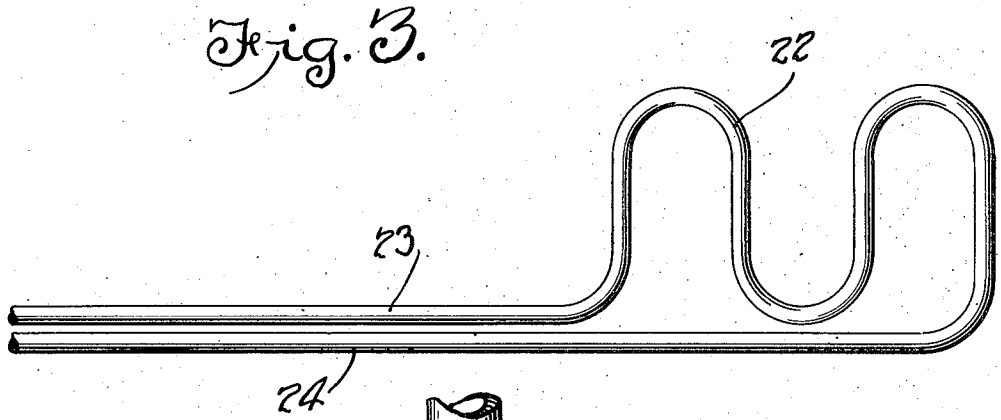


Fig. 4.

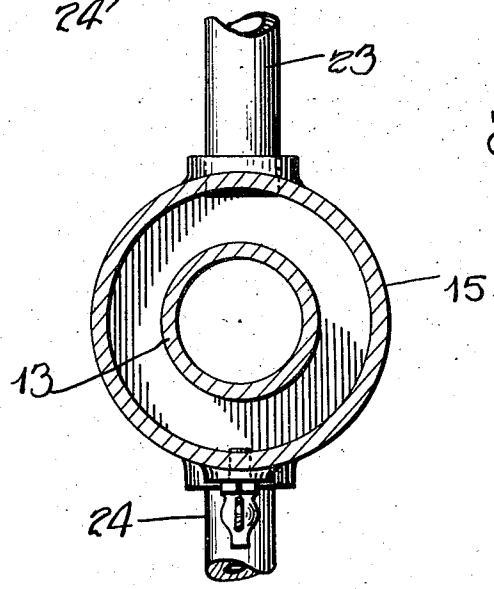
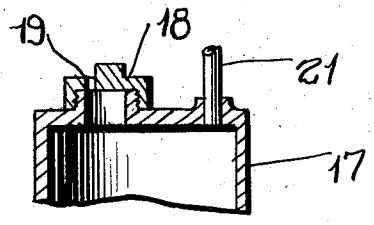


Fig. 5.



INVENTOR
Frederick W. Gerlinger
BY
L. N. Ellis
ATTORNEY

Patented Feb. 8, 1927. 1,616,792

UNITED STATES PATENT OFFICE.

FREDERICK W. GERLINGER, OF DALLAS, OREGON.

AUTOMOBILE HEATER.

Application filed March 22, 1926. Serial No. 96,607.

This invention relates to heaters and has special reference to an automobile heater.

One object of the invention is to provide an improved and economical automobile heater arranged to use water or other suitable liquid heated by the hot gases flowing through the exhaust pipe common to automobiles using internal combustion engines.

A second object of the invention is to provide an improved heater of this description so arranged as to avoid the use of valves.

A third object of the invention is to provide an improved arrangement of water storage tank in connection with such heaters.

With the above and other objects in view as will be herein apparent, the invention consists in general of certain novel details of construction and combinations of parts hereinafter fully described, illustrated in the accompanying drawings and specifically claimed.

In the accompanying drawings like characters of reference indicate like parts in the several views, and:

Figure 1 is a section through the forward lower part of an automobile body showing the improved heater installed therein.

Figure 2 is an enlarged detail partly in section showing the water heating drum and the pipes connected thereto.

Figure 3 is a plan view of the heater coil as it rests on the foot board of the automobile.

Figure 4 is an enlarged detail section on the line 4—4 of Figure 2.

Figure 5 is a section through the upper part of the water storage tank showing the filling plug and vent.

In the present showing there is disclosed a portion of an automobile including the floor board 10, dash 11, foot board 12, exhaust pipe 13 and muffler 14, the exhaust pipe leading in the usual manner from the exhaust manifold of the engine (neither manifold nor engine being shown).

Surrounding the exhaust pipe 13 forward of the muffler is a drum 15 having its heads fitted closely to the exhaust pipe and soldered or brazed to prevent leakage as at 16. Secured to the front of the dash 11 at a greater height than the foot board is a water storage tank 17 having a filling opening normally closed by a plug 18 provided with a vent 19. Extending from the bottom of this tank to the bottom of the drum 15 is a supply pipe 20 and the tank is likewise provided with an overflow or relief pipe 21 leading from the top thereof. Laid flat upon the foot board 12 is a heater coil 22 formed of sinuously bent tubing and having one end 23 continued to connect with the top of the drum and form a flow pipe while its other end 24 is likewise continued and is connected with the bottom of the drum to form a return pipe.

In operation it will be seen that the drum and coil with its connecting ends will always remain full so long as there is water in the tank and that whenever the exhaust is hot a flow will be set up by convection through the coil.

There has thus been provided a simple and efficient device of the kind described and for the purpose specified.

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

1. The combination with an automobile body and an automobile exhaust pipe; of a heating drum surrounding the exhaust pipe, a heating coil within the body, a flow pipe connecting one end of the coil to the top of the drum, a return pipe connecting the remaining end of the coil to the bottom of the drum, a supply tank carried by the body at a greater elevation than said coil, a supply pipe leading directly from the bottom of the tank to the bottom of the drum, and a relief pipe leading downwardly from the top of the tank.

2. The combination with an automobile having a body provided with a dash and foot board and having an exhaust pipe and a muffler connected thereto; of a heating drum surrounding said exhaust pipe forward of the muffler to receive a maximum of heat from the exhaust pipe, a flat heating coil mounted on the foot board, a flow pipe leading from one end of the coil to the top of the drum, a return pipe leading from the remaining end of the coil to the bottom of the drum, a supply tank carried by the dash above the foot board, and a supply pipe directly connecting the bottoms of the tank and drum.

In testimony whereof I affix my signature.

FREDERICK W. GERLINGER.