Aug. 4, 1925. 1,548,390

H. C. SCHLOE

CAR HEATER REGISTER

Filed Dec. 14, 1923

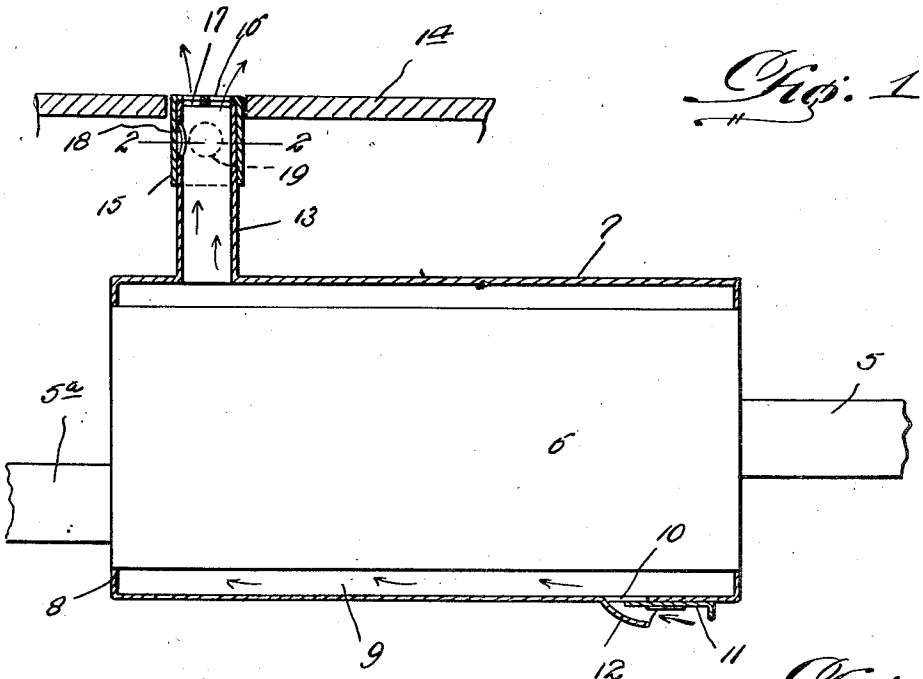
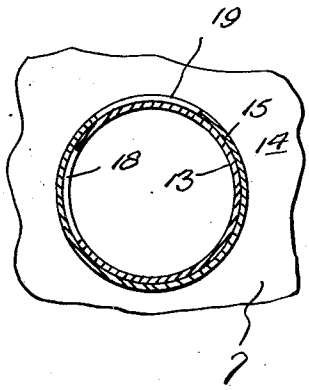
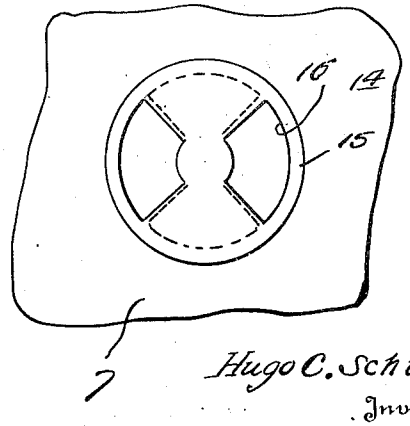


Fig. 1.

Fig. 2.

Fig. 3.





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UNITED STATES PATENT OFFICE.

HUGO C. SCHLOE, OF BROOKINGS, SOUTH DAKOTA.

CAR-HEATER REGISTER.

Application filed December 14, 1923. Serial No. 680,660.

To all whom it may concern:

Be it known that I, HUGO C. SCHLOE, a citizen of the United States, residing at Brookings, in the county of Brookings and State of South Dakota, have invented certain new and useful Improvements in Car-Heater Registers, of which the following is a specification.

This invention relates broadly to a car heater of the type used in connection with automobiles, but it has more particular reference to an improved register or heat controlling device for an appropriately designed heater.

The primary object of the invention is to provide a register of the above kind, depending for its operation upon its association and relationship with a motor vehicle engine exhaust muffler.

Another object of the invention is to provide a register of the above character that embraces the desired qualities of simplicity and durability of construction, as well as efficiency in operation.

Still another object of the invention is to provide a device which may be readily installed upon existing motor vehicles with comparative ease and at a nominal cost, the device embodying a register for readily regulating the amount of heated air delivered into the vehicle.

Other objects will appear as the nature of the invention is better understood, and the same consists in the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawing and claimed.

In the drawing, wherein like reference characters indicate corresponding parts throughout the several views:

Figure 1 is a view partly in section, and partly in elevation of an exhaust manifold heater equipped with an improved register, constructed in accordance with the present invention.

Figure 2 is an enlarged transverse sectional view taken substantially upon the line 2—2 of Figure 1, and

Figure 3 is an enlarged top plan view of a portion of the device shown in Figure 1, to reveal details of the register.

Referring more in detail to the drawing, 5 indicates the portion of an exhaust pipe of a motor vehicle engine that leads to a conventional form of muffler 6, and 5^a indicates the portion of said exhaust pipe which leads from said muffler 6 and has its rear end open to the atmosphere, in the well known usual manner.

In carrying out the present invention, a suitable drum 7 is disposed about the casing of the muffler 6 in concentric spaced relation to the latter, and the ends of this drum are placed in closed relation to the muffler casing by means of inturned annular flanges 8 provided upon the ends of the drum 7 as shown in Figure 1, the drum 7 being rigidly secured in place by any suitable manner such as by soldering the flanges 8 to the muffler casing. An annular cylindrical chamber 9 is provided, in this manner, between the muffler casing and the drum 7, about which air may circulate so as to be heated by contact with the casing of the muffler 6, that becomes heated due to the hot exhaust gases passing therethrough. The bottom of the drum 7 is provided with a port 10, through which air may pass to enter the chamber 9, and associated with this port is a damper 11, by means of which the amount of air admitted to the chamber 9 may be regulated, which damper is preferably of the slide type as shown. Disposed at the rear of the port 10 is a forwardly and downwardly projecting deflector plate 12 of scoop like form by means of which the air is effectively directed into the chamber 9 upon forward travelling movement of the vehicle. The parts so far described form no part of the patentable novelty of the present device.

As observed from the foregoing and more particularly from the annexed claim, the novelty of the present device resides more particularly in the construction of the so called register. In the present instance, this register embodies a heat conveying pipe or conduit 13 which is connected at its lower end to one end of the aforesaid casing 7 and extends upwardly therefrom. The upper end of the outlet pipe 13 projects into an opening provided in the floor 14 of the car to be heated, the upper end of said pipe 13 being substantially flush with the upper surface of the floor 14 as shown clearly in Figure 1. A damper is provided upon the upper end of the outlet pipe 13, and this damper preferably consists of a rotatable cap 15, having a plurality of spaced openings 16 in the top thereof, which openings are adapted to be brought into or out of registration with similar openings 17 provided

in a suitable wall formed on the upper end of the outlet pipe 13 as shown. The outlet pipe 13 is also provided with a side port 18, and the cap 15 is similarly provided with a side port 19, said ports 18 and 19 being so related as to register with each other when the cap 15 is turned to dispose the openings 16 and 17 out of register. It follows that the openings 18 and 19 are also so related that when they are out of register, the side port 18 will be closed while at the same time, the ports or openings 16 and 17 are registered. Thus, means is provided for simultaneously allowing all of the heated air to pass through the upper end of the outlet pipe 13 into the car while preventing any of the same from being diverted to the atmosphere through the side port 18, such means also constituting means which may be operated for diverting all of the heated air through the side port 18 and preventing any of the same from passing through the upper end of the outlet pipe 13 into the car. Likewise, a portion of the heated air may be diverted through the port 18 to the atmosphere, while the remaining portion thereof is allowed to pass into the car, because the openings 17 may be partially opened while the port 18 is partially opened when the cap 15 is adjusted to a particular position. Hence, the temperature of the air within the car may be regulated to a nicety.

What I claim as new is:

In a device of the class described, a hot air conveying conduit formed at its upper end with hot air escape ports and formed in one side of its wall at a point below the upper end with an additional port, a closing cap telescopically and rotatably fitted upon the upper end of the conduit, and provided at one end with ports adapted to register with the first named ports and provided in its side wall with a supplemental port adapted to register with the aforesaid additional port, the last named port in the cap being disposed with respect to the ports at the end of the cap, so that when the latter are fully registered with their co-acting ports in the conduit, the port in the side wall of the latter will be closed.

In testimony whereof I affix my signature.

HUGO C. SCHLOE.