Sept. 8, 1953 R. W. COOPER 2,651,381

EXHAUST MUFFLER WITH CONICAL PERFORATED BAFFLES

Filed Sept. 24, 1951

Fig. 1

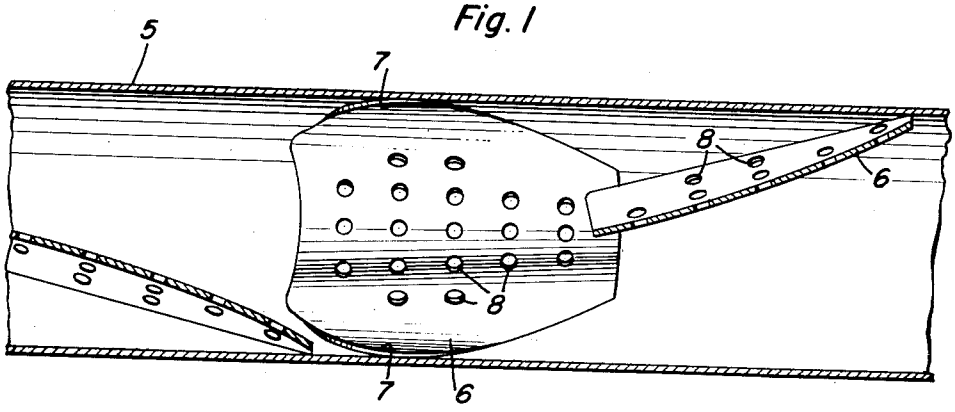


Fig. 2

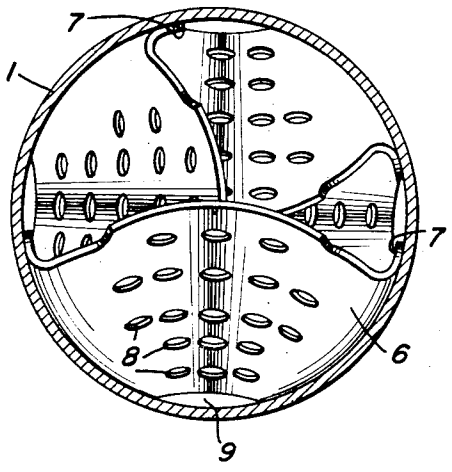
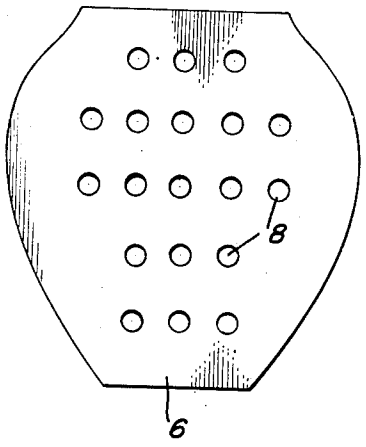


Fig. 3



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Patented Sept. 8, 1953

2,651,381

UNITED STATES PATENT OFFICE

2,651,381

EXHAUST MUFFLER WITH CONICAL PERFORATED BAFFLES

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Application September 24, 1951, Serial No. 247,964

1 Claim. (Cl. 181—70)

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The present invention relates to new and useful improvements in mufflers, particularly for the internal combustion engines of motor vehicles, stationary engines, marine and aircraft engines, etc., and has for its primary object to provide, in a manner as hereinafter set forth, a device of this character embodying a novel construction and arrangement whereby the accumulation of moisture will be prevented, thus preventing the formation of rust and prolonging the life of the device.

Other objects of the invention are to provide an improved muffler of the aforementioned character which will be comparatively simple in construction, strong, durable, highly efficient and reliable in use, compact and which may be manufactured at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawing, wherein like characters of reference designate corresponding parts throughout the several views, and wherein:

Figure 1 is a view in longitudinal section through a portion of a muffler constructed in accordance with the present invention;

Figure 2 is a view in transverse section through the device; and

Figure 3 is a plan view of the blank from which the baffles are formed.

Referring now to the drawing in detail, it will be seen that the embodiment of the invention which has been illustrated comprises a tube 5 of suitable metal. The tube 5 may be of any desired length and said tube is preferably of a diameter corresponding to the usual exhaust and tail pipes which are to be connected to its ends.

Fixed in the tube 5 at longitudinally and circumferentially spaced points is a plurality of metallic baffles 6. The baffles 6, which are formed from a single sheet of metal, are substantially in the form of segmental cones comprising reversely bent longitudinal marginal portions constituting attaching flanges 7 which are firmly secured to the tube 5 in any suitable manner.

As illustrated to advantage in Figure 2 of the drawing, the baffles 6 have formed therein a multiplicity of openings or perforations 8. The arcuate rear ends of the baffles 6 define moisture passages 9.

It is thought that the operation of the device will be readily apparent from a consideration of the foregoing. Briefly, the exhaust gases from the usual exhaust pipe of the engine enter the

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tube 5 and are muffled by the baffles 6 around and through which said gases pass. As also shown to advantage in Figure 2 of the drawing, the arrangement of the baffles 6 is such that no portion of the exhaust gases may flow straight through the muffler. Any moisture or fluid which may enter the muffler will be carried therethrough by the exhaust gases, this elimination being facilitated by the passages 9, thereby preventing the formation of rust and materially prolonging the life of the muffler.

It is believed that the many advantages of a muffler constructed in accordance with the present invention will be readily understood and although a preferred embodiment of the device is as illustrated and described, it is to be understood that changes in the details of construction and in the combination and arrangement of parts may be resorted to which will fall within the scope of the invention as claimed.

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

A muffler comprising a tube having an inlet at one end and an outlet at its other end, and a plurality of longitudinally spaced, substantially segmental, conical perforated baffles mounted at circumferentially spaced points in the tube in spaced, opposed relation thereto, said baffles having their large ends forward and being inclined rearwardly and outwardly from the longitudinal axis of the tube, both ends of said baffles being spaced from the tube and defining, in conjunction therewith, a plurality of unobstructed passages, said baffles including reversely bent longitudinal marginal attaching flanges fixed to the tube.

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