Dec. 7, 1937. O. C. FISCHER 2,101,389

MUFFLER

Filed Oct. 16, 1936

Fig. 1.

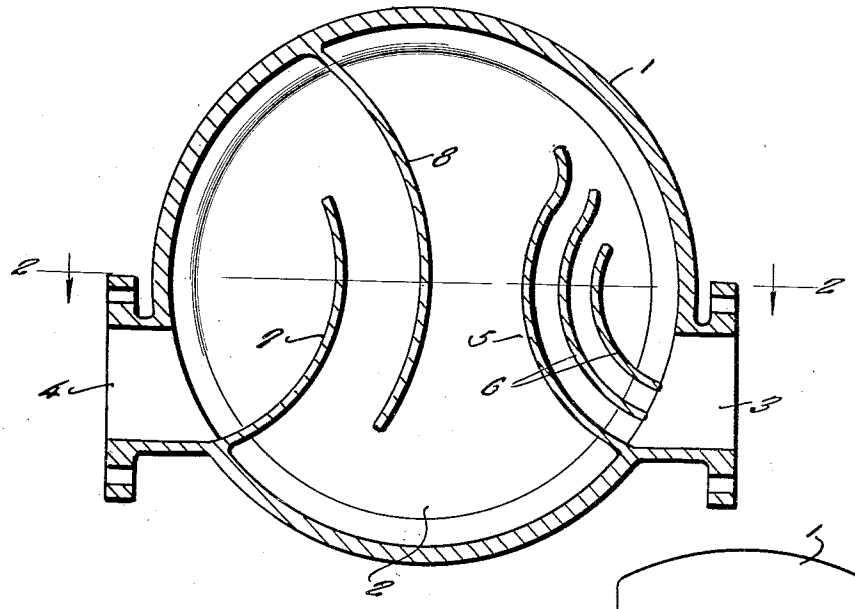
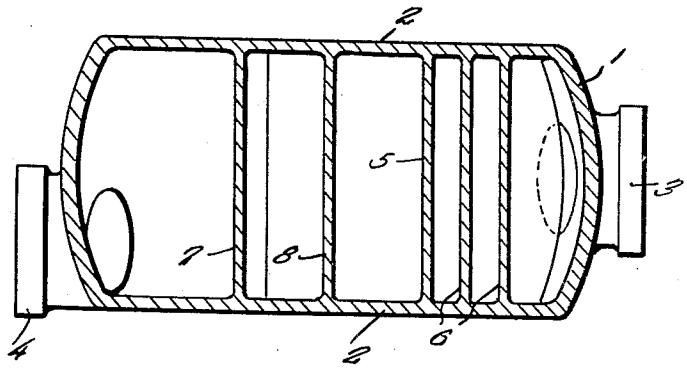


Fig. 2.



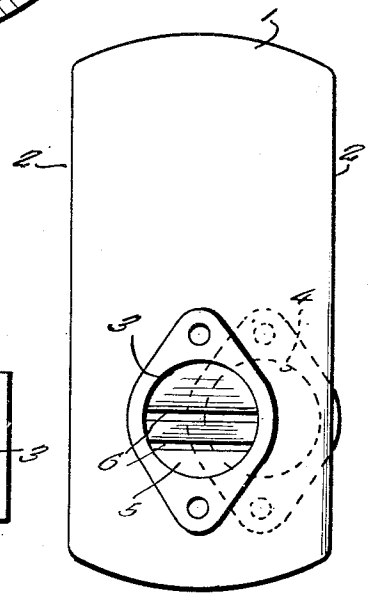


Fig. 3.

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UNITED STATES PATENT OFFICE

2,101,389

MUFFLER

Oliver C. Fischer, Waterloo, Ill., assignor of one percent to Robert L. Miller, one percent to Oscar J. Moffitt, one percent to Harold G. Horn, four percent to Henry F. Schneider, one percent to Elmer E. Collette, one percent to Leo V. Sondelbeck, and one percent to Arthur D. Goeddel, all of Waterloo, Ill.; one percent to Anton A. Wierschem and Mamie Wierschem, and one percent to Elmer W. Koch, all of Columbia, Ill., and one percent to Ira A. Moore, of Collinsville, Ill.

Application October 16, 1936, Serial No. 106,004

2 Claims. (Cl. 181—57)

The present invention relates to new and useful improvements in mufflers particularly for internal combustion engines and has for its primary object to provide, in a manner as hereinafter set forth, a device of this character embodying a novel construction, combination and arrangement of parts through the medium of which the exhaust of the engine will be effectively silenced while at the same time creating a minimum of back pressure.

Other objects of the invention are to provide a 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 vertical longitudinal section through a muffler constructed in accordance with the present invention.

Figure 2 is a horizontal sectional view taken substantially on the line 2—2 of Figure 1.

Figure 3 is a view in front elevation of the invention.

Referring now to the drawing in detail, it will be seen that the embodiment of the invention which has been illustrated comprises a circular metallic casing 1 of any suitable dimensions having substantially flat, opposed side walls 2. Projecting horizontally from the lower portion of the periphery of the annular casing 1 is an inlet and an outlet 3 and 4, respectively. As illustrated to advantage in Figures 2 and 3 of the drawing, the inlet and outlet 3 and 4, respectively, are not in alignment with each other.

Extending upwardly from the periphery of the casing 1 adjacent the inlet 3 is an arcuate baffle 5. Additional curved baffles 6 are provided in spaced concentric relation to the baffle 5. It will be observed that the spaces between the baffles 5 and 6 communicate with the inlet 3 for receiving the exhaust gases therefrom. It will also be noted that all of the baffles 5 and 6 terminate, at their upper ends, in spaced relation to the periphery of the casing 1 above the inlet 3.

Extending upwardly from the lower portion of the periphery of the casing 1 at the bottom of the outlet 4 is an arcuate baffle 7. The reference numeral 8 designates an arcuate baffle which is arranged in staggered, spaced, concentric relation to the baffle 7. As shown to advantage in Figure 1 of the drawing, the baffles 7 and 8 are oppositely curved with respect to the baffles 5 and 6.

It is thought that the operation of the invention will be readily apparent from a consideration of the foregoing. Exhaust gases from the internal combustion engine enter the casing 1 through the inlet 3 and are deflected upwardly by the baffles 5 and 6, said exhaust gases passing between said baffles. After leaving the baffles 5 and 6 and expanding in the upper portion of the casing 1, the exhaust gases pass downwardly between the baffles 5 and 8, then under the latter, then upwardly between said baffle 8 and the baffle 7, and then over the latter and then downwardly to the outlet 4. The gases also expand in the lower portion of the casing 1 before entering between the baffles 7 and 8 and after passing over said baffle 7.

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.

What is claimed is:—

1. A muffler of the class described comprising a drum-like casing provided below its horizontal center with opposed inlet and outlet ports, respectively, a series of spaced apart similarly curved baffles upstanding from the inlet port, said series being graduated in height, a baffle upstanding from the bottom of the outlet port, and a baffle depending from the casing intermediate said series of baffles and said outlet port baffle, said outlet port baffle and said intermediate baffles being oppositely curved relative to said series of baffles.

2. A muffler of the class described comprising

a drum-like casing provided below its horizontal center with opposed peripheral inlet and outlet ports, respectively, a series of spaced apart similarly curved baffles upstanding from the inlet port and curving in the same direction, said series of baffles being graduated in height, a baffle for the outlet port upstanding from the bottom thereof, and a baffle depending from said casing intermediate the series of baffles and said outlet port baffle, said depending and outlet port baffle being oppositely curved relative to said series of baffles, and said depending baffle overlapping said outlet port baffle.

OLIVER C. FISCHER.