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MUFFLER WITH PLURAL PERFORATED CONICAL BAFFLES

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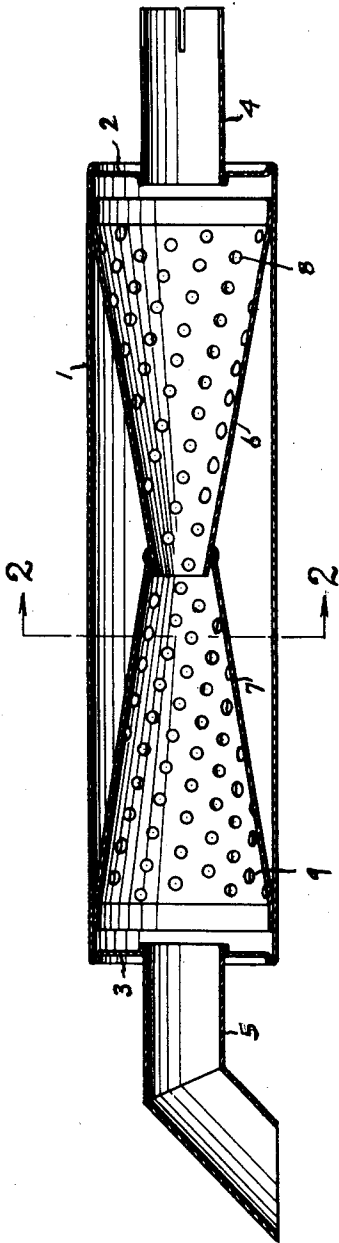


Fig. 1.

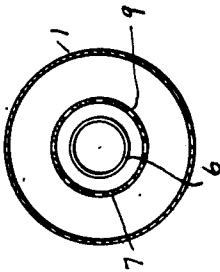


Fig. 2.

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MUFFLER WITH PLURAL PERFORATED
CONICAL BAFFLES

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1 Claim. (Cl. 181-41)

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This invention relates to a muffler for internal combustion motors.

It is an object of the invention to provide a muffler specially designed for use in connection with the motors of trucks, buses and heavy motor vehicles although it may be designed for use on automobiles and similar vehicles.

Another object of the present invention is to provide a muffler for a vehicle motor which will effectively muffle the exhaust at a minimum of back pressure.

It is a further object of the invention to provide a muffler of the character described which eliminates all cross baffle plates so that there are no parts that are liable to become loose and obstruct the exhaust or blow out.

It is a still further object of the invention to provide a muffler which consists of a cylindrical housing with two frusto-conical baffles therein whose small ends meet and are united with their large ends fitted closely within the respective ends of the housing said baffles being perforated approximately throughout their areas.

Other objects and advantages will be apparent from the following specification which is illustrated by the accompanying drawings, wherein:

Figure 1 is a longitudinal, sectional view of the muffler, and

Figure 2 is a cross-sectional view taken on the line 2-2 of Figure 1.

Referring now more particularly to the drawings, the numeral 1 designates an elongated cylindrical shaped housing which is preferably formed of heavy sheet metal and whose ends are crimped inwardly.

At the ends of the housing there are the circular end plates 2, 3 which are fitted within the ends of the housing and their margins are preferably turned outwardly and welded to the inwardly turned ends of the housing.

Secured to the plate 2 there is an inlet pipe 4 which is connected into the exhaust of the motor and secured to the end plate 3 there is a tail pipe 5 which may be straight but which, in the present illustration, is downwardly directed at its discharge end to deflect the exhaust downwardly and away from the brake drums or wheels of the vehicle.

These pipes 4 and 5 are welded to the end plates 2 and 3.

Within the housing 1 there are the baffles 6 and 7.

These baffles are formed of heavy sheet metal and are frusto conical in shape with their outer ends fitted within the corresponding ends of the housing and with their inner, or small, ends adjacent or preferably telescoping, as shown. These adjacent ends may be welded or otherwise secured together so that they will be maintained in a central position relative to the housing. These

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baffles 6 and 7 are provided with the perforations 8 and 9 approximately throughout their area.

The exhaust gases pass from the motor through the inlet pipe 4 into the baffle 6 and thence through the perforations 8 thus being broken up into a plurality of streams and pass into the housing around the baffles and thence inwardly through perforations 9 into the baffle 7 thus being again broken up into a plurality of streams and pass thence out through the tail pipe.

This baffling of the stream of exhaust gases minimizes the noise of the exhaust but, at the same time, reduces the back pressure to a minimum thus increasing the efficiency of the motor.

The muffler as a whole is composed of heavy gauge steel sheet construction not only as to the housing but also as to the baffles and the intake and tail pipes, said parts being all securely welded together for strength to the end that there will be no parts which can come loose and blow out in the normal operation of the motor.

The drawings and description are illustrative merely while the broad principle of the invention will be defined by the appended claim.

What I claim is:

A muffler for internal combustion motors comprising, a housing which is cylindrical from end to end and which is formed of sheet metal and at both ends crimped inwardly, circular end plates which are fitted within the ends of the housing with their margins turned outwardly and welded to the inwardly crimped ends of the housing, an inlet pipe adapted to be connected to the exhaust of the motor and secured to one of said end plates and a tail pipe secured to the other end plate, two baffles within the housing formed of sheet metal and frusto-conical shaped with their larger ends fitted closely within the corresponding ends of the housing and with their inner, or smaller ends, adjacent each other, said smaller ends being secured together so that they will be retained in a center position relative to the housing, said baffles being provided with perforations approximately throughout the area thereof.

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REFERENCES CITED

The following references are of record in the file of this patent:

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