

Jan. 10, 1956

J. H. BAILEY
BAFFLE MUFFLER SILENCER

2,730,188

Filed May 21, 1951

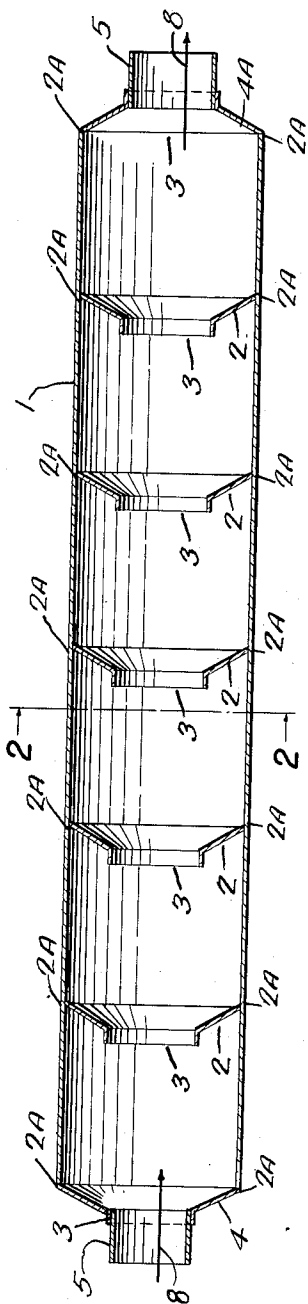


Fig-1

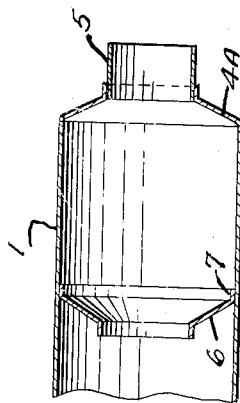


Fig-3

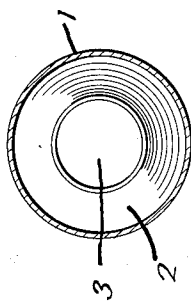


Fig-2

INVENTOR.
JOHN H. BAILEY
BY *Roy H. Daily*
ATTORNEY

1

2,730,188

BAFFLE MUFFLER SILENCER

John H. Bailey, Sacramento, Calif.

Application May 21, 1951, Serial No. 227,391

1 Claim. (Cl. 181—47)

My invention relates to improvements in a baffle muffler silencer for diesel engines in trucks.

This invention relates to new and useful improvements in mufflers for diesel engines and consists in the provision of a silencer of this nature whereby the possibility of back pressure and after firing are eliminated and by which an economy in fuel is afforded.

My invention consists essentially in the provision of a muffler having a series of conical shaped members, the open ends of which extend centrally through the cylindrical muffler body.

The invention finally consists in the combination and arrangements of conical baffle plates set forth in the following specification, and particularly pointed out in the claim thereof, and a series of conical baffle plates located within said cylindrical muffler body, the smaller ends of said conical baffle plates pointed toward the inlet end of the muffler.

Other objects and advantages of the invention will be apparent during the course of the following description:

Figure 1 is a longitudinal section through the center of muffler.

Figure 2 is a sectional view along line 2—2 of Figure 1, and

Figure 3 is a sectional view of construction of outlet end of muffler.

In the drawings, wherein for the purpose illustration is shown a preferred embodiment of my invention the numeral 1 designates an outer cylindrical casing, or muffler body. This cylindrical muffler body includes a front portion, or conical shaped baffle plate 4, which is similar to conical shaped baffle plates 2, used throughout the muffler, 3 is a round opening in baffle plate, within which is inserted a cylindrical shaped sleeve 5 inside diameter of which is the same as the outside diameter of an exhaust pipe on an automobile, truck or aeroplane, 8 shows the direction of the exhaust from the vehicle to which the muffler is attached, within the outer cylindrical casing is placed a series of conical shaped baffle plates 2 which are electrically butt welded at 2A to the cylindrical casing 1. The back portion of the muffler also has a conical shaped baffle plate 4A attached

2

thereto similar to the front portion into which is inserted a cylindrical shaped sleeve to permit the exhaust of the gases from an automobile or truck motor. In Figure 3 the numeral 7 designates and shows in detail the flange for spot welding, or electrically butt welding, of the conical shaped baffle plates 2 to the outer cylindrical casing 1 while 6 shows the last baffle plate within the muffler and the baffle plate 4A on outside of muffler.

By the provision of a silencing muffler made in accordance with my invention on the principle of a series of conical shaped baffle plates, I have found that after firing is avoided, a great saving of fuel effected and dispensing with the noise usually accompanying the opening of the cut out in climbing hills and, owing to the direct passage of the gas, its course is prevented from spreading and which tends to decrease the velocity of the gas, whereas, in the operation of mufflers in which reverse arrangement of a conical shaped baffle plates are employed, the gases are allowed to spread and necessarily retard their exit.

What I claim is new:

A silencing muffler having a front inlet and a back outlet and comprising a casing having imperforate cylindrical walls and provided with a front upstream baffle plate having a central opening therein and a back downstream plate with a central opening therein, a series of additional baffle plates mounted within said casing and located between said front baffle plate and said back plate, each of said baffle plates having imperforate sloping conical sides extending continuously from said imperforate casing walls to a single central opening and converging in a direction toward said front baffle plate to terminate upstream in said central opening, the height of said conical plates forming but a small fraction of the base diameter thereof, and cylindrical stiffening sleeves on said baffle plates projecting in an upstream direction from the perimeter of said openings whereby portions of the exhaust gases entering through the opening in said front baffle plate are deflected toward said imperforate sides of said baffle plates and toward said imperforate casing walls.

References Cited in the file of this patent

UNITED STATES PATENTS

45	1,061,272	De Witt	May 13, 1913
	1,874,326	Mason	Aug. 30, 1932
	1,990,837	Morgenstern	Feb. 12, 1935
	2,353,914	McLeod	July 18, 1944
	2,502,709	Dorman	Apr. 4, 1950
50	2,514,996	Faust	July 11, 1950
	2,562,101	Hoyle	July 24, 1951

FOREIGN PATENTS

55	275,364	Germany	June 16, 1914
	141,254	Great Britain	Apr. 15, 1920