No. 877,840. PATENTED JAN. 28, 1908.

W. L. GEE.

MUFFLER.

APPLICATION FILED APR. 22, 1907.

Fig. 1

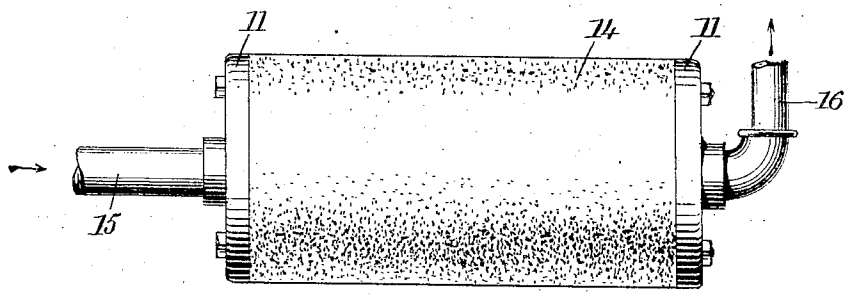


Fig. 2

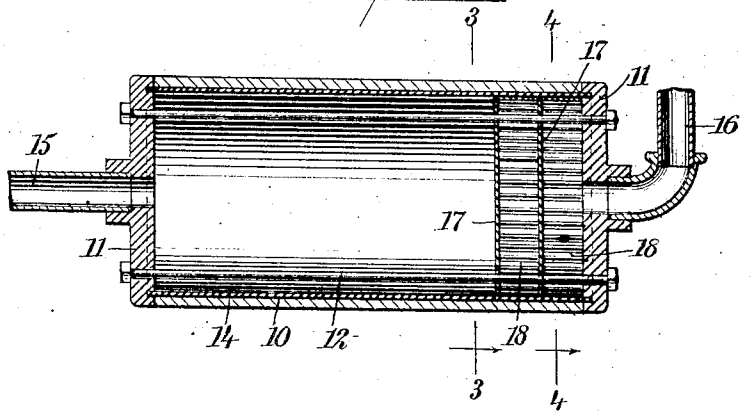


Fig. 3

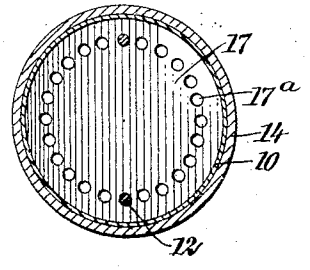
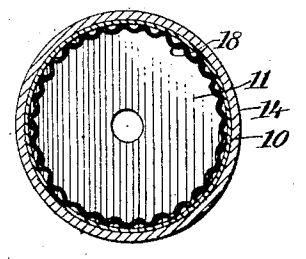


Fig. 4



WITNESSES:

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MUFFLER.

No. 877,840. Specification of Letters Patent. Patented Jan. 28, 1908.

Application filed April 22, 1907. Serial No. 369,586.

To all whom it may concern:

Be it known that I, WALTER LEANDER GEE, a citizen of the United States, and a resident of Saratoga Springs, in the county of Saratoga and State of New York, have invented a new and Improved Muffler, of which the following is a full, clear, and exact description.

The invention relates to a muffler intended particularly for use in connection with internal combustion engines to reduce the noise of the exhaust.

The object of the invention is to provide an efficient device for this purpose of the lightest possible construction and involving the minimum degree of back pressure in the engine thus fitting it especially for use in automobile work.

The invention resides in certain features of construction and arrangement of parts which will be fully set forth hereinafter and particularly pointed out in the claims.

Reference is to be had to the accompanying drawings which represent, as an example, the preferred embodiment of my invention, in which drawings

Figure 1 is a side elevation of the muffler; Fig. 2 is a longitudinal section; Fig. 3 is a cross section on the line 3—3 of Fig. 2; and Fig. 4 is a cross section on the line 4—4 of Fig. 2.

The muffler is formed of a cylindrical sheet metal drum 10, to the ends of which cast metal heads 11 are held by tie bolts 12 passing longitudinally through the muffler from one end to the other. The heads project beyond the sides of the drum 10, and the space between the heads is filled by a covering 14 of asbestos or other non-conducting material. One of the heads 11 has an inlet pipe 15 for the exhaust gases, and the other head has an outlet pipe 16 therefor. Adjacent to the outlet end of the muffler is located a number of baffle plates 17. These plates are preferably two in number, though this may be varied if desired. The plates fill the entire cross sectional area of the drum and are formed with a series of openings 17^a, which permit the gases to pass the baffle plates. Said plates are held at the proper distance apart by means of annular spacers 18 which are formed with bands of corrugated metal, as shown best in Fig. 4, these spacers lying against the inner sides of the drum. The exhaust gases passing under pressure into the open receiving portion of the muffler through the pipe 15 expand in said portion, pass the baffle plates and finally escape through the pipe 16 at an approximately constant pressure, this being due to the expansion of the gases in the muffler where the separate puffs from the exhaust are merged into the lower pressure obtaining in the body of the muffler, which lower pressure gradually and uniformly issues past the baffle plates out through the discharge pipe.

Having thus described the preferred form of my invention, what I claim as new and desire to secure by Letters Patent is:

1. A muffler having a body formed of a sheet metal drum, heads engaging with the ends thereof, tie rods passing through the muffler and engaging the heads to hold them in place, a non-conducting covering encircling the drum between the heads, and a transverse baffle plate within the drum, said plate being provided with a plurality of openings therethrough.

2. A muffler comprising a drum with inlet and outlet openings, a baffle plate therein, and a spacer for the baffle plate, said spacer being formed of annular corrugated sheet metal.

3. A muffler having a drum with inlet and outlet openings, a baffle plate therein, and an annular spacer for the baffle, said spacer being formed of sheet metal corrugated longitudinally of the muffler.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WALTER LEANDER GEE.

Witnesses:

HENRY W. BURTON,

CLARENCE B. KILMER.