

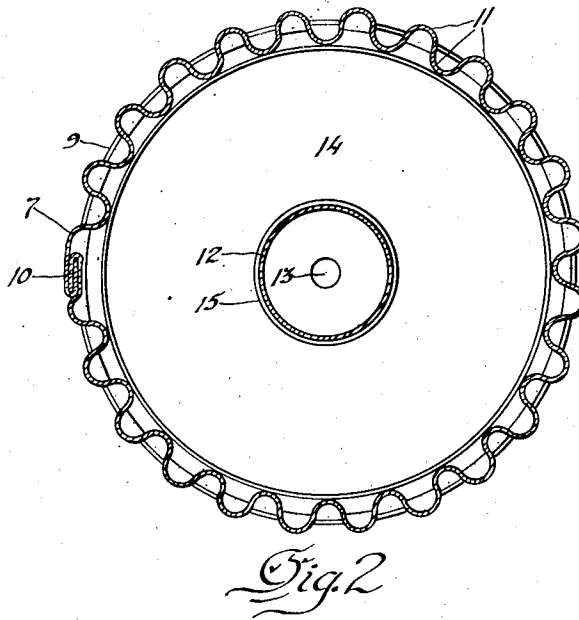
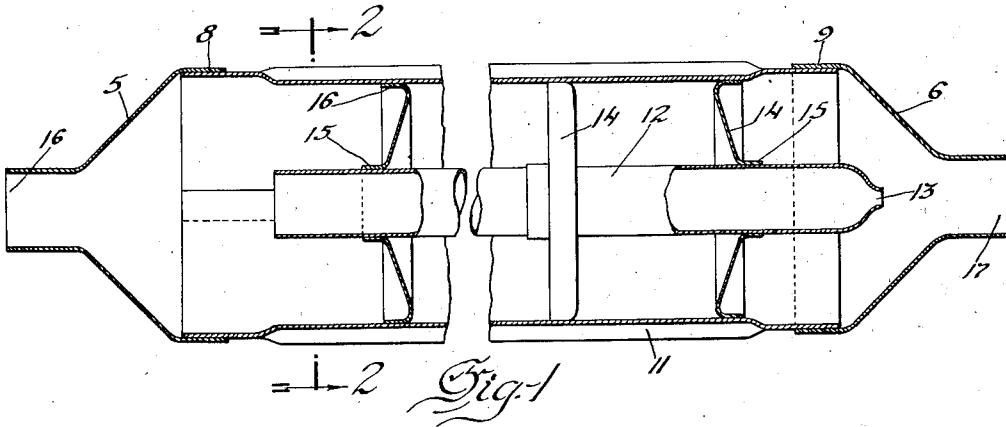
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MUFFLER FOR INTERNAL COMBUSTION ENGINES

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MUFFLER FOR INTERNAL-COMBUSTION ENGINES.

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It is the primary object of my invention to provide a muffler of the type described, which is adapted to quickly and efficiently cool the exhaust gases passed into it and which is of economical and sturdy construction.

To this end, I have provided a muffler composed of a very small number of parts so joined together as to make their disintegration through usage substantially impossible.

With the above, and other objects in view, my invention consists in the arrangement, combination and construction of the various parts of my improved device as described in the specification, claimed in my claims and shown in the accompanying drawings, in which:

Fig. 1 is a longitudinal sectional view of my improved device.

Fig. 2 is a view taken on line 2—2 of Fig. 1.

I have shown a pair of end pieces or heads 5 and 6, to which a shell 7 is secured by welding as at 8 and 9.

The shell 7 is formed of a single strip of material having its longitudinal edges return bent and joined together as shown at 10 in Fig. 2. The return bent edges may, if desired, be welded together. A plurality of longitudinally extending corrugations 11 are provided on the shell.

Extending within the shell 7 is an ejector tube 12 having its discharge end drawn to effect a relatively small opening 13.

A plurality of baffle plates 14 are provided having necks 15 formed thereon and adapted to engage the ejector tube 12. The necks 15 may be welded to the tube 12 in order to assist in securing the baffle plates in place.

The outer peripheries of the plates 14 are flanged as at 16, the flanges being adapted to engage the bottoms of the corrugations 11 and are welded thereto in order to secure them against displacement.

The number of baffle plates utilized and the positioning of the same along the ejector tube 12 is determined by the piston displacement of the motor which the muffler is intended to serve.

Exhaust gases will be passed into the muf-

fler through the opening 16 in the head 5, a portion of them passing directly into the ejector tube 12, and the remainder being deflected by the first baffle plate 14 to the inner periphery of the shell 7. Contracting of the end 13 of the ejector tube 12 naturally restricts the passage of gases through the tube and creates a partial vacuum in the head 6, thus assisting in drawing the gases around the inner periphery of the shell 7 through the openings effected by the corrugations 11, out through the head 6 and the opening 17 therein.

Thus it will be readily seen that the gases are effectually cooled around the inner periphery of the shell 7 with the corrugations 11 acting as radiators.

It will be obvious that various changes may be made in the arrangement, combination and construction of the various parts of my improved device without departing from the spirit of my invention. Particularly changes in the assembly of my improved device may be made, as well as changes in the location of the various parts to accommodate various types and sizes of engines, to which the muffler is assembled. It is my intention to cover by my claims such changes as may be reasonably included within the scope of my invention.

What I claim is:

1. A muffler of the class described comprising a gas receiving opening and a discharge opening, a corrugated shell between said openings, a plurality of baffle plates in said shell, said plates having portions thereof positioned against the inner ridges of said corrugations, and means extending through said plates to a point adjacent said discharge opening adapted to receive some of the gases and to create a vacuum, whereby the remaining gases may be drawn around the inner periphery of said corrugated shell.

2. A muffler of the class described comprising a gas receiving opening and a discharge opening, a corrugated shell between said openings, a tube in said shell having a contracted opening adjacent said discharge opening, a plurality of baffle plates in said shell having apertures therein through which said tube extends, a portion of each plate en-

gaging said tube and another portion thereof engaging the inner ridges of said corrugations, whereby gases may pass through the valleys of said corrugations.

- 5 3. A muffler of the class described comprising a gas receiving opening and a discharge opening, a corrugated shell between said openings, a tube in said shell having a contracted opening adjacent said discharge

opening, a plurality of baffle plates in said 10 shell having apertures therein through which said tube extends, flanges on said plates around said tube and flanges on said plates bearing against the ridges of said corruga- 15 tions and means securing said flanges to their bearing surfaces.

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