

T. B. HAUGEN.
GAS ENGINE SILENCER.
APPLICATION FILED JAN. 28, 1913.

1,070,600.

Patented Aug. 19, 1913.

Fig. 1.

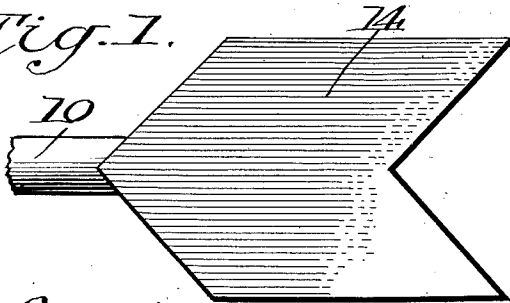


Fig. 2.

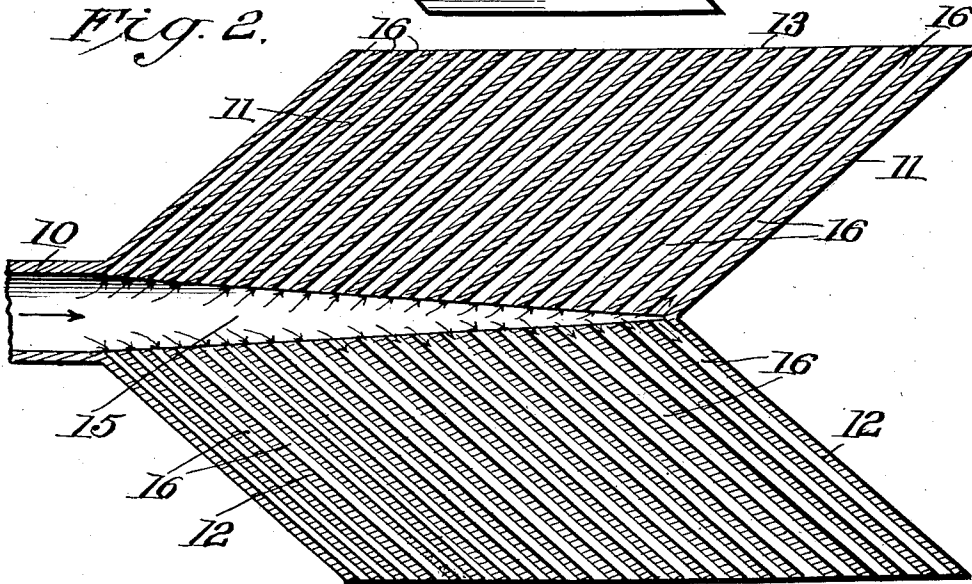


Fig. 4.

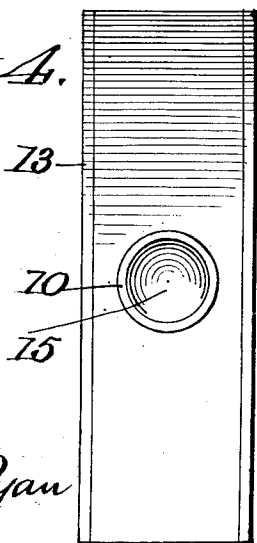
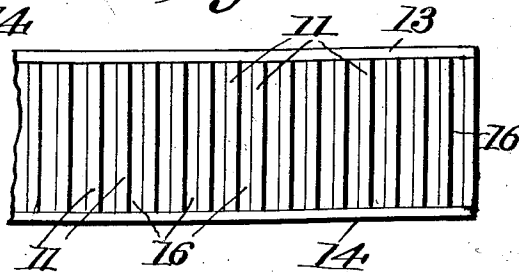


Fig. 3.



Witnesses
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GAS-ENGINE SILENCER.

1,070,600.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, THEOPHILUS B. HAUGEN, a citizen of the United States, residing at Northwood, in the county of Worth, State of Iowa, have invented certain new and useful Improvements in Gas-Engine Silencers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to gas engine silencers and has for an object to provide an extremely simple and inexpensive silencer that divides the exhaust in such a manner that the gases are cooled and passed without back pressure or noise into the atmosphere.

With the above object in view the invention consists of certain novel details of construction and combination of parts hereinafter fully described and claimed, it being understood that various modifications may be made in the minor details of construction within the scope of the appended claims.

In the accompanying drawing illustrating this invention: Figure 1 is a side elevation. Fig. 2 is a longitudinal section. Fig. 3 is a plan. Fig. 4 is an end elevation.

Referring now to the drawing in which like characters of reference designate similar parts, 10 designates the exhaust pipe.

The silencer comprising the subject-matter of this invention consists of a box or casing comprising an upper and lower series of synclinal rectangular plates 11 and 12 connected together by side plates 13 and 14, the inner ends of the plates being arranged in stepped relation to produce a tapered chamber 15 in axial alinement with the exhaust pipe 10 as clearly shown in Fig. 2. The exhaust gases pass from the exhaust pipe into the tapered chamber 15 and thence escape

through the passages 16 between the synclinal plates into the atmosphere. By virtue of the novel stepped relation of the synclinal plates to produce a tapered chamber the exhaust gases will expand with resultant cooling during passage from the chamber through the spaces between the plates into the atmosphere so that a comparatively noiseless exhaust without back pressure will result.

What is claimed, is:—

1. A silencer comprising a casing including an upper and lower series of synclinal plates, and side plates connecting said synclinal plates together, the inner ends of said synclinal plates being arranged in stepped relation to produce a tapered chamber, the exhaust gases being designed to enter the larger end of said chamber and escape from said chamber through the spaces between said synclinal plates into the atmosphere.

2. A silencer comprising a casing including an upper and a lower series of synclinal plates, side plates connecting the side edges of both series of synclinal plates together, and an exhaust pipe entering one end of said casing, the inner ends of said plates being disposed in stepped relation and producing a chamber in prolongation of said pipe and gradually increasing in diameter from said pipe to the opposite end of said casing, the exhaust gases being designed to pass from said pipe into said chamber and from thence escape through the spaces between said plates into the atmosphere.

In testimony whereof, I affix my signature, in the presence of two witnesses.

THEOPHILUS B. HAUGEN.

Witnesses:

IVER IVERSON,
O. E. GUNDERSON.