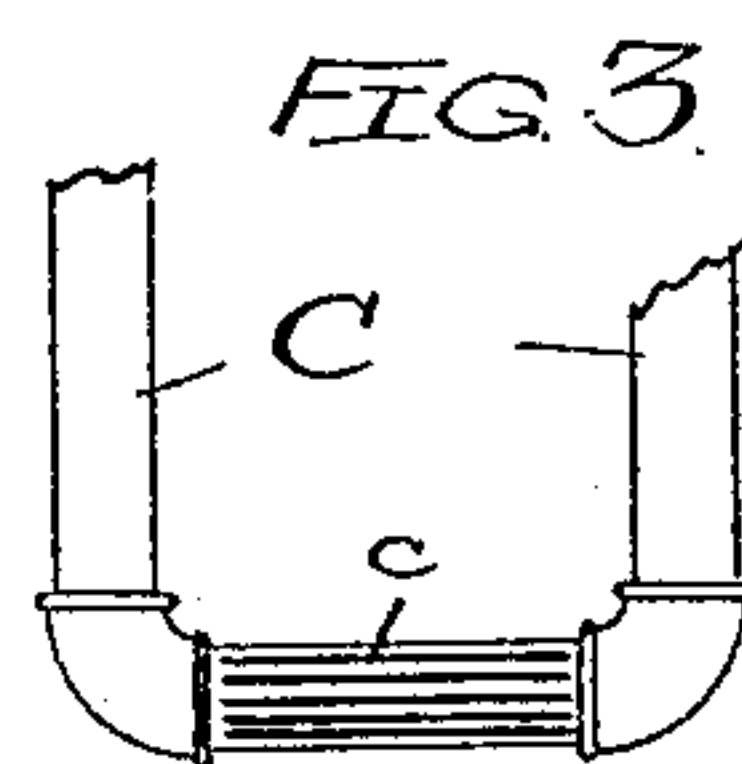
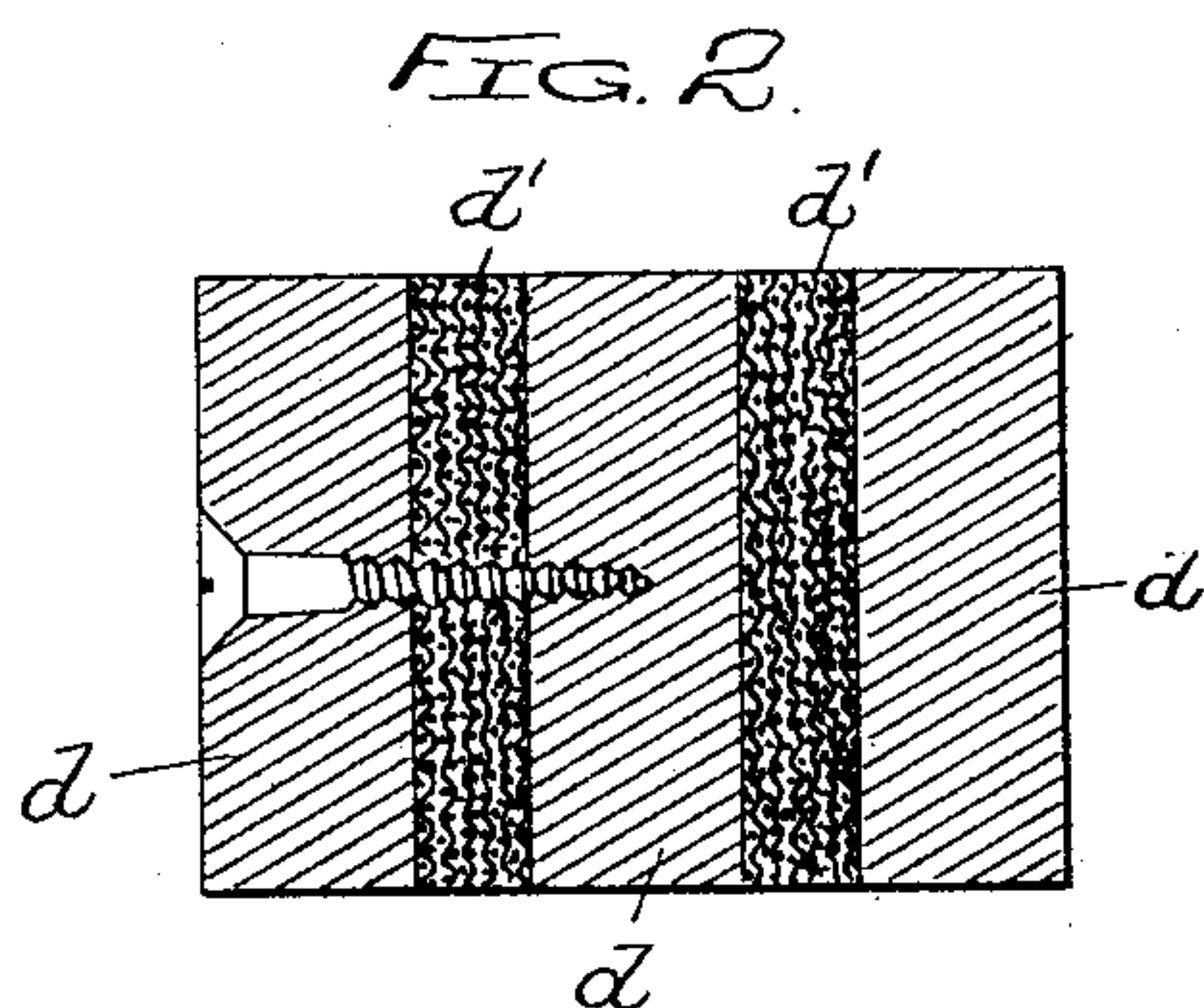
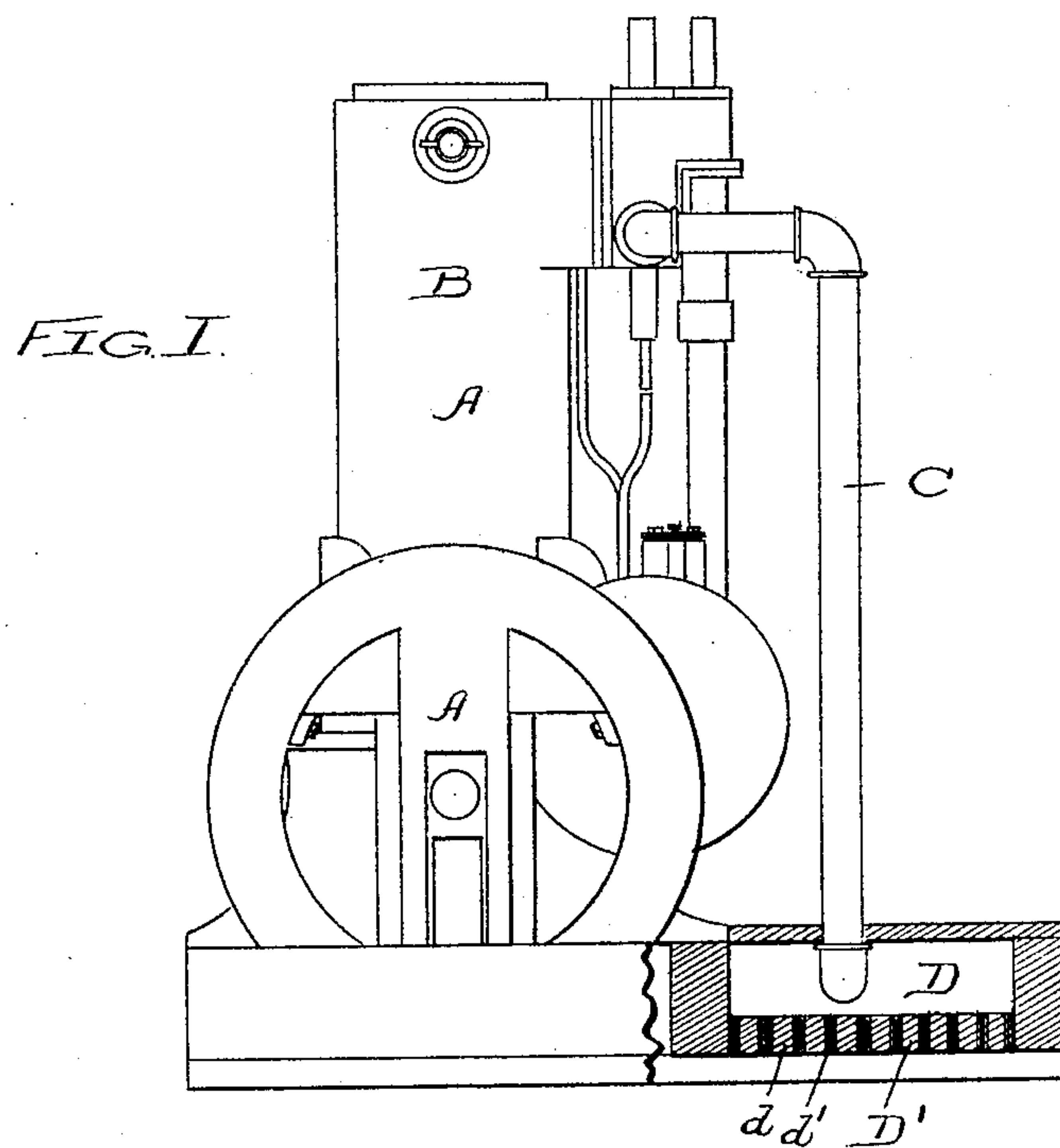


(No Model.)

E. PROUTY.
MUFFLER FOR ENGINES.

No. 570,502.

Patented Nov. 3, 1896.



WITNESSES:

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HIS ATTORNEYS.

UNITED STATES PATENT OFFICE.

ENOCH PROUTY, OF CHICAGO, ILLINOIS, ASSIGNOR TO OLIVE S. PROUTY
AND ENOCH PROUTY, OF SAME PLACE.

MUFFLER FOR ENGINES.

SPECIFICATION forming part of Letters Patent No. 570,502, dated November 3, 1896.

Application filed May 18, 1896. Serial No. 591,934. (No model.)

To all whom it may concern:

Be it known that I, ENOCH PROUTY, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Mufflers for Engines, of which the following is a specification.

My invention relates to the construction of mufflers for gas-engines.

The object of my invention is to provide a muffler of a simple, efficient, and durable construction by means of which the exhaust-blast from gas-engines or other engines may be broken, scattered, or dissipated without producing disagreeable sounds or noises or forcible jets which would interfere with the use of the gas-engine as a means for propelling street-cars or other vehicles.

To this end my invention consists in a sound-muffler comprising a chamber, preferably in capacity several times that of the cylinder of the engine, and into which the exhaust is led through a suitable pipe, and which chamber is furnished with a bottom or side composed of a series of slats, preferably wood slats, with the space between the slats filled in by a series or several thicknesses of wire screen or netting strips placed edgewise between the slats and held in place by being compressed between the slats. The strips of wire screen or netting are preferably about two or three inches in width, and as the exhaust thus has to pass in the direction of the plane of the wire-screen strips through the series of them the blast or exhaust has no opportunity to form holes or passages through the muffler or to escape in forcible jets and produce any disagreeable noise or sound. To better distribute the blast as it escapes into the muffler-chamber from the exhaust-pipe, I also provide the exhaust-pipe with a series of long narrow longitudinal slits arranged around the periphery of the pipe.

In the drawings forming a part of this specification, and in which similar letters of reference indicate like parts, Figure 1 is a side elevation, partly in section, of a device embodying my invention. Fig. 2 is an enlarged detail vertical cross-section. Fig. 3 is a side ele-

vation showing the exhaust-pipe and the slits or orifices therein for the discharge of the exhaust into the muffler.

In the drawings, A represents a gas-engine of any suitable or customary construction, B its cylinder, and C its exhaust-pipe.

D represents my improved sound-muffler chamber, the same being preferably several times the capacity of the cylinder, the chamber being preferably constructed of wood or other suitable material and preferably in the form of a box. Its bottom D', through which the exhaust escapes from the chamber, is composed of a series of wood slats *d*, preferably some two or three inches in width vertically, arranged alternately with a series of wire screen or netting strips *d'*, placed edgewise between the slats or one flat against another, as illustrated in the drawings. Each series of the wire-screen strips should be composed of six or eight or more thicknesses or separate strips of wire screen, or so that the wire-screen strips are built up to a thickness approximating that of the wood slats. Each series or thickness of wire-screen strips is held in place by being clamped or compressed between the adjacent slats. The series of wire-screen strips may be thus clamped between the wood slats by any suitable means. A convenient means is that illustrated in the drawings at Fig. 2, in which screws are employed to clamp each successive wood strip to its predecessor. The muffler bottom or side of the chamber may thus be built up to any desired width or size by simply applying alternately successive wood slats and the interposed series of flat or edgewise-placed strips of wire screen or netting. The exhaust-pipe C is preferably provided with a series of long longitudinal slits *c*, extending around the periphery of the pipe so as to divide the blast and break its force before it escapes into the muffler-chamber. The alternate slats and series or thicknesses of wire screen, clamped flatwise between the slats, may be arranged or placed in the top, bottom, sides, or ends of the chamber, one or more, as may be preferred. I prefer, however, to employ them only in the bottom of the chamber. As the

strips or thicknesses of the wire screen or netting are placed edgewise between or flat against or parallel to the sides of the slats the exhaust has to escape edgewise through the screens or in the direction of their plane, as contradistinguished from passing at right angles through them, and as the series or thicknesses of wire screen are firmly supported and more or less compressed between the adjacent slats the muffler acts in a very efficient manner and thoroughly dissipates and breaks up the exhaust and prevents its escape in jets or in such manner as to produce noise.

I claim—

1. A sound-muffler for gas or other engines, consisting in a chamber furnished with a number of slats, having interposed between them a number of thicknesses or strips of wire screen placed edgewise or parallel to the slats, substantially as specified.

2. In a sound-muffler, the combination with slats d of a series of strips or thicknesses of

wire screen or netting d' , clamped between the slats, substantially as specified.

3. In a sound-muffler, the combination with slats d of a series of strips or thicknesses of wire screen or netting d' clamped between the slats, and screws for clamping each successive slat to the preceding one, substantially as specified.

4. A sound-muffler for gas or other engines, consisting in a chamber furnished with a number of slats, having interposed between them a number of thicknesses or strips of wire screen placed edgewise or parallel to the slats, and an exhaust-pipe leading into said chamber and being provided with a series of long narrow slits around its periphery to divide the exhaust-blast as it is discharged into said chamber, substantially as specified.

ENOCH PROUTY.

Witnesses:

H. M. MUNDAY,
S. E. CURTIS.