No. 842,531. PATENTED JAN. 29, 1907.

G. P. DORRIS.

MEANS FOR COOLING EXPLOSIVE ENGINE CYLINDERS.

APPLICATION FILED OCT. 5, 1904.

FIG. I.

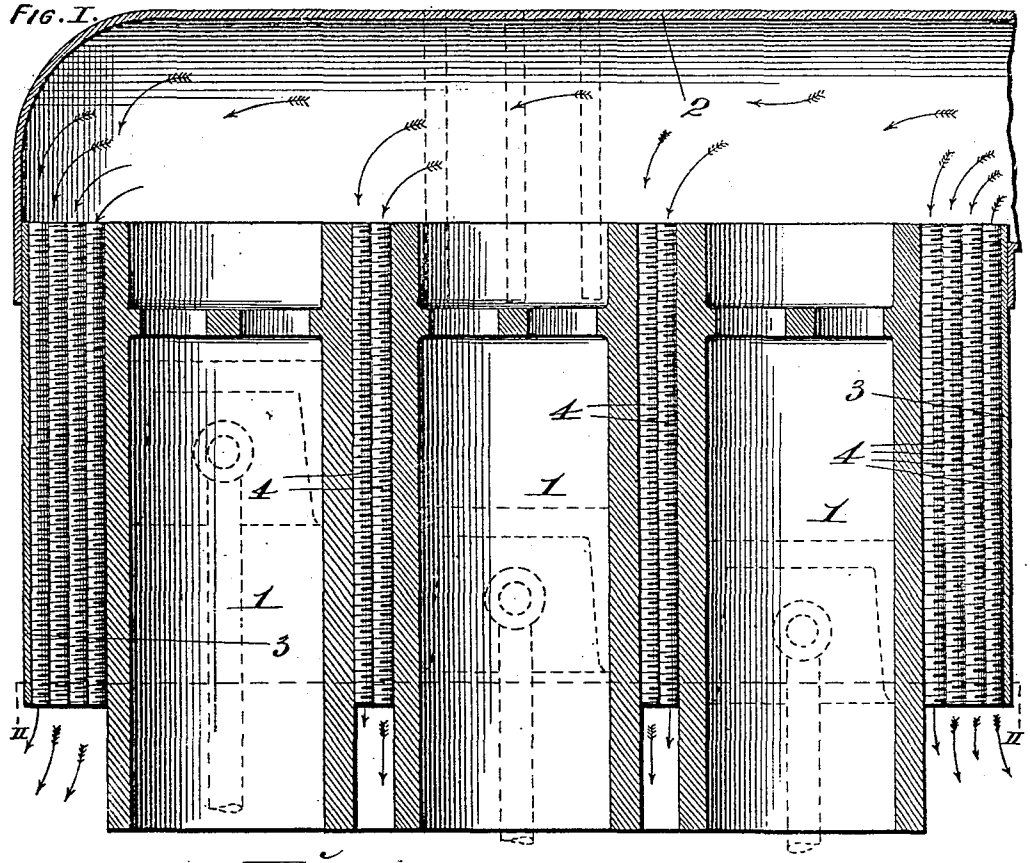


FIG. II.

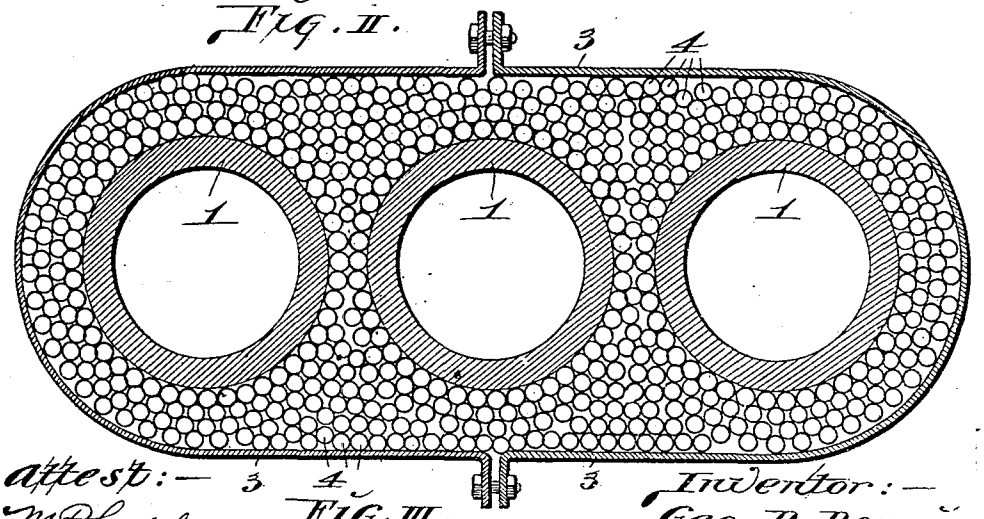
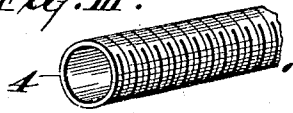


FIG. III.



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UNITED STATES PATENT OFFICE.

GEORGE P. DORRIS, OF ST. LOUIS, MISSOURI.

MEANS FOR COOLING EXPLOSIVE-ENGINE CYLINDERS.

No. 842,531. Specification of Letters Patent. Patented Jan. 29, 1907.

Application filed October 5, 1904. Serial No. 227,199.

To all whom it may concern:

Be it known that I, GEORGE P. DORRIS, a citizen of the United States, residing in the city of St. Louis, and State of Missouri, have invented certain new and useful Improvements in Means for Cooling Explosive-Engine Cylinders, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a means providing for the use of air for cooling the cylinders of gasolene or other explosive-engine cylinders.

The invention consists in features of novelty hereinafter fully described, and pointed out in the claim.

Figure I is a longitudinal section taken through a series of engine-cylinders with my improvement applied thereto. Fig. II is a transverse section taken on line II II, Fig. I. Fig. III is a perspective view of one end of one of the tubes utilized in my improvement.

1 designates explosive-engine cylinders that may be of any desirable number and of any common type and which form parts of an engine. For the purpose of maintaining the cylinders 1 of a low degree of temperature for satisfactory operation of the engine I convey thereto a constant supply of air through a conductor or hood 2.

3 is a jacket surrounding the engine-cylinders.

4 designates a plurality of tubes that are open throughout their length and into which communication from the conductor 2 is obtained, due to one end of each of the tubes being exposed to the interior of said conductor. The tubes surround the engine-cylinders 1, as a body, and preferably extend longitudinally of said cylinders, as shown. It will be seen that by utilizing the plurality of tubes of small diameter, as illustrated, I furnish a large heat-absorbing medium by which the heat resulting in the engine-cylinders is taken up, and that due to the circulation of air through said tubes. This absorbed heat will be constantly disseminated from the tubes by being carried therefrom with the air.

I preferably thread or rib the tubes 3, as illustrated in Figs. I and III, and by so doing increase the heat-absorbing area of the tubes, so that they will take up the heat from the cylinders with greater efficiency and in addition will be held in assembled condition by interlocking with each other throughout the body of tubes to prevent their displacement.

I claim as my invention—

The combination with the cylinder of an explosive-engine, of a jacket surrounding said cylinder, a hood located at one end of said jacket to conduct air thereto, and a plurality of tubes arranged in concentric layers about said cylinder within said jacket and communicating directly with the hood at one end and with the atmosphere at the other end, both by their bores and by the space between the tubes.

GEORGE P. DORRIS.

In presence of—
NELLIE V. ALEXANDER,
BLANCHE HOGAN.