No. 828,867. PATENTED AUG. 14, 1906.

H. STOLTENBERG.

CYLINDER COOLING DEVICE FOR GASOLENE ENGINES.

APPLICATION FILED AUG. 11, 1905.

Fig. 1.

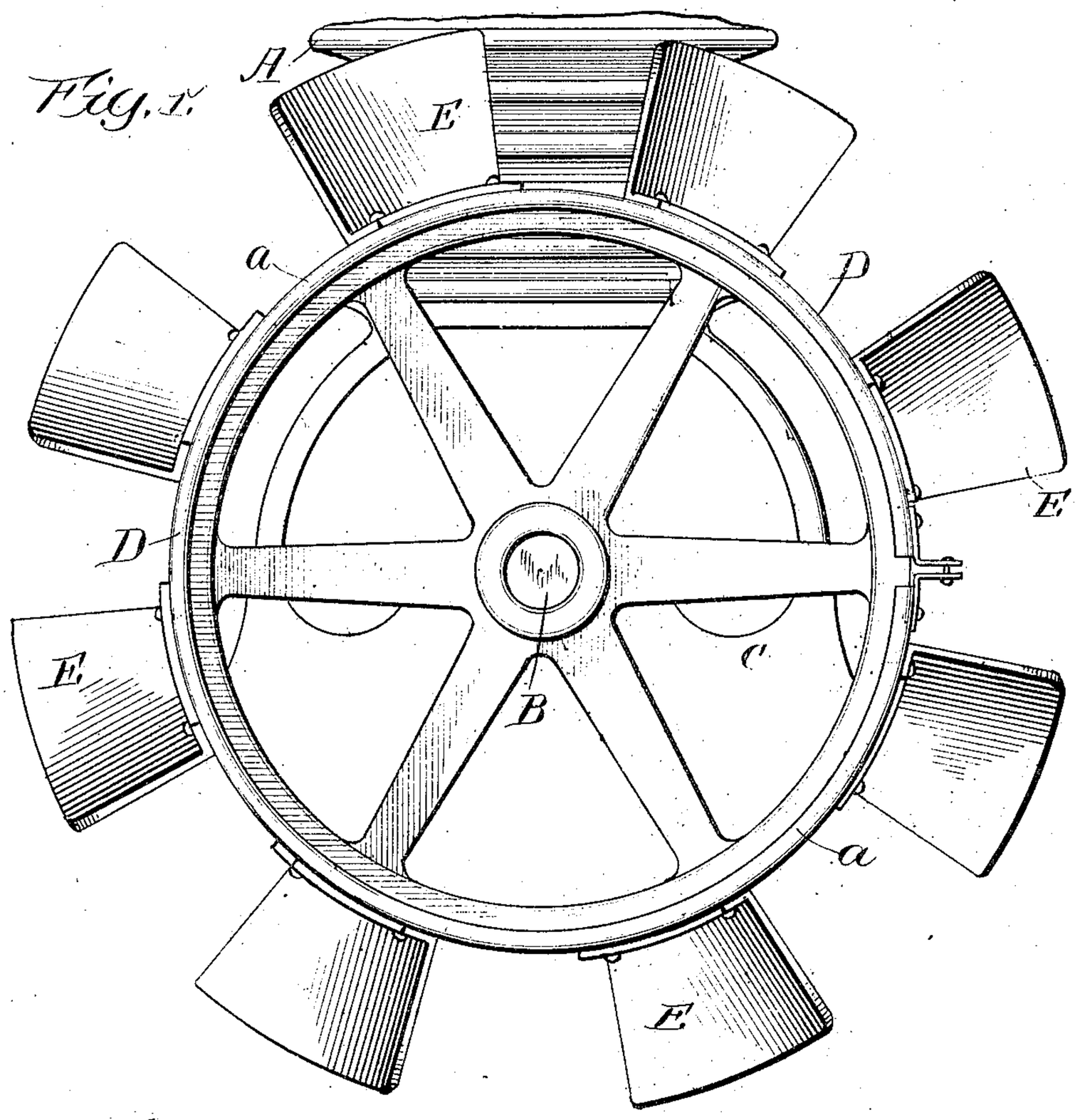


Fig. 3.

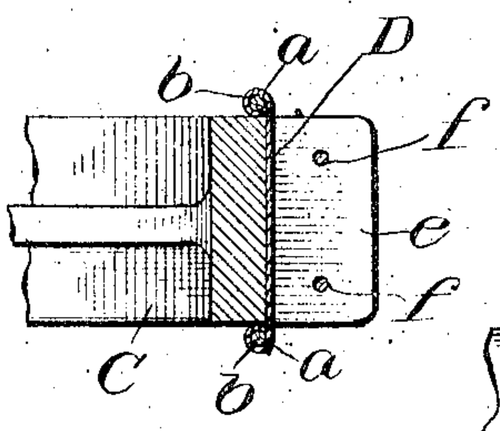


Fig. 4.

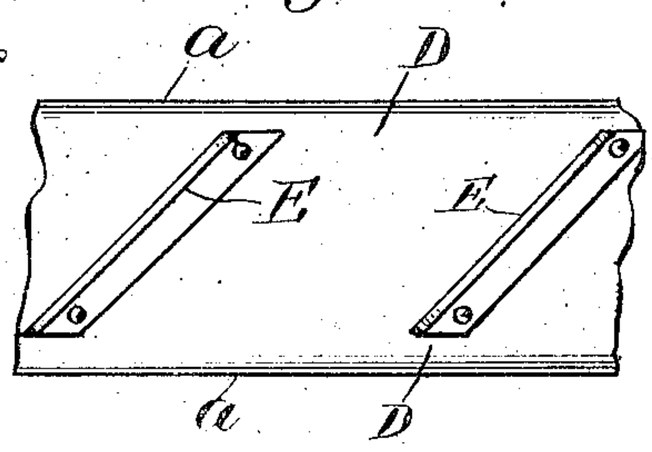
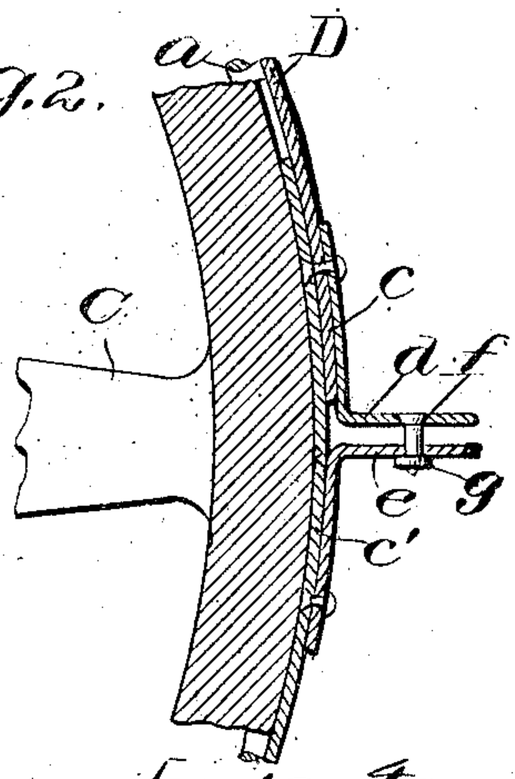


Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

HENRY STOLTENBERG, OF DAVENPORT, IOWA, ASSIGNOR TO WHITE LILY WASHER COMPANY, OF DAVENPORT, IOWA, A CORPORATION OF IOWA.

CYLINDER-COOLING DEVICE FOR GASOLENE-ENGINES.

No. 828,867. Specification of Letters Patent. Patented Aug. 14, 1906.

Application filed August 11, 1905. Serial No. 273,815.

To all whom it may concern:

Be it known that I, HENRY STOLTENBERG, a citizen of the United States, and a resident of Davenport, in the county of Scott and State of Iowa, have invented certain new and useful Improvements in Cylinder-Cooling Devices for Gasolene-Engines, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which the same appertains to make and use the same.

My invention relates more particularly to gas-engines; and its object is to provide a removable device which can be applied with equal facility to the fly-wheels of either new or old gas-engines and will as said wheel revolves direct a current of air to and past the cylinder to assist in diffusing the heat generated therein and carry away the surface heat thereof. This I accomplish by the means hereinafter fully described and as particularly pointed out in the claims.

In the drawings, Figure 1 is a side view of the fly-wheel of a gas-engine, showing my improvements applied thereto. Fig. 2 is a section of a portion thereof drawn to a larger scale. Fig. 3 is a transverse section of the same, taken on dotted line 3 3, Fig. 2. Fig. 4 is a detail plan view of a portion of the rim of the fly-wheel, showing the oblique arrangement of the vanes or fans.

In the drawings, A represents the cylinder of a gas-engine, B the drive-shaft thereof, and C the fly-wheel on said drive-shaft. My invention consists of a circular band or rim D, of sheet metal, which is fitted upon and is clamped to the periphery of said fly-wheel. This band is preferably of a slightly greater width than the periphery of said fly-wheel and has its longitudinal edges *a a* provided with interiorly-projecting beads, which are made by bending said edges around the wire fillers *b b*. When the band D is properly fitted upon the rim of the wheel, these beads lap over and inclose the outer edges of the fly-wheel and prevent the lateral displacement of the band. The lateral displacement of the band might be prevented in some other manner, however, although I prefer the use of the beads. The band is preferably of such length that the ends *c c'* thereof overlap. The outermost end *c* has a transverse angle-strip *d* of metal secured thereto by rivets or otherwise, so that its outwardly-projecting portion is in the same plane as the edge of said end, and the undermost end *c'* has a similar strip *e* secured a suitable distance back from the end edge thereof, so that its transverse outwardly-projecting portion opposes the outwardly-projecting portion of strip *e*. The outwardly-projecting portions of these transverse angle-strips are connected by bolts *f f*, which are passed through suitable openings and tightened by nuts *g g*, so as to draw said ends together and securely clamp the band on the rim of the fly-wheel. The band D has secured thereto and projecting outwardly therefrom oblique to the line of motion thereof a series of vanes or fans E E, which are preferably located equal distances apart and are of corresponding shape and dimensions. These vanes or fans may be of any suitable design, so that when the fly-wheel revolves they will propel a continuous current of cool air against and past the cylinder, thus carrying away a considerable amount of heat coming to the surface of the cylinder and diffusing the heat of the outer surface of the cylinder and lowering the temperature thereof.

What I claim as new is—

1. In an engine the combination with a fly-wheel; of a circular flat band secured on and extending around the periphery of said wheel and having downwardly-flanged edges; a series of diagonally-disposed vanes secured to the outer surface of said band; angle-shaped clamping-strips secured transversely to said band near each end thereof; and means for clamping the ends of said band together.

2. In an engine the combination with a fly-wheel; of a circular flat band secured on and extending around the periphery of said wheel and having downwardly-flanged edges and overlapping ends; a series of diagonally-disposed vanes secured to the outer surface of said band; angle-shaped clamping-strips secured transversely to said band near each end thereof; and means for clamping the ends of said band together.

3. In an engine the combination with a fly-wheel; of a circular flat band surrounding the periphery of said wheel and having its longitudinal edges beaded; a series of outwardly-projecting diagonally-arranged vanes projecting from the outer surface of said band; angle-shaped clamping-strips secured

transversely to said band near the ends thereof; and bolts connecting the outwardly-projecting portions of said clamping-strips.

4. In an engine the combination with a fly-wheel, of a circular flat band surrounding the periphery of said wheel and having its longitudinal edges beaded and turned down over the side of said wheel; a series of outwardly-projecting diagonally-arranged vanes projecting from the outer surface of said band; angle-shaped clamping-strips secured transversely to said band near the ends thereof; and bolts connecting the outwardly-projecting portions of said clamping-strips.

In testimony whereof I have hereunto set my hand and seal this 1st day of August, A. D. 1905.

HENRY STOLTENBERG. [L. S.]

Witnesses:
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