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Patented Dec. 25, 1900.

O. F. GOOD.

PISTON FOR SINGLE ACTING ENGINES.

(Application filed Aug. 25, 1900.)

(No Model.)

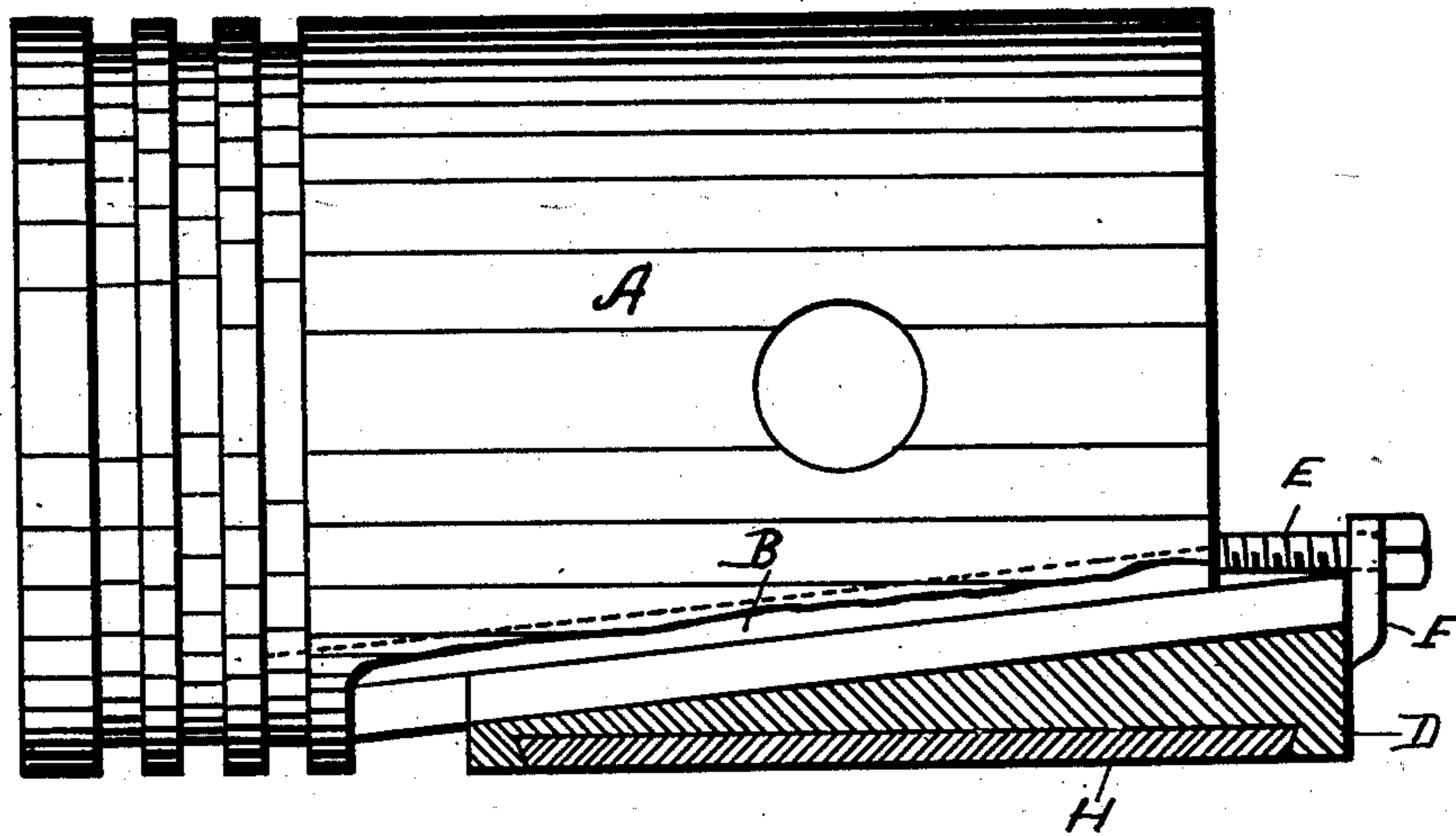


Fig. 1.

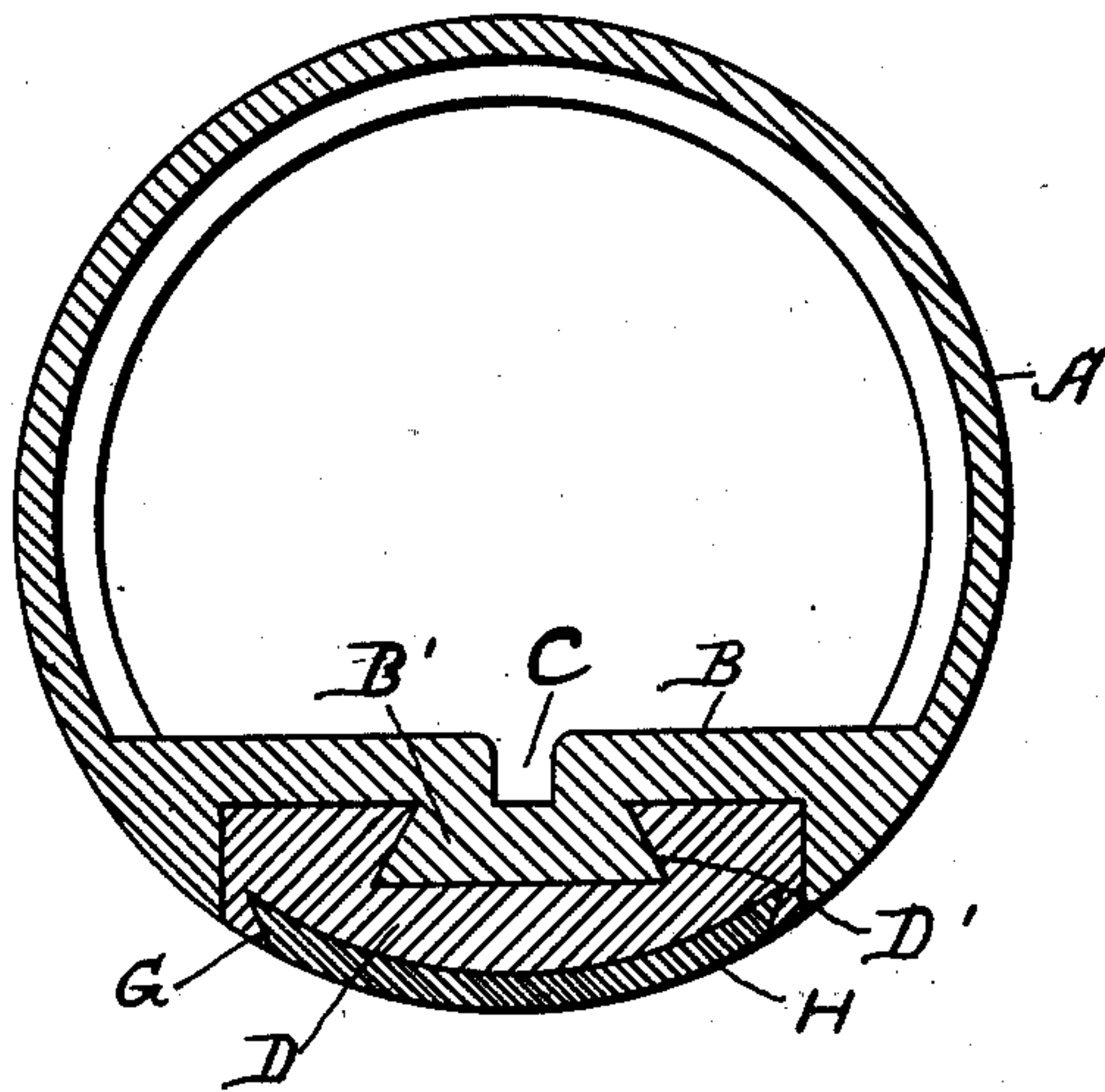


Fig. 2.

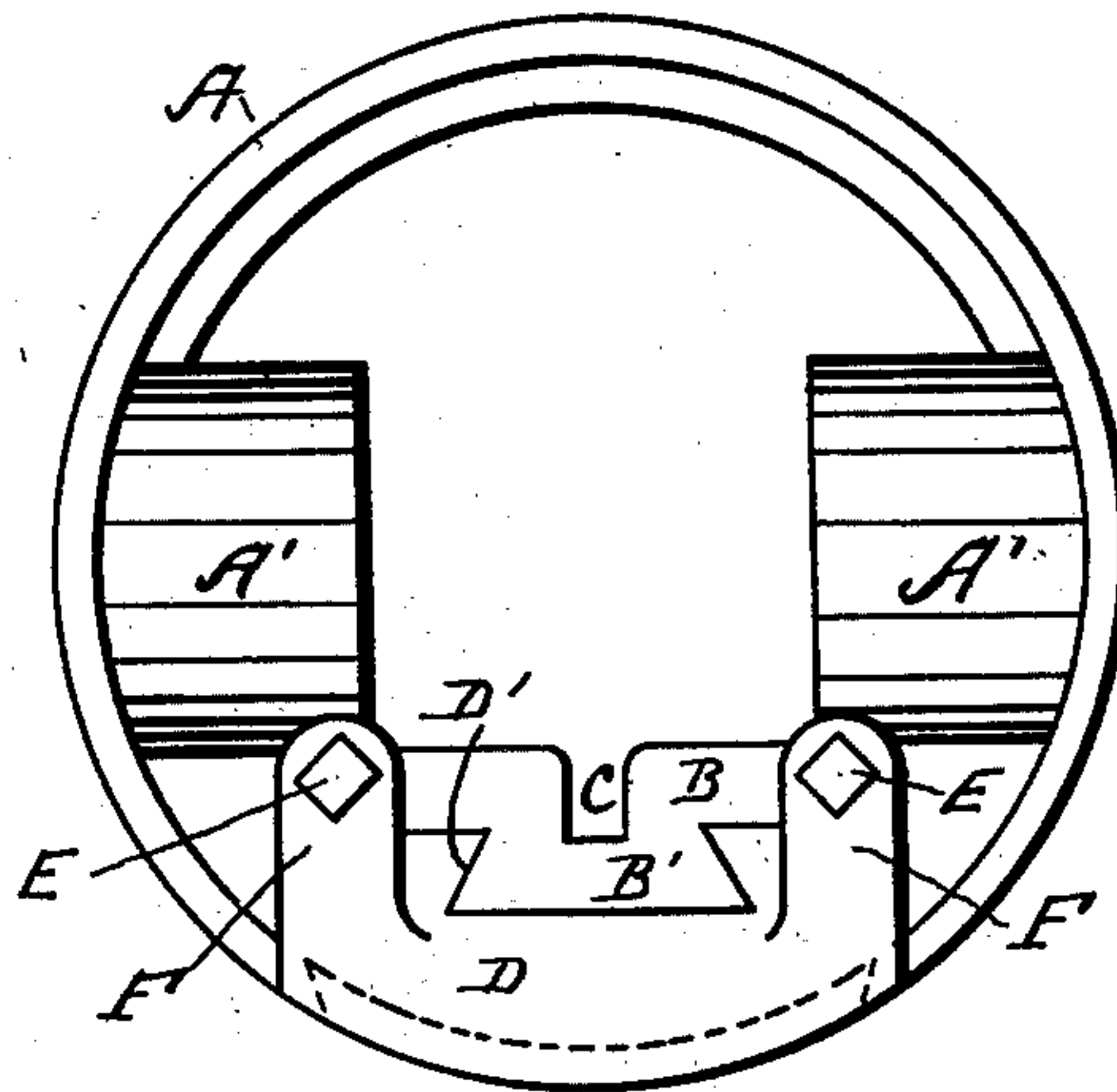


Fig. 3.

WITNESSES:

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PISTON FOR SINGLE-ACTING ENGINES.

SPECIFICATION forming part of Letters Patent No. 664,401, dated December 25, 1900.

Application filed August 25, 1900. Serial No. 27,966. (No model.)

To all whom it may concern:

Be it known that I, OLIVER F. GOOD, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Pistons for Single-Acting Engines; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in pistons for gas or explosive engines; and it consists of a piston having the novel and useful features hereinafter described and claimed.

The object of the invention is to provide means for compensating for the wear of the cylinder and the piston and to provide means for lessening the wear between the parts, to the end that any pounding of the piston against the walls of the cylinder, due to the looseness occasioned by wear of the parts, may be avoided.

In a detail description of my invention reference is made to the accompanying drawings, of which—

Figure 1 is an elevation of my improved piston, a portion of which is broken away to show the means for lessening and compensating for the wear of the parts, said means appearing in section. Fig. 2 is a cross-sectional view of Fig. 1. Fig. 3 is an elevation of the open end of the piston.

The piston A is made in the form of a cross-head and has trunnions A' projecting inwardly at the open end, through which a wrist-pin projects in attaching the connecting-rod. (Not shown.) The working side of the piston is provided with a tapering wall B, the inclination of which commences at the open end of the piston near the longitudinal center of said piston and tapers outwardly from said center toward the periphery. The outer surface of said wall B is provided with a dovetail projection B', which extends approximately the full length of said wall. The upper or inner side of said wall is provided with a groove C, in which the connecting-rod

enters and moves in the lower position of its movement. A gib or shoe D incloses the outer side of the wall B and has a corresponding dovetail groove D', which receives the dovetail projection B', as shown in Figs. 2 and 3, and the said gib or shoe is adjustable along the dovetail projection B' by means of two adjusting-screws E E, which penetrate openings in ears F and the tapering wall B. Said ears F project from the outer end of the shoe D to a plane coincident with the highest plane of the inclined wall B, as shown in Fig. 3. By turning said screws the shoe may be moved inwardly to increase the working diameter of the piston. The working or outer surface of the shoe D is rounded to conform to the circumference of the piston, and said outer surface is provided with a dovetail recess G, which receives a body H, of Babbitt metal or other suitable antifriction metal having a capacity to withstand wear.

Having described my invention, I claim—

1. A piston having a tapering wall on one side thereof with a dovetail projection extending approximately the entire length of said wall, a gib or shoe having a corresponding groove to receive said projection, ears projecting from said gib or shoe, and screws penetrating said ears and the wall of the piston and adapted to adjust said shoe to the desired position to compensate for the wear of the piston and cylinder, substantially as described.

2. In a piston having trunnions in its open end for the attachment of a connecting-rod, the combination with a piston having a portion of its wall extending on an incline approximately the length of the piston, the said wall having a groove C in its inner surface for the reception of the connecting-rod, and a dovetail projection B' on its outer surface, a gib or shoe having a corresponding dovetail groove adapted to receive said dovetail projection, ears projecting from the outer end of said gib or shoe and terminating in a plane coinciding with the highest plane of the incline wall, screws penetrating said ears and the incline wall of the piston, whereby the gib or shoe may be moved along the dovetail projection B' to increase the working diameter of the piston, and antifriction metal

inclosing the working side of the said gib, substantially as shown and described.

3. A piston for gas-engines, the same having a tapering wall on one side in combination with a gib or shoe having a corresponding tapering surface adapted to fit against the tapering surface of the piston and to increase the diameter of said piston by being moved longitudinally, and means for adjust-

ing said gib or shoe longitudinally with relation to the piston, substantially as and for the purposes specified.

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

OLIVER F. GOOD.

Witnesses:

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