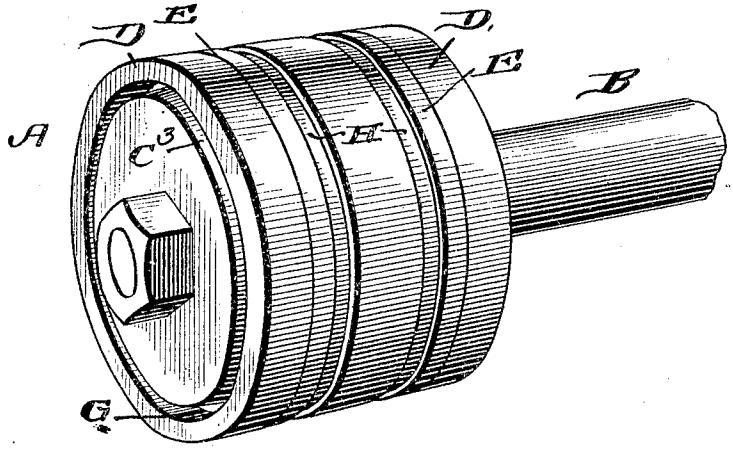
No. 807,470. PATENTED DEC. 19, 1905.

W. J. KANE.

PACKING FOR PISTONS.

APPLICATION FILED APR. 11, 1904.

Fig. 1.



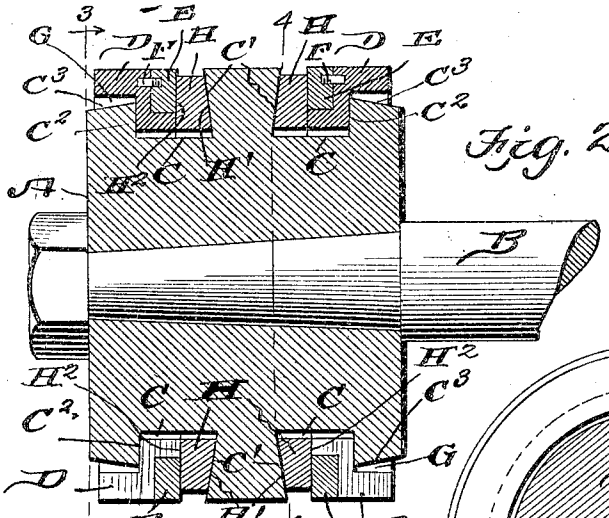


Fig. 2.

Fig. 4.

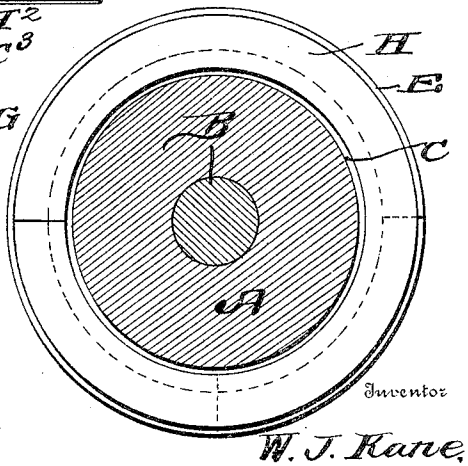
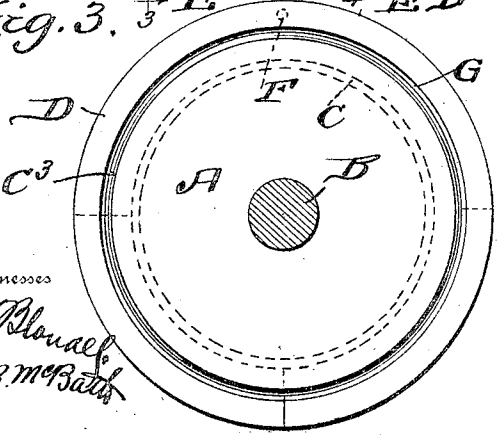


Fig. 3.



Witnesses

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WILLIAM JAMES KANE, OF BALTIMORE, MARYLAND, ASSIGNOR OF ONE-HALF TO THOMAS UPPERMAN, OF BALTIMORE, MARYLAND.

PACKING FOR PISTONS.

No. 807,470. Specification of Letters Patent. Patented Dec. 19, 1905.

Application filed April 11, 1904. Serial No. 202,590.

To all whom it may concern:

Be it known that I, WILLIAM JAMES KANE, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented a new and useful Packing for Pistons, of which the following is a specification.

This invention is an improved construction of packing for pistons, the object being to provide a packing which will automatically adjust itself to the piston, thereby preventing steam passing between the piston and the packing, and thereby avoiding all the objections incidental to such passage of steam behind the packing-rings.

With this object in view my invention consists in the novel features of construction and arrangements, all of which will be fully described hereinafter, and pointed out in the claims.

In the drawings forming a part of this specification, Figure 1 is a perspective view showing a piston provided with my improved packing. Fig. 2 is a sectional view of the same. Fig. 3 is a section on the line 3 3 of Fig. 2, and Fig. 4 is a section on the line 4 4 of Fig. 2.

Referring to the drawings, A indicates the piston, and B the piston-rod. Two annular recesses C are produced in the cylindrical surface of the piston, the inner walls C′ of said recesses being inclined in opposite directions, as shown, while the outer walls C^2 are perpendicular to the longitudinal axis of the piston. The ends of the piston are turned off, as shown at C^3, the purpose of which will be explained hereinafter.

D D indicate the double-flanged rings, which fit upon the end of the cylinder and carry the rings E, said rings D and E being made in sections, the joints being arranged to alternate, and in practice I prefer to divide the sections upon oblique lines. The rings D and E are united by means of dowel-pins F in order to prevent the said rings turning upon each other. The outer face of the ring B is turned to fit against the straight wall C^2, and the rings D and E are turned after being fitted to the piston, so as to be slightly larger in diameter than the cylinder. The space G between the ends of the piston and the ring D serves to catch the steam for the purpose of expanding the rings and making a tight joint between the said rings and the cylinder, thereby utilizing the entire force of the steam, as none of it is permitted to escape between the packing-rings and cylinder.

In order to hold the face of the ring D against the face C^2 of the piston, and thereby prevent steam getting in back of the ring, I employ a ring H between each pair of rings D and E and the inclined walls C′, said ring H having an inclined face H′, which engages the inclined wall C′, and a straight face H^2, which engages the straight faces of the rings D and E. The ring H is normally in such condition that its tendency is to spring or spread outwardly, and in doing so its incline face will ride against the inclined wall and force the flat face of the ring D against the flat wall of the piston, thereby preventing the steam working in behind the rings D and E, and the very moment there is any slack between the ring D and piston the automatic outward movement of the wedge-shape ring will serve to bind the ring D tightly against the wall C^2 of the piston.

It will thus be seen that I provide a simple and efficient construction of piston-packing which will completely avoid steam passing between the piston and packing-rings.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a piston having a circumferential groove, said groove having a wall perpendicular to the axis of the piston and a wall inclined outwardly and toward the first wall, a ring fitting in said groove, a packing-ring, a dowel-pin connecting the two rings, said packing-ring having its inner face parallel to the perpendicular wall of the groove, and a metal ring having a face adapted to bear on the inner wall of the packing-ring and a face adapted to bear on the inclined face of the groove, as and for the purpose set forth.

2. The combination with the piston having an annular recess, the inner wall being oblique and the outer wall perpendicular to the axis of the piston, the packing-rings surrounding the piston, the outer one of which engages the perpendicular walls of the recess, and the wedge-shaped ring having an oblique face adapted to engage the oblique wall of the annular recess, the straight face of said ring being adapted to engage the packing-rings, as set forth.

WM. JAMES KANE.

Witnesses:
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