No. 822,053. PATENTED MAY 29, 1906.

H. T. JONES.

PISTON.

APPLICATION FILED JAN. 27, 1905.

Fig-1-

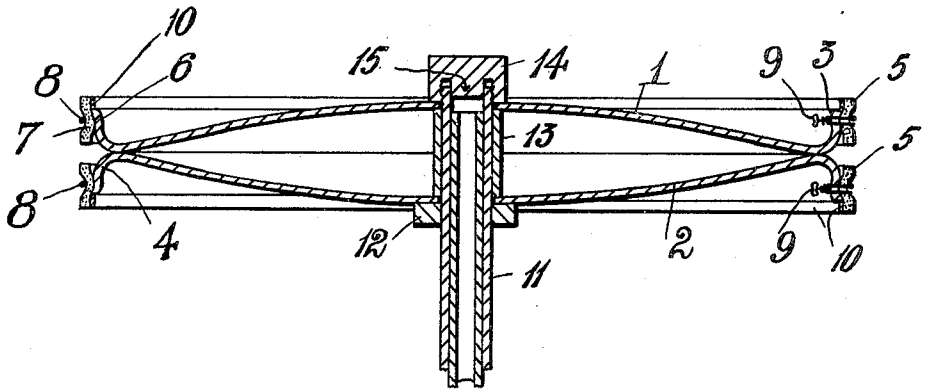
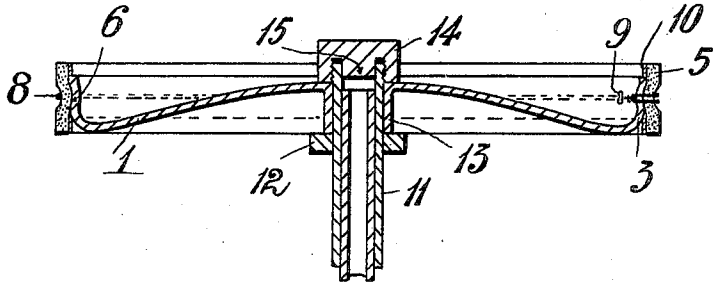


Fig-2-



Witnesses

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UNITED STATES PATENT OFFICE.

HORATIO THOMAS JONES, OF MELBOURNE, VICTORIA, AUSTRALIA, ASSIGNOR OF ONE-HALF TO JOHN PETER LUDEMAN, OF MELBOURNE, VICTORIA, AUSTRALIA.

PISTON.

No. 822,053. Specification of Letters Patent. Patented May 29, 1906.

Application filed January 27, 1905. Serial No. 242,934.

To all whom it may concern:

Be it known that I, HORATIO THOMAS JONES, engineer, a subject of the King of Great Britain, residing at 31 Spring street, Melbourne, in the State of Victoria, Australia, have invented Improvements in Pistons, of which the following is a specification.

This invention relates to improvements in pistons whereby they may be readily fitted together, and also to the means for securing the packing around same, as will be understood by reference to the accompanying drawings, whereof—

Figure 1 is a central section through a piston, and Fig. 2 is a similar view with a slight difference.

According to this invention the head of the piston is preferably formed of a pair of dished metallic plates 1 2, provided, respectively, with upwardly and downwardly projecting flanges 3 4, to which the annular packing of felt or other suitable material 5 is secured. The outer periphery of each flange is formed with a groove 6, and the packing having a similar groove 7 is fastened in position by a wire 8, which encircles same and presses it into the groove in the flange. The ends of the wire pass through a hole in the flange, where they are fastened to a button or rotatable key 9, from which they may be readily released when found necessary to remove or replace a worn packing.

In order to keep the extreme edges of the packing which overlap the flanges tight against the cylinder, and thus prevent air escaping between same and the piston, narrow spring-hoops 10 may be placed against the inside face of the packing or between the flange and the packing, as shown in the drawings.

The plates 1 2 are provided with openings in the center to enable them to pass freely over the piston-rod 11, and said rod is provided near its upper end with a collar 12, upon which the lower plate 2 rests. A spacing-sleeve 13 may be then slipped over the rod, and against its upper end the upper plate 1 rests, the whole being clamped together rigidly by a nut 14 on the end of the rod, which is screwed down against said upper plate. The sleeve is not essential and may be dispensed with, as the plates are jammed together at their peripheries.

When a hollow rod is employed, as in the drawings, the nut 14 has a central plug 15, adapted to close the end of the rod.

The piston, as described, has virtually a hollow head and is provided with two independent annular packings; but it will be obvious that a single one may be attached to both flanges in this manner or that by dispensing with the lower plate and connecting the sleeve 13 to the upper one, as in Fig. 2, a single ring of packing may be attached to the flange of the upper plate—a construction which will be found useful in small blowers or air-pumps.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. An improved piston-head comprising a dished plate, a flange on the outer edge thereof, a packing of felt abutting against and detachably connected to the flange, substantially as set forth.

2. A piston comprising a dished plate, a flange on the outer edge thereof, a packing of felt detachably connected thereto and spring-hoops seated on the edge of the flange and engaging the inner face of the felt, substantially as set forth.

3. A piston comprising a pair of dished plates, flanges thereon respectively bent upwardly and downwardly, and a packing of suitable material abutting against and detachably secured to each plate, substantially as set forth.

4. In a piston, a hollow head comprising a pair of abutting dished plates with an annular felt packing around the flanges thereof and means for drawing the plates toward each other, substantially as set forth.

5. A piston comprising a pair of dished-shaped plates, each provided with a flange, a packing abutting against the periphery of the flanges and of greater width, and means for detachably securing the packing to the flanges.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

HORATIO THOMAS JONES.

Witnesses:

EDWARD WATERS,

WALTER C. HART.