Thayer & McPherson,

Piston Packing.

No. 100,213. Patented Feb. 22. 1870.

Fig 1.

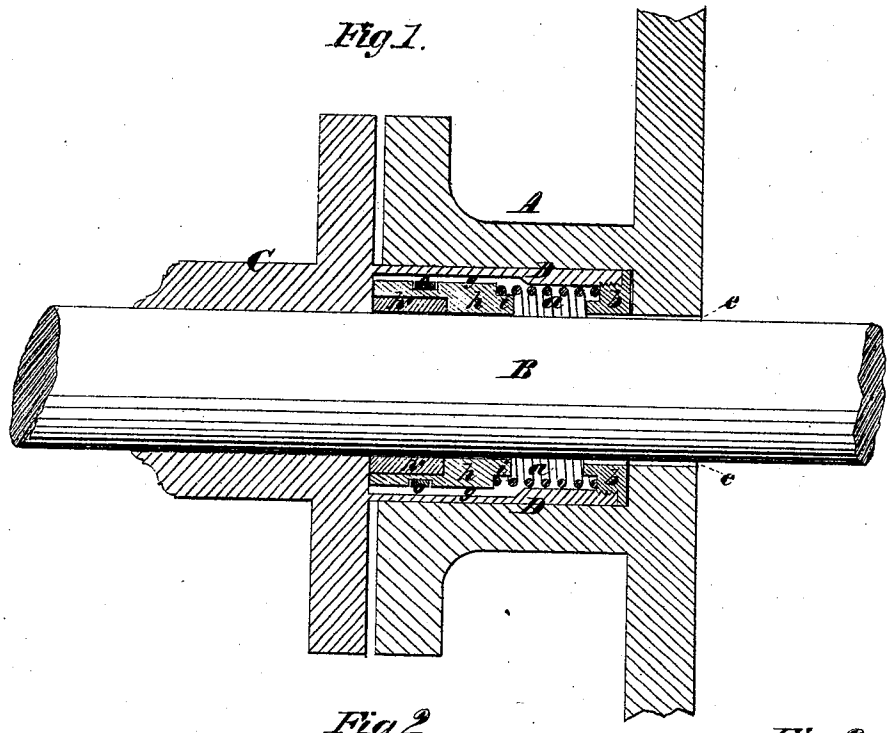


Fig 2

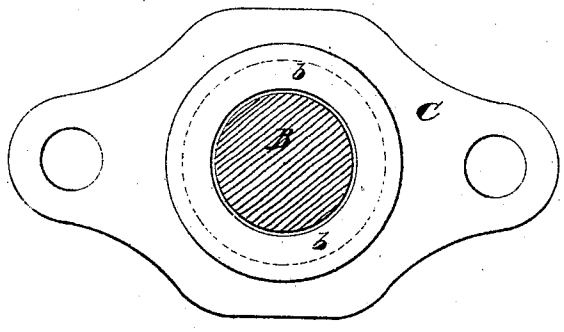


Fig 3

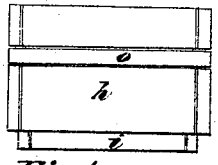
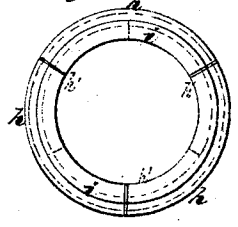


Fig 4



Witnesses.
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United States Patent Office.

CHARLES THAYER AND DAVID McPHERSON, OF ROME, NEW YORK.

Letters Patent No. 100,213, *dated February* 22, 1870.

IMPROVEMENT IN PACKING FOR PISTON-RODS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, CHARLES THAYER and DAVID McPHERSON, of Rome, in the county of Oneida, and State of New York, have invented a new and improved Packing for Piston-Rods; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings making part of this specification, in which—

Figure 1 is a sectional view, which shows the improved mode of packing the piston-rod of a steam-engine.

Figure 2 is a view of one end of the gland which contains the packing.

Figures 3 and 4 are views of sectional metallic packings which are used in the gland.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to provide for readily applying within and removing from a stuffing-box a piston-rod packing.

The nature of our invention consists in a novel construction, arrangement, and combination of parts, viz: cylindric casing, screw-cap, cylindric packing rings, spring, and stuffing-box, and gland, and steam-passage and chamber, all as will be hereinafter described.

To enable others skilled in the art to understand our invention, we will describe its construction and operation.

In the accompanying drawings—

A represents a stuffing-box, formed on the head of a steam-cylinder, and

e is a hole through the cylinder-head, which is slightly larger in diameter than the piston-rod B, but considerably smaller in diameter than the interior diameter of the stuffing-box, as shown in fig. 1.

C is the gland which is constructed with a cylindrical case on one end, which is adapted to fit snugly and be packed tightly into the stuffing-box A, and which has a screw-ring, *b*, applied to that end which is next the cylinder head.

The interior diameter of the screw-ring *b* is slightly greater than the diameter of the piston-rod, so that steam from the interior of the cylinder can enter the chamber *g* containing the packing and act upon this packing so as to compress it around the piston-rod.

That portion of the annular chamber in casing D which receives the packing, is made somewhat larger in diameter than that portion which is nearer the ring *b*, for the purpose of affording plenty of space around the outside of the packing for receiving steam.

The packing consists of segments *h h'* made of any suitable metal or alloy of metals, and held together by a spring, *o*, which is fitted into an annular groove made into the external surface of the segments *h*.

The segments *h* are mitred to receive within them the narrow segments *h'*, which latter break joints with their inclosing segments.

The segments *h'* are reduced at *i* for receiving upon these reduced portions one end of the helical spring *a*, the opposite end of which embraces a reduced portion of the screw-ring *b*.

It will be seen from the above description that the packing and the spring *a*, which keeps it in its place, are confined within a casing, D, by means of a screw-ring, *b*, and that the casing D is formed on the gland C, and removable from the stuffing-box A with this gland.

It will also be seen that the packing is accessible by removing its casing from the box A and unscrewing the ring *b*.

When the parts are confined in place by bolts passed through the flange of the box A and gland C, steam will enter the casing D, through passage *e*, and compress the packing tightly around the piston-rod.

We do not claim as new and our invention anything which is shown in the patents granted C. F. Jauriet, February 13, 1866, J. Johnson, February 10, 1863, and E. T. Prindle, March 27, 1866.

Having described our invention,

What we claim as new, and desire to secure by Letters Patent, is—

The cylindric casing D, screw-cap *b*, cylindrical packing rings, passage *e*, chamber *g*, spring *a*, and stuffing-box and gland C A, all constructed and arranged substantially in the manner shown and described.

CHARLES THAYER.
DAVID McPHERSON.

Witnesses:
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