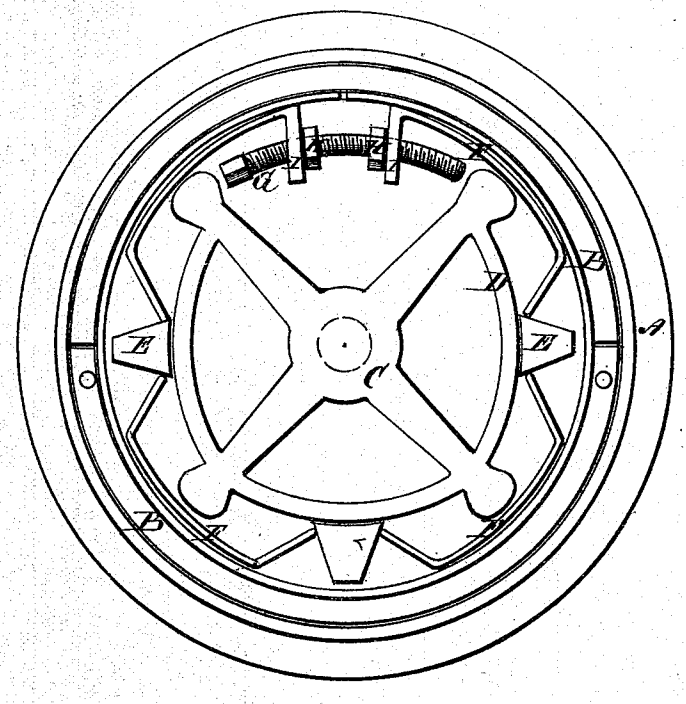
J. Hughes,

Piston Packing.

No. 104,459. Patented June 21. 1870.



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United States Patent Office.

JOHN HUGHES, OF SAXTON, PENNSYLVANIA.

Letters Patent No. 104,459, *dated June* 21, 1870.

IMPROVED PISTON PACKING.

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

To all whom it may concern:

Be it known than I, JOHN HUGHES, of Saxton, in the county of Bedford and State of Pennsylvania, have invented a new and useful Improvement in Spring Packing; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

The object of this invention is to provide a spring packing for steam-cylinder pistons which shall be simple and durable, and readily adjustable to the walls of the cylinder; and

It consists in the construction and arrangemeet of certain parts in combination with the packing-ring, hereinafter more fully described.

The accompanying drawing represents a piston provided with packing according to my invention.

Similar letters of reference indicate corresponding parts.

A represents the cylinder.

B the packing-rings, in two or more parts, as seen in the drawing.

C is the cone, circular in form, having upon its rim, D, three, more or less, loose triangular-shaped blocks, marked E, the sides of which are inclined planes, against the ends of which the packing springs bear.

F represents the packing springs, of irregular form.

The sides next the packing-ring are arcs of circles, but of greater radius than the rings, so that between its ends and center there is a space which does not bear upon a ring.

The ends of the spring form obtuse angles with the sides, as seen, and bear upon the sides of the triangular blocks E, as represented.

G is the tightening bolt, connected with the ends of the two upper springs with the tightening nuts H H thereon, bearing against the ends I I of the springs.

The effect of tightening up the springs is to bow or force out against the ring the central portion of the spring, which portion will recoil as the packing wears and thereby keep the ring tightly packed against the cylinder.

The blocks E, it will be observed, are arranged so as to operate more directly on the lower portion of the piston, which arrangement is, of course, designed to apply to a piston moving horizontally, but which arrangement would not be adhered to in packing a piston moving vertically.

The blocks E are movable on the rim D of the core, so that they readily adjust themselves according to the force and tension of the separate springs.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

1. In combination with the packing-spring F, the core C, with the rim D, and the block E, working thereon, arranged substantially as and for the purposes described.

2. The springs F, in combination with the block E, rim D, and bolt G, arranged and operating substantially as and for the purposes described.

JOHN HUGHES.

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