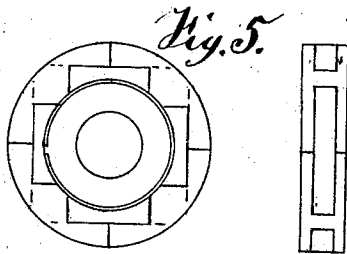
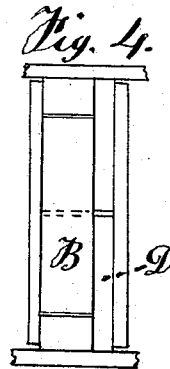
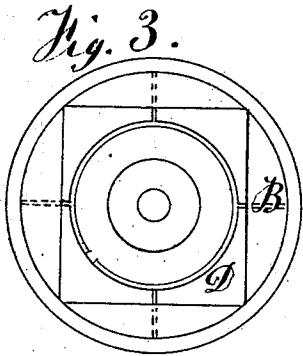
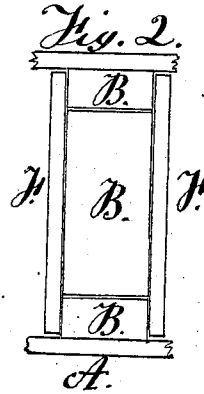
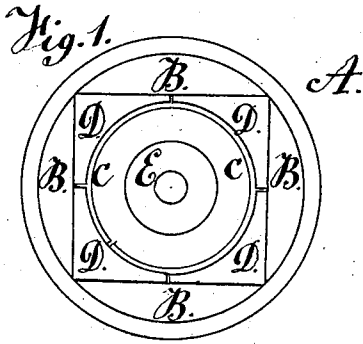


A. BURLINGAME.
Piston-Packings.

No. 155,179.

Patented Sept. 22, 1874.



Witnesses
Aron Brown }
Samuel Green }

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Inventor

UNITED STATES PATENT OFFICE.

ABRAHAM BURLINGAME, OF WORCESTER, MASSACHUSETTS.

IMPROVEMENT IN PISTON-PACKINGS.

Specification forming part of Letters Patent No. **155,179**, dated September 22, 1874; application filed September 12, 1873.

To all whom it may concern:

Be it known that I, ABRAHAM BURLINGAME, of the city and county of Worcester, State of Massachusetts, have invented an Improved Piston-Packing, of which the following is a specification:

My invention relates to the packing for the pistons of pumps, steam-cylinders, and similar purposes.

It is designed to compensate for the wear caused by the friction or grit of the material pumped by its form and manner of construction, in connection with a moderate spring-pressure acting internally, thus making the packing most durable and lasting.

Its nature consists in forming the packing of one set of pieces whose outer surfaces correspond to the cavity in which they work, and another set which work or are pressed on the flat inner surfaces of the outer set by means of springs, making under laps or joints between the two sets of pieces, the springs surrounding the center core, to which the heads are attached, and in such a manner that the packing may be free to turn or revolve and shift its position in the cylinder, to prevent grooving, and also to allow the piston flanges and rod to move slightly sidewise in the cylinder without the packing, which, with its spring, is independent of the flanges and their center or core, by means of which the whole head or piston is secured to its rod.

In the accompanying drawings, Figure 1 is a plan of a piston embodying my invention. Fig. 2 is an edge view of the same. Figs. 3 and 4 show similar views of my invention ar-

anged with the well-known form of side lap, the inner set of pieces having sections of rings formed on them whose ends lap by and nearly meet beside the outer. This may be best for large cylinders, as the side lap covering the under lap makes a most perfect fit, two pairs being used. Fig. 5 shows another form of construction of my invention on a smaller scale.

The construction is as follows: A is the cylinder; B B B B, the outer set of pieces; D D D D, the inner, with their flat faces pressed against the flat faces of the pieces B B B B by the free spring C C, which surrounds the center E, F F, Fig. 2, showing the heads holding the packing on each side.

In operation the outer set of pieces receive the first and most wear, but are followed up and kept tight by the inner ones, the flat keeping a perfect fit for any amount of wear, and the whole packing being free of the heads or flanges of the piston, allows the crowding of the rod or ways to shift the piston on the packing, the heads being made small for that purpose, and the packing in operation turns in the cylinder, preventing grooving or planing.

I claim—

The combination of the two sets of pieces having flat adjacent surfaces and a free spring pressing the inner against the outer set, constructed to form an independent packing and to permit said packing to turn or revolve.

ABRAHAM BURLINGAME.

Witnesses:

C. F. WILLARD,
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