

G. Wells,
Piston Packing.

No. 111,997.

Patented Feb. 21. 1871.

Fig 2.

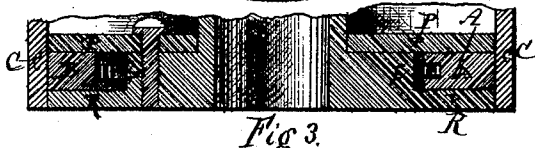
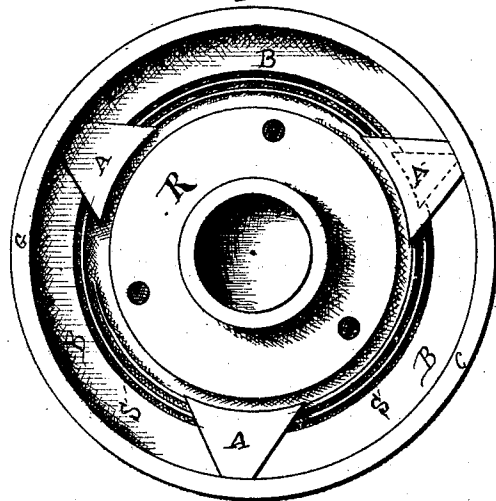


Fig 3.

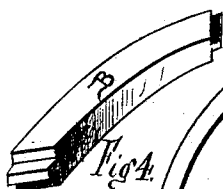


Fig 4.



Fig 5.

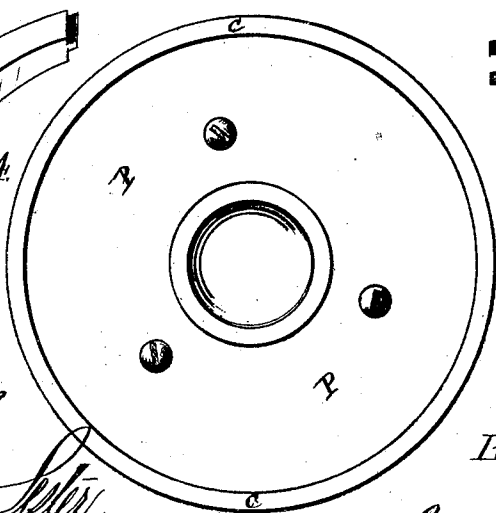


Fig 1.

Witnesses.

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United States Patent Office.

GEORGE WELLS, OF PROVIDENCE, RHODE ISLAND.

Letters Patent No. 111,997, dated February 21, 1871.

IMPROVEMENT IN PISTON-PACKING.

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

I, GEORGE WELLS, of Providence, in the county of Providence and State of Rhode Island, have invented a new and improved Piston-Packing, of which the following is a specification.

In my drawing like figures refer to like parts.

Figure 1 shows the upper plate of the piston, and is marked P.

Figure 2 shows the packing with the upper plate of the piston removed, in which—

A A A are the V-shaped pieces of the packing, and B B B the segments of the packing.

S, the spring.

R the under plate, with the hole for the insertion of the piston-rod.

C is the cylinder within which works the piston.

Figure 3, a section of the cylinder and piston, with packing inserted.

Figure 4, a full view of one of the segments marked B, showing the tongues at each end.

Figure 5, a full view of one of the V-pieces, marked A, with grooves in the three longest sides.

My invention consists in making the pistons of engines of two plates, an upper and lower one, between which are placed three metallic segments, as B B B, between which are the metallic V-shaped pieces marked A A A, with grooves therein, into which the tongues at the ends of the segments play, all of which are pressed against the inner side of the cylinder by a spring coiled around the post of the lower plate, and placed within the inner grooves of the V or wedge-shaped pieces.

The aim in making packing for steam-cylinders has been to devise some plan by which the piston can be kept tight as its outer surface wears away by friction

with the inside of the cylinder, as well as the wearing away of the inner surface of the cylinder. The loss of steam and consequently power by its escape from the imperfect packing is great, and to avoid this my invention is made.

As the segments are worn upon their surface, they as well as the V-pieces are pressed out by the continued action of the spring, and thus the packing, the segments, and V-pieces are always kept firmly against the inner surface of the cylinder, preventing escape of steam.

In large cylinders it will be well to duplicate the parts, so placing them that an upper V-piece shall be directly over the center of a segment, all operated as described.

The spring is coiled within the groove in the V-pieces, so that its force is always exerted directly upon them and the segments.

The three smaller pieces are made V-shaped, that, as they are pressed outward, other forces in an opposite direction will be exerted which will aid in keeping the segments in perfect contact with the inside of the cylinder.

What I claim as my invention, and desire to secure by Letters Patent, is—

The segments B B B, the V-shaped pieces A A A, when placed between an upper and lower piston-plate, and operated by a spring coiled about the post of the lower plate, all arranged and combined as described, and for the purposes set forth.

GEORGE WELLS.

Witnesses:

J. ERASTUS LESTER,
FRANCIS RICH.