

D. Neahr.

Piston Packing.

N^o 85,606.

Patented Jan. 5, 1869.

Fig. 1.

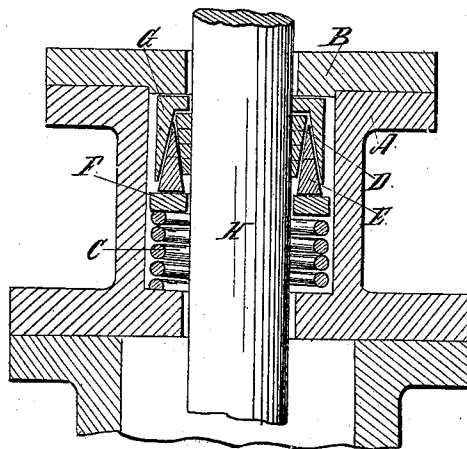


Fig. 2.

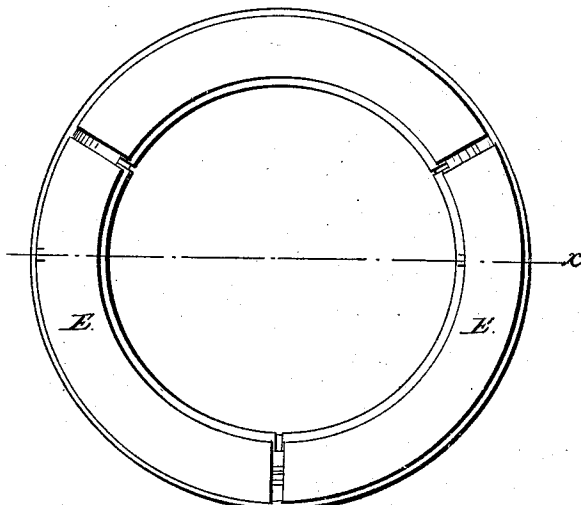
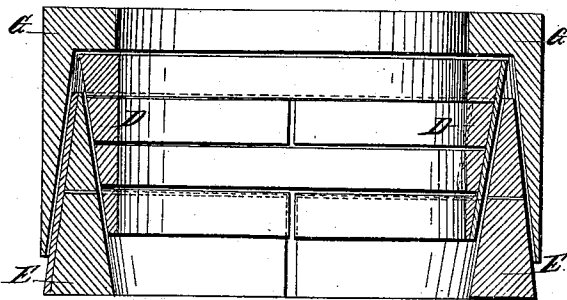


Fig. 3.



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DAVID NEAHR, OF FORT YUMA, CALIFORNIA.

Letters Patent No. 85,606, dated January 5, 1869.

IMPROVEMENT IN PACKING FOR STEAM-ENGINE 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 I, DAVID NEAHR, of Fort Yuma, in the county of San Diego, and State of California, have invented a new and improved Packing for Stuffing-Boxes; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to a new construction and arrangement of packing for stuffing-boxes, whereby the same more effectually prevents the leaking of steam around the piston-rod, or through the piston-rod aperture, in the cap of the stuffing-box.

It consists in the construction and arrangement of a series of rings in segments, slightly tapering within another series of rings in segments, slightly tapering in the opposite direction, said last series of rings being fitted into a box, having a tapering cavity to receive the same, and resting on a follower, forced upward by the pressure of a spring, so as to force the entire packing upward, against a ground seat for the same, on the under side of the cap or cover of the stuffing-box, the first or inner series of rings being thus forced upon and around the piston-rod, whereby the escape of steam is prevented, the pressure of steam or other elastic fluid operating with like effect as said spring.

In the accompanying plate of drawings—

Figure 1 represents a central vertical section of a stuffing-box, with my invention in position therein.

Figure 2 represents an underneath view of the packing.

Figure 3 represents a central vertical section of the same, taken in the line *x z*, fig. 2.

Similar letters of reference indicate corresponding parts.

A is the stuffing-box.

B is the cap or cover of the same.

C is a coiled or spiral spring.

D is the first or inner series of rings.

E is the second or outer series of rings.

F is the follower.

G is a case or box to contain the rings D and E.

H is the piston-rod.

Within the cavity of any stuffing-box A, and resting upon a follower, F, which said follower F rests upon the upper end of a coiled metallic spring, C, is a series of two or more metallic rings, E, each ring made in three or more segments, as shown in the drawing, each of said rings being smaller than the one under or below the same, having their edges inclined, inside and out, so as that the whole series of rings E will be smaller, or of less diameter at the top, on the outside, and of greater diameter at the top, on the inside, than the diameter of the outside and inside of the same, at the bottom thereof.

Within the series of rings E is another series of rings D, having only the outsides inclined, and so as

to be of less diameter at the bottom than the top, and so as to fit into the inside of the series of rings E, as shown in the drawing, and so as that the series D will extend a little above the top of the series E, also as shown, said rings in both the series E and D being of sufficient thickness so as, when all in position, as shown in the drawing, to form a packing of any required length.

Upon and over the series of rings E is a metallic box, G, the inside of the same being tapering, as shown in the drawing, so as to fit closely upon the series E, and so that the top of box G will rest, on the inside of the same, upon the top of the series D, as shown, said box G being ground upon the top, so as to fit tightly upon a ground seat on the under side of the cap B, provided to receive the same, and so as to prevent the escape of steam through the piston-aperture in said cap B.

All of the rings in the series of rings E and D are made in three segments or more; one segment of one ring breaking the joint of the segments of the adjoining rings, and so as to fit closely around the piston-rod H, and leave a small space between all the segments.

Through the top of the box G is an aperture, to receive the piston-rod H, as shown.

All of the segments of rings of both series of rings E and D are held in place by a dowel, in one of the segments of each series.

The box G, and all the rings of the several series of rings E and D, are made of any suitable metallic composition, or partly of rubber, or of other suitable material.

The operation is readily seen from the drawing, the pressure of steam in the stuffing-box A forcing the series of rings E between the series of rings D, and the box G thereby pressing the series of rings D more closely around the piston-rod H, the object of the coiled spring C being to hold the parts in position when the pressure of the steam is removed, thereby producing an elastic packing around said piston H.

Constructed as above shown and described, it constitutes an elastic packing for stuffing boxes, the advantages of which are that the same will accommodate themselves to different diameters of the piston, and the wear of the same is provided for, and the same are rendered more durable, and so as to prevent the escape of steam around the piston H, or through the piston-aperture in the cap B.

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

The construction and arrangement of the series of rings D E, box G, spring C, and follower F, substantially as shown and described.

The above specification of my invention signed by me, this 24th day of October, 1867.

DAVID NEAHR.

Witnesses:

ISAAC POLHAMUS, Jr.,

PETER SHALL.