W. C. Conrell,

Packing Ring.

No. 49,725. Patented Sep. 5, 1865.

Fig. 1.

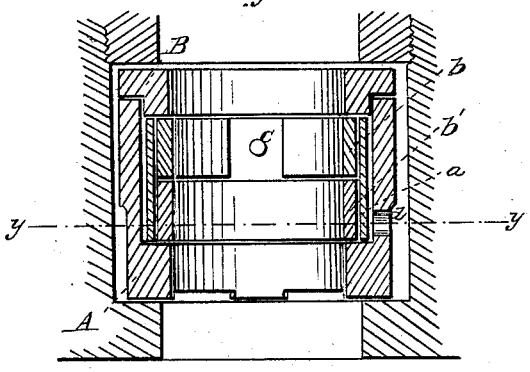
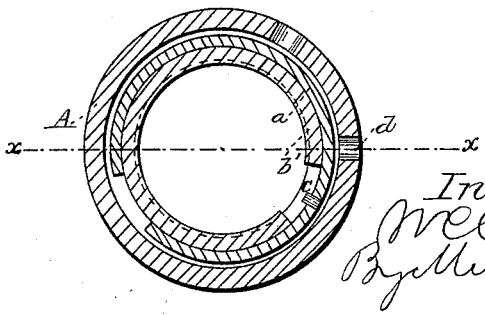


Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

W. C. CONWELL, OF SCRANTON, PENNSYLVANIA.

IMPROVEMENT IN PACKING-RINGS FOR PISTON-RODS.

Specification forming part of Letters Patent No. **49,725**, dated September 5, 1865.

To all whom it may concern:

Be it known that I, W. C. CONWELL, of Scranton, in the county of Luzerne and State of Pennsylvania, have invented a new and Improved Ring-Packing for Piston and other Rods; 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 drawings, forming part of this specification, in which—

Figure 1 represents a longitudinal central section of this invention, the line *x x* of Fig. 2 indicating the plane of section. Fig. 2 is a transverse section of the same, the plane of section being indicated by the line *y y*, Fig. 1.

Similar letters of reference indicate like parts.

This invention relates to metallic steam-packing for piston-rods, valve-rods, &c., of steam-engines, to be applied by placing the same in the ordinary stuffing-boxes.

It consists of three split or sectional rings, that one on the outside being equal in width to the two inner rings, in combination with a case or box which surrounds and incloses the rings, and which is provided with holes in such a manner that when the piston-rod, valve-rod, or other rod to be packed is made to pass through the box containing the rings the pressure of the steam acting on the external surface of the wide ring keeps the inner surfaces of the inner or narrow rings in close contact with the surface of the rod, and a steam-tight and self-adjusting packing is obtained, which is not liable to cut or injure the rod, and which can easily be removed whenever it should be worn.

A represents a box or case, of brass or any other suitable material, provided at one end with a hole fully large enough to admit the rod to be packed, and at the opposite end with a movable head or follower, B, which is also bored out to fit quite loosely on the rod to be packed. The interior of this box is occupied by three rings, *a b b′*, which are split or made in sections, and so placed as to break joints. The outer ring, *a*, extends from the bottom of the box A to the inner surface of the follower, being equal in width to the two inner rings, *b b′*, together. These rings are made of some soft metal or composition—such, for instance, as Babbit metal—and they are held in position by pins *c* inverted in the inner surface of the outer ring, *a*. The edges of the rings are made to fit steam-tight against the bottom and follower of the box A, and steam admitted through holes *d* in said box bears on the outer circumference of the ring *a*, and by compressing said ring keeps the inner rings in close contact with the rod to be packed. By this arrangement the packing is always kept in close contact with the rod to be packed by a power which increases or decreases with the pressure of the steam, and the leakage of steam is effectually prevented.

The box A is secured in the ordinary stuffing-box, and its inner end is scalloped, so that the steam has free access to the holes *d*.

If the rings *b b′* are made in sections, they can be removed or introduced without taking off the cross-head or other connections of the rod to be packed, and a packing is obtained which is convenient, economical, and easily repaired.

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

The box A, containing a wide split ring, *a*, and two narrow split or sectional rings, *b b′*, in combination with the follower B, and with holes *d*, admitting steam to the outer surface of the ring *a*, substantially as and for the purposes set forth.

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Witnesses:
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