

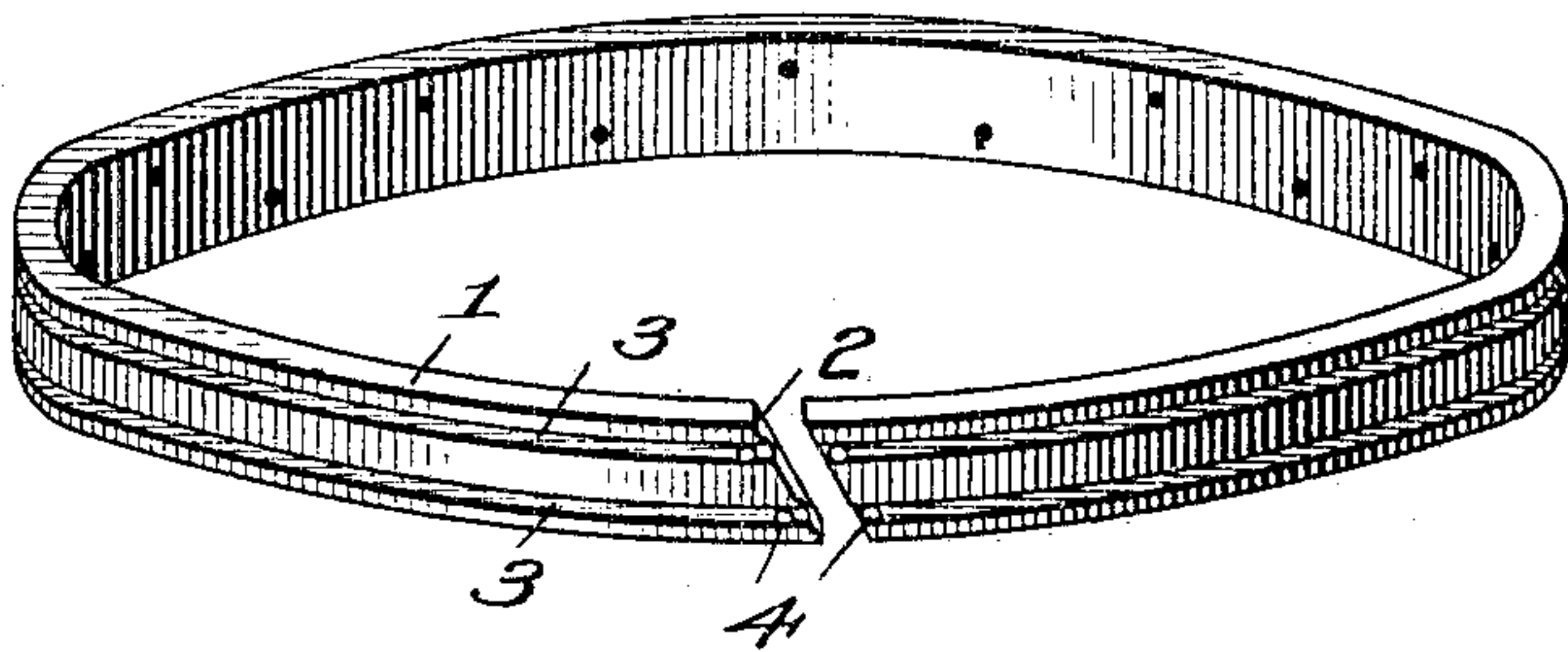
No. 775,213.

PATENTED NOV. 15, 1904.

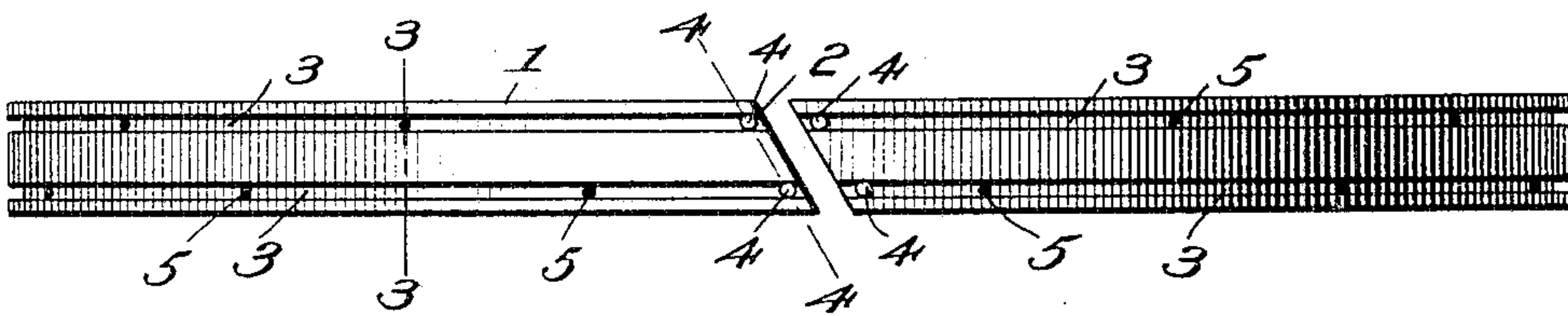
G. E. ERICSSON.  
METALLIC PISTON PACKING.  
APPLICATION FILED JUNE 2, 1904.

NO MODEL.

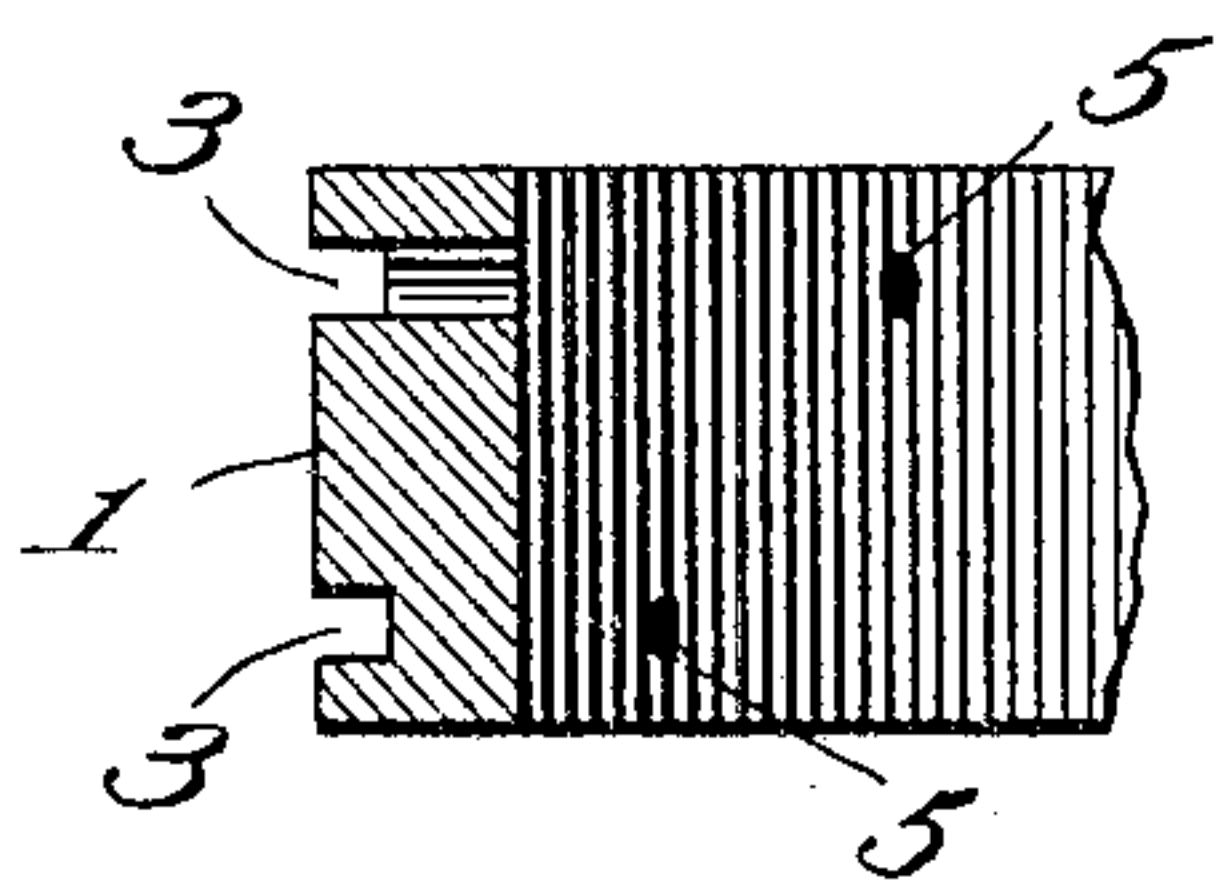
*Fig. 1.*



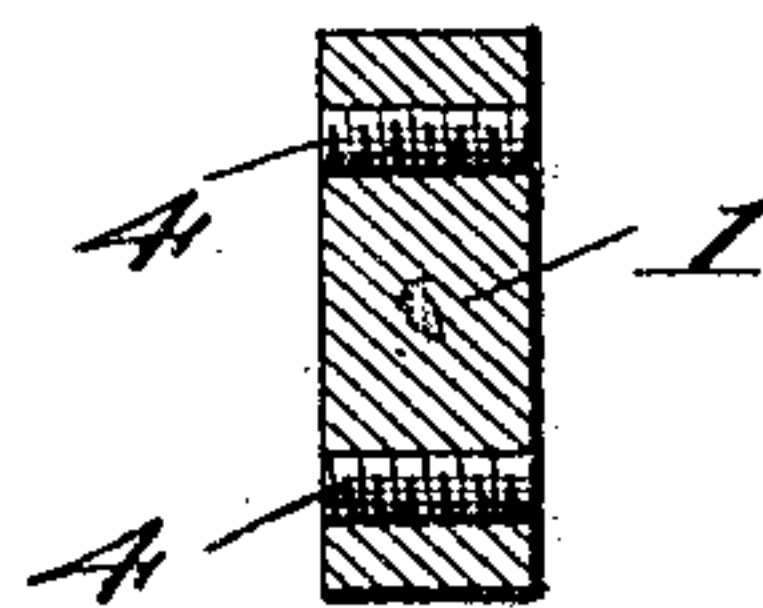
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



Witnesses

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# UNITED STATES PATENT OFFICE.

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## METALLIC PISTON-PACKING.

SPECIFICATION forming part of Letters Patent No. 775,213, dated November 15, 1904.

Application filed June 2, 1904. Serial No. 210,847. (No model.)

*To all whom it may concern:*

Be it known that I, GUSTAVE E. ERICSSON, a citizen of the United States, residing at Dubois, county of Clearfield, State of Pennsylvania, have invented certain new and useful Improvements in Metallic Piston-Packings, of which the following is a specification.

This invention has relation to metallic piston-packings; and it consists in the novel construction and arrangement of its parts, as hereinafter shown and described.

The object of the invention is to provide a packing for the pistons of steam or gas engines or any form of reciprocating piston.

The further object of the invention is to provide an interrupted ring which encircles the piston-head and is adapted to bear against the inner surface of the cylinder. The ring is provided in its outer surface with a plurality of grooves, said grooves extending around the ring and being closed at their ends adjacent to the point of interruption in the ring. Each groove is provided with a series of orifices which pass through to the inner face of the ring, the orifices of the adjacent grooves being alternately arranged in a transverse direction with relation to each other. The steam passing through said orifices and entering the grooves practically equalizes the pressure on both sides of the ring, acts as a lubricant, and prevents unnecessary wear of both the packing-ring and the cylinder. The advantage of the alternate arrangement of the orifices is that the ring is not unnecessarily weakened and that the steam may enter the grooves around the entire outer surface of the ring.

In the accompanying drawings, Figure 1 is a perspective view of the ring. Fig. 2 is an edge view of the ring. Fig. 3 is a sectional view of the ring cut on the line 3' 3' of Fig. 2, and Fig. 4 is a sectional view of the ring cut on the line 4' 4' of Fig. 2.

The ring 1 is interrupted transversely, preferably at an acute angle to the planes described by the edges of the ring, as shown in Figs. 1 and 2. The grooves 3 3 extend around and are located within the outer surface of the ring, the ends of said grooves 3 3 at points

adjacent to the interruption being closed by the pins 4 4. Each groove 3 3 is provided with a series of orifices 5, which extend transversely through the ring. The orifices of the adjacent grooves are alternately arranged with relation to each other.

When the ring or a series of rings are applied to a piston-head, the steam will pass through the orifices 5 5 and enter the grooves 3 3. The ends of the said grooves being closed by the pins 4 4, the steam cannot escape into the interruption of the ring 2; but the steam contained within said grooves in a measure equalizes the pressure on the inner and outer faces of the ring and at the same time acts as a lubricant to reduce the friction between the outer face of the ring and inner surface of the cylinder.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A packing consisting of an interrupted ring having a groove in its outer face with orifices extending through the ring and entering said groove, said groove having its ends closed adjacent to the point of interruption of the ring.

2. A packing consisting of an interrupted ring having in its outer face a plurality of grooves with orifices extending through the ring and entering said grooves, the orifices of the adjacent grooves being alternately arranged in a transverse direction with relation to each other, said grooves having their ends closed adjacent to the point of interruption of the ring.

3. A packing consisting of a ring having in its outer face a plurality of grooves with orifices leading through the ring and entering said grooves, the orifices of the adjacent grooves being alternately arranged in a transverse direction with relation to each other.

In testimony whereof I affix my signature in the presence of two witnesses.

GUSTAVE E. ERICSSON.

Witnesses:

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W. M. COCHRAN.