

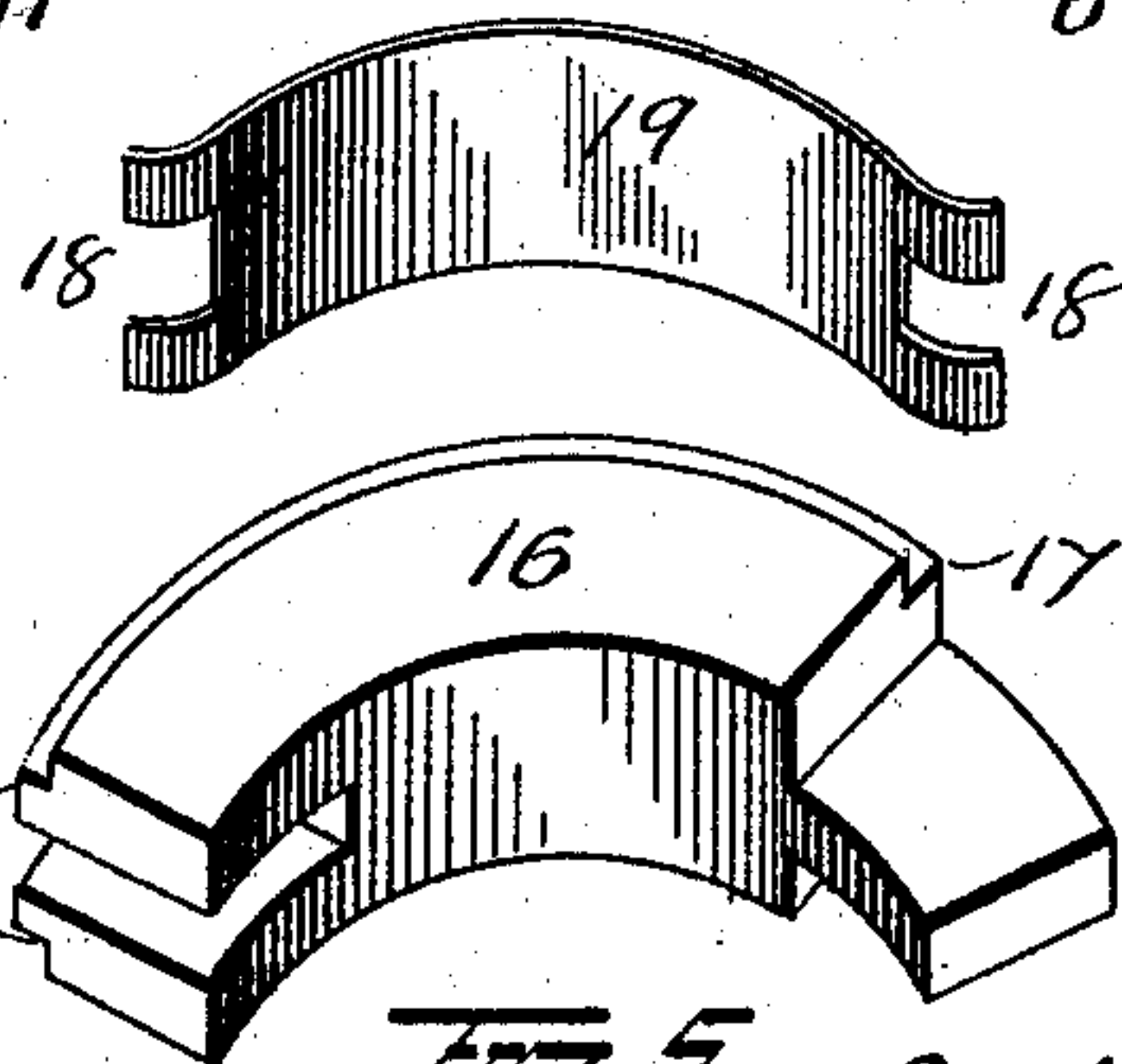
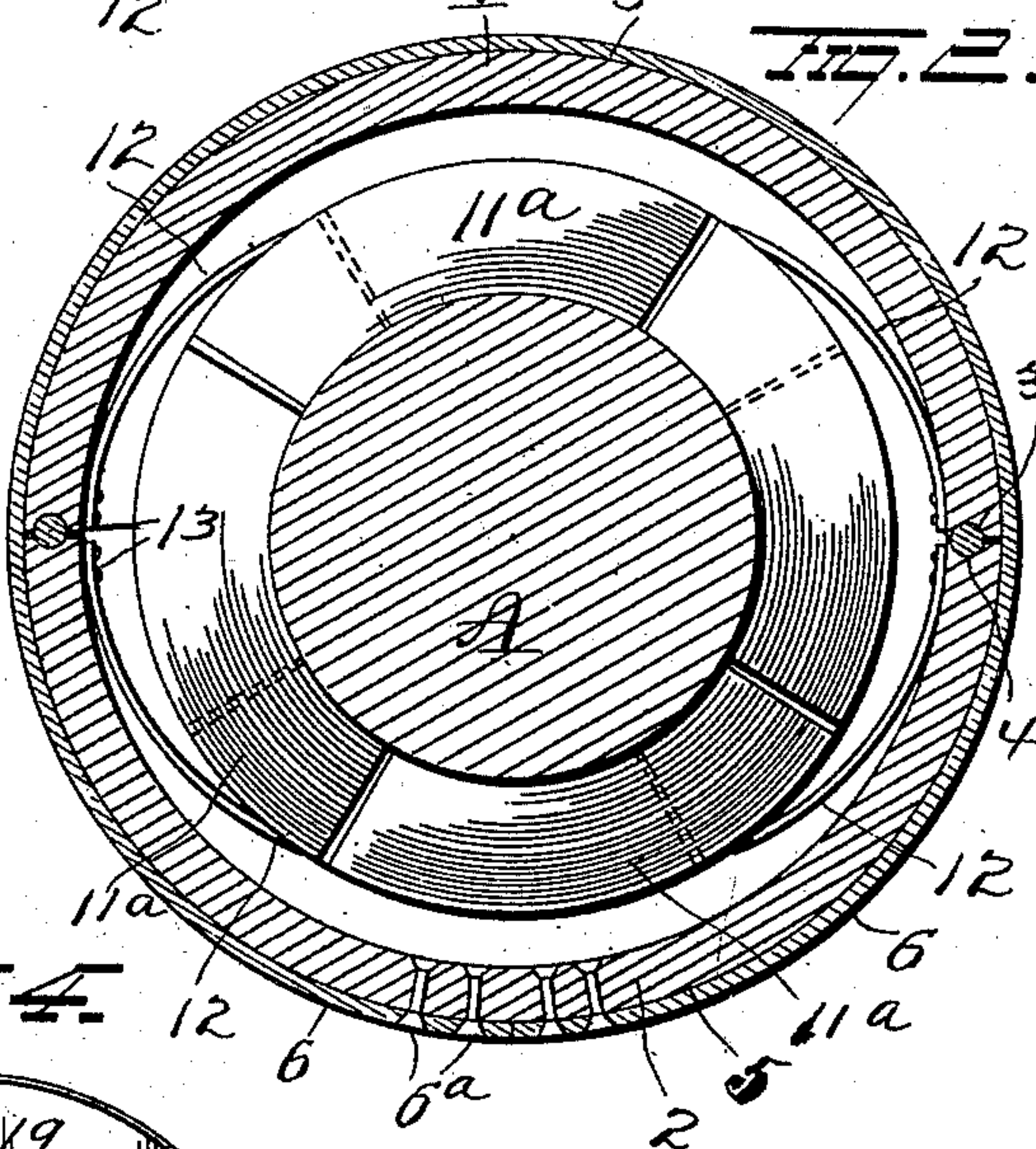
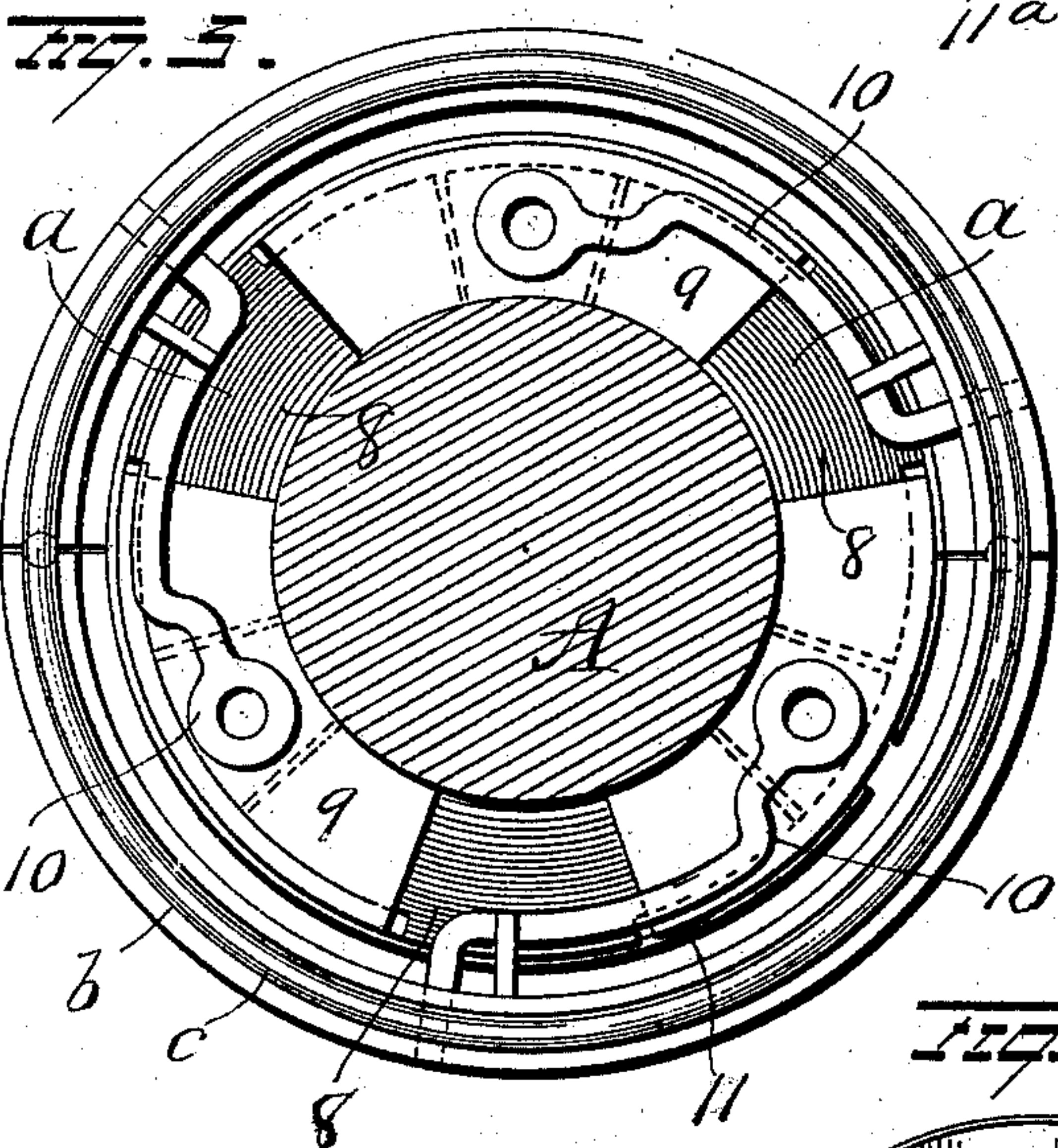
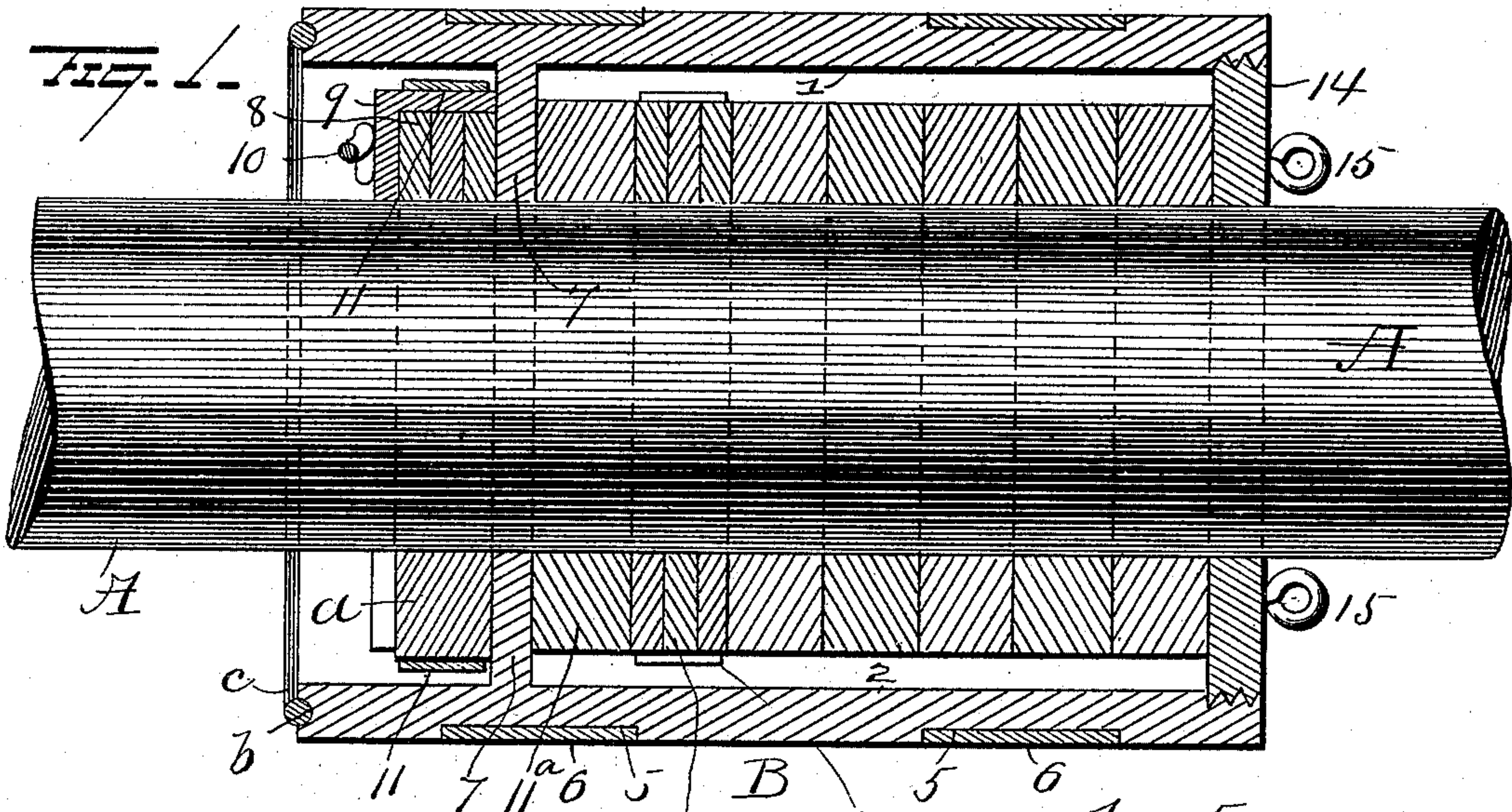
No. 638,138.

Patented Nov. 28, 1899.

F. D. PHILP.
PISTON ROD PACKING.

(Application filed July 29, 1899.)

(No Model.)



WITNESSES
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UNITED STATES PATENT OFFICE.

FREDERICK D. PHILP, OF BUFFALO, NEW YORK.

PISTON-ROD PACKING.

SPECIFICATION forming part of Letters Patent No. 638,138, dated November 28, 1899.

Application filed July 29, 1899. Serial No. 725,503. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK D. PHILP, a resident of the city of Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Piston-Rod Packing; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in metallic packing for piston-rods, one object of the invention being to so construct a packing that it can be placed in position on a piston-rod without disconnecting the same from its cross-head.

A further object is to provide a piston-rod packing which will be simple in construction and most effectual when in use.

With these objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in longitudinal section, illustrating my improvements. Fig. 2 is a view in transverse section. Fig. 3 is an end view with the piston-rod shown in section, and Figs. 4 and 5 are views of a modified form of my invention.

A represents a piston-rod, and B the casing of my improved packing. The casing B is made in two semicircular sections 1 2, provided with recesses or grooves in their longitudinal meeting edges, as shown at 3, for the reception of wires or rods 4, and the casing is provided around its outer face with grooves 5 for the accommodation of metal straps or bands 6, having their ends secured together by means of rivets 6^a, as clearly shown in Fig. 2. The inner end of the casing A is made with a groove *b* for the accommodation of a wire ring *c*, which is disposed against the cylinder-head of the engine to prevent any escape of steam.

The casing B is provided internally near its inner end with an integral ring 7, half of said ring being integral with each section 1 2, and when the sections are placed together the ring 7 will completely surround the piston-rod A.

A packing-ring *a*, comprising a series of

segmental metallic sections 8, having mortise-and-tenon connections, is disposed around the piston-rod A between the ring 7 and cylinder-head, and a series of segments 9, made L shape in cross-section, are disposed over the joints between the sections 8, and spring-arms 10 are secured to the casing B, as most clearly shown in Fig. 3, and are adapted to press against the segments 9 to force them against the ring 7, and a spring 11 is disposed around the segments 9 and is adapted to hold the sections 8 always in close contact with the piston-rod A.

A series of sectional packing-rings 11^a, similar to the ring *a*, are disposed around the piston-rod A on the other side of the ring 7, and springs 12 are secured at one end to the sections 1 2 by means of rivets 13, and the free ends of the springs bear against the sections of packing-ring.

The outer end of the casing B is made with internal screw-threads for the reception of a threaded ring 14, adapted to prevent longitudinal movement of the packing-rings, and said ring 14 is provided with eyebolts 15 or other suitable means to permit the casing to be removed from the stuffing-box of the engine when desired.

Instead of constructing my improved device as above described I might make the same as shown in Figs. 4 and 5. In this form of my invention the packing-ring sections 16 are provided on their outer peripheral edges with grooves 17 for the reception of projections or flanges 18 on the ends of sheet-springs 19, such a spring being provided for each joint and adapted to engage the two adjoining sections.

Various other slight changes might be resorted to in the general form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I would have it understood that I do not wish to limit myself to the precise details set forth, but consider myself at liberty to make such slight changes and alterations as fairly fall within the spirit and scope of my invention.

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

1. In a piston-rod packing, the combination

with a casing, of an internal ring integral with the casing, a packing-ring on one side of the integral ring, said packing-ring consisting of three or more sections having mortise-and-tenon connections, said mortises and tenons being equal in width to that of the wall of the ring and extending from the inner to the outer face thereof and springs adapted to press the sections of rings inward.

10 2. In a piston-rod packing, the combination with a casing, of a ring between the ends of said casing and integral therewith, a segmental packing-ring bearing against said integral ring, segments L-shaped in cross-section dis-
15 posed over the joints of the packing-ring and springs secured to the casing and bearing against the end faces of said segments so as to press the packing-ring against the integral ring in the casing.

20 3. In a piston-rod packing the combination with a casing and an internal fixed ring, of a sectional packing-ring in the casing alongside said fixed ring, segments bearing against the

periphery and outer face of the packing-ring and lapping the joints of the latter, springs 25 pressing against the periphery of the packing-ring, and springs secured to the casing and pressing against the portions of said segments which bear on the outer face of the packing-ring. 30

4. In a piston-rod packing, the combination of a casing made in two longitudinal sections adapted to contain sectional packing-rings and having grooves in the adjoining faces of the meeting edges of said sections, wires or 35 rods in said grooves and bands or straps adapted to be secured around said sections to hold them together.

In testimony whereof I have signed this specification in the presence of two subscrib- 40 ing witnesses.

FREDERICK D. PHILP.

Witnesses:

C. H. McCUTCHEON,
ALEX CLARK.