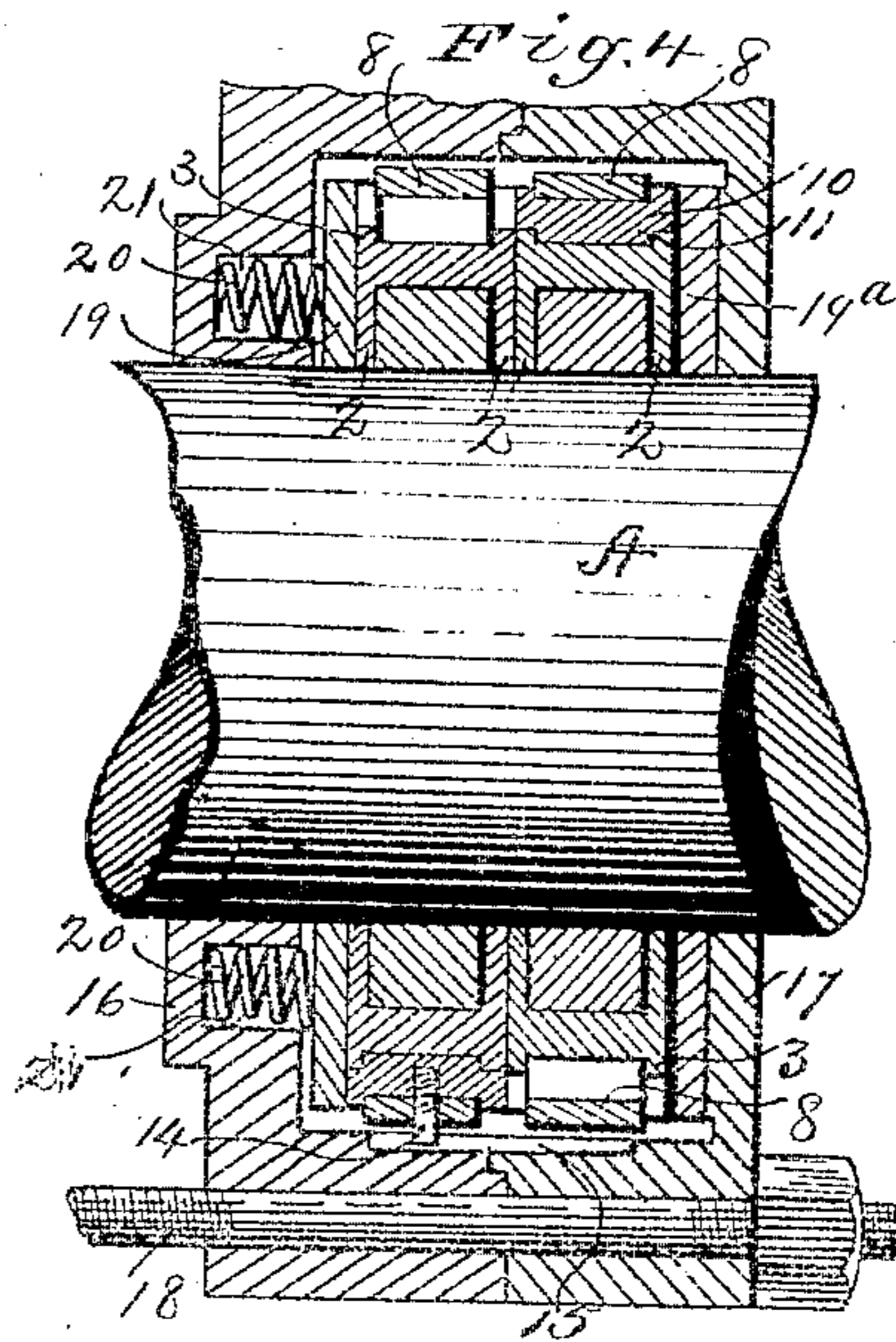
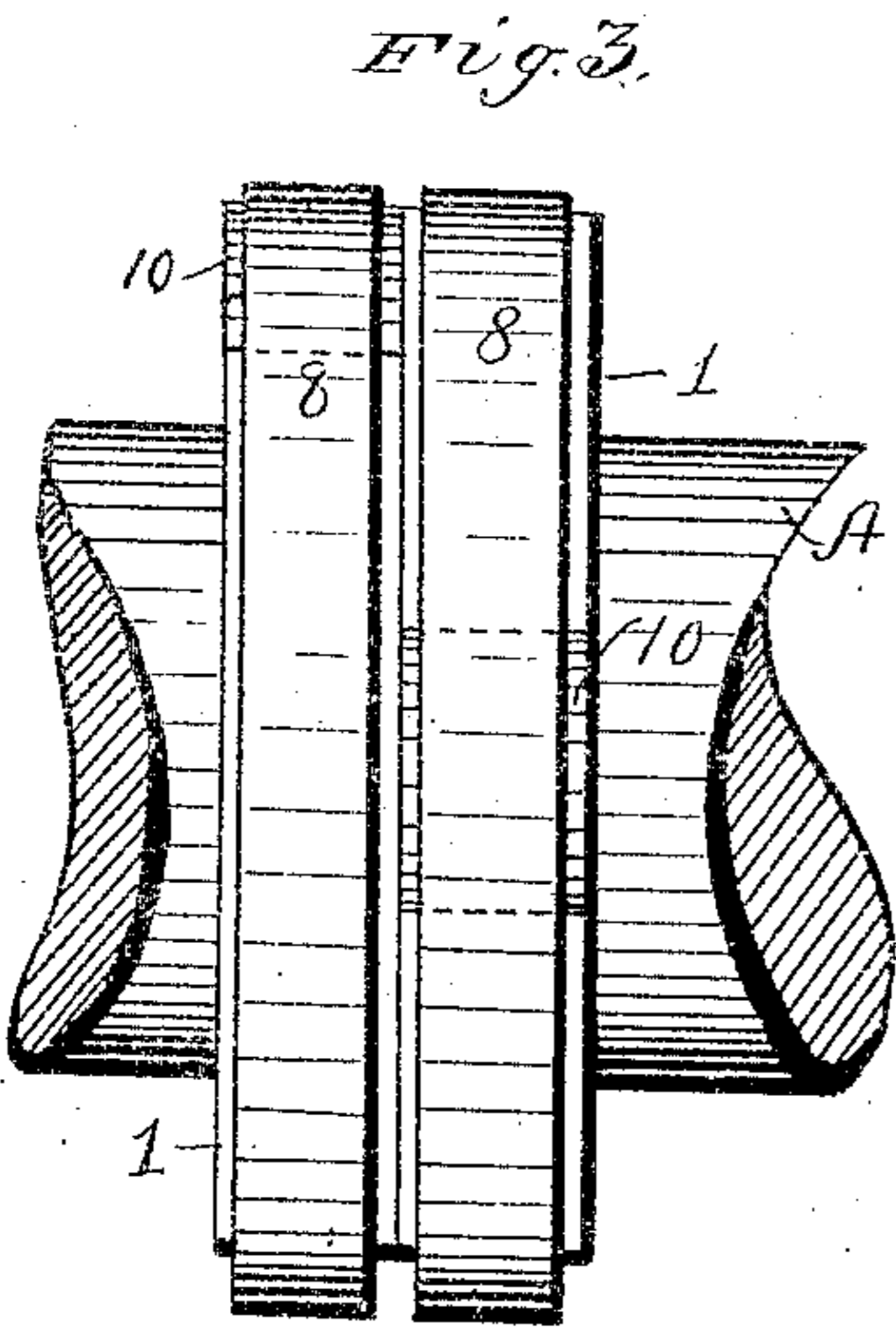
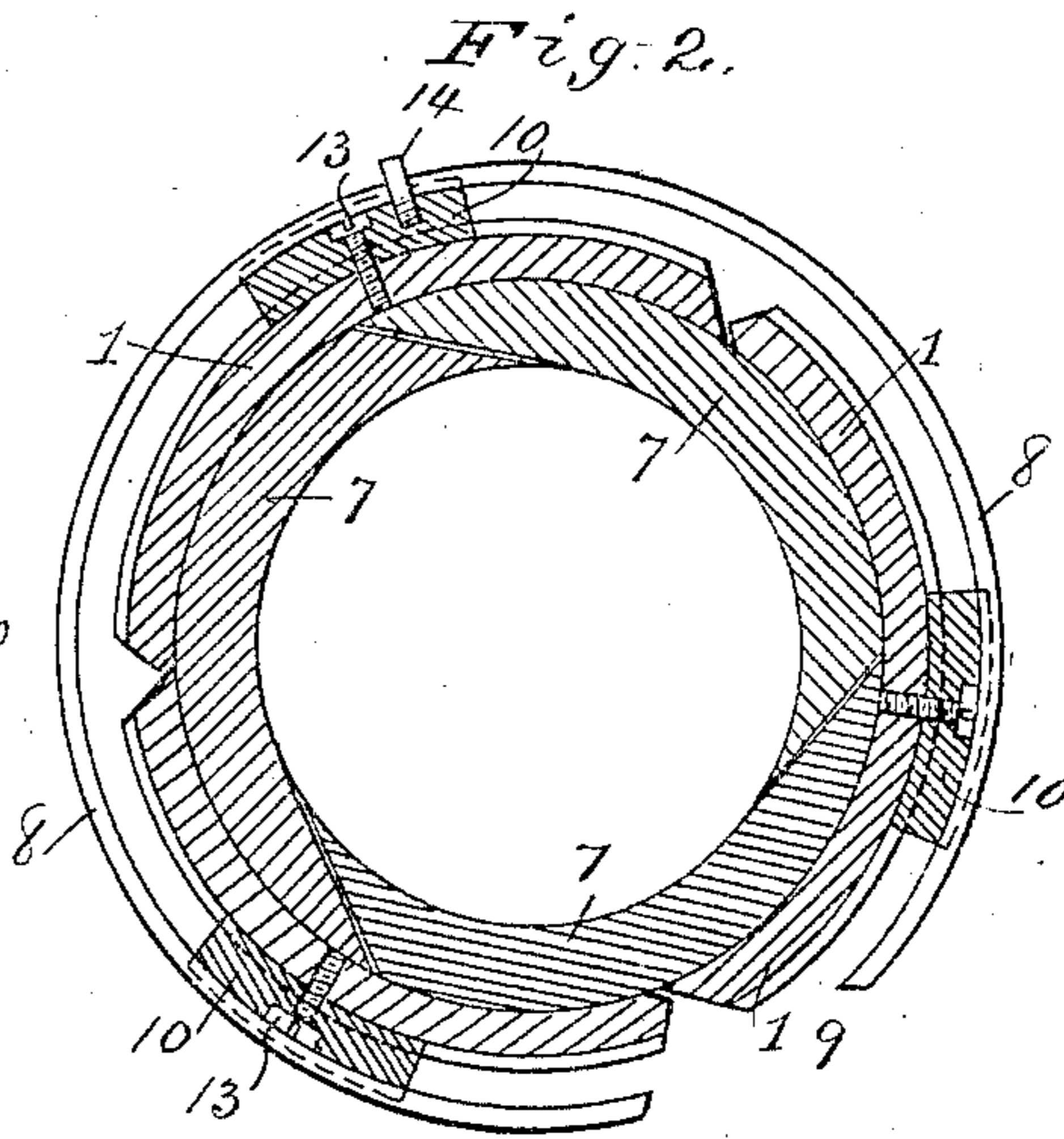
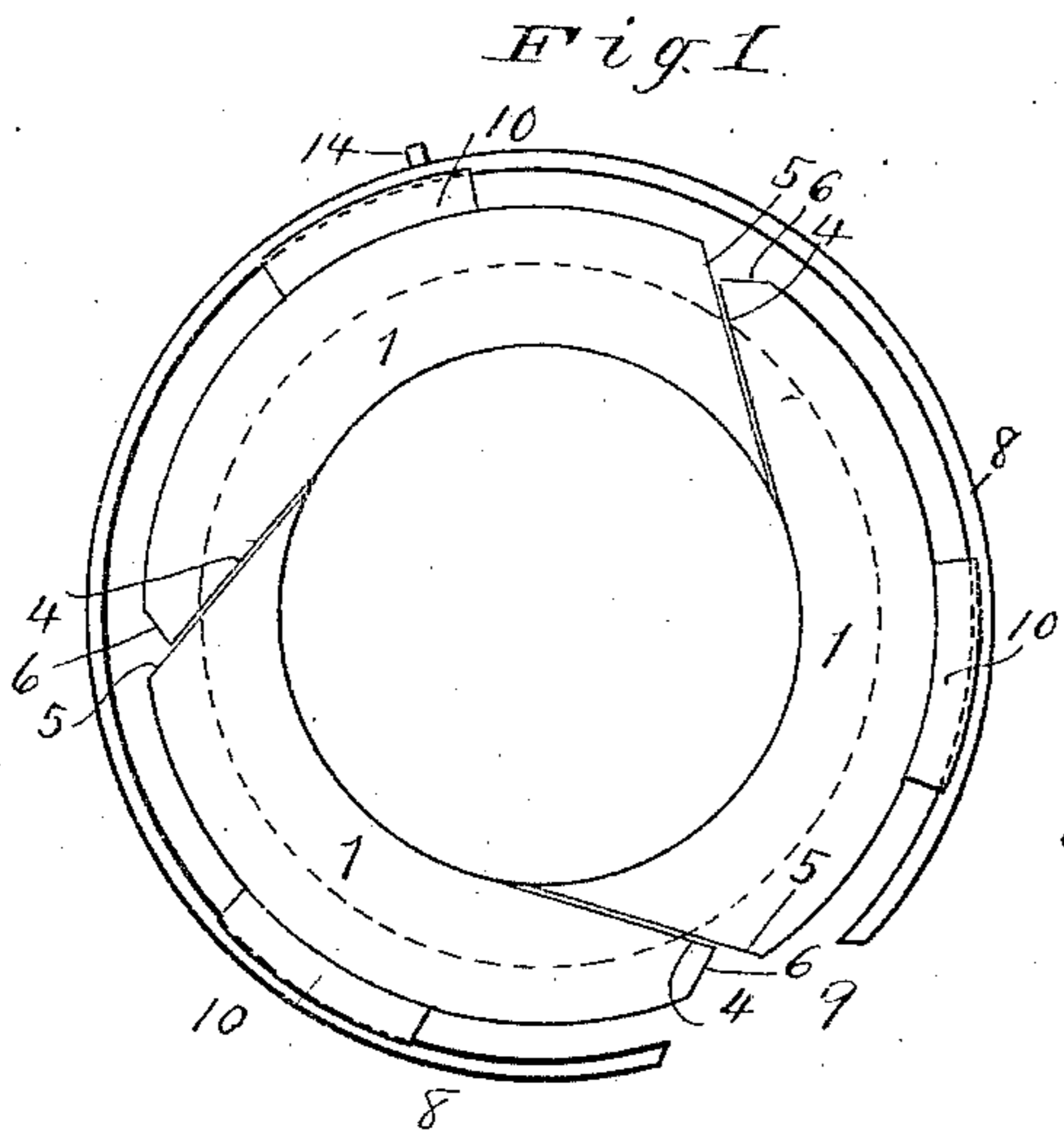


No. 839,900.

PATENTED JAN. 1, 1907.

A. E. SPARROW.
PACKING RING.

APPLICATION FILED JUNE 14, 1906.



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UNITED STATES PATENT OFFICE.

ARTHUR E. SPARROW, OF CHICAGO, ILLINOIS.

PACKING-RING.

No. 839,900.

Specification of Letters Patent.

Patented Jan. 1, 1907.

Application filed June 14, 1906. Serial No. 321,722.

To all whom it may concern:

Be it known that I, ARTHUR E. SPARROW, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Packing-Rings, of which the following is a specification.

This invention relates to new and useful improvements in rod-packings, and it particularly pertains to steam-tight packings employed in connection with piston-rods, steam-valve stems, and the like.

The primary object of the present invention is to provide a packing which shall be simple and inexpensive to manufacture, readily applied, and practical and efficient in use.

It is a further object of the present invention to provide a packing made in sections and to provide a novel tensioning device for the sections in their contacting relation with the rod, which particularly comprises a resilient ring and elements carried by the sections for adjusting the tension of the ring.

The detailed construction will appear in the course of the following description, in which reference is had to the accompanying drawings, forming a part of this specification, like numerals designating like parts throughout the several views, wherein—

Figure 1 is a side elevation of a complete packing-ring constructed in accordance with my invention. Fig. 2 is a longitudinal section thereof. Fig. 3 is a side elevation of a rod with my invention applied thereto, and Fig. 4 is a vertical transverse section thereof.

In the practical embodiment of my invention I employ a plurality of brass-ring sections 1 of U shape in cross-section and formed with depending walls 2. The sections 1 are formed in their outer curved faces with longitudinal grooves 3, extending peripherally of the sections in their assembled relation. In effecting a joint between the sections 1 each section is formed with an inclined face 4 at one end thereof extending tangentially of its inner curved surface and with an inclined face 5 upon its other end and designed to bear upon the face 4. Each section is formed with a beveled shoulder 6 adjacent the face 4 and coacting with the inclined face 5 of the confronting section to form a substantially V-shaped recess at the point of union of the sections, whereby ine-

qualities between the sections due to wear and vibration may be compensated. Similarly-shaped sections 7 of Babbitt metal are held between the depending walls 2 and in their assembled relation form an annulus which fits snugly the rod A, passed there- held together by an annulus 8, which is split, through. The sections thus assembled are as at 9, and is separated from the sections in concentric relation by spacing-blocks 10.

The blocks 10 are each formed with a rib 11 on their underneath face, designed to interfit the groove 3, and with a groove 12 in their upper face, designed to receive the annulus 8. The blocks 10 are positively connected to the sections 1 by means of the screws 13, as is shown in Fig. 2. One of said blocks is provided with a pin 14, projecting through the ring 8 and designed to engage in a groove 15, formed in the casing, and to serve as a stop to prevent the rotation of the ring 8 and the sections 1. The casing comprises annular sections 16 and 17, abutting one another and united by bolts 18. The packing above described is supported in the casing and at its points of contact is provided with sealed joints comprising flat rings 19 and 19*, located on each side of the casing. For the purpose of forcing the packing-ring 19 tightly against section 1 expansive coil-springs 20 are employed, which seat in recesses 21, formed in one of the sections (arbitrarily 16) and which bear against the flat face of the adjacent ring 19.

In the practical embodiment of my invention it is preferred to employ two or more of the rings constructed as shown in Fig. 1 and having the arrangement shown in Fig. 4. By virtue of this construction and arrangement all joints are effectually sealed and the escape of steam is prevented. The sections 7 being of Babbitt or other antifriction metal offer less resistance to the rod A than the hemp packing ordinarily employed and will wear smooth and even at all times. It follows, therefore, that the amount of friction and consequent wear upon the parts will be greatly reduced. The tension of the ring 8 in maintaining the sections in their assembled relation, as above set forth, is regulated by the size of the blocks 10, which are readily attachable to and detachable from the section 1, a larger block increasing the tension of the ring 8 and a smaller block lessening the

tension thereof. Inasmuch as the rings are held from rotatory movement by the pin 14, the advantageous arrangement will be preserved and the joints will remain effectually sealed at all times.

While the elements herein shown and described are well adapted to serve the purposes set forth, it is obvious that various changes may be made in the proportions, shape, and arrangement of the several parts without departing from the spirit and scope of my invention as defined in the appended claims.

Having fully described my invention, I claim—

1. A rod-packing comprising an annulus formed of a plurality of separable sections, severally provided with antifrictional bearing-surfaces, spacing-blocks positively carried upon the outer faces of said sections and a split ring surrounding said sections in con-

centric relation and engaging the surfaces of said spacing-blocks.

2. The combination with a casing formed with a recess in its inner peripheral face, of a packing within said casing and comprising an annulus formed of a plurality of separable sections provided with antifrictional bearing-surfaces, a split ring concentrically surrounding said sections, spacing-blocks carried by said sections and having connection with said ring and a stop-pin carried by one of said sections and projecting through said ring to engage said recess in said casing.

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

ARTHUR E. SPARROW.

Witnesses:

ORVILLE E. WOOLDRIDGE,
HUGH M. MORAN.