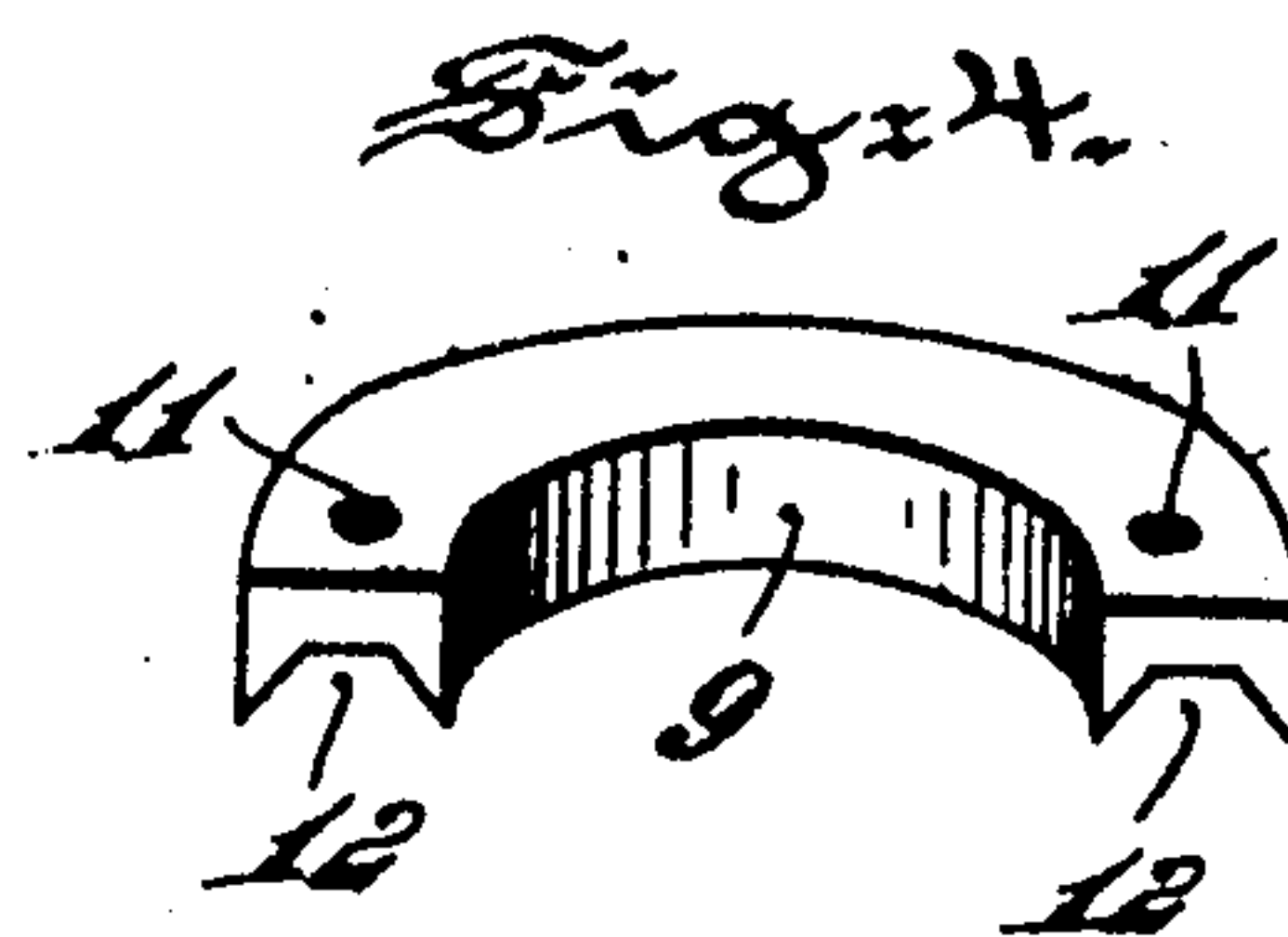
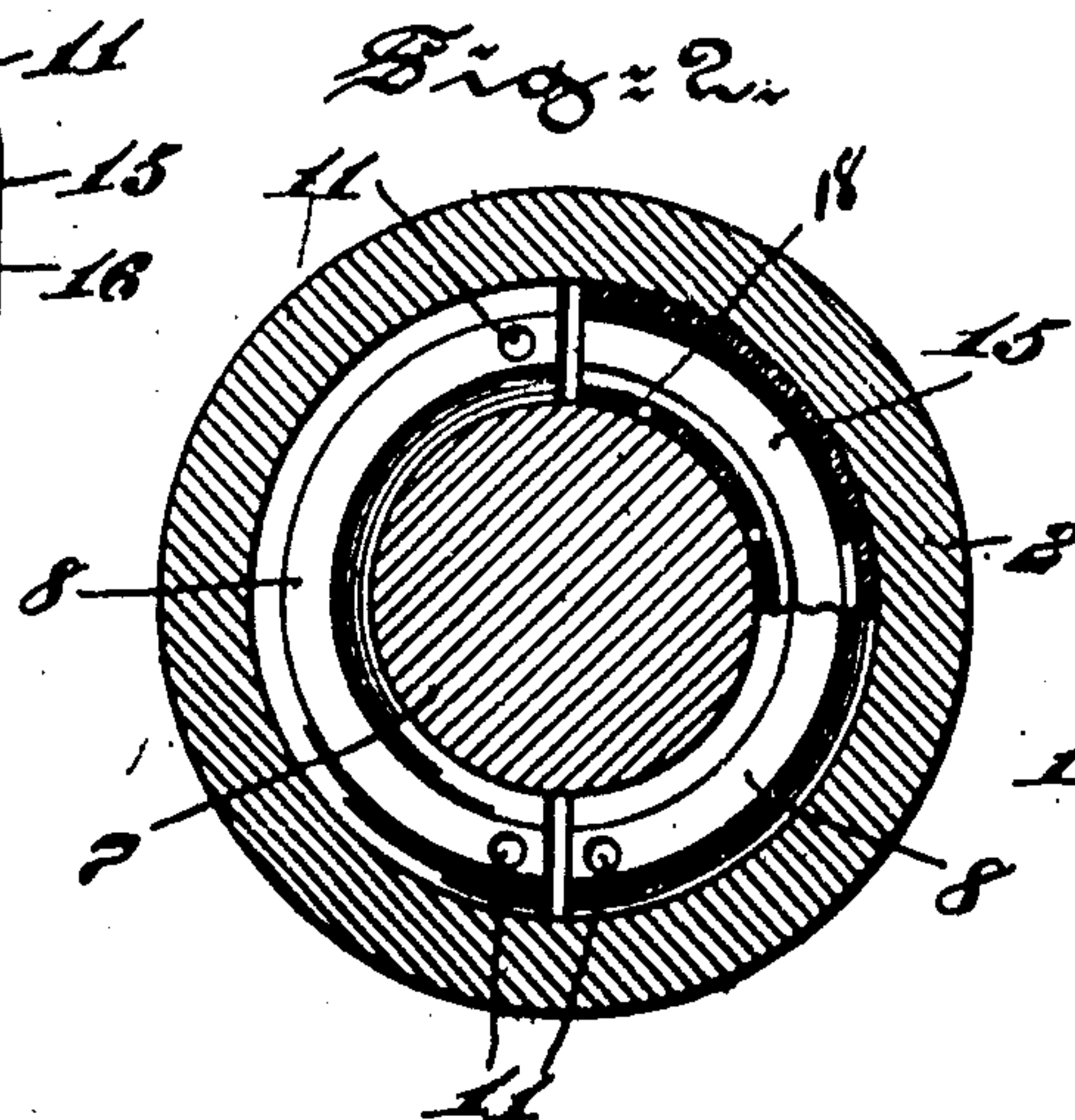
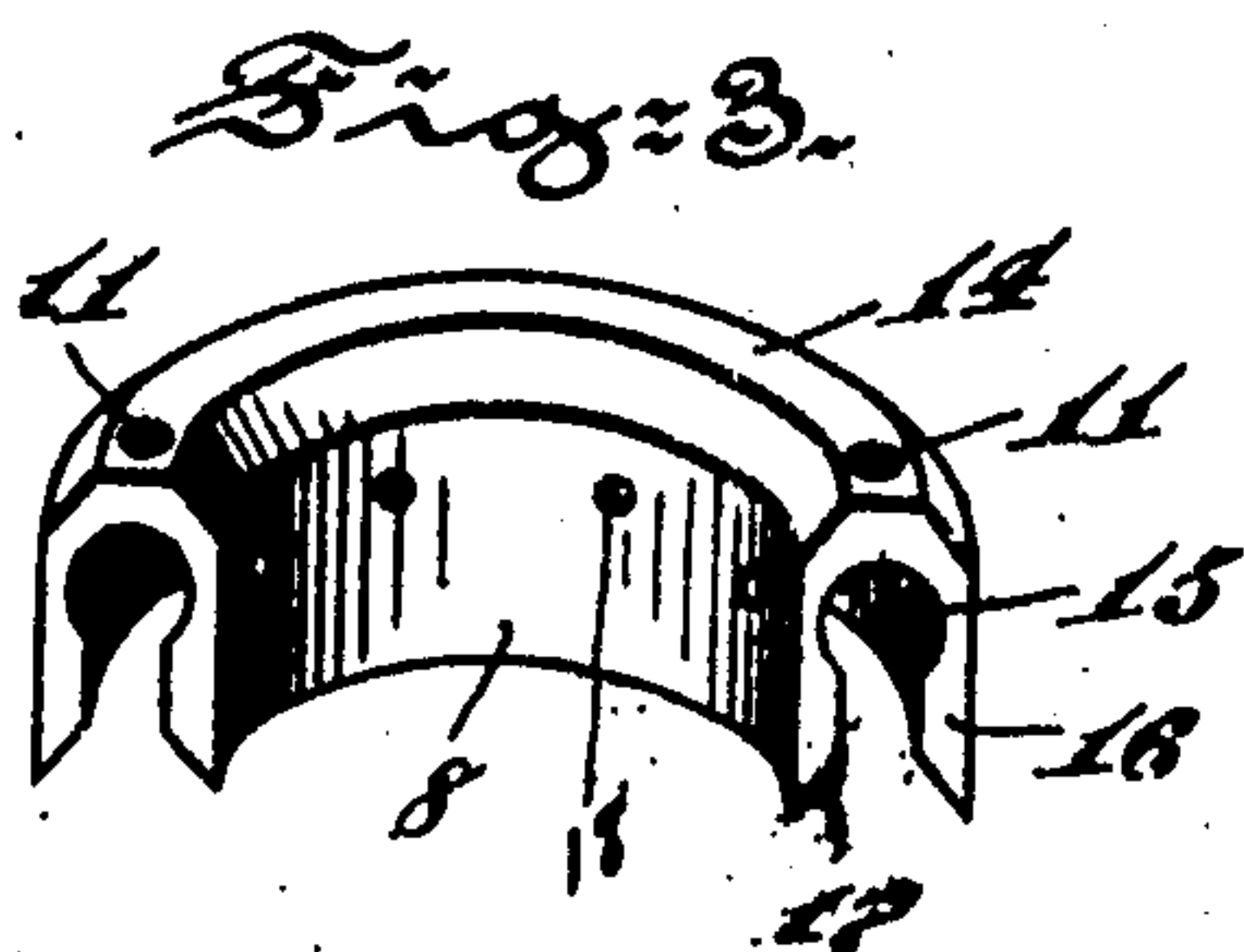
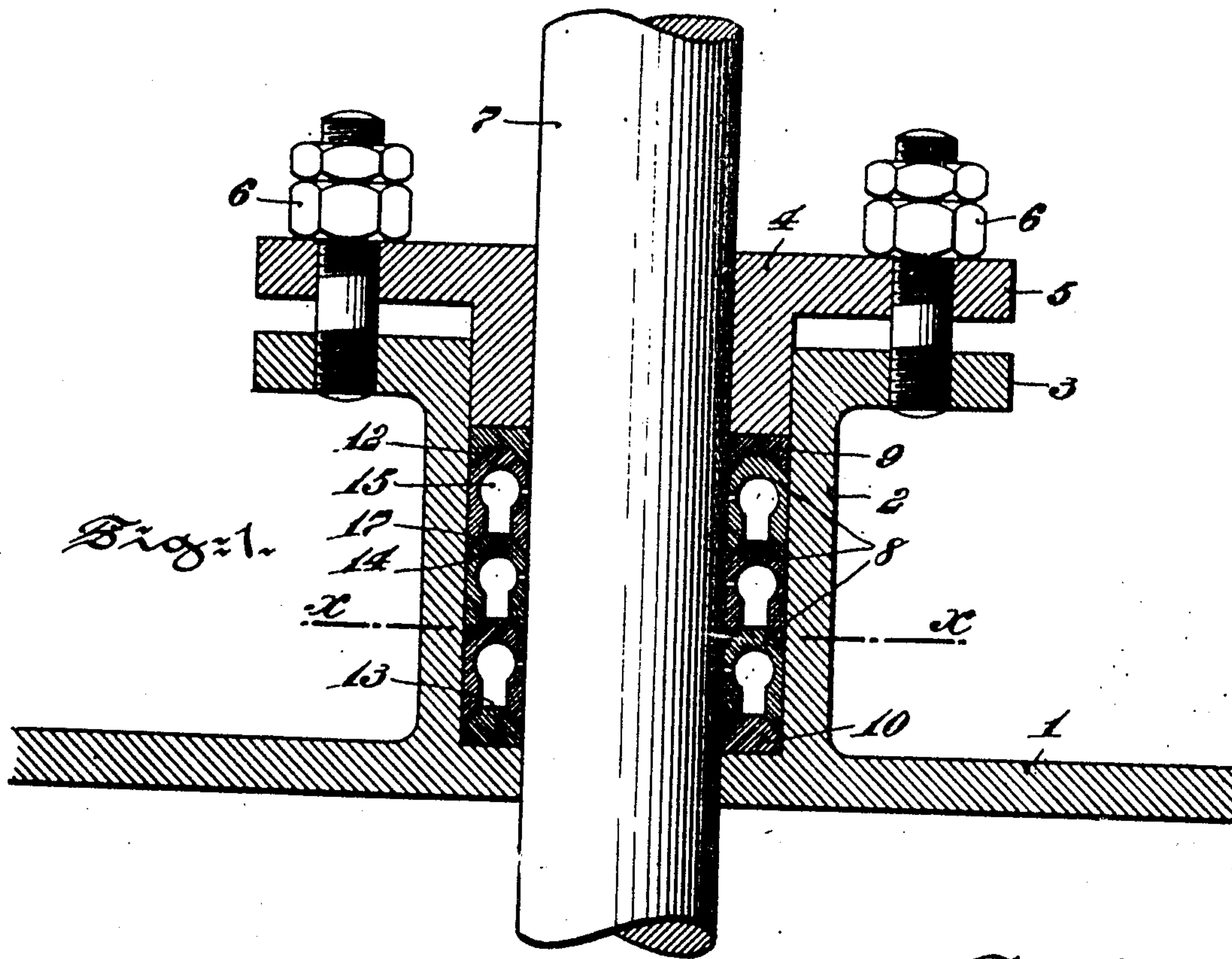


No. 869,536.

PATENTED OCT. 29, 1907.

J. C. W. WEBER.  
STUFFING BOX METALLIC PACKING.

APPLICATION FILED JUNE 5, 1907.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JOHANN CHRISTOPH WILHELM WEBER, OF PHILADELPHIA, PENNSYLVANIA.

## STUFFING-BOX METALLIC PACKING.

No. 869,536.

Specification of Letters Patent.

Patented Oct. 29, 1907.

Application filed June 5, 1907. Serial No. 377,452.

To all whom it may concern:

Be it known that I, JOHANN CHRISTOPH WILHELM WEBER, a subject of the King of Denmark, residing in the city of Philadelphia, State of Pennsylvania, have

invented certain new and useful Improvements in Stuffing-Box Metal Packing, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

- My invention has for its object the production of an improved form and character of metal packing for stuffing-boxes of engines, and it consists of a pair or plurality of pairs of semi-circular cup-like sections hereinafter described, constituting when assembled in pairs in vertical series a longitudinally and laterally sectioned sleeve around the piston rod, in combination with a pair of oppositely-disposed end compressing rings, preferably six semi-circular sections, each provided respectively with a contacting face coinciding with that of the adjacent interposed cup section: the latter being constructed, as an essential characteristic, of composition "white metal" so-called, or of Babbitt metal, or of other like metal having a compressible and preferably a resilient quality, in order that when compressed vertically the vertical sides of the cup section will be forced outward at or adjacent to the top edges against the piston rod, the vertical compression also bringing together the adjacent ends of each pair of semi-circular packing rings or sections. The novel features of construction of the parts elementally and in their combination being as hereinafter described and pointed out in the claims.

In the accompanying drawings illustrating my invention, Figure 1 is a vertical sectional view of the head end, partly broken away, of an engine cylinder having one of the usual forms of stuffing-box, containing my improved metallic packing, and with the covering gland in place thereon. Fig. 2 is a lateral cross-section through the stuffing-box and packing on the line *s-s* of Fig. 1 showing a top plan view, of the cup-like members of the packing with a portion thereof broken away or sectioned through the lubricating holes. Fig. 3 is an elevation of one of the inner members of the packing. Fig. 4 is an elevation of one of the top members; and Fig. 5 an elevation of one of the under members.

Referring now to said drawings, 1 indicates the head-end of a known type of engine cylinder, with its stuffing-box formed by cylindrical or other extension end 2 with its flange 3. The stuffing-box is provided with the usual form of gland cover 4 having flanges 5, the parts being assembled as shown in Fig. 1 and held in place by bolts 6; the cylinder head and gland cover being centrally bored, as usual, to permit the passage therethrough of the piston rod 7.

The packing, shown in Fig. 1 in loosely assembled position, in the stuffing-box, consists of a series of semi-cylindrical cup-like sections 8, with top sections 9 and bottom sections 10.

The sections 9 and 10 are merely top and bottom end sections presenting flat surfaces on one side with grooved surface 12 in top section 9 and beveled surface 13 in lower section 10, to adapt each to register with coinciding surfaces of the packing sections 8 which are the characteristic elements. These are constructed as shown in Fig. 3 in inverted cup-like form, the top edge 14 being beveled, and the body portion cut away at 15 and formed with depending side walls 16 extending therefrom and provided at the base with tapering edges 17, the two tapered edges forming between them what is substantially a groove adapted to rest on the top beveled edge 14 of the adjacent section 8 below it. The interior of these sections 8 therefore form a receptacle for a graphite lubricant which will discharge through holes 18 extending from the inner wall of the section to the interior thereof. The parts are assembled as shown in Fig. 1, and when top pressure is applied by tightening down the gland 4, the tendency will be to spread the sides 16 of the sections 8, mainly at the extreme lower ends and very little above that, hence the frictional contact, with the piston-rod, while sufficient, will be less than a complete contact with the entire surface of the adjacent side wall 16 of the section.

It is preferable to drill holes 11 in the several sections 8, 9 and 10 to more readily withdraw them from the stuffing-box when desired for repair, removal or otherwise.

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

1. A packing of compressible metal composed of a pair of coinciding semi-circular ring-like sections forming, when brought into register around a piston rod, a longitudinally sectioned sleeve, each section being of cup-like form in cross-section, one edge of which is beveled and the opposite bifurcated edge has interiorly inclined walls, in combination with a pair of top and bottom compressing rings provided respectively with a contacting face coinciding with that of the adjacent interposed ring sections.

2. A metallic packing composed of a plurality of pairs of semi-circular ring-like sections of compressible metal and of cup-like form in cross-section with beveled top face and outwardly inclined basal edges, said sections coinciding when assembled in vertical series and forming a longitudinally and laterally sectioned sleeve, and a pair of top and bottom compressing rings each provided with a face coinciding with the adjacent compressible ring section.

3. A metallic packing comprising a pair of semi-circular sections of composition, "white metal" or the like, said sections having a beveled top face and a grooved under face, the interior being cut away to form a cup-like member with depending sides interiorly tapered at their ends, and perforated through the inner of said depending sides, in combination with top and bottom sections having faces

adapted in form to register with the coinciding faces of the cup-like sections and spread the side walls thereof when the parts are assembled and top pressure is applied to the assembled elements.

- 5 4. In combination with the stuffing-box of an engine cylinder, with a gland cover therefor and a piston rod passing through the same, of a series of semi-circular sections of metal of the character recited, formed with two depending side walls interiorly tapering at their basal  
10 edges and forming a cup-like interior between them, perforations through the inner of said side walls, and coin-

ciding top and bottom compressing sections adapted, when vertical pressure is applied thereto by the gland of the stuffing-box, to force the lower edge of the adjacent wall of each cup-like section against the piston rod.

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In testimony whereof, I have hereunto affixed my signature this 25th day of May A. D. 1907.

JOHANN CHRISTOPH WILHELM WEBER.

Witnesses:

A. M. BIDDLE,

JAS. C. WOBUSWITH.