No. 639,722. Patented Dec. 26, 1899.

A. W. FRANCE.

METHOD OF MAKING SECTIONAL PACKING RINGS.

(Application filed Sept. 14, 1899.)

(No Model.)

Fig. 1.

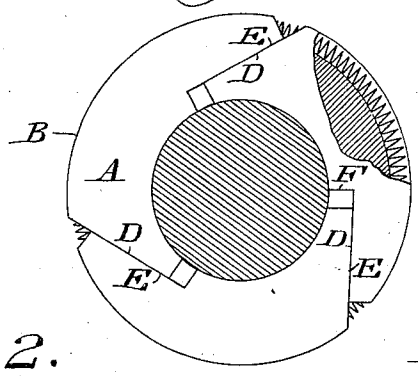


Fig. 2.

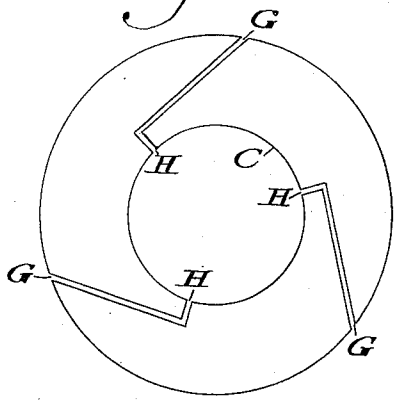


Fig. 3.

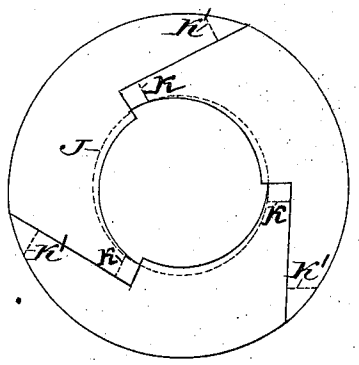


Fig. 4.

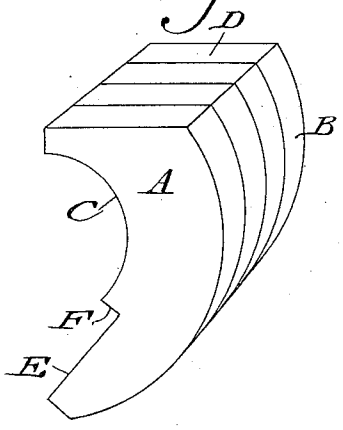
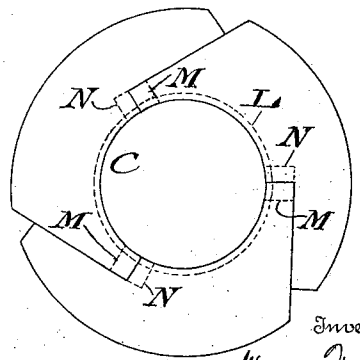


Fig. 5.



Witnesses

P. F. Eagle

Harry C. Kennedy.

Inventor

By Adam Warren France.

Wiedenheim & Fairbanks,

Attorneys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ADAM W. FRANCE, OF PHILADELPHIA, PENNSYLVANIA.

METHOD OF MAKING SECTIONAL PACKING-RINGS.

SPECIFICATION forming part of Letters Patent No. 639,722, dated December 26, 1899.

Application filed September 14, 1899. Serial No. 730,393. (No model.)

To all whom it may concern:

Be it known that I, ADAM WARREN FRANCE, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Methods for Making Sectional Packing-Rings, which improvement is fully set forth in the following specification and accompanying drawings.

My invention relates to a method for making sectional packing-rings; and it consists in the steps of said method hereinafter fully described and claimed.

The sectional packing-ring to which my method refers consists of a plurality of sections having abutting faces upon which the sections can move relatively. These abutting faces provide steam-joints, and a spring serves to compress the sections around a piston-rod to which it is applied, as will be understood.

Figure 1 represents a plan view of a packing-ring made by my method. Fig. 2 represents a ring cut into a plurality of sections according to one step of my method. Fig. 3 represents the said sections reassembled. Fig. 4 represents a plurality of sections assembled side by side according to another part of my method. Fig. 5 represents said sections assembled.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates the sections of the packing-ring, each having the outer periphery B, inner periphery C, outer abutting face D, inner abutting face E, and shoulder F. These rings may be made in various ways, although my method of cutting them from a solid ring I consider preferable.

Broadly considered, the method consists in first making these sections with the outer and inner abutting faces D and E and the inner periphery C approximately of the desired radius. The sections are then assembled with their abutting faces in contact and the inner peripheries trued to the same radii. The sections must have room to be compressed or to slide upon their abutting faces, and this is preferably accomplished by cutting off the end of the section bearing the outer abutting face after the inner peripheries have been trued.

In Fig. 1 the complete packing-ring is shown. In making the sections thereof according to my method from a solid ring, I first cut the ring by a plurality of angular cuts G and H, as shown in Fig. 2. The cut G is tangentially arranged with respect to a circle intermediate of the inner and outer periphery, and the cut H leads from the inner end thereof to the inner periphery of the ring. These sections A are then reassembled as shown in Fig. 3, and while being held in this position their inner peripheries are trued out to a circle of the diameter of the rod it is intended to pack. This is shown by the dotted lines marked J. The ends of the sections bearing the outer abutting faces are then cut off, as shown by dotted lines K, to allow the sections to be compressed. After cutting off the end portion at the outer end of the inner abutting face, as on the dotted line K′, which is not part of my method, the sections then appear as in Fig. 1.

Instead of making the sections from a solid ring they may be cut separately, as shown in Fig. 4. When following this method, several sections A may be bound together to cut the abutting faces D and E true. The inner periphery is cut only approximately. The sections are then assembled as shown in Fig. 5 and the inner periphery C trued, as before, the dotted lines L showing, for instance, the portion removed. The dotted lines M show the end portions of the ends of the sections bearing the outer abutting face, that is removed to allow the sections to slide upon each other in closing around a piston-rod. This can be secured in other ways—for instance, by cutting away the other end of the section, as shown by dotted lines N. Cutting off the end portion of the section after truing is the preferable manner of proceeding, for it permits the sections to be firmly secured and held while truing the inner peripheries, since one end of a section abuts against the shoulder F of another section.

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

1. The herein-described method for making a sectional packing-ring, which consists in first forming the sections with an outer abutting face at one end and an inner abutting face at the other end, upon which abutting

faces adjacent sections are adapted to move relatively, then assembling the sections with their ends overlapping and the abutting faces in contact, then truing the inner peripheries of said sections to the same radii when the sections are so assembled, and then removing a portion of the inner peripheral portion of each section adjacent the meeting ends of the inner peripheries thereof.

2. The herein-described method for making a sectional packing-ring, which consists in first forming the sections with an outer abutting face at one end and an inner abutting face at the other end, upon which abutting faces adjacent sections are adapted to move relatively, then assembling the sections with their ends overlapping and the abutting faces in contact, then truing the inner peripheries of said sections to the same radii when the sections are so assembled, and then removing a portion of the end of each section bearing the outer abutting face.

3. The herein-described method for making a sectional packing-ring, which consists in first forming the sections with an outer abutting face at one end, an inner abutting face at the other end, and a shoulder at the inner end of said inner abutting face, upon which abutting faces adjacent sections are adapted to move relatively, then assembling said sections with their ends overlapping, the abutting faces in contact, and the ends of the sections bearing the outer abutting faces in contact with the shoulders on the other sections, then truing the inner peripheries of said sections to the same radii when the sections are so assembled, and then removing a portion of the end of each section bearing the outer abutting face.

4. The herein-described method for making a sectional packing-ring, which consists in first separating a solid ring into a plurality of sections having an outer abutting face at one end and an inner abutting face at the other end, upon which abutting faces adjacent sections are adapted to move relatively, then assembling the sections with their ends overlapping and the abutting faces in contact, and then truing the inner peripheries of said sections to the same radii when the sections are so assembled.

5. The herein-described method for making a sectional packing-ring, which consists first in separating a solid ring into a plurality of sections by angular cuts, one of the cuts extending tangentially from the outer periphery and the other cut extending from the inner end of said tangential cut and intersecting the inner periphery of the ring, then assembling said sections in corresponding positions with their ends overlapping, then truing the inner peripheries of said sections to the same radii, and then removing the end portion of the inner of the overlapping ends of the sections.

ADAM W. FRANCE.

Witnesses:
JOHN A. WIEDERSHEIM,
WM. CANER WIEDERSHEIM.