W. D. MATHEWS.

PISTON RING.

APPLICATION FILED DEC. 1, 1919.

1,391,335. Patented Sept. 20, 1921.

Fig. 1.

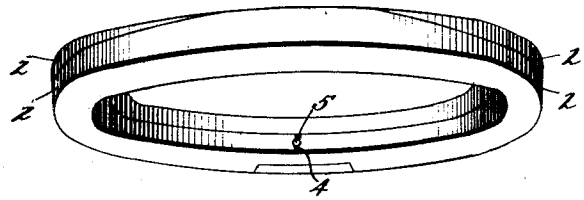


Fig. 2.

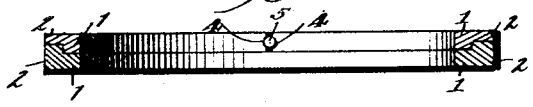


Fig. 3.

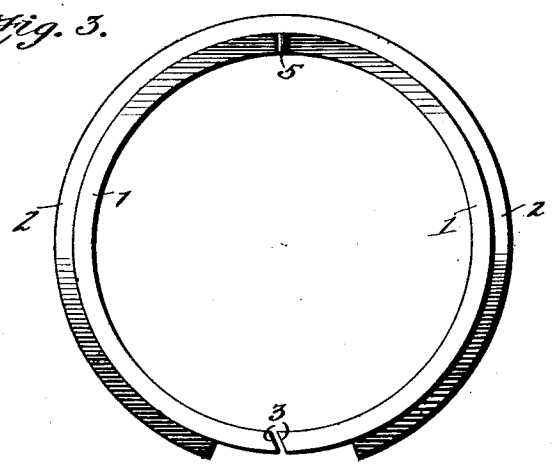
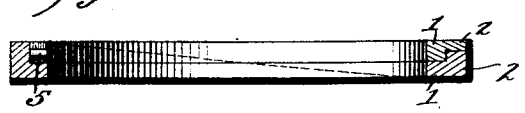


Fig. 4.



WITNESSES

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PISTON-RING.

1,391,335. Specification of Letters Patent. Patented Sept. 20, 1921.

Application filed December 1, 1919. Serial No. 341,642.

To all whom it may concern:

Be it known that I, WALTER D. MATHEWS, a citizen of the United States, and a resident of Marlette, in the county of Sanilac and State of Michigan, have made certain new and useful Improvements in Piston-Rings, of which the following is a specification.

My invention is an improvement in piston rings, and has for its object to provide a ring of the character specified, which will be proof against leakage in every direction, and which may be easily applied and removed when desired.

In the drawings:—

Figure 1 is a perspective view of the improved ring,

Fig. 2 is a transverse vertical section,

Fig. 3 is a plan view,

Fig. 4 is a section at right angles to Fig. 2.

In the present embodiment of the invention the improved ring is composed of two similar sections, each section being a split ring. Each section may be considered as being composed of two portions, an inner portion 1 and an outer portion 2. The inner portion 1 of each section is of the same height throughout while the outer portion 2 of each section is of greatest height at its center, and gradually decreases in height toward its end, and the ends of the outer portion stop short of the ends of the inner portion 1, as clearly shown in Fig. 3. That is, the inclination of the surface of the portion 2 of the section cuts into the lower face of the section considered as a whole before the split in the section is reached.

It will be evident that when these two sections are symmetrically arranged with the split of one diametrically opposite the split of the other, they will fit each other to form a ring having the same height or thickness throughout, it being understood that the radial width of the portions 1 and 2 is the same in each section. One section has its ends beveled as indicated at 3, and the other section has its ends recessed as indicated at 4, to engage a pin 5 at the highest portion of the other section. This pin and recess engagement is merely for the purpose of preventing angular movement of the sections with respect to each other, and it will be evident that either section may carry the pin, since the position of the pin is immaterial.

It will be evident that from the description that each section of the improved ring is beveled on its abutting face in such manner that a portion of the abutting face of the ring is at the level at the face of the other section remote from the bevel surface, taking in fact the place of a portion of the said plate. If this bevel extended the width of the ring, the sections would tend to slip laterally upon each other in the plane of the ring. By providing two portions for each section, only one of which is beveled, the tendency to such slipping is prevented.

I claim:—

A piston ring comprising two similar sections each having a diagonal gap, the gaps being diametrically opposite in the assembled ring, each section including a circular portion of uniform width and thickness and further including an outwardly extending flange having its greatest thickness opposite the gap of the other section and tapering gradually toward both ends, the ends terminating considerably short of the gap, and an inwardly extending radial pin on each section, the other section being recessed for the accommodation of the pin.

WALTER DAVID MATHEWS.