G. DE LAVAL.

OSCILLATING DISK PISTON FOR DISK METERS, &c.

APPLICATION FILED JULY 12, 1906.

923,497. Patented June 1, 1909.

Fig. 1.

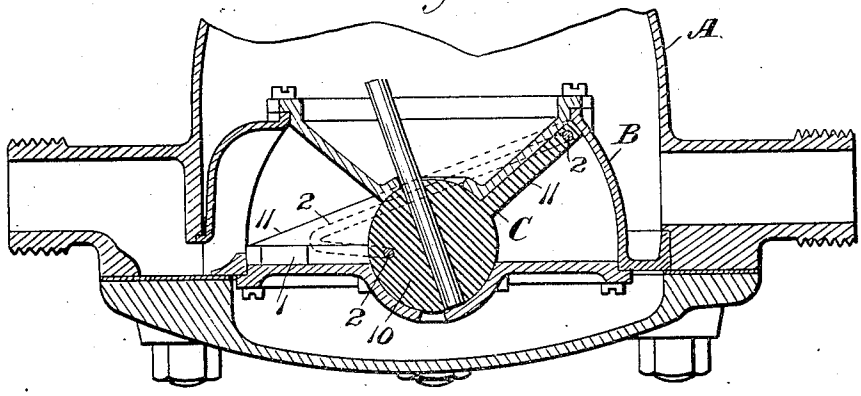


Fig. 2.

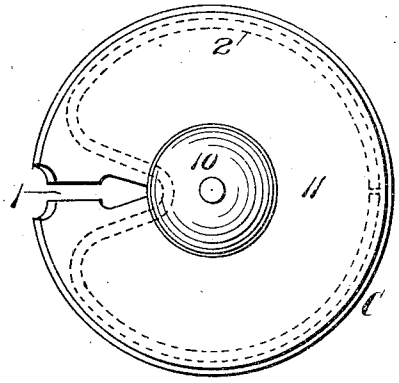
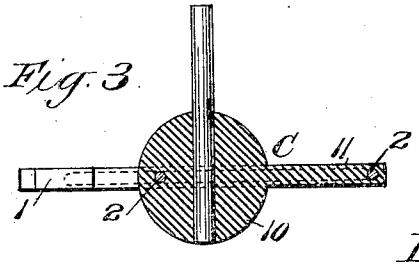


Fig. 3.



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UNITED STATES PATENT OFFICE.

GEORGE DE LAVAL, OF EAST ORANGE, NEW JERSEY, ASSIGNOR TO HENRY R. WORTHINGTON, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

OSCILLATING DISK PISTON FOR DISK METERS, &c.

No. 923,497. Specification of Letters Patent. Patented June 1, 1909.

Application filed July 12, 1906. Serial No. 325,774.

To all whom it may concern:

Be it known that I, GEORGE DE LAVAL, a citizen of the United States, residing at East Orange, county of Essex, and State of New Jersey, have invented certain new and useful Improvements in Oscillating Disk Pistons for Disk Meters and the Like, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

This invention relates to oscillating disk pistons of that class used in disk meters, the object of the invention being to provide an improved metal reinforcement for hard rubber disks of this class.

The invention consists in embedding in the disk a strengthening wire which extends inward from the disk edge around the disk slot, so as to avoid the great liability to breakage at the inner end of the slot, while the piston, except at the edge and around the slot, consists of a solid body of hard rubber.

In the accompanying drawings the invention is shown as applied in connection with a disk meter of the class now well-known as the "Worthington disk meter", and this construction will now be described, and the invention specifically pointed out in the claims.

Figure 1 is a vertical central section of the lower portion of a disk meter embodying the invention. Fig. 2 is a plan view of the disk. Fig. 3 is a central section of another form of disk embodying the invention.

Referring to said drawings, A is the outer casing and B the inner or measuring chamber having the disk piston C which is shown as of a common form having the spherical bearing hub 10 and disk or web 11, the disk piston being shown in Figs. 1 and 2 as coned for use with a flat base wall of the measuring chamber, while in Fig. 3 a straight disk is shown, for use with a double coned measuring chamber, as well understood in this art. The disk has the radial slot 1 co-acting with the usual abutment or diaphragm in the measuring chamber, and the disk is strengthened by a wire 2 embedded in the edge of the disk and extending inward from the edge at opposite sides of the slot 1, and around the inner end of the slot. The wire preferably extends throughout the entire edge of the disk, so as to strengthen the disk throughout. A very strong and rigid hard rubber disk is thus provided, which avoids all danger of breakage at the inner edge of the slot, while the main portion of the disk is formed of a continuous body of rubber.

While my oscillating disk piston is especially intended for disk meters, it will be understood that it is applicable, also, in other oscillating disk actions, such as disk engines and pumps.

What I claim is:—

1. An oscillating disk piston of hard rubber having a slot and a reinforcing wire embedded in the disk and extending inward from the edge at the opposite sides of the disk slot and around the inner end of the slot.

2. An oscillating disk piston of hard rubber having a slot and a reinforcing wire embedded in and extending throughout the edge of the disk and having a continuous portion extending inward from the edge at the opposite sides of the disk slot and around the inner end of the slot.

In testimony whereof, I have hereunto set my hand, in the presence of two subscribing witnesses.

GEORGE DE LAVAL.

Witnesses:

A. H. BRAIDWOOD,

B. M. SANDERS.