

(No Model.)

F. W. HOOD.
WATER METER.

No. 568,759.

Patented Oct. 6, 1896.

Fig. 1.

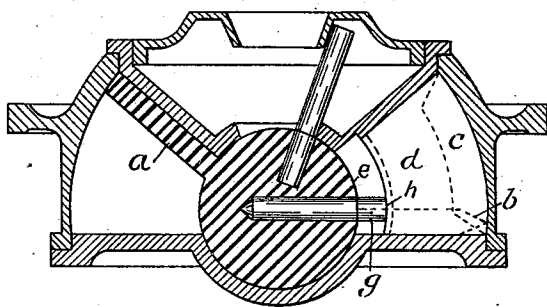
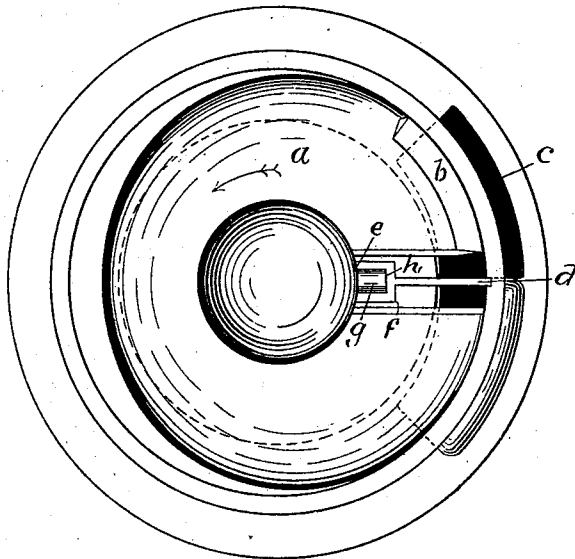


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

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WATER-METER.

SPECIFICATION forming part of Letters Patent No. 568,759, dated October 6, 1896.

Application filed February 26, 1896. Serial No. 581,068. (No model.)

To all whom it may concern:

Be it known that I, FREEMAN W. HOOD, a citizen of the United States, residing at Newton, in the county of Middlesex and Commonwealth of Massachusetts, have invented a new and useful Improvement in Water-Meters, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in explaining its nature.

My invention relates to disk water-meters; and it consists of means for relieving the thrust of the disk on the abutment, as hereinafter described.

In the drawings, Figure 1 represents a vertical section of a disk-chamber and disk. Fig. 2 represents a plan view of the same with the bottom plate removed.

The disk-piston *a* gyrates in the direction shown by the arrow and is beveled at *b*, where it passes by the inlet-port *c*, which port is shown by the dotted line back of the abutment *d*. The natural trend of the piston, due to the direction of the current of the water, and which is the same as the direction of the gyration of the piston, in ordinary constructions is against the side of the abutment nearest the outlet-port, at which point the thrust is received by the slotted edge of the piston. In order to relieve this thrust and obviate the friction incident thereto, I have widened the face of the abutment back to the point marked *f*, that is, that face which is adjacent to the ball of the piston, indicated by *e*, and have slotted it perpendicular to the bottom plate, so that the pin *g*, which I insert loosely and radially in the ball of the piston, may vibrate freely therein as the piston gyrates. In this way I am enabled to cut a wide slot in the piston, so wide in fact that the slotted edge does not bear at any point on the abutment, all the thrust of the piston being taken up

by the pin *g* in the slot *h*. On account of the pin *g* being fitted loosely in the ball, it makes a perfect roller-contact in the slot *h* and a rotating contact in the ball of the piston. The effect of this arrangement is to entirely relieve the abutment from thrust and to greatly reduce the friction, and consequently improve the registration and increase the sensitiveness and durability of the meter. To still further decrease the thrust due to currents of water at high velocity, I have beveled the edge of the piston at *b*, where it passes the port *c*, so that the water will not impinge against the comparatively broad surface, as in the ordinary construction, but instead will be deflected by the sharp edge to either side of the piston.

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

1. In a disk water-meter the combination with a disk-chamber and disk, of an abutment provided with a slot in the face thereof adjoining the ball of the piston, a pin projecting from the ball of said piston and acting in said slot, substantially as set forth and described.

2. In a disk water-meter a disk, a pin, projecting radially from the center of the ball of the disk, said pin acting in a slot in the face of the abutment adjacent to the ball of the disk, substantially as set forth and described.

3. In a disk water-meter a disk, a pin projecting from the ball of the disk, said pin being free to rotate in the ball of the disk and roll against the side of a slot in the abutment, substantially as set forth and described.

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Witnesses:

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