

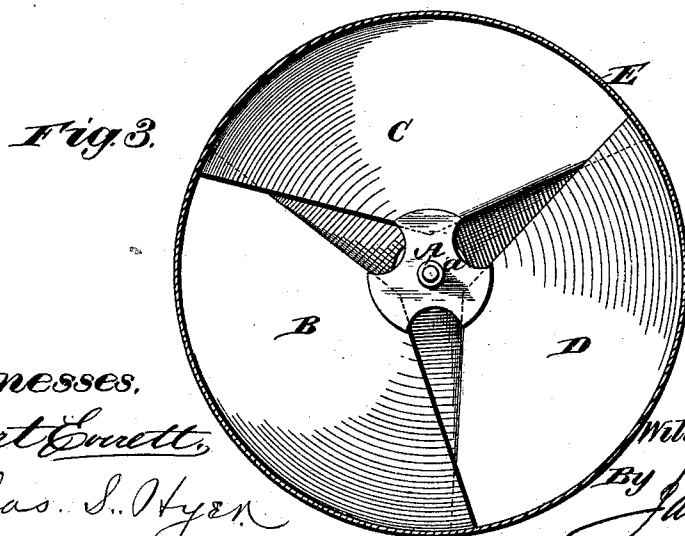
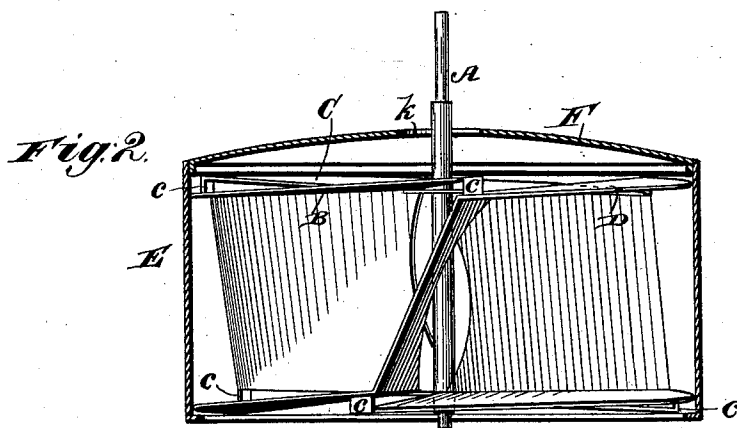
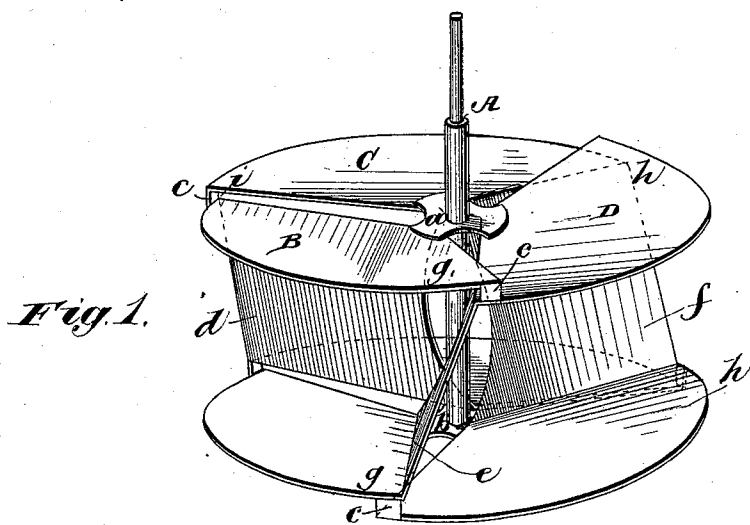
(No Model.)

W. C. PARKINSON.

REVOLVING DRUM FOR GAS METERS AND LOW PRESSURE WATER METERS.

No. 299,418.

Patented May 27, 1884.



Witnesses,

Philetus

Chas. S. Hyer

Inventor,

William C. Parkinson,

By James L. Norris,
Atty.

UNITED STATES PATENT OFFICE.

WILLIAM COULSON PARKINSON, OF LONDON, ENGLAND.

REVOLVING DRUM FOR GAS-METERS AND LOW-PRESSURE WATER-METERS.

SPECIFICATION forming part of Letters Patent No. 299,418, dated May 27, 1884.

Application filed December 30, 1882. (No model.) Patented in England May 6, 1882, No 2,134, and in France September 20, 1882, No. 149,495.

To all whom it may concern:

Be it known that I, WILLIAM COULSON PARKINSON, of London, England, have invented new and useful Improvements in Wet Gas-Meters and Low-Pressure Water-Meters, (for which I have obtained a patent in Great Britain, No. 2,134, bearing date May 6, 1882, and a patent in France, No. 149,495, bearing date September 20, 1882,) of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to improvements in that class of gas-meters and low-pressure water-meters in which the gas or water is automatically and regularly measured by a revolving wheel or drum having vanes or compartments separated from each other, said compartments being covered by a casing or hood; and the object is to produce a drum or wheel provided with compartments operated by the gas or water without the loss occasioned by friction of the revolving parts, and at the same time to make said wheel very sensitive and permit a free ingress and outflow of the gas or water; also, to provide means by which the deposit often accumulating therein can be easily and readily cleaned or removed therefrom by means of brushes or other suitable instruments or devices that can be passed into said compartments and applied through a central opening.

To accomplish this object my invention consists in forming the compartments of the drum or wheel with screw-shaped blades or vanes of an angular segmental shape, connected by slightly-inclined partitions which are operated by the gas or water entering and passing out of the casing, permitting a regular and free outflow through a large central opening or passage. Said blades are secured to a central shaft, imparting motion to a suitable indicating or registering apparatus by which the number of revolutions are registered on suitable dials. The outer ends of said blades are secured by narrow studs, and the horizontal edges are so placed as to overlap each other partly, and to leave a clear passage for the gas or water at their edges, and the vertical parts of said blades are slightly inclined, and at their inner edges they are cut

in a concave manner, so as to form a clear and unobstructed large passage around the central shaft and working nearly frictionless, all of which will be more fully described hereinafter, and more specifically pointed out in the claims, reference being had to the accompanying drawings and the letters of reference marked thereon.

In the accompanying drawings, Figure 1 represents a perspective of the improved drum or wheel. Fig. 2 is a vertical section of the same arranged in a casing. Fig. 3 is a plan or top view of the same.

In said drawings, A designates the shaft, to which the recessed collars or disks *a* and *b* are secured. To these disks the partitions or vanes B C D are attached at their inner ends, while at the outer circumference they are connected together by studs or junction-pieces *c*. The blades are of peculiar shape, having nearly radially-arranged inclined partitions *d e f*, and upper and lower segmental screw-shaped parts, *g h i*, and these are arranged to slightly overlap each other at their outer ends. Their inner ends, as stated, are connected to the disks *a* and *b*, and their sides are so cut as to form angular openings, as seen in Fig. 3. The inner vertical edges of the blades do not extend to the central shaft, and their edges are made of a concave shape, so as to form an unobstructed central opening or passage around the shaft. The casing or hood E is of cylindrical shape, and one side communicates with the source of supply, while the opposite side has an outlet-opening, *k*, in the concave cover F. The shaft projects through said opening and will be provided with a worm or gear wheel, which will impart motion to the registering apparatus to indicate the number of revolutions made by the drum or revolving wheel.

The drum and its casing may be made of any size desired, and may be provided with more or less blades or vanes, and can be made of tin, copper, sheet-brass, or any other suitable material.

It will readily be seen by those skilled in the art that the gas or water entering at one end of the casing will impart a rotary motion to the drum and always force it in one direc-

tion, and by the peculiar screw-shaped form of the blades it acts in a similar manner to a screw-propeller, permitting by the central concave-shaped longitudinal opening and the radial openings formed between the overlapping edges of the blades a free and unobstructed passage of gas or water, and indicating in a positive manner every revolution made by the drum on the registering apparatus.

10 The device is very simple, and therefore economical in its construction, is much easier to clean than those now in use, and a much larger water-way is formed in the center, which is a very important feature, as it tends to materially reduce the pressure absorbed by the meter in working, less friction being produced.

15 Having thus described my invention, what I claim is—

20 1. In a meter, a drum or wheel having screw-shaped segmental blades connected by inclined partitions and forming an unobstructed opening or passage around the shaft, substantially as described.

2. In a meter, a drum or wheel provided with three or more compartments formed by screw-shaped segmental blades or vanes overlapping each other at their outer circumference and forming a central unobstructed passage and passages between their overlapping edges, substantially as described.

30 3. In a meter, a drum or wheel composed of an upper and a lower series of segmental plates, the plates of each series having angular inner edges and overlapping each other at their outer edges to form intervening passages, and inclined partitions connecting the plates of the upper and lower sections, as shown, in combination with a casing having inlet and outlet openings, substantially as described.

WILLIAM COULSON PARKINSON.

Witnesses:

W. W. BENNETT,
S. K. BENNETT.