

(No Model.)

L. H. NASH.  
WATER METER.

No. 574,562.

Patented Jan. 5, 1897.

Fig. 1.

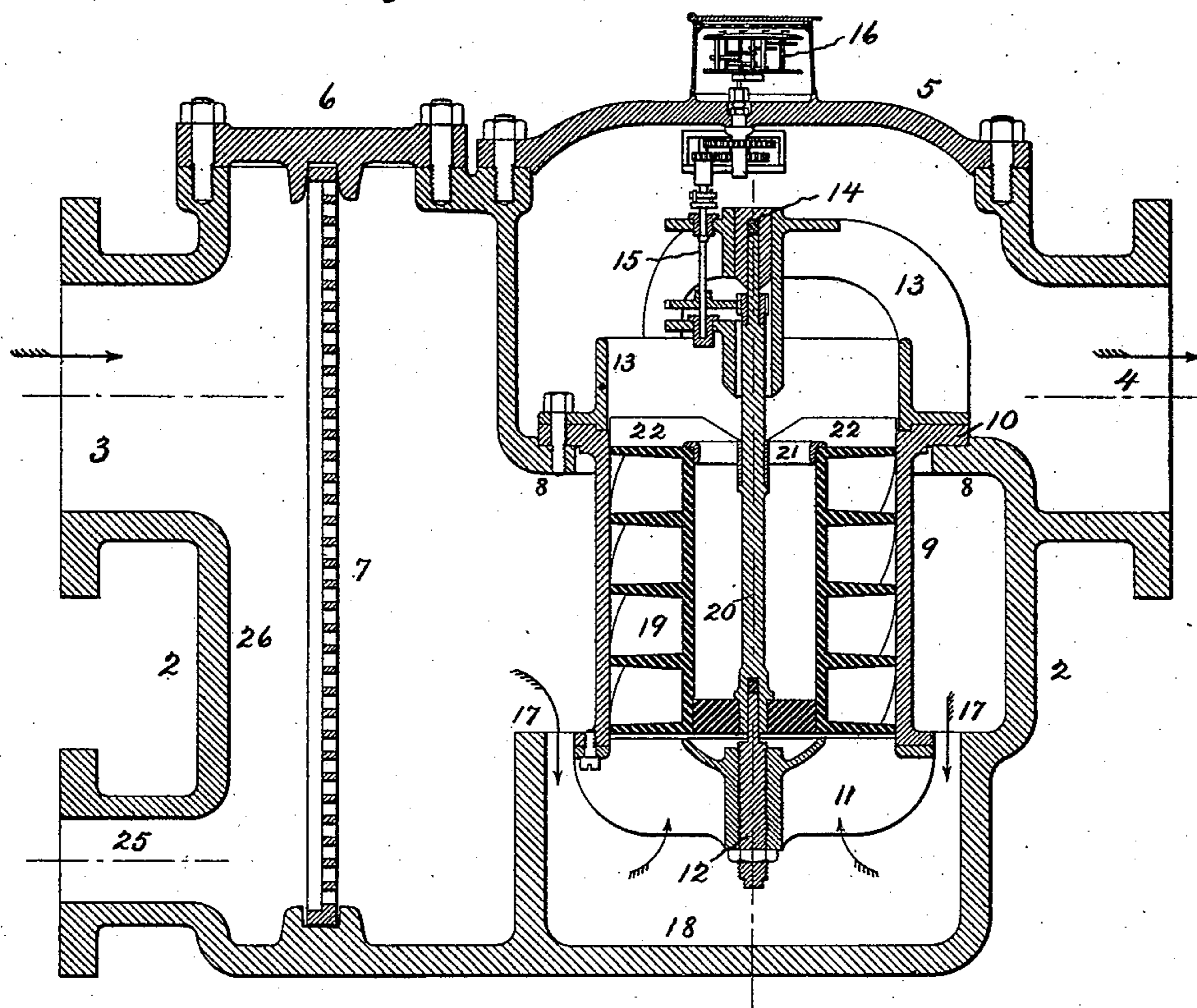
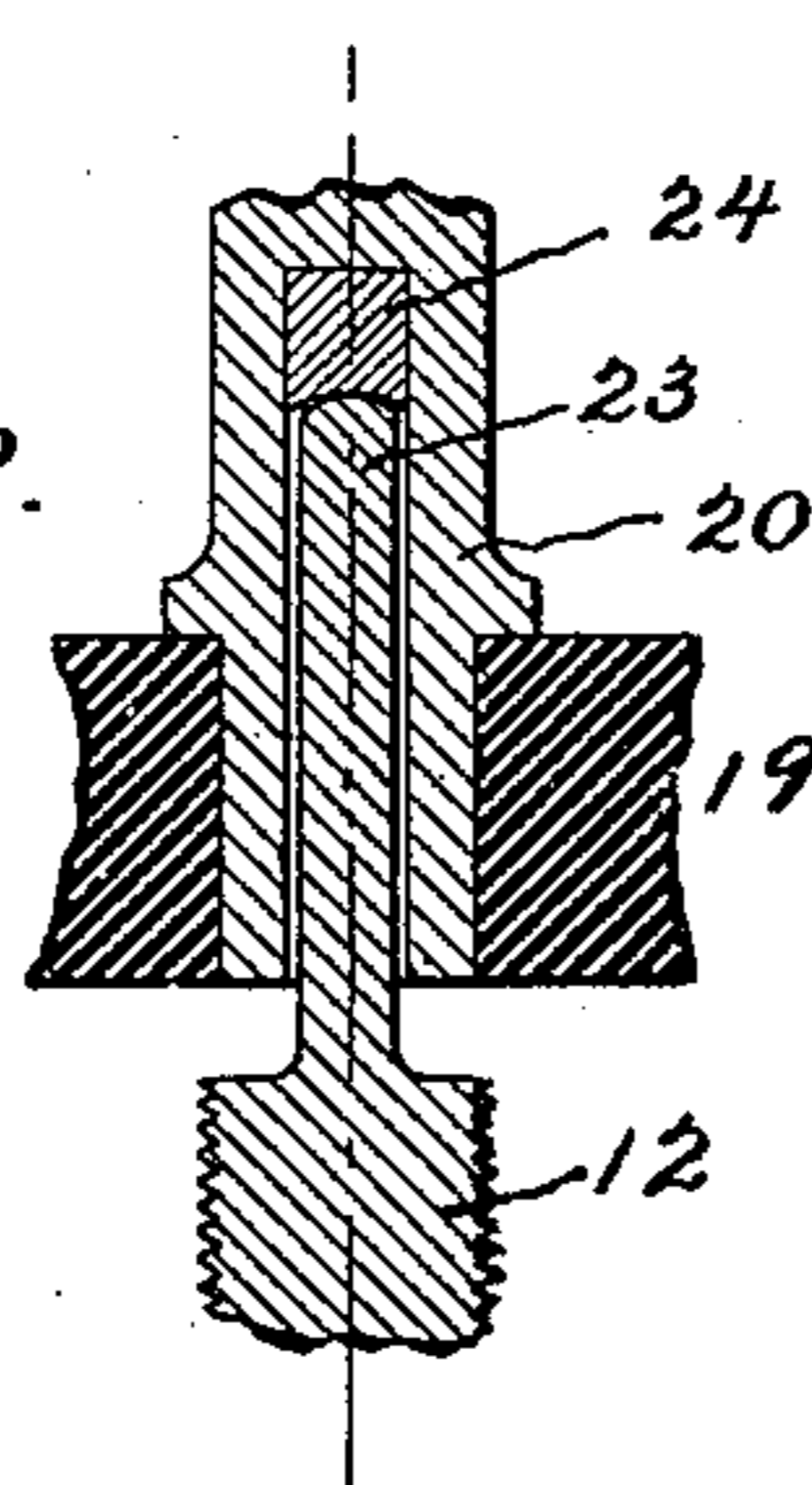


Fig. 2.



WITNESSES:

Charles W. Ireland  
Dennis P. Cowie

INVENTOR

Lewis Hallock Nash

BY

Johnson & Johnson  
ATTORNEY

# UNITED STATES PATENT OFFICE.

LEWIS HALLOCK NASH, OF SOUTH NORWALK, CONNECTICUT, ASSIGNOR TO  
THE NATIONAL METER COMPANY, OF NEW YORK, N. Y.

## WATER-METER.

SPECIFICATION forming part of Letters Patent No. 574,562, dated January 5, 1897.

Application filed February 7, 1896. Serial No. 578,346. (No model.)

*To all whom it may concern:*

Be it known that I, LEWIS HALLOCK NASH, a citizen of the United States, and a resident of South Norwalk, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Water-Meters, of which the following is a specification.

My invention consists in certain novel parts and combinations of parts pointed out in the claims concluding this specification.

The following is a description of the accompanying drawings, which show my invention employed in forms at present preferred by me; but it will be understood that various modifications and changes may be made without departing from its spirit and without exceeding the scope of my claims.

Referring to the drawings, Figure 1 represents a vertical section through a meter, and Fig. 2 shows a detail of the spindle-bearing.

2 is the inclosing case.

3 is the inlet-spud, and 4 the outlet-spud.

The course of the water through the meter is indicated by arrows.

5 is a head-plate inclosing the measuring-chamber of the meter, and 6 is a head-plate giving access to the forward part of the meter, in which the screen 7 is placed.

8 8 is an internal flange supporting the body of the measuring device proper.

9 is a cylinder having a flange 10, which is bolted to the flange 8 of the external case.

11 is a spider directing the current of the water into the cylinder 9 and supporting the spindle 12.

13 is a spider secured to the flange 10 and supporting the bearings 14 and the speed-reducing gearing 15.

16 is the dial mechanism.

17 is an annular opening on the inlet side directing the current in a uniform flow into the chamber 18, from which it issues and passes through the cylinder 9.

19 is a screw-propeller, preferably formed of hard rubber, mounted upon a spindle 20.

21 is a spider mounted on the spindle 20,

carrying wings 22, which serve under certain conditions to retard the motion of the piston and prevent it racing. The spider also serves as a bearing for the propeller to keep it central.

25 is a blow-off hole for removing foreign matter which collects outside the screen 7.

Referring to Fig. 2, which shows the lower end of the propeller, 23 is a pivot having a convex end, upon which bears a bearing-piece 24, having a concave end. The spindle 23 is loosely fitted in the spindle 20. The upper bearing is made on the same principle. By means of these concave and convex ends the spindle 23 is automatically kept out of friction-contact at its sides. By this means the friction at the spindle is very greatly reduced. When a light stream is passing, the weight of the piston is not overcome by the pressure of the water, and said weight is borne upon the top of the lower spindle 23; but when water is passing in large quantities the propeller is lifted and the pressure is borne by the top of the corresponding spindle at the upper end of the propeller. It is obvious that the spindle 23 might be made concave and the seat 24 convex, if preferred.

What I claim is—

1. The combination with the cylinder 9 containing the propeller 19, means for causing the water passing said propeller to flow from the bottom upward, an inclosing case 2 completely inclosing said cylinder and leaving around it an annular space and forming an ante-chamber divided by a screen on the outer side of which are two openings, one for the inlet of water and one for the removal of sediment.

2. The combination of the propeller 19, with a spider 22 carried by said propeller acting directly in line with the flow of the water as it passes through the meter.

LEWIS HALLOCK NASH.

Witnesses:

WM. J. BROWN,

D. L. THOMPSON.