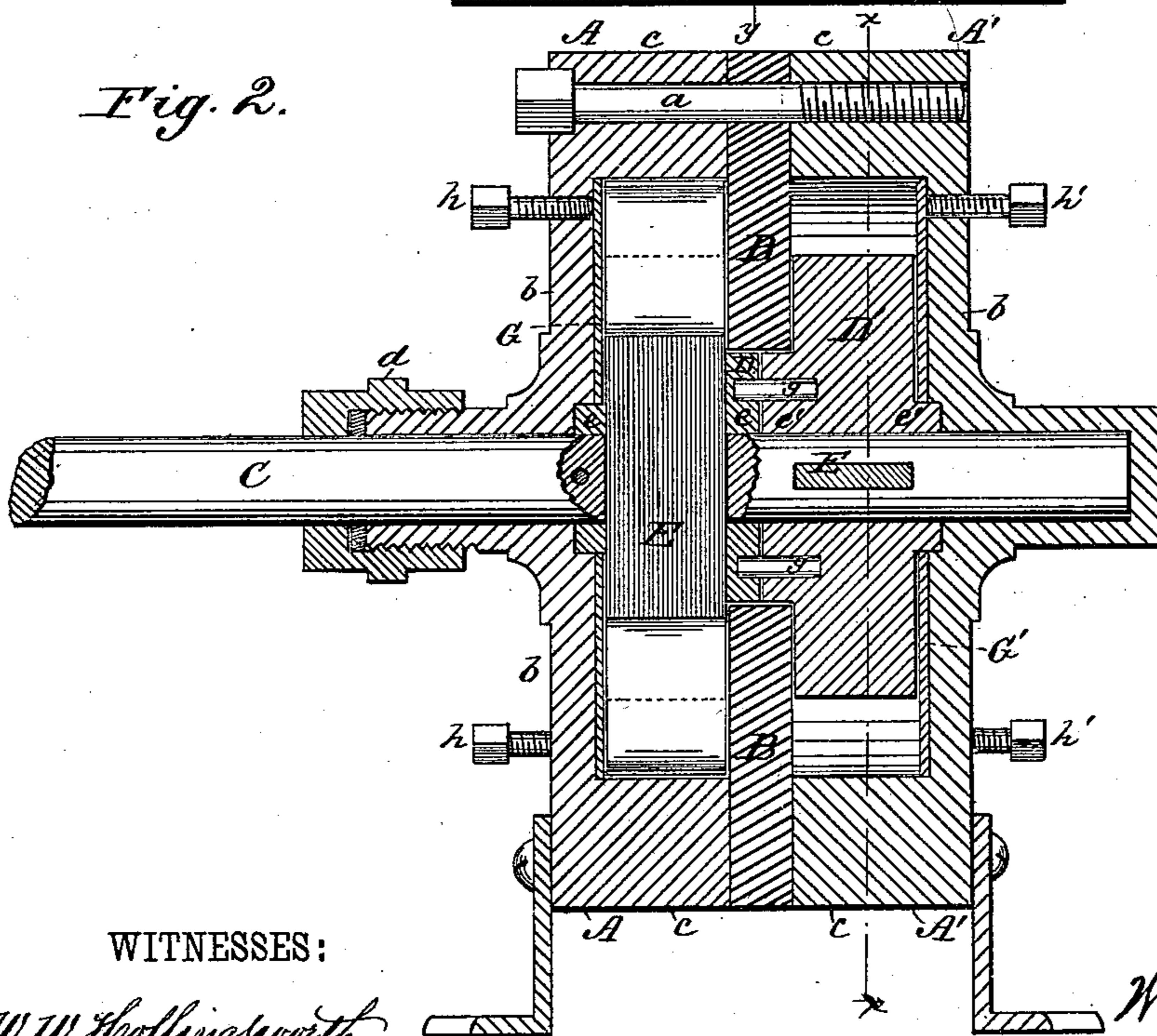
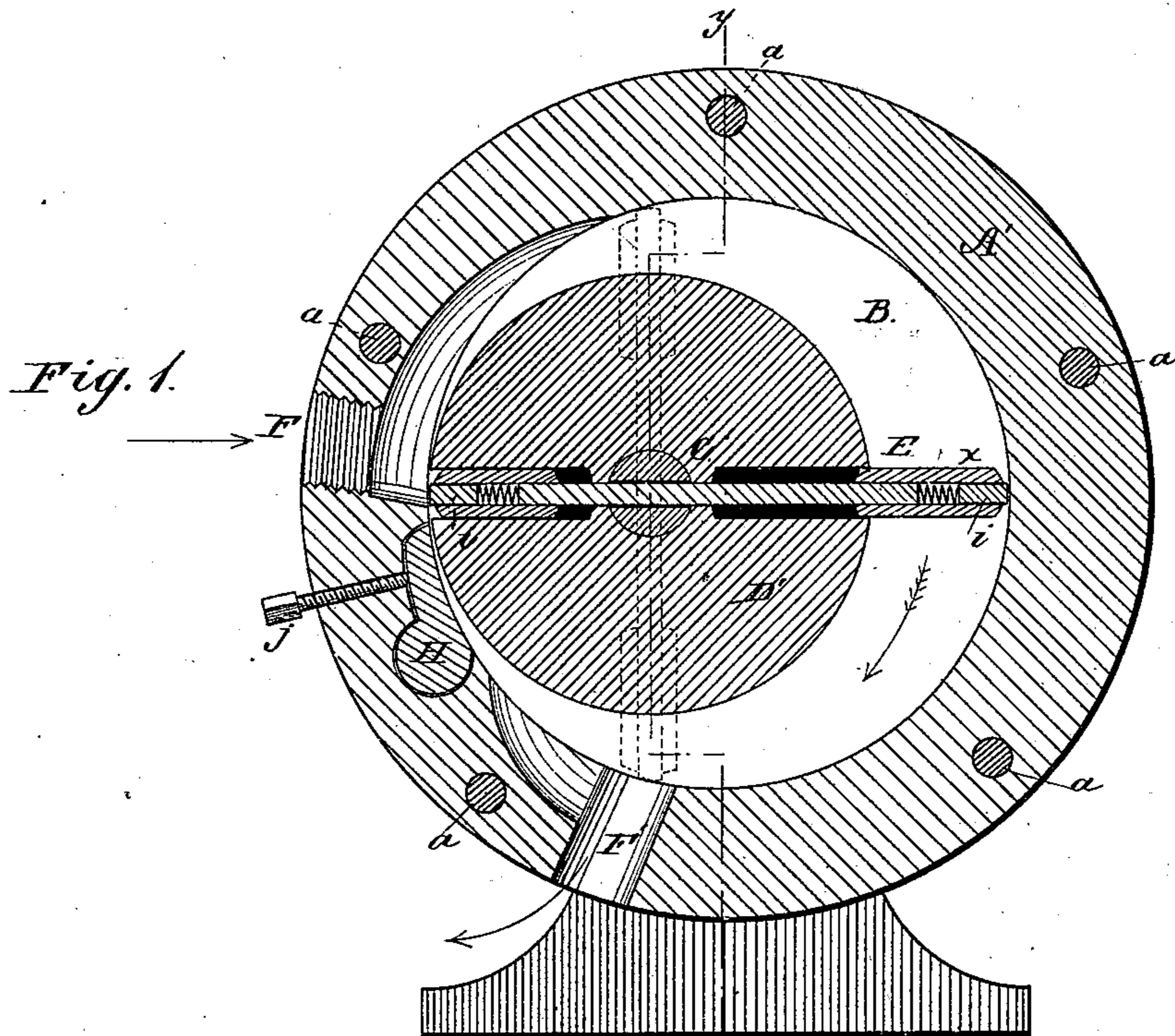


(No Model.)

W. E. SEELYE.  
Water-Motor.

No. 227,307.

Patented May 4, 1880.



WITNESSES:

*W. W. Hollingsworth*  
*Edw. W. Byrn.*

INVENTOR:

*Wm. E. Seelye*

BY

*Wm. E. Seelye*

ATTORNEYS.

# UNITED STATES PATENT OFFICE.

WILLIAM E. SEELYE, OF ANOKA, MINNESOTA.

## WATER-MOTOR.

SPECIFICATION forming part of Letters Patent No. 227,307, dated May 4, 1880.

Application filed March 2, 1880. (No model.)

To all whom it may concern:

Be it known that I, WM. E. SEELYE, of Anoka, Anoka county, and State of Minnesota, have invented a new and Improved Water-Motor; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a section through the line *x x* of Fig. 2, and Fig. 2 is a section through the line *y y* of Fig. 1.

My invention relates to an improved water-motor constructed on the general principle of a rotary engine, in which two compartments are arranged side by side, with a partition intervening, and in which the sliding pistons in the piston-wheels in the two compartments are arranged at right angles to each other.

My invention consists in the improved arrangement of the piston-wheels and mode of connecting them together upon opposite sides of the partition for simultaneous movement, as hereinafter fully described.

In the drawings, *A A'* represent the two sections of the motor-case, which are clamped together by bolts *a* upon a central partition, *B*, whose edge is flush with the exterior of the case. Each one of the sections *A A'* of the case is recessed, so that one of its parts, *b*, forms the head, and the other part, *c*, the periphery, of the cylinder.

*C* is the drive-shaft of the motor, which shaft extends through stuffing-box *d* in the heads *b*, and carries inside the case the two piston-wheels *D D'*. Each of these piston-wheels is slotted diametrically through to receive the sliding pistons *E E*, arranged at right angles to each other, while the piston-wheels have upon each side of the slots hubs *e e* and *e' e'*, to give the requisite strength. One of these piston-wheels, *D'*, is fixed rigidly to the shaft by a pin, while the other piston-wheel, *D*, is loose thereupon.

The opening in the central partition, *B*, is made large enough to receive the abutting hubs *e* and *e'* of the two piston-wheels, which hubs are connected at this point for rigid revo-

lution by two steady-pins, *g g*, which pins are fixed to one of the hubs in parallel position with the central shaft, and enter corresponding holes in the other hub, to cause both pistons to revolve together. This construction permits the two pistons to be rigidly connected upon opposite sides of the middle partition, and yet allows them to be readily separated when necessary.

In arranging the several parts of the motor the piston-wheel shaft is arranged eccentrically within the case, which latter is upon its inner surface elliptical, so that the pistons touch the inner periphery of the same during their entire revolution.

*F* is the inlet to the cylinder, and *F'* the outlet, the inlet-pipe being in practice, preferably, bifurcated, so as to feed both compartments of the motor. The piston of each compartment is provided at its ends with spring packing-blocks *i*, while the piston of one compartment is arranged at right angles to that of the other, to render the action more uniform.

For packing the sides of the pistons and piston-wheels, brass or other soft-metal plates *G G'* are arranged upon the outer hubs of said piston-wheels next to the head portion *b* of the case, and are adjusted to the said pistons and piston-wheels by set-screws *h h'*. A packing, *H*, is also fixed in the periphery of the cylinder between the inlet and outlet points. This packing is formed with a rounded hinge or abutment at one end, and its other end is adjusted to or from the pistons by a set-screw, *j*.

The action of this water-motor is in the main similar to that of any rotary engine constructed on the same general principle—i. e., the water enters at *F*, and, operating against the face *x* of the piston, forces the piston-wheels and shaft around, driving the water in front of it through the outlet *F'*, until the opposite end of the piston is brought in front of the inlet, the piston meanwhile having a longitudinally-sliding movement.

I do not claim this general arrangement of eccentric piston-wheels and sliding pistons,

nor yet the duplicate arrangement of piston in a two-compartment cylinder, as these have been heretofore made use of; but

What I claim is—

- 5 In a rotary motor or engine, the combination, with a two-compartment case having a partition within, of a drive-shaft carrying a rigid piston-wheel and a loose one provided with

hubs, as described, with the hubs abutting in the plane of the central partition and connected for rigid revolution together by pin and sockets, as described.

WILLIAM E. SEELYE.

Witnesses:

C. L. FOSS,

ALTON M. STRATTON.