

R. A. Horning,

Rotary Pump.

No. 106061.

Patented Aug. 2. 1870.

Fig. 1.

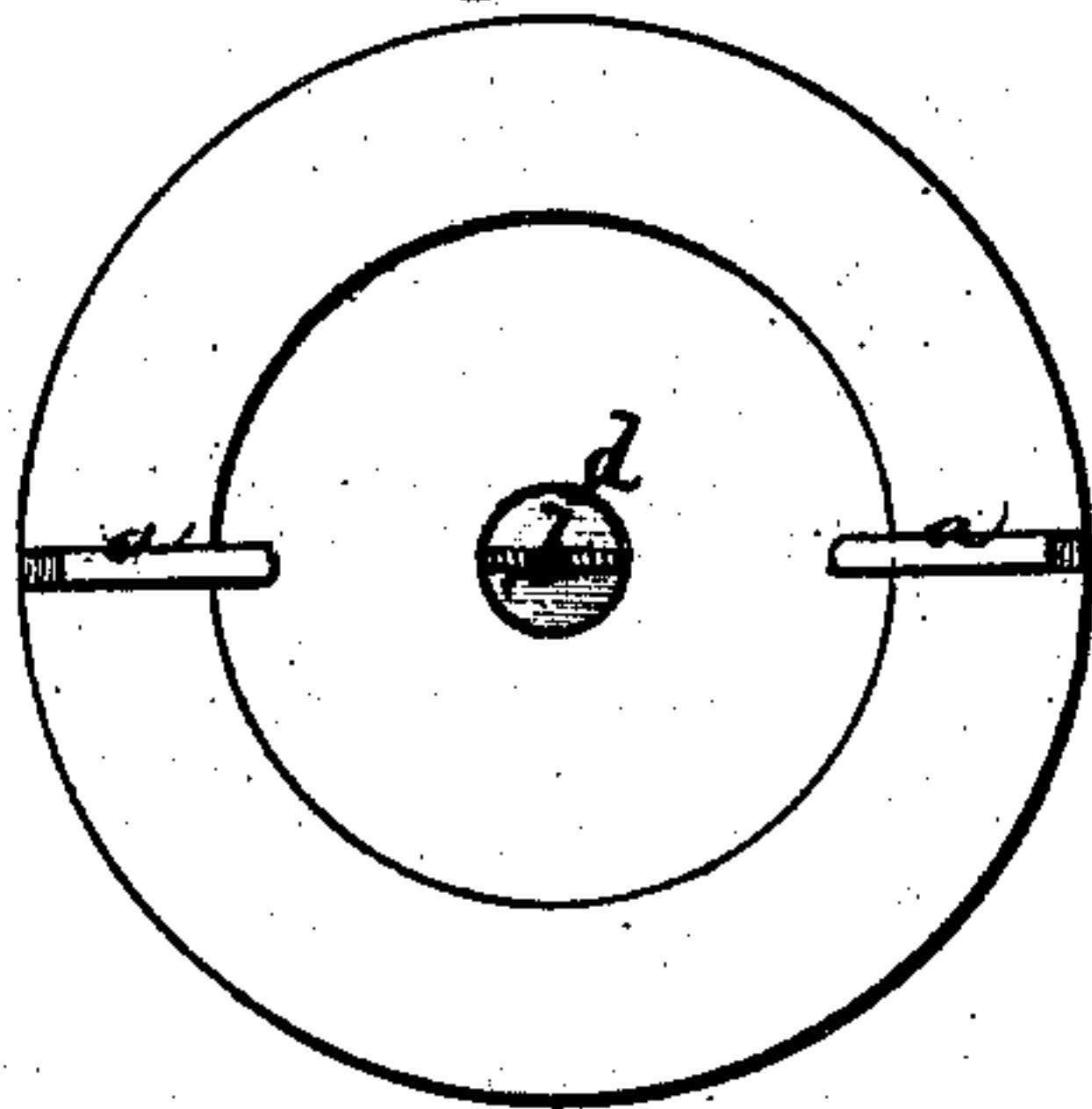


Fig. 2.

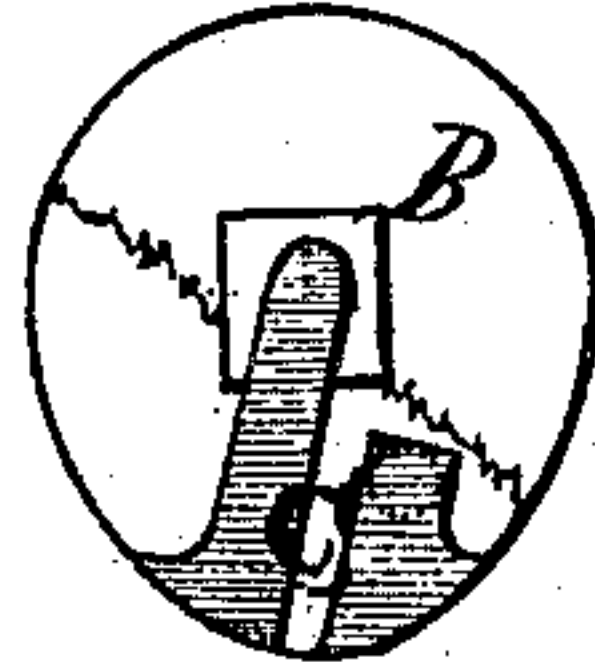


Fig. 3.

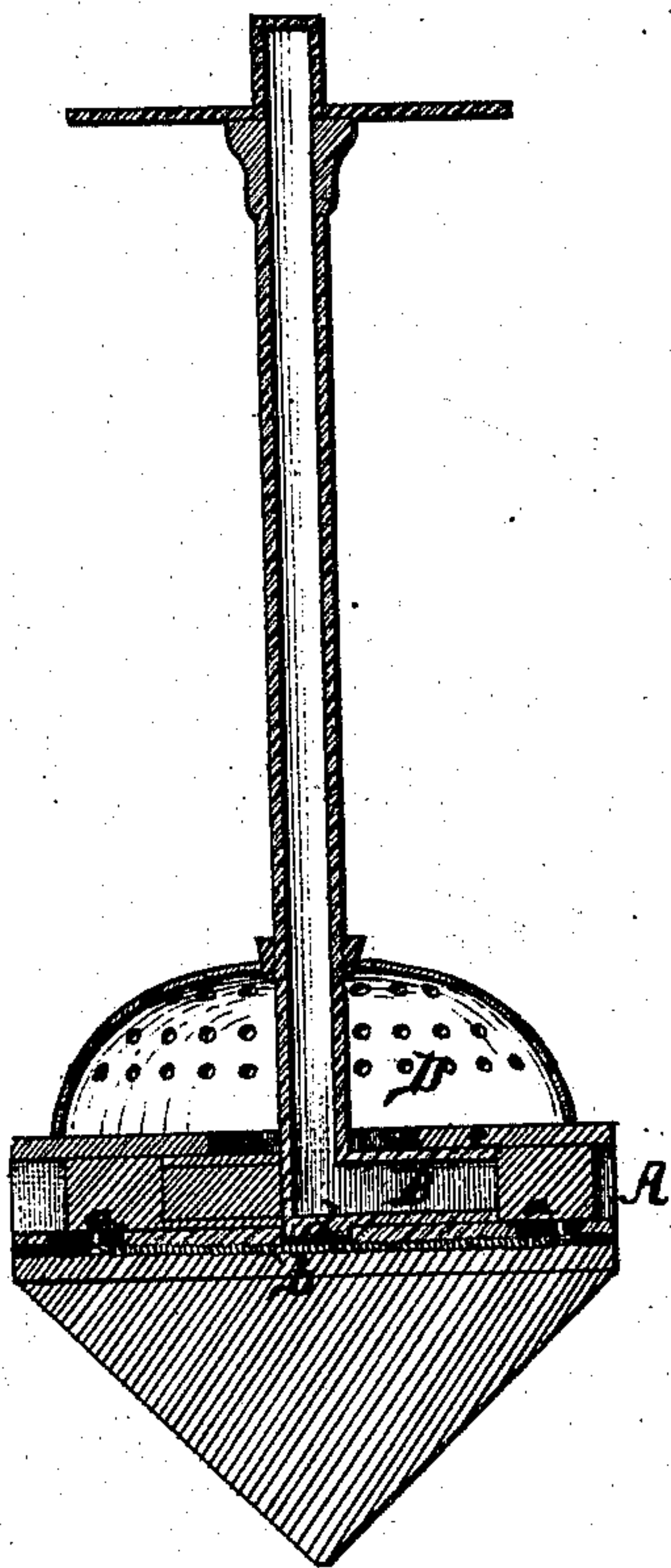
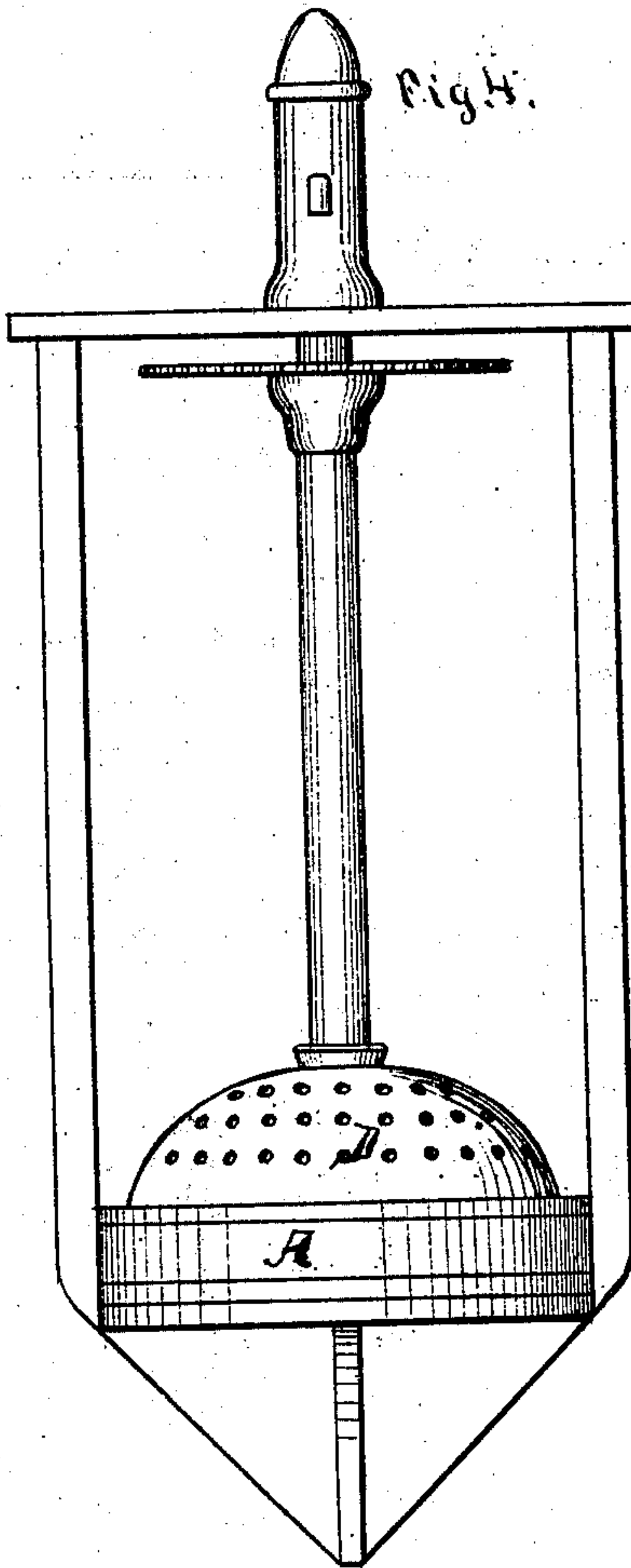


Fig. 4.



Witnesses:

T. H. Pinson

S. J. Hayes

Inventor

R. A. Horning by

H. M. Beader atty.

United States Patent Office.

ROBERT A. HORNING, OF LENARK, ILLINOIS.

Letters Patent No. 106,061, dated August 2, 1870.

IMPROVEMENT IN ROTARY PUMPS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, ROBERT A. HORNING, of Lenark, in the county of Carroll and State of Illinois, have invented a new and useful Improvement in Rotary-cam Pump; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawing and to the letters of reference marked thereon.

This invention consists of certain devices, to be hereinafter more fully described, forming what I call a rotary-cam pump.

In the drawing—

Figure 1 is a plan view of the circular water-tight compartment in which my cam revolves, showing the valves and spring;

Figure 2 is a plan of the cam, with part of the upper covering broken away to show the chambers or recesses in the cam;

Figure 3 is a vertical section taken through the cam on a line of the passage leading to the hollow tube and perforated cover; and

Figure 4 is a front elevation of the pump attached to a suitable frame for support, and with spout above.

In order that those skilled in the art to which my invention more particularly pertains may make and use the same, I will proceed to describe the details of construction, referring to the lettered parts in the figures.

The lower case or chamber A, located in any suitable foundation under water, is circular in form, of suitable depth, and is provided with two sliding valves *a a'*.

These valves move in slots, and are drawn forward by a spring, *b*, located beneath, and to which they are attached on the under side.

Within this chamber revolves, in a horizontal plane, the cam B. This is made of substantially the form shown, and is recessed at the part C, as shown.

This recess is divided by a vertical partition from the vertex inward. On one side is a passage leading to

the hollow shaft on which the cam is placed, and on the other an opening is provided through the upper shell from the chamber. The pivot on the center of the lower side rests in a central step, *d*.

Over the cam is placed an inverted disk, D, the convex part being perforated to admit the water freely.

The plane bottom *e* of the disk has a central opening smaller than the cam, but sufficiently large to include the orifice in the upper shell. This disk is secured to the lower case, and the shaft passes through it. The hollow shaft is rotated in any suitable manner, by crank, ratchet-wheels, or pulleys and band, and may have any convenient spout.

The operation of my cam-pump is as follows:

The cam being revolved to the right, the valves are held against the edge by their spring connection, and a vacuum is formed forward of the valves, which vacuum fills with water through the disk or strainer. At the same time the revolution of the cam forces the water into the chamber connected to the hollow central tube, up the tube, carrying the water to any desired height.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The described cam, revolving in suitable chamber, having valves and recesses, one opening to the water outside, and the other communicating with the hollow shaft, all as set forth.

2. In combination with the cam thus constructed and operating, the sliding valves and spiral spring, all arranged and operating as set forth.

3. In like combination, the disk or strainer, arranged as set forth.

This specification signed and witnessed this 1st day of June, 1870.

ROBERT A. HORNING.

Witnesses:

A. T. GUNN,

F. G. WYNKOOP.