

N. Jenkins,

Stop Cock,

No 57,329,

Patented Aug. 21, 1866.

Fig. 3

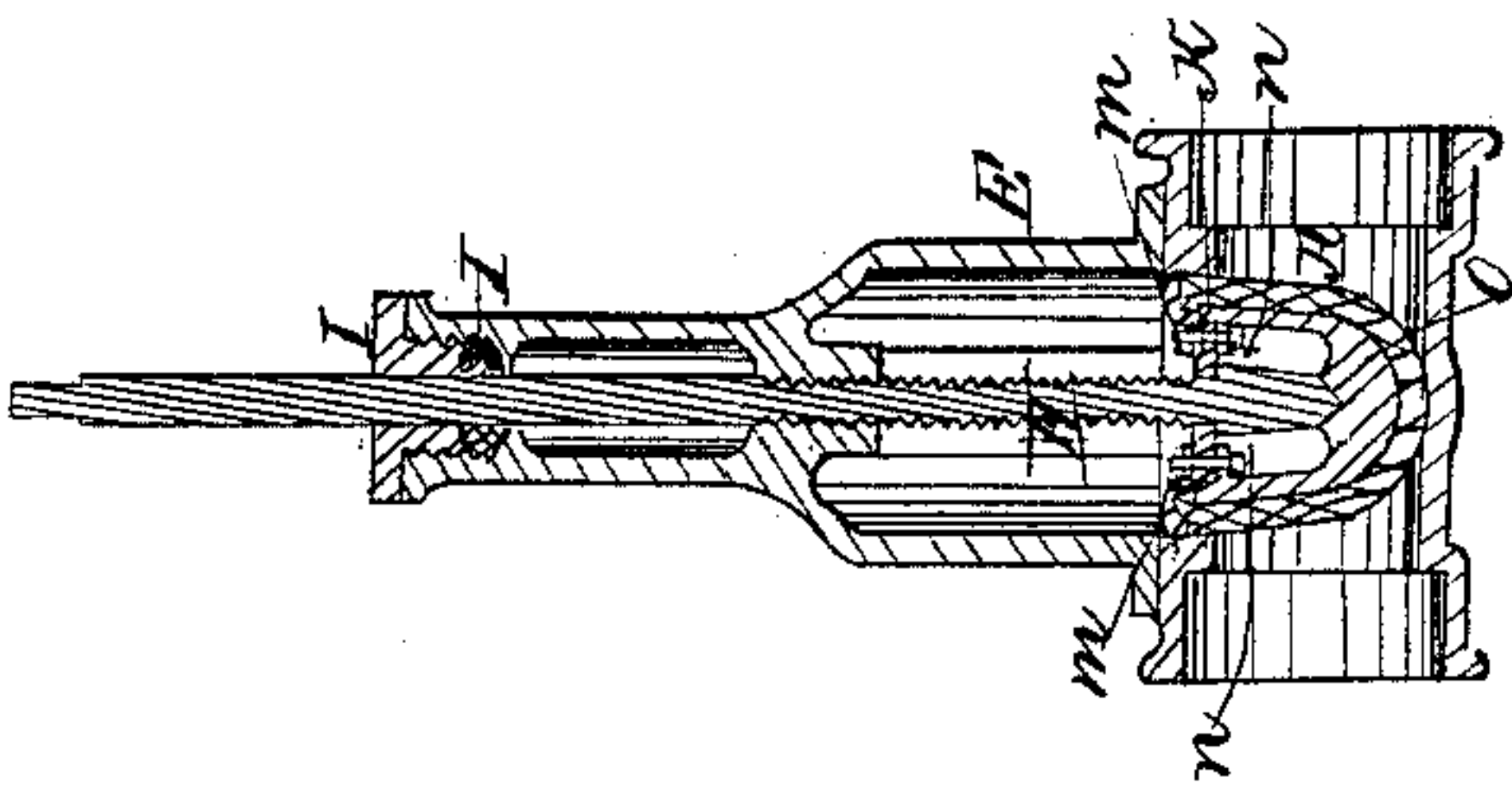


Fig. 2

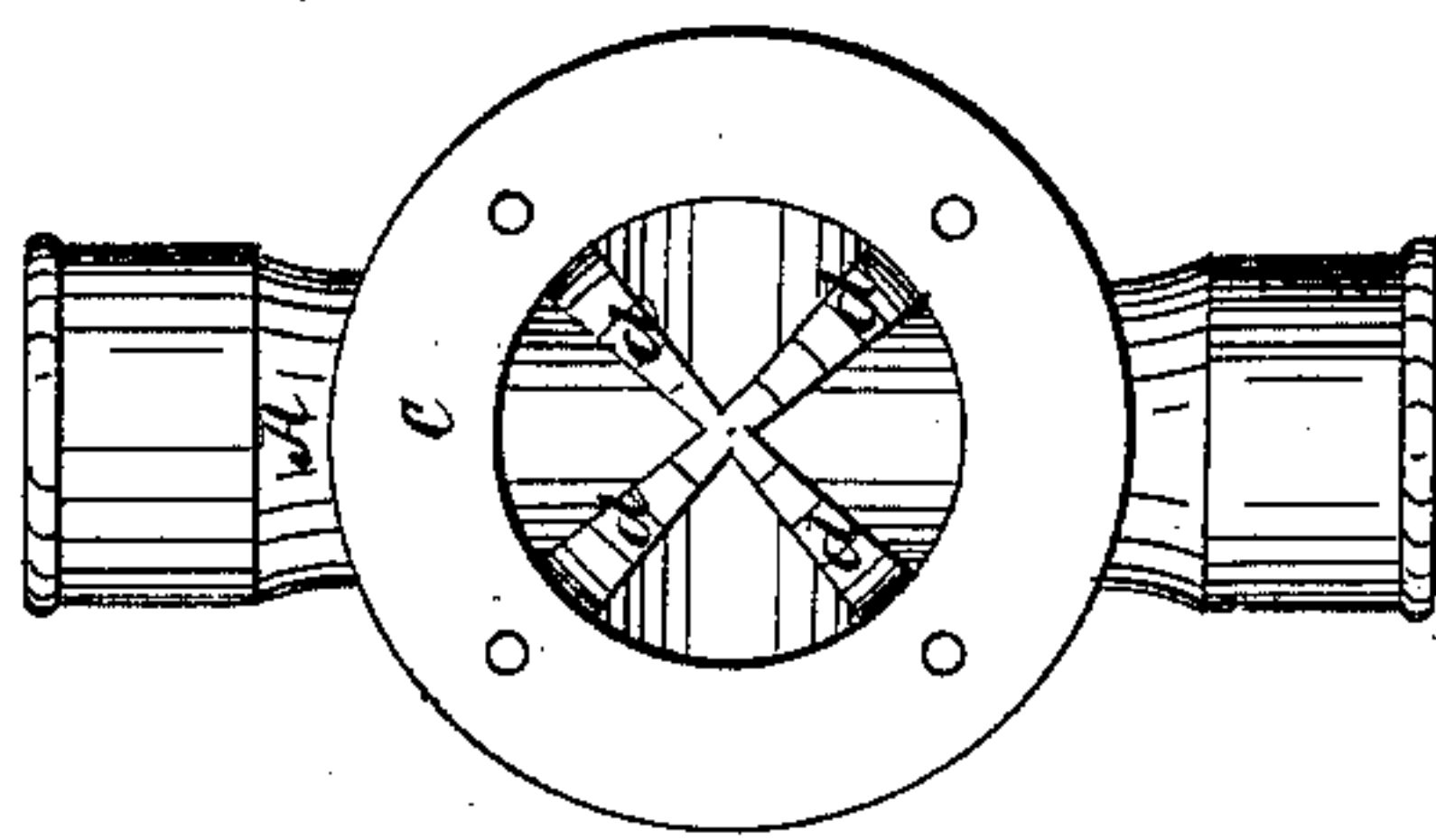
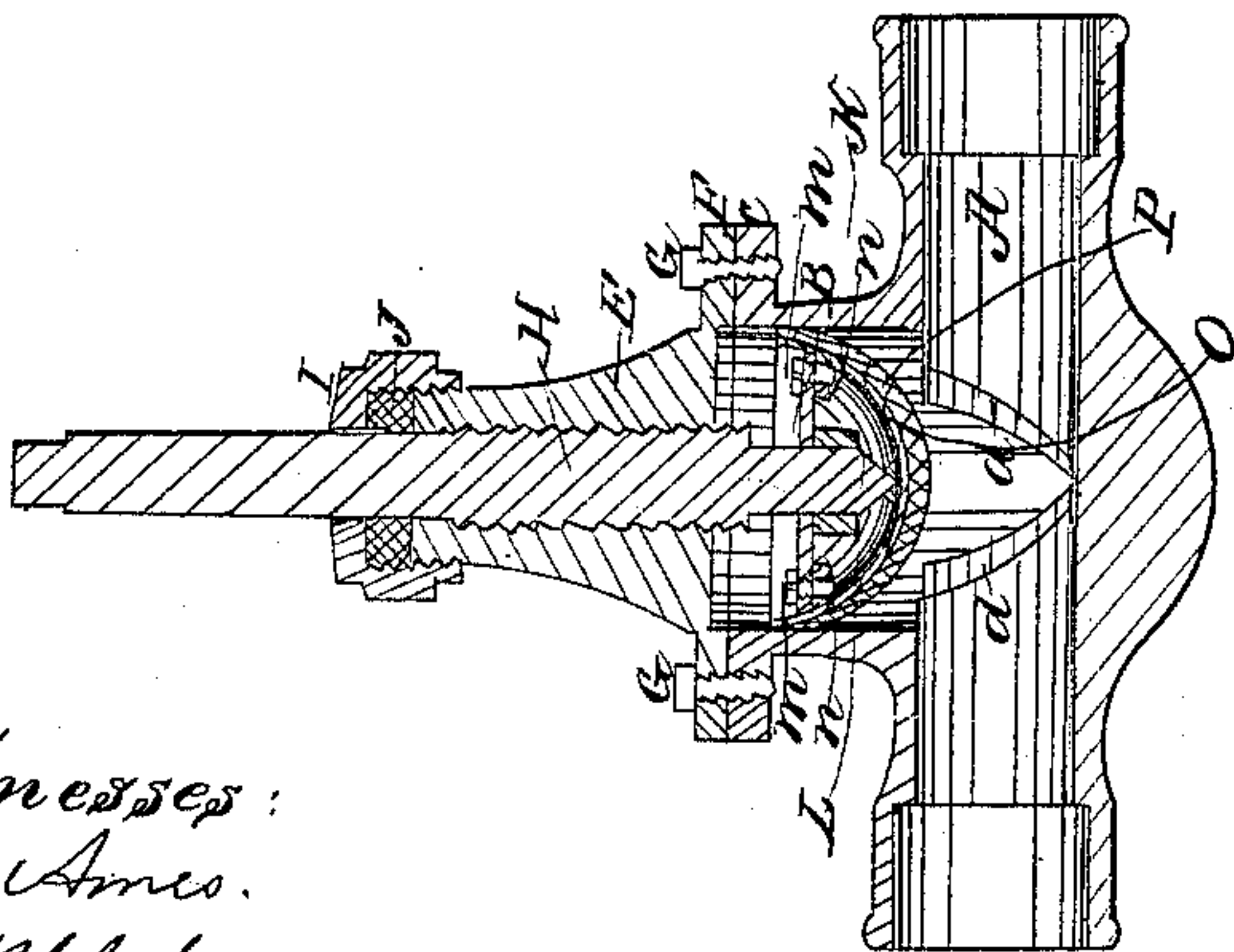


Fig. 1



Witnesses:
N. Ames.
Geo. H. Blakey

Inventor:
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UNITED STATES PATENT OFFICE.

NATHANIEL JENKINS, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN WATER-GATES.

Specification forming part of Letters Patent No. 57,329, dated August 21, 1866; antedated August 15, 1866.

To all whom it may concern:

Be it known that I, NATHANIEL JENKINS, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Water-Gates; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a vertical central section. Fig. 2 is a top view; and Fig. 3 is a vertical central section, representing a slight modification of Fig. 1.

Like parts are indicated by the same letters in all the drawings.

What are known as "water-gates" (to prevent the water from flowing from the main pipe into the supply-pipes, as occasion requires) have hitherto consisted of flat plates of brass fitted to slide water-tight in suitable ways in an enlarged chamber made in sections, leaded and bolted together; and the practical objection to these water-gates has been the comparatively great expense of constructing them, and their liability of being worn or clogged by gravel and other substances so as to leak and require repairing or removal.

The nature of my improvement therefore consists, first, in constructing the gate or valve of a hollow or solid hemispherical, hemispherical, conical, or other suitably-shaped core of iron or other non-elastic material, covered with rubber or some equivalent elastic or compressible substance; and, second, in providing the gate-chamber with raised ribs extending from the bottom of the pipe to a point above the top of the same, to operate as seats for the elastic covering of the valve or gate, whereby, owing to the diminished area of the bearing-surface, a water-tight fit is attained and secured with comparatively little compression, and an effectual water-gate is produced cheaper, more durable, and more easily worked, I think, than any known or used before.

To enable others skilled in the art to make and use my improvement, I will now proceed to describe its construction and operation.

A represents a section of a supply-pipe leading from a main pipe. B is a cylindrical chamber at right angles with the pipe A, having a flange, C, around its upper edge.

E is the chamber-cap, confined by means of screws G and its flange F to the flange C, as represented in Fig. 1. This cap E is provided with an internal screw for the reception of the valve-spindle H, the upper portion of which is cylindrical and smooth, and passes through the stuffing J contained in the stuffing-box I, screwed to the top of the cap.

The bore of the pipe A is round and straight, and about one-half the diameter of the chamber B, so as to afford a direct passage of the water through the said chamber, which thus becomes, in effect, a simple enlargement of the pipe itself.

d d d d are raised ribs, about an inch (more or less, according to the size of the gate) in width, commencing at the bottom of the pipe A, at a point directly under the center of the chamber B, and extending upward, as represented in Figs. 1 and 2, each side of the pipe and into the chamber, thereby forming a seat consisting of narrow sections of a basin shaped to fit the valve. The drawings represent four of these ribs. It is obvious, however, that more than four might be used, if desirable, or even two would answer. I prefer, however, to employ the number represented in Fig. 2.

O, Fig. 1, is a hollow hemisphere, of metal or other suitable material, provided with a covering, P, of rubber or other equivalent elastic substance, confined thereto in any obvious manner, K being a cross-bar confined to ears *n n* by means of screws *m m*. Through the center of this cross-bar K is a round hole, through which passes freely the lower end of the spindle H, L being a thimble fast to the spindle under the said cross-bar to prevent the valve from dropping off. The extremity of the spindle H is brought to a point and set into a suitable step at the center of the bottom of the cup O, as shown in Figs. 1 and 3.

In Fig. 3 the cup O is represented as somewhat conical, and the covering P confined to the cup by entering an annular groove near the top of the same. In this figure, also, the lower part of the spindle H is enlarged to take the place of the thimble L in Fig. 1.

The core O is represented as hollow and of metal. It may, however, be constructed solid and of any other suitable material; or, finally, the valves or gate may be made entirely of the elastic material or rubber, provided with a

suitable bearing for the spindle H to turn or swivel in. The upper end of the spindle H is squared, so as to be readily turned by means of a key, in the usual manner.

In Fig. 1 the valve or gate is represented as open, affording a straight passage for the water through the pipe A and chamber B. In Fig. 3 the valve or gate is closed. In both cases the moment the valve touches its seat or the raised ribs *d d d d* it ceases to revolve, and the spindle turns in the core O, thereby relieving the elastic covering of any sliding friction, and allowing it to be easily compressed water-tight upon said ribs.

The cheapness and durability of my water-gate (thus constructed and operating) as com-

pared with the water-gates now in general use render it, I think, a great improvement in the art.

Having thus described the construction and operation of my invention, what I claim as new, and desire to secure by Letters Patent, is—

For a water-gate, the arrangement of a valve consisting of a non-elastic core, O, preferably hollow, clothed with elastic material *p*, and its combination with the ledges *d* of the valve-seat, operating substantially as described.

NATHL. JENKINS.

Witnesses:

GEO. H. CLARKE,
N. AMES.