

W. D. Hooker,

Pump Valve,

No 61,199,

Patented Jan. 15, 1867.

Fig 2.

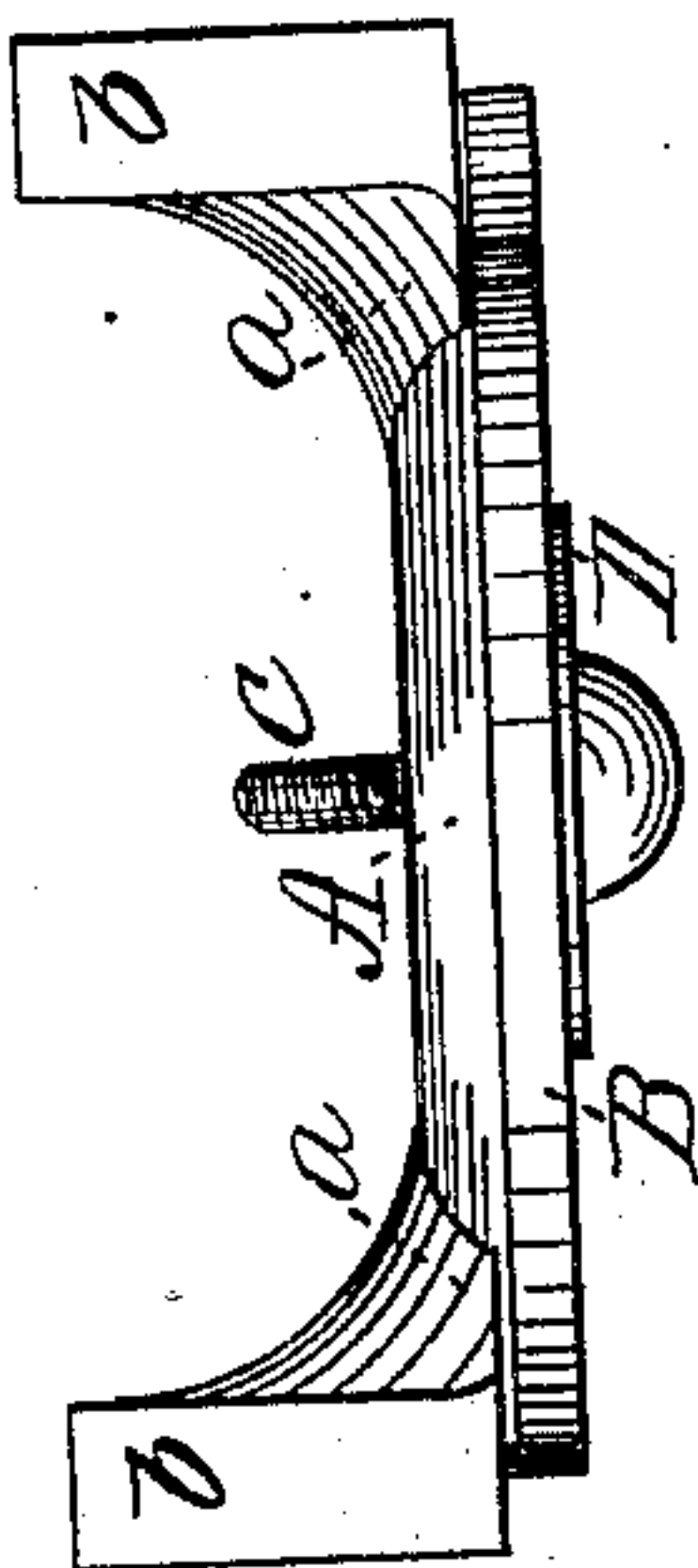
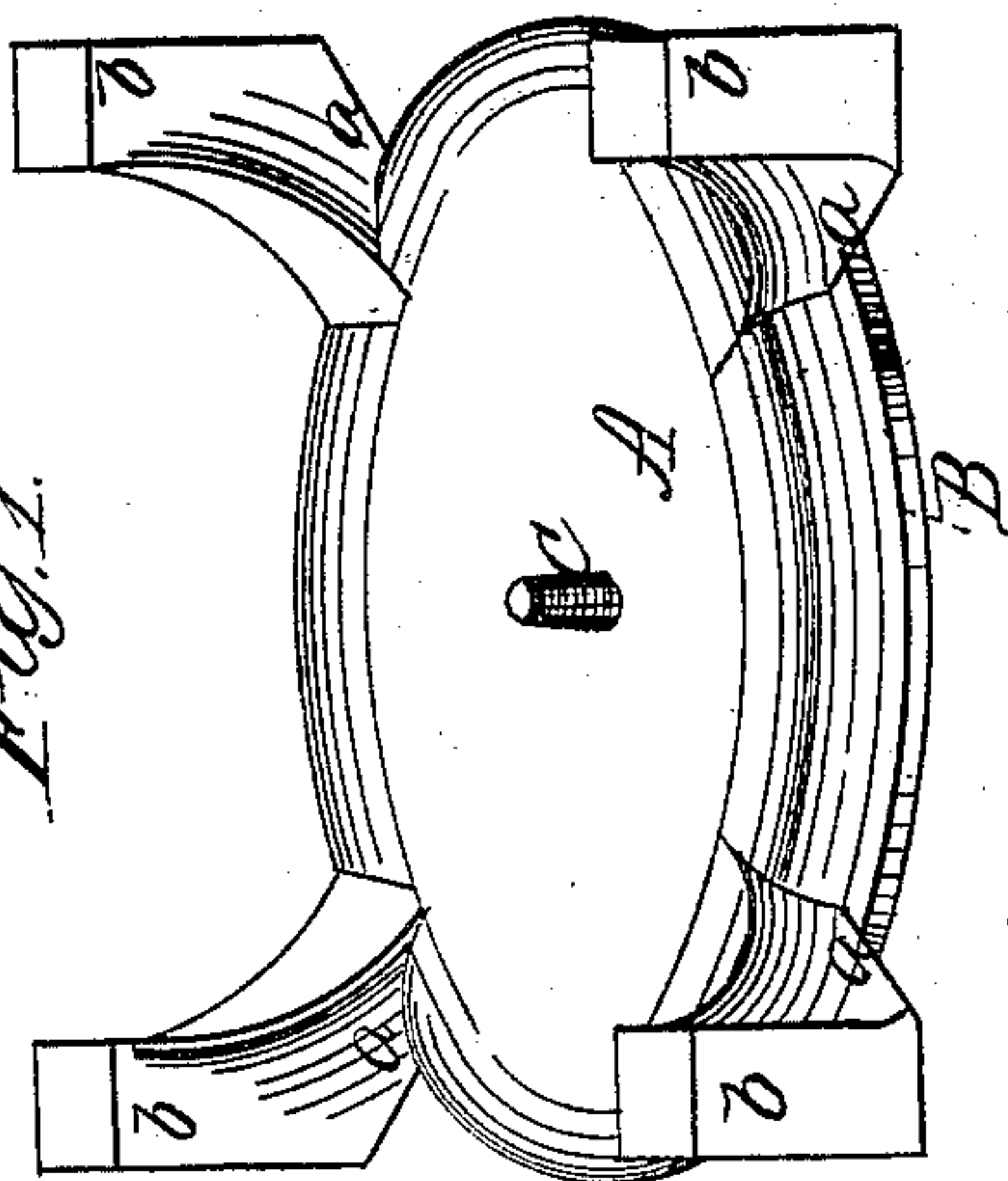


Fig 1.



Witnesses

Wm. Smith
Geo. A. Strong

Inventor

William D. Hooker

United States Patent Office.

WILLIAM D. HOOKER, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO
HIMSELF AND VOLNEY CUSHING.

Letters Patent No. 61,199, dated January 15, 1867.

IMPROVEMENT IN PUMP-VALVES.

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, WILLIAM D. HOOKER, of the city of San Francisco, and San Francisco county, State of California, have invented certain new and useful Improvements in Pump-Valves; and I do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention without further invention or experiment.

The nature of my invention consists in providing a valve so constructed that by means of guides arranged at certain points on the sides, the valve is made to rise and fall perpendicularly, and at the same time not permitted to turn around. In this construction of pump-valves, many devices are used to insure the perpendicular rise and fall of the valve, and there are also others employed to keep the valve from turning around, but in most of these the valve-chamber has to be bored out, and the valve faced and ground to fit perfectly, or some mechanism adopted that takes much time and labor to construct, and consequently renders the pump very costly, and often unwieldy from the size of the valve-chamber. The great desideratum is a valve whose construction is so simple and at the same time so efficacious, that it may be universally employed, and at a small expense. This valve has been found to answer the conditions, and allows of a great reduction in the size of the valve-chambers, with the largest port necessary for the full action of the pump.

To enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation, reference being had to the accompanying drawings, and the letters marked thereon, of which—

Figure 1 represents a perspective view of a valve

Figure 2, side elevation of the same.

Similar letters indicate like parts.

A, figs. 1 and 2, is the body of a valve, of my construction, made of iron, brass, or any suitable material, and having its lower face either fitted or covered with rubber, leather, or any substance, B, to make the valve water-tight. This packing is secured to the body of the valve by the screw, C', and washer, D. The body of the valve may be round, oblong, or any shape, and fits loosely the chamber, whose horizontal section may either be square or in form of a parallelogram, or other convenient shape. At any suitable points on the sides of the valve, and so that the guides may rise at the corners of the valve-chamber, project the arms, *a a a a*. At the ends of these arms arise the perpendicular guides, *b b b b*. These guides are made of such a height as to cause the valve to rise and fall perpendicularly, while from the form of the chamber they keep the valve from turning around.

The advantages gained by this valve are, first, its construction with the guides cast on the body of the valve so that it is complete, after putting on the packing, and needs no filling or finishing. The valve-chamber may also be used just as it is cast, with no finishing except the valve-seat; second, its simplicity and little liability to get out of order, and the ease with which it may at any time be removed, or repaired and replaced, and also adapted to other pumps. Its use will often reduce the expense of building small pumps so as to make their manufacture profitable, when with other valves they could not be made to advantage.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

The valve A, constructed with guides *b b b b*, upon its sides, arranged substantially as described and for the purpose herein set forth.

In witness whereof I have hereunto set my hand and seal this day of June, 1866.

WILLIAM D. HOOKER. [L. S.]

Witnesses:

C. W. M. SMITH,

GEO. H. STRONG.