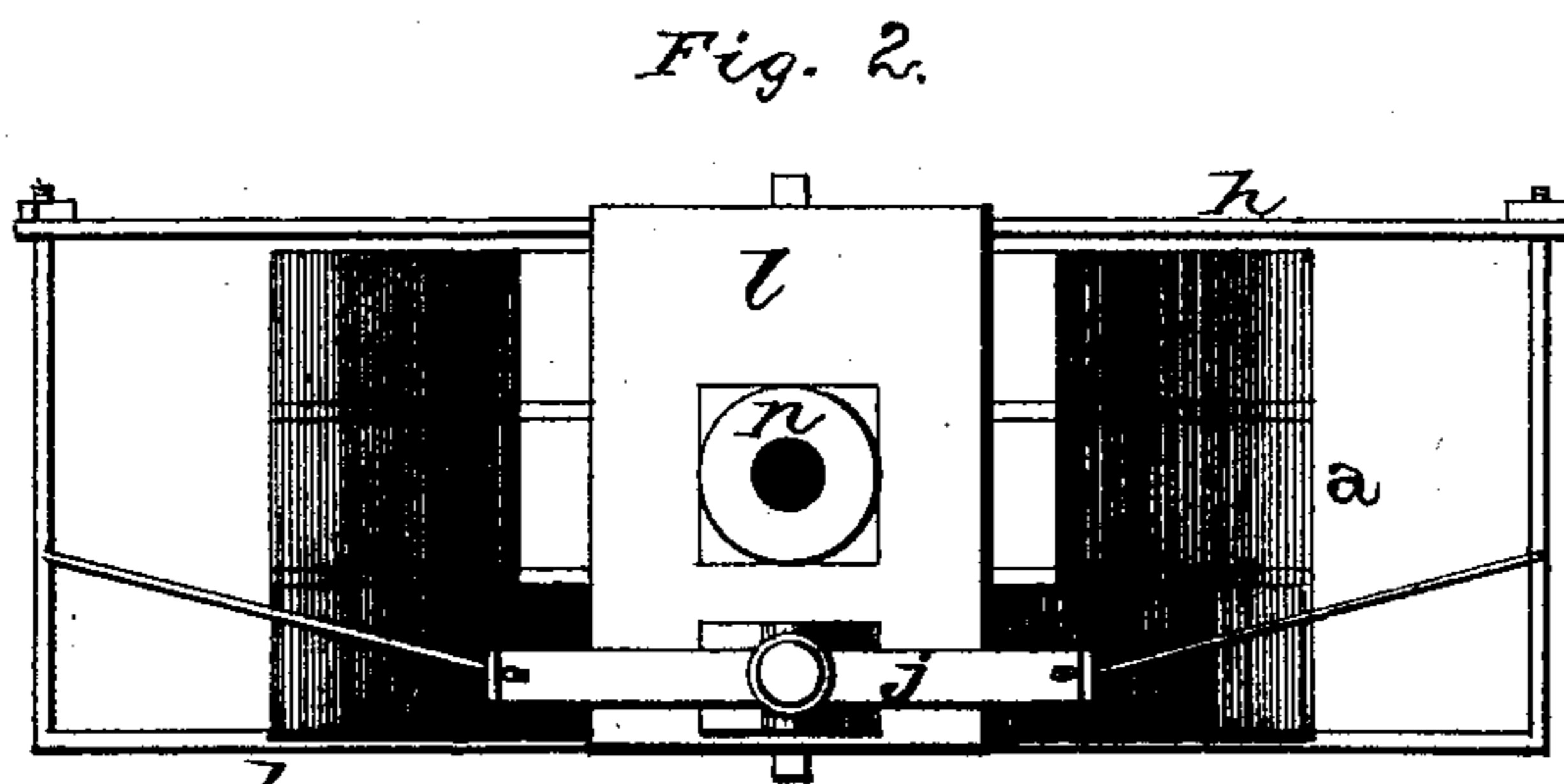
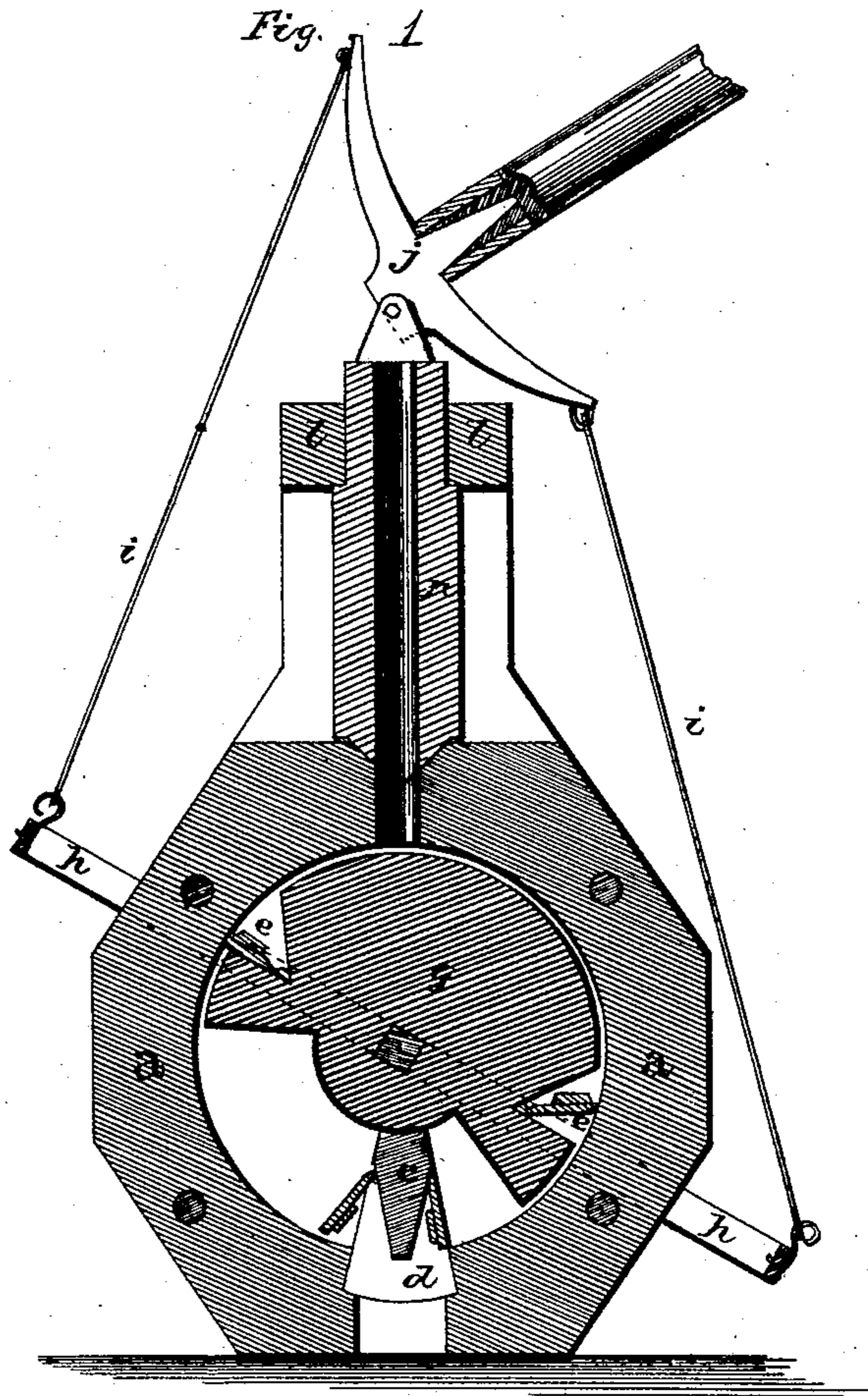


J. SMITH.
Oscillating-Pumps.

No. 157,033.

Patented Nov. 17, 1874.



WITNESSES.

J. W. Garner,
J. F. Lehmann.

INVENTOR.

J. Smith
per
F. A. Lehmann, Atty.

UNITED STATES PATENT OFFICE.

JEREMIAH SMITH, OF PRICETOWN, OHIO.

IMPROVEMENT IN OSCILLATING PUMPS.

Specification forming part of Letters Patent No. **157,033**, dated November 17, 1874; application filed September 24, 1874.

To all whom it may concern:

Be it known that I, JEREMIAH SMITH, of Pricetown, in the county of Highland and State of Ohio, have invented certain new and useful Improvements in Rotary Pumps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in rotary pumps; and it consists in the arrangement and combination of parts, which will be more fully described hereafter.

The accompanying drawing represents my invention.

a represents an iron or wooden cylinder, of any desired size or form, the center of which is bored out round and true, so as to form a water-chamber, in which the piston works. In the bottom of this chamber is placed the dividing-partition *c* and valve-block *d*, the lower end of the block being held in a dovetailed recess formed in the cylinder, so that it can be readily taken out to repair the valves, and then as easily inserted again.

The piston *g* is made rounding upon its upper surface, and nearly large enough to fill the entire chamber, and has a recess formed in each side, in which the valves *e* are fastened. These valves reach over to the sides of the chamber, and have their outer ends supported by the sides, in such a manner that they open freely upward as the piston is recip-

rocated back and forth, to allow the water to pass upward, but allow none to pass back again. The journals of the piston extend through beyond the sides of the cylinder, and have the elongated frame or levers *h* attached to them, through which the piston is operated. Attached to each end of this frame *h* are the rods or chains *i*, which extend upward, and have their upper ends attached to the reciprocating lever *j*, pivoted upon the base-board *l*.

By means of the arrangement of levers here shown and described, a compound lever is formed, by which the piston can be operated with great ease and power, so that the pump can be used to throw water to a great distance, when so desired. By lengthening the stock *n* the pump can be used to elevate water to any desired height.

Having thus described my invention, I claim—

1. The valve-block *d*, dovetailed in the cylinder, so that the valves can be easily removed and replaced, substantially as set forth.

2. The combination of the cylinder *a*, piston *g*, valves *e*, frame or levers *h*, rods or chains *i*, and levers *j*, substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 21st day of September, 1874.

JEREMIAH SMITH.

Witnesses:

P. W. ARMSTRONG,
E. G. BOATRIGHT.