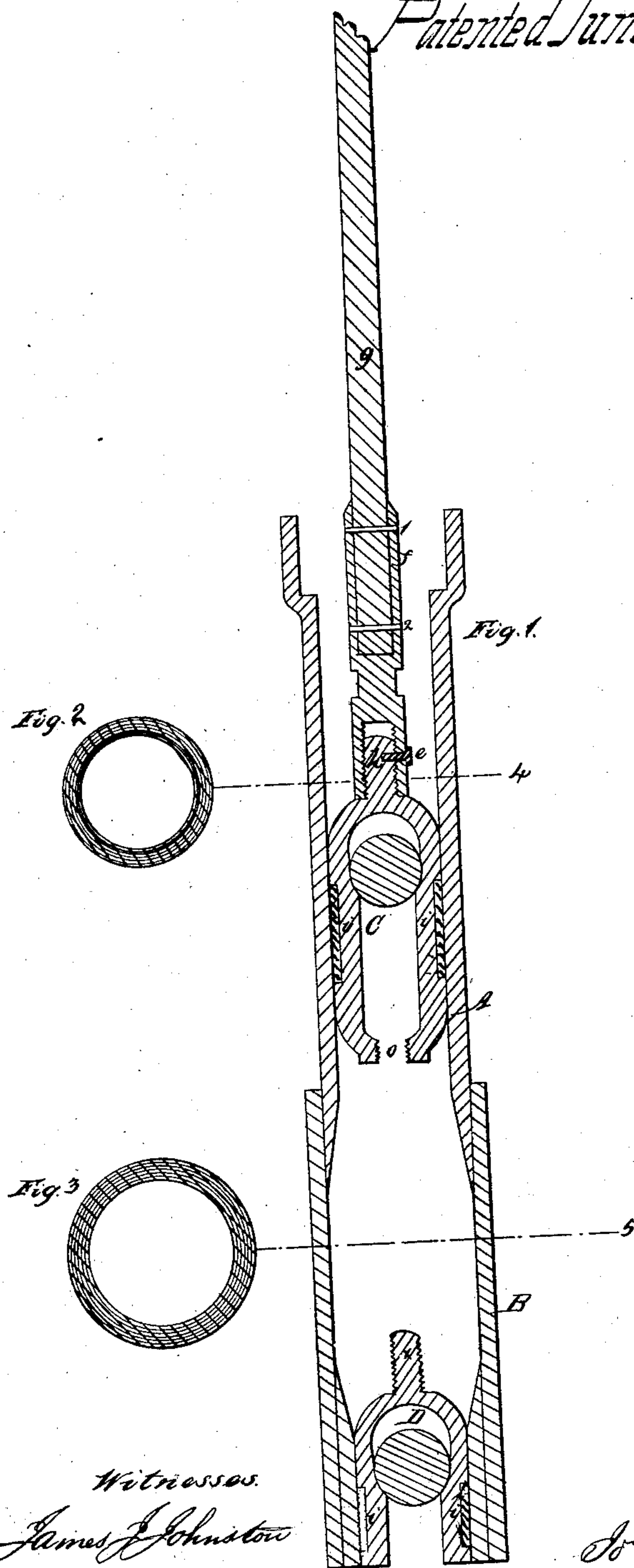


J. H. Davis
Oil Pump.

N^o 55626.

Patented June 19, 1866.



Witnesses.
James Johnston
John Denton

Inventor.
J. H. Davis

UNITED STATES PATENT OFFICE.

JOSEPH H. DAVIS, OF ALLEGHENY CITY, PENNSYLVANIA.

IMPROVEMENT IN PUMPS FOR DEEP WELLS.

Specification forming part of Letters Patent No. 55,626, dated June 19, 1866.

To all whom it may concern:

Be it known that I, JOSEPH H. DAVIS, of the city and county of Allegheny, and State of Pennsylvania, have invented a new and useful Improvement in Pumps; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My improvement in pumps relates to that class of pumps which are used in wells which are of great depth, such as oil, salt, and other wells of like form and depth. In removing the lower valve in such pumps for the purpose of repairing and for other cause great trouble and loss of time are some of the accompaniments that attend the removal of the lower valve from the pump or valve-chamber. All of this trouble and loss of time are caused by the friction of the upper valve in turning it for the purpose of coupling to the lower valve. The friction of the valve on the sides of its chamber and the great length of pole make it almost impossible to remove the lower valve without trouble, loss of time, and a very great liability of breaking the pole off by over-twisting it.

Now, the nature of my invention consists in providing means for overcoming and avoiding the evils above cited by an enlargement of the valve-chamber of the pump in the manner hereinafter described.

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

In the accompanying drawings, Figure 1 represents a longitudinal section of valves and their chambers and a section of the pump-pole. Fig. 2 represents a transverse section of the pump or valve-chamber cut through at line 4. Fig. 3 represents a transverse section of the enlarged part of the pump or valve-chamber cut through at line marked 5.

In the drawings, A represents the chamber of the valve C, which is the lifting-valve, and

is attached to the pump rod or pole, marked *g*, by means of what is termed a "pole-wing," and in the drawings is marked *f*. This pole-wing is secured to the pole by bolts or rivets, marked 1 and 2, and attached to the valve C by means of a screw-socket and the screw *h* on the upper end of the valve.

B represents the enlarged chamber for the lower valve, D, which is furnished with a screw on the upper end, marked *x*, which is used, in connection with the screw-socket, marked *o*, on the lower end of the valve C, for lifting and removing the lower valve when so desired. *i* represents the packing of the valves.

The ordinary mode of constructing the kind of pump herein referred to is to make the bore of the valve-chamber of uniform size; hence the trouble in removing the lower valve. With the exception of the enlargement of the chamber for the lower valve, all the other parts are of ordinary construction and are well known and understood in their operation.

The operation of removing the lower valve is as follows: The valve C is forced down into the enlarged part of the chamber marked B, which will allow it and the parts attached thereto to turn with ease and without friction. The screw-socket *o* is coupled on the screw *x* of valve D, and the whole is drawn out in usual manner.

I wish it clearly understood that I do not claim, broadly, enlarging the valve-chamber when not connected with pumps of oil, salt, or other wells of like form and depth.

Having thus described the nature, construction, and operation of my improvement in pumps, what I claim as of my invention is—

The enlargement B of the valve-chamber A, when constructed and operating for the removal of the foot-valve D, substantially as herein described, and for the purpose set forth.

JOS. H. DAVIS.

Witnesses:

JAMES J. JOHNSTON,
JOSHUA ROBINSON.