

(No Model.)

D. B. CAHOW.

PUMP.

No. 349,205.

Patented Sept. 14, 1886.

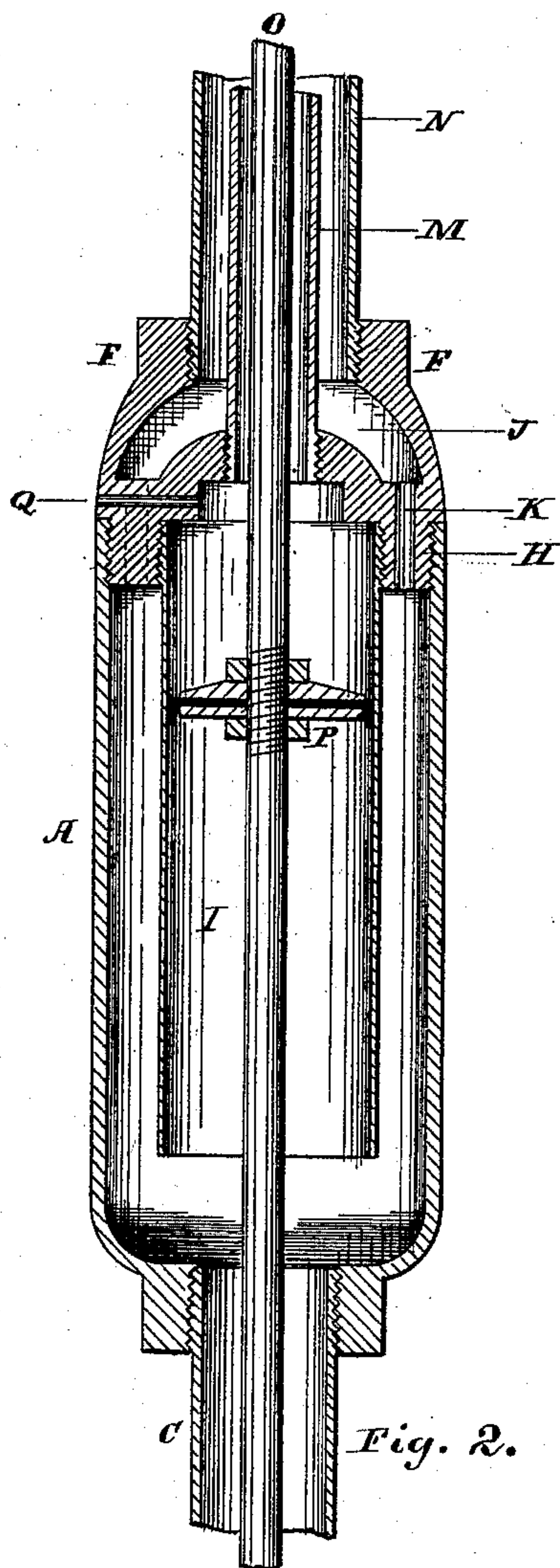


Fig. 2.

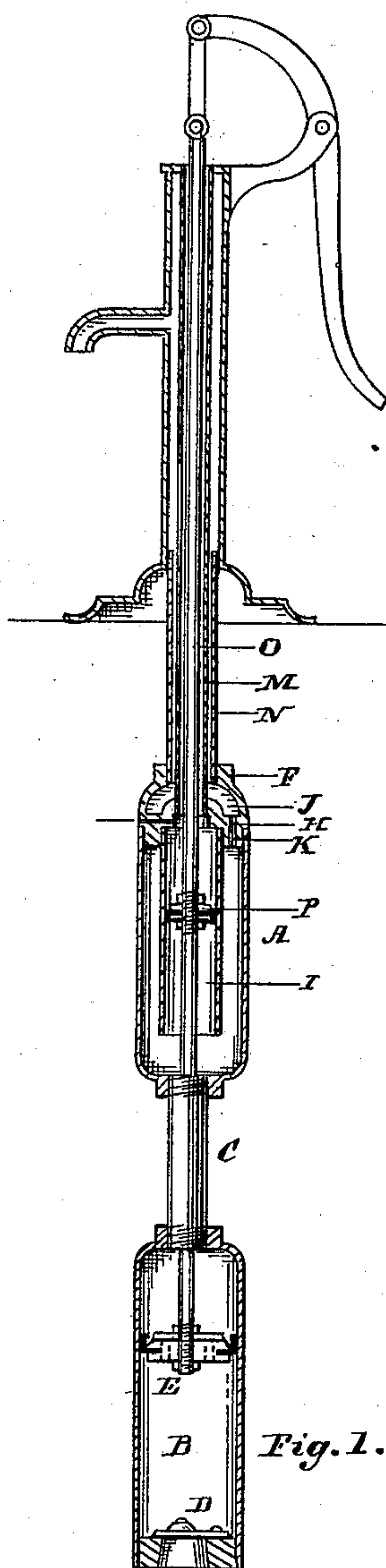


Fig. 1.

Witnesses:

Dayton A. Doyle
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Atty.

UNITED STATES PATENT OFFICE.

DANIEL B. CAHOW, OF AKRON, OHIO.

PUMP.

SPECIFICATION forming part of Letters Patent No. 349,205, dated September 14, 1886.

Application filed March 14, 1885. Serial No. 158,865. (No model.)

To all whom it may concern:

Be it known that I, DANIEL B. CAHOW, a citizen of the United States, residing at Akron, in the county of Summit and State of Ohio, have invented a new and useful Improvement in Pumps, of which the following is a specification.

My invention has relation to that class of pumps in which are combined a lifting-cylinder and a forcing-cylinder, the pistons of which are connected and move in unison.

The objects are to simplify the construction, to lessen the number of joints, and avoid consequent leakage, and to adapt the pump to be inserted in drilled wells.

It consists in the novel construction and arrangement of parts exhibited in the accompanying drawings, and hereinafter specifically claimed.

Figure 1 is a central vertical section of a pump embodying my invention, and Fig. 2 an enlarged view of the upper cylinder, exhibiting its construction.

The pump has two cylinders, A B, united by a pipe C. In the lower, B, which is simply a lifting-pump, is a clack-valve, D, and valved piston E. Above and connected by the pipe C is another cylinder, A, the lower end of which is contracted and internally screw-threaded to receive the pipe C; but the upper end is of the same size as the body, and is also provided with an internal screw-thread to receive the head F. The head F, cast of one piece, is, near its base, of the same external diameter as the cylinder A, and thence converges toward its top. The base H is smaller than the largest diameter of the head, and is screw-threaded to match and enter the cylinder A. Within this smaller part the base is recessed upward for about half the height of the head, the lower part of the recess being of even diameter and screw-threaded to receive the forcing-cylinder I, in which is a solid piston, P. Above the base of the head is a chamber, J, which chamber is connected with the space between the cylinders A and I by a series of holes, K K, through the annular part of the base H. In the center of the recessed base is a screw-threaded orifice, L, in which is the pipe M, and through the upper shell of the head is also a screw-thread-

ed orifice, in which fits the pipe N, which surrounds the pipe M, the intervening space constituting an annular channel for the discharge of water from the pump, the pipe M forming a case for the piston-rod O, to which are attached the pistons P and E. Through the solid base an orifice, Q, allows the escape of any water that may find its way past the piston I.

The operation of the pump is so obvious that it is not deemed necessary to describe it.

The combination of the cylinders A B I and pistons P E, arranged and operating substantially in the manner shown, is not new, as pumps embodying these features have been in use for some years.

I am aware also that the combination of pipes N M, with the upper cylinder for the same purpose as that herein described, is not new. As heretofore constructed, however, these pumps are objectionable, for the reason that the pipe M and cylinder I screw into an independent horizontal disk which is placed between the head and cylinder, the two latter being united by bolts passing through outer flanges, thereby making two flange-couplings with all the liability to leakage incident to that form of joint, while the flanges prevent the introduction of the cylinder into drilled wells.

Having thus described my invention, I claim—

In a pump of the species described, the solid cast head F, with the partition cast therein, both screw-threaded internally, as shown, to receive the concentric pipes M N, and said partition having an annular base projecting therefrom screw-threaded on the inside and outside to receive the concentric cylinders A and I, respectively, the contour of the cast head and cylinder A, when joined, being continuous and without projections, whereby a maximum diameter of pump is obtained for insertion into drilled wells, substantially as specified.

In testimony that I claim the foregoing I have hereunto set my hand this 16th day of February, A. D. 1885.

DANIEL B. CAHOW.

Witnesses:

DAYTON A. DOYLE,
C. P. HUMPHREY.