(No Model.)

J. B. DRAKE.

PUMP.

No. 384,749. Patented June 19, 1888.

Fig: 2.

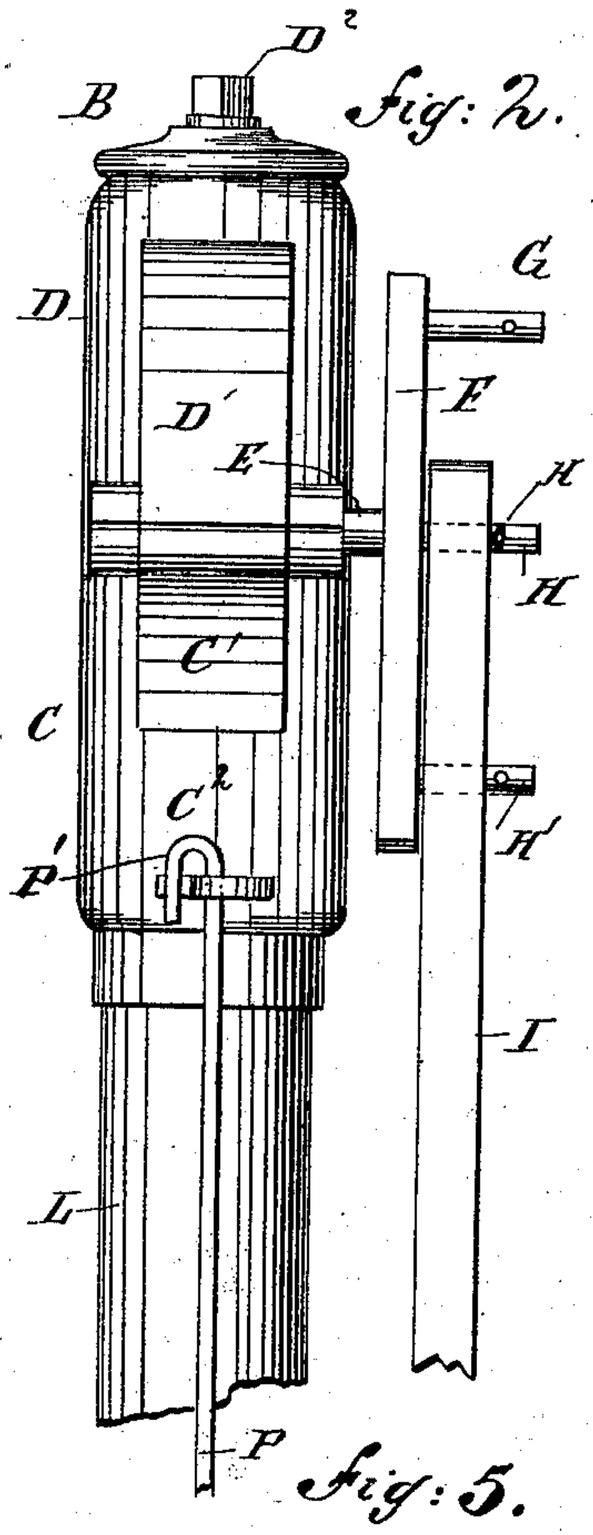

Fig: 1.

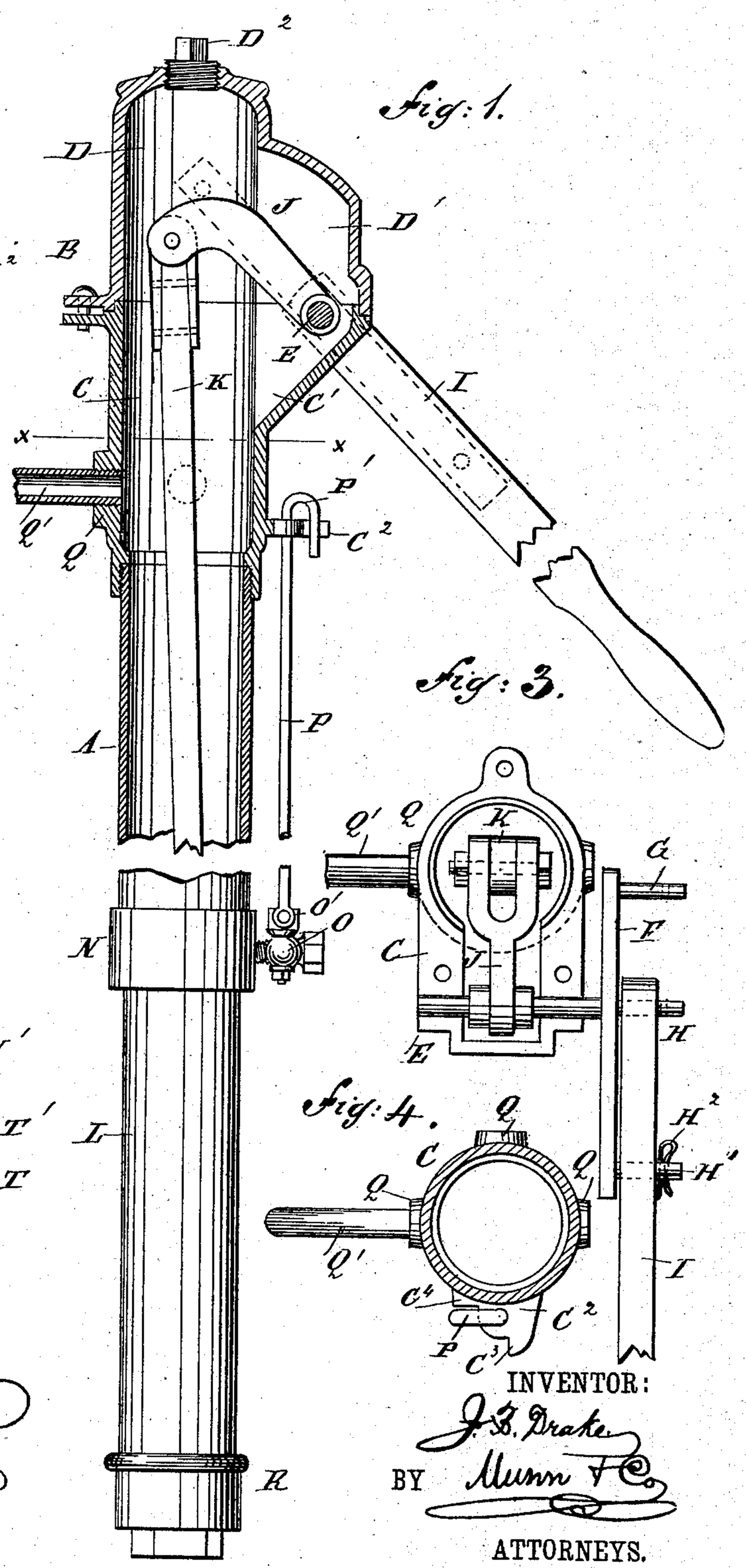

Fig: 5.

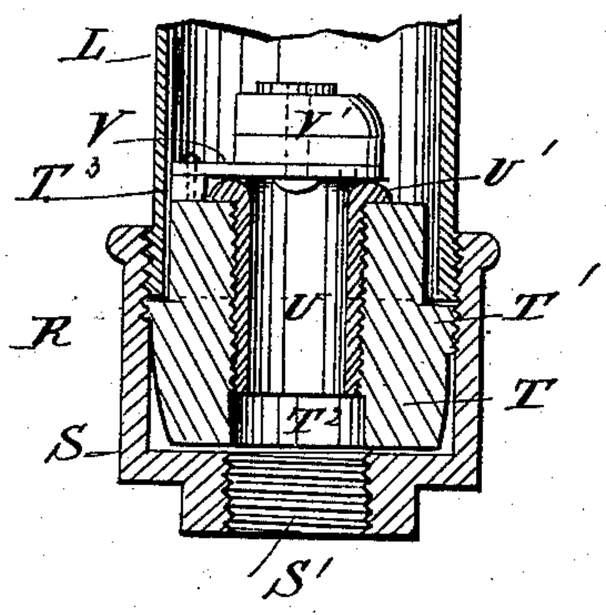

Fig: 3.

Fig: 4.

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JOHN B. DRAKE, OF GOSHEN, INDIANA.

PUMP.

SPECIFICATION forming part of Letters Patent No. 384,749, dated June 19, 1888.

Application filed July 2, 1887. Serial No. 243,265. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. DRAKE, of Goshen, in the county of Elkhart and State of Indiana, have invented a new and Improved Pump, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved pump which is simple and durable in construction and very effective in operation.

The invention consists in the construction and arrangement of various parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional side elevation of my improvement. Fig. 2 is an elevation of part of the same at right angles to Fig. 1. Fig. 3 is a plan view of the same with the top part of the head removed. Fig. 4 is a sectional plan view of my improvement on the line *x x* of Fig. 1, and Fig. 5 is an enlarged sectional elevation of the pump-valve.

The pump-casing is provided with a tube, A, supporting on its upper end the pump-head B, made in two parts, C and D, secured to each other by bolts or other means, each part being provided on one side with an offset, C′ or D′, respectively, in which are formed bearings for the shaft E, placed transversely in said offsets D′ and C′ and extending at one end to the outside of the pump-casing. The shaft E has half of its bearing in the upper part, D, and the other half in the lower part, C.

To the outer end of the shaft E is secured the arm F, provided on one end with a crank-pin, G, adapted to be connected with the pitman of a windmill, and in the middle of the arm F, in line with the shaft E, is secured a pin, H, and on the other end of said arm F is formed a crank-pin, H′, on which and on the said pin H fits the pump-handle I, held in place on said pins by a spring-key, H^2, passed through the pin H′, as is plainly shown in Fig. 3.

On the shaft E, inside of the head D and between the bearings of said shaft E, is secured the crank-arm J, extending to the center of the head B and connecting at its forked free end with one end of the pitman K, provided on its lower end with the usual plunger (not shown) operating in the plunger-tube L, connected with the lower end of the collar N, secured to the lower end of the tube A. In the collar N screws a tap, O, connected by its valve O′ with a rod, P, which extends upward and passes through an aperture in the lug, C^2, formed on the part C′ of the head D. The lug C^2 is provided with two shoulders, C^3 and C^4, standing at right angles to each other, as shown in Fig. 4, and between said lugs C^3 and C^4 is held the downwardly-bent end of the rod P, which after passing through the lug C^2 is bent downward, as shown in Figs. 1 and 2.

It will be seen that when the bent end of said rod P is given one-quarter turn from one shoulder, C^3, to the other shoulder or lug, C^4, or vice versa, then the valve O′ and the cock O are opened or closed, so as to permit the water standing above the plunger in the tube A to escape, thus preventing the freezing of the water in cold weather.

The part C of the head B is also provided on its outside with three projections, Q, arranged as shown in Fig. 4, and adapted to be tapped so as to receive the outlet-pipe Q′, which is screwed into said projection Q, according to the direction in which the water is to run out of the casing A.

On the lower end of the plunger-tube L is held the valve R, provided with the casing S, screwing on said lower end of the plunger-tube L, and in the bottom of said casing S is formed a central inlet-aperture, S′, which corresponds with the central aperture, T^2, of the valve-body T, held in the bottom of said casing S and provided with an annular shoulder, T′, on the top of which rests the lower edge of the plunger-tube L, thus holding said valve-body T in place in the casing S. Into the central aperture, T^2, of the valve-body T, which is preferably of wood, screws the metallic tube U, provided on its upper end with a flange, U′, resting on top of the valve-body T, which latter is provided on its top at one side with a projection, T^3, on which is secured one end of the leather valve V, extending over the top of the metal tube U and carrying the weight V′, so as to remain in a closed position on said metallic tube, except when opened by the upwardly-moving water from the upward stroke of the plunger.

In the upper end of the part D of the head B screws the plug D^2, which is removable, so as to permit of examining the interior parts, and also of pouring in water when deemed necessary.

It will be seen that the shaft E can be turned in its bearings either by connecting its arm F with the windmill-rod at the pin G, or by using the pump-handle I, which, when moved up and down, imparts a swinging motion to the shaft E and its crank-arm J, so that the pitman K moves the plunger up and down in the plunger-tube L, thus drawing the water into the valve R at the upward stroke and then pressing it through the plunger in its downward stroke until it finally reaches the outlet-pipe Q′, through which it passes to the outside.

It will further be seen that the pump is very simple and durable in construction, and can be easily set up or taken apart for repairs or for other purposes.

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

1. In a pump, the combination, with the pitman carrying the plunger, of a crank-arm pivotally connected with said pitman, a shaft turning in the pump-head and carrying said crank-arm, and an arm secured to the outer end of said shaft and provided with three crank-pins, of which one is adapted to be connected with the windmill-rod and on the other two of which is secured a pump handle, substantially as shown and described.

2. In a pump, the combination, with the shaft E, of the arm F, secured on said shaft, the crank-pin G, secured to one end of said arm F and adapted to be connected with the windmill-rod, the pins H and H′, also secured to said arm F, and the pump-handle I, fastened on said pins H and H′, substantially as shown and described.

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