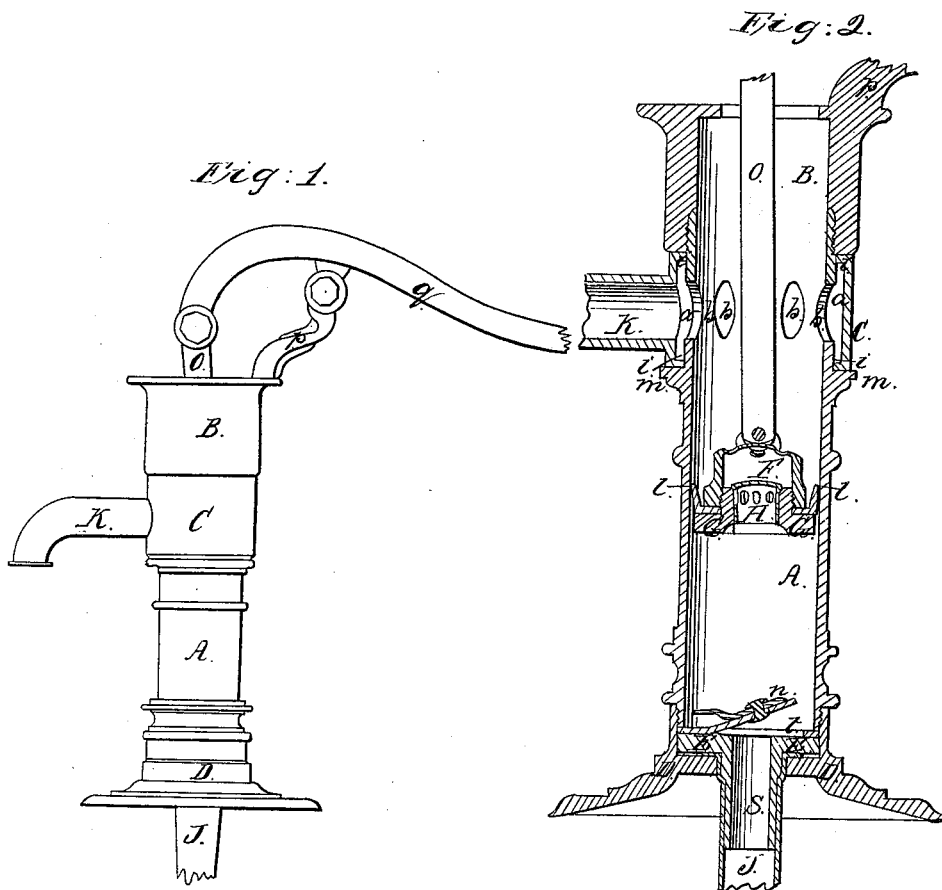


B. Holly,

Pump.

N^o 6,500.

Patented June 5, 1849.



UNITED STATES PATENT OFFICE.

BIRDSILL HOLLY, OF SENECA FALLS, NEW YORK, ASSIGNOR TO A. DOWNS, E. MYNDERS,
H. C. SILSBY, AND WASHBURN RACE.

PUMP.

Specification forming part of Letters Patent No. 6,500, dated June 5, 1849; Reissued May 7, 1850,
No. 168.

To all whom it may concern:

Be it known that I, BIRDSILL HOLLY, of Seneca Falls, in the county of Seneca and State of New York, have invented a new and Improved Pump; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1, is an elevation, and Fig. 2, a vertical section.

Similar letters indicate like parts in both figures.

A, is the main portion of the pump barrel, which is combined with the other parts of my improved pump so represented in Fig. 2.

The short tube C, placed upon, and inclosing a portion of the upper end of A, is cast in one piece with the nozzle K: within the flanges *i, i*, projecting inward from the ends of C, there is an annular chamber *a*, surrounding the series of apertures *b, b*, in the sides of the pump barrel, and communicating with the nozzle; the object of this arrangement, is to enable the position of the nozzle to be readily changed from one side to the other, as circumstances may require.

The lower end of the nozzle ring C, rests upon, and is accurately ground to the upper side of the flange *m*; the upper portion B, of the pump barrel, is screwed to the upper extremity of A, and fits accurately to the upper end of the nozzle ring C; and consequently serves to confine the nozzle in any desired position.

The fulcrum arm *p*, to which the handle *q*, is jointed, is cast in one piece with the upper part B, of the pump barrel.

The base D, of the pump, is of the form represented in Fig. 2, and is screwed to the lower extremity of A; within the cup-rising from D, there is located the circular valve plate E, from which descends the tube *s*, passing down through a hole in the center of D; *t*, is a leather disk placed upon the valve plate E, the periphery of which is pressed firmly against the lower extremity of A, and makes a water tight packing between the two; the valve *n*, that closes the aperture in the valve plate, is cut from the center of the leather disk *t*, and is suitably weighted with metal.

The lead induction pipe J, which de-

scends from the pump into the well or cistern, is connected to the base of the pump in the manner represented in Fig. 2; to wit. The end of the lead pipe is passed up through the hole in the center of the cup, rising from the base D, and a flange is formed at its extremity by forcing a mandrel into it; the tube *s*, descending from the valve plate E, is then inserted into the open mouth of the lead pipe, and after placing the leather disk *t*, upon the valve plate, the pump barrel A, is screwed into the cup rising from the base D, and forces down the valve plate upon the flange of the lead pipe, at the same time forcing the largest portion of the tube *s*, near the valve plate, into the mouth of the pipe and firmly pressing it against the sides of the aperture in the base.

The cup rising from the base D, having a screw thread cut upon its inner sides, the metallic disk E, placed therein, which serves as a valve seat, and in connection with the tube *s*, descending therefrom through an aperture in the bottom of the base, serves to connect the induction pipe to the pump, when the barrel A, is screwed to the base (without the addition of anything exterior to the pump.)

The respective parts of the piston plunger that I make use of in my pump, are represented in Fig. 2.

The cap F, has a series of perforations in its tops, and is screwed to the ring G, the inner edge of a ring of leather *l*, is inserted between F, and G, the outer periphery of which is turned upward and bears against the sides of the pump barrel: consequently as the piston is forced downward, there will be no friction between its sides and the sides of the pump barrel; but when the piston is drawn upward, the weight of water above it will force the edge of the leather ring against the sides of the pump barrel with sufficient force to prevent the loss of any water around the same.

H, is a perforated tube placed within the ring G, having a conical flange projecting from its upper end which fits into a seat on the upper edge of the inner periphery of G. As the piston is forced down, the tube H, will rise into the cap F, allowing the water to pass through the perforations in its sides into the cap F, from which it will pass through the holes in the top of the same.

The water will also force up the edge of the packing ring *l*, and pass upward around the sides of the ring *G*, as it descends.

When the piston is drawn upward, the tube *H*, will descend into its place and close the aperture in the ring *G*, and the pressure of water upon the packing ring *l*, will force its edge against the sides of the pump barrel and prevent any leakage about the same, as above described.

The water elevated by the piston plunger into the pump barrel, will pass through the holes *b*, *b*, in its sides into the annular space

a, within the ring *C*, and thence will be discharged through the nozzle *K*.

What I claim as my invention and desire to secure by Letters Patent, is—

The combination of the nozzle with the pump barrel in such a manner that the nozzle can be readily changed from side to side and secured in any desired position, substantially as herein represented and described.

BIRDSILL HOLLY.

In presence of—

NATHAN BAKER,
S. B. PAYNE.

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