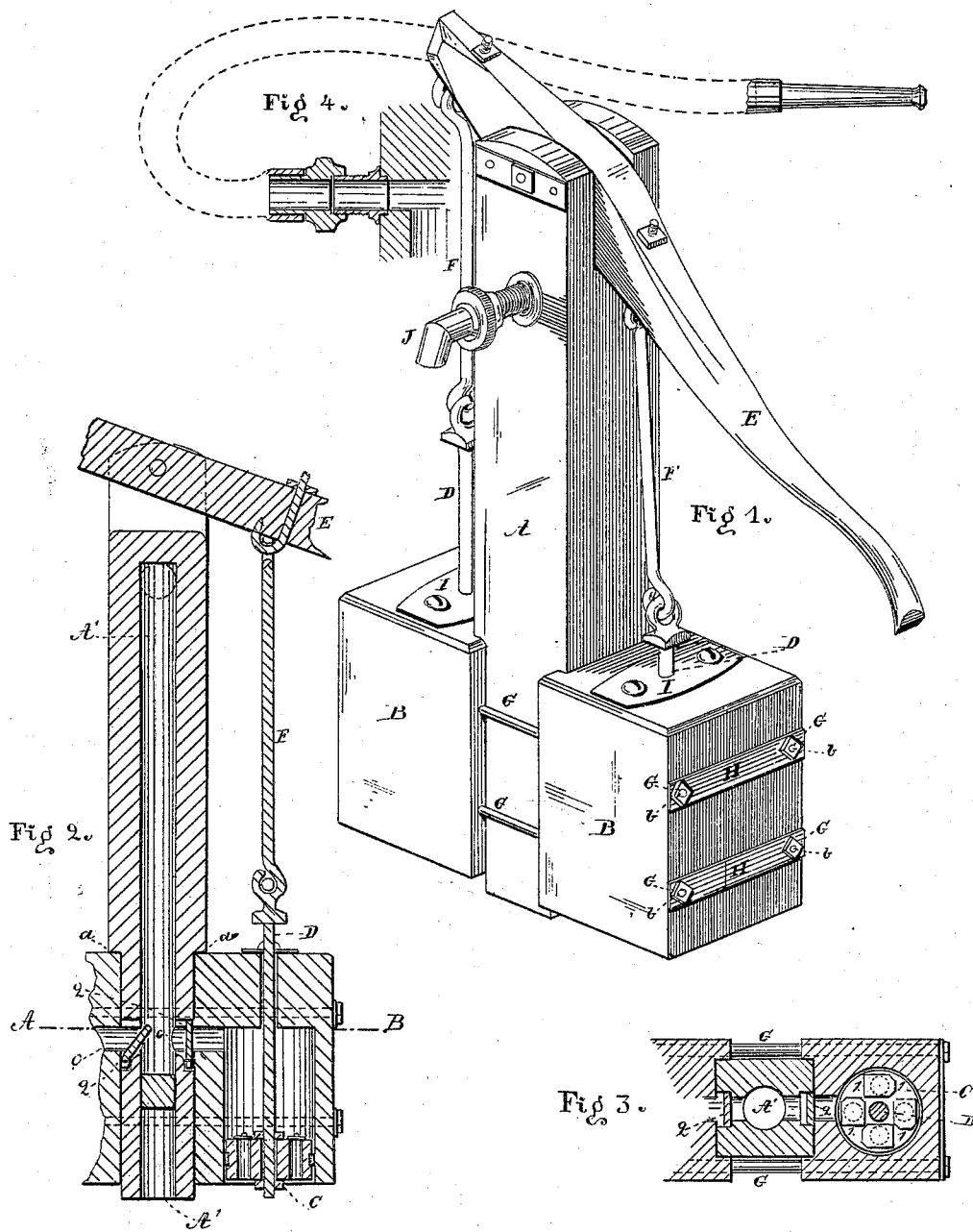


F. CATUDAL.
Pumps.

No. 134,785.

Patented Jan. 14, 1873.



Witnesses:

H. La Roque M.D.
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UNITED STATES PATENT OFFICE.

FRANCIS CATUDAL, OF WEBSTER, MASSACHUSETTS.

IMPROVEMENT IN PUMPS.

Specification forming part of Letters Patent No. 134,785, dated January 14, 1873.

To all whom it may concern:

Be it known that I, FRANCIS CATUDAL, formerly of Napierville, Canada, but now of Webster, in the county of Worcester and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Pumps; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing which forms a part of this specification, and in which—

Figure 1 represents a perspective view of my improved pump; Fig. 2 represents a vertical central section of a portion of the pump; Fig. 3 represents a cross-section on the line A B, Fig. 2; and Fig. 4 represents a central section of the upper part of the pump when it is to be used as a force-pump, the pipe being shown in dotted lines and the nozzle in full lines.

To enable those skilled in the art to which my invention belongs to make and use the same, I will proceed to describe it in detail.

My object has been to produce a pump that can be used equally well for ordinary domestic and farm purposes, while at the same time it can be effectively employed as a force-pump for extinguishing fires, washing windows in high buildings, &c., and at the same time be of simple and cheap construction, whereby an ordinary farm laborer can take apart, and adjust and put together, the various parts of the pump.

In the drawing, the part marked A is the main portion of the pump-frame—that is, it is the part to which all of the other parts are attached and receive their support directly or indirectly. The part A is made of wood, has a hole, A', bored up from its lower end for the passage of the water from the chamber in wooden blocks B B, in which the pistons C C are fitted to work; the bottom of the hole A' is plugged up, as seen in Fig. 2. Pistons C are provided with four valves, 1, (more or less in number may be used,) while their elevating and depressing rods D D pass up through holes in the upper ends of the blocks B B, and are connected to the pump-handle or lever E by means of the hinged or linked connections F F. The blocks B B are fitted under shoulders a a of the part A, and in which positions they are held by four bolt-rods, G, two on each side, and which bolt-rods are provided with screw-threads for the reception of the nuts b. Said nuts may be applied at both ends of the rods or only at

one end, the other ends being made with heads. Iron or metal straps H are combined with the rods and nuts G and b, as fully shown in the drawing, whereby the parts B B are held securely to the part A. Openings c are made from chambers C to communicate with the base A' in the part A, while valves 2 are fitted to close and open said openings, accordingly as the pistons are raised or depressed. The valves work in recesses cut in the part A, and, when closed, rest against the inner sides of the blocks B.

Handle E is pivoted in a slot in the upper end of the part A, and is so combined with the piston-rods and their connections that when one piston is raised the other is depressed, thus giving a constant flow of water during the operation of pumping.

The piston-rods D may have packings placed below the metal caps I, through which they pass if desired to prevent the escape of water around the rods.

J is the discharge-pipe used when the pump is employed for raising water ordinarily, while when the pump is to be used for throwing water for washing windows, extinguishing fires, and for similar purposes, the discharge-pipe J is unscrewed and the connection and pipe shown in Fig. 4 is employed.

As my pump is mostly made of wood it is not liable to freeze. Then again, the blocks B being combined with the part A so that their upper inner ends will abut against shoulders a, in combination with the side bolt-rods G, the pump is rendered strong and the parts retained in position, and that too without the upright part A being pierced with either bolt or screw holes.

In arranging the pump for use the lower ends of the blocks B B and the part A should be placed below the surface of the water.

Having described my improved pump, what I claim therein as an improved article of manufacture, and desire to secure by Letters Patent, is—

A pump for domestic and other purposes, the parts A and B B of which are made of wood and combined together by means of the shoulders a a and clamping screw-bolts G G, substantially as and for the purposes set forth.

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Witnesses:

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