

C. S. Mc Mahan,

Pump Lift.

N^o 78,602.

Patented June 2, 1868.

Fig. 1

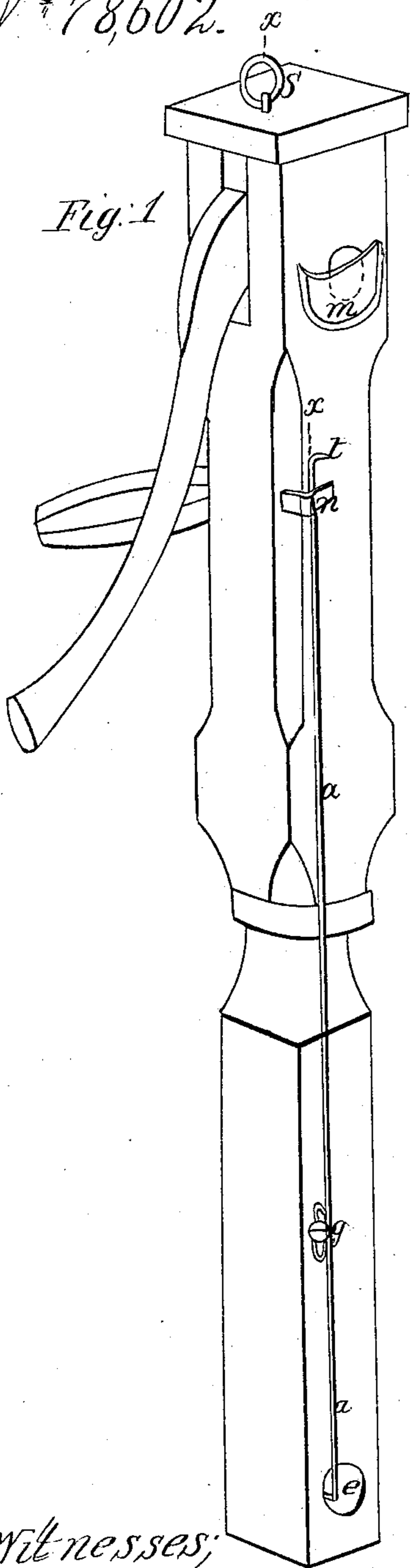
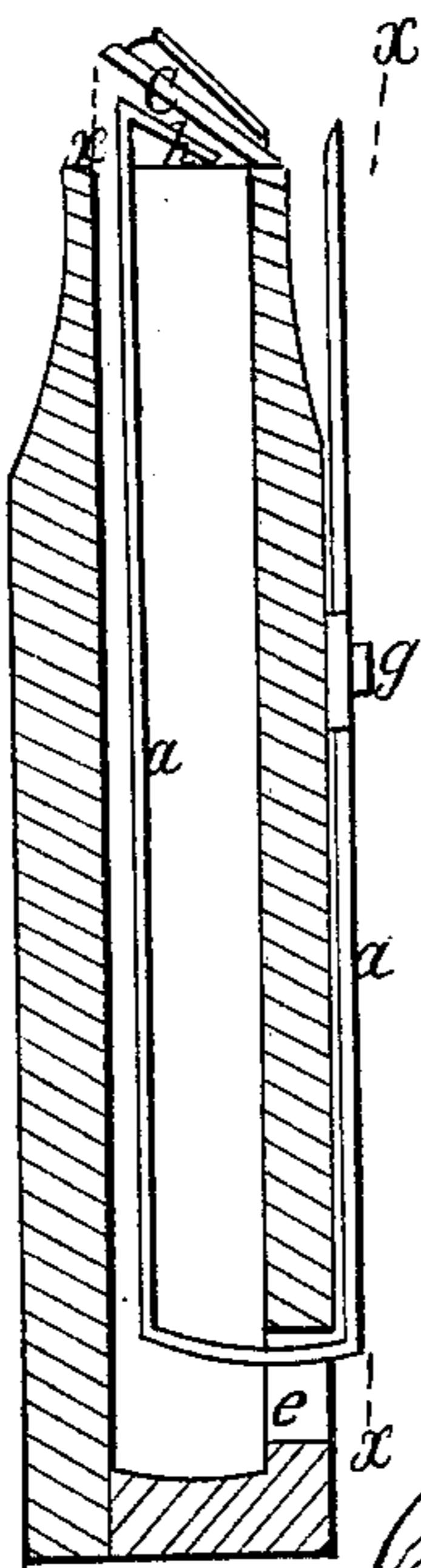
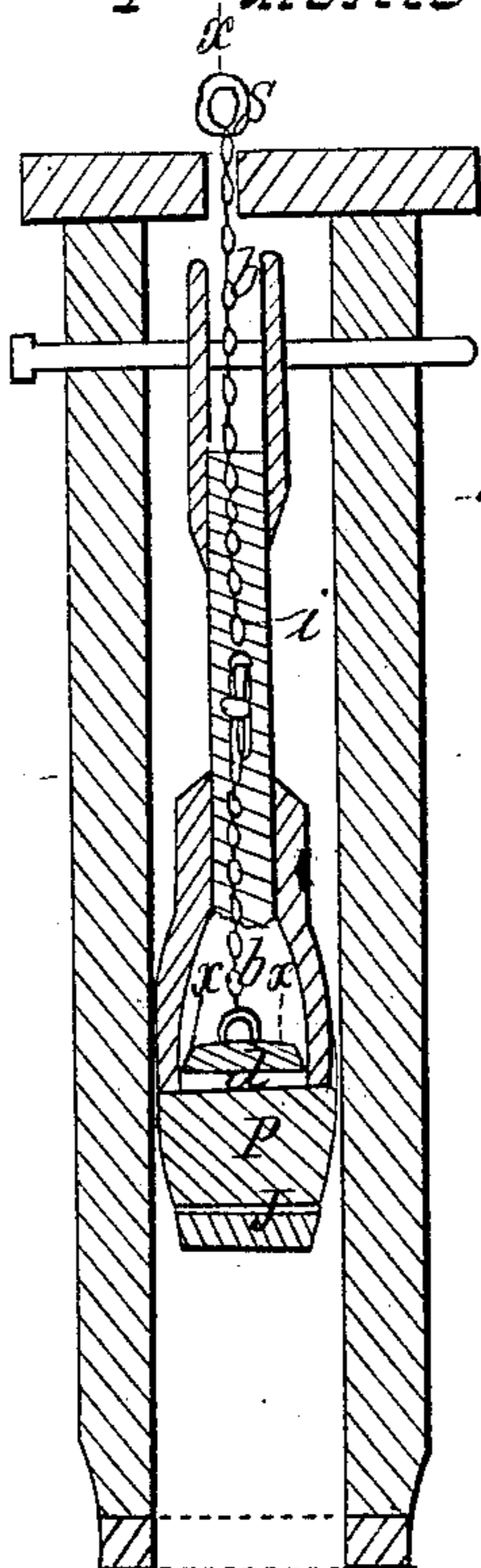


Fig. 2.



Witnesses;
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Inventor;
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By Joseph Ridge his attorney

United States Patent Office.

CLABURN S. McMAHAN, OF CENTREVILLE, INDIANA.

Letters Patent No. 78,602, dated June 2, 1868.

IMPROVEMENT IN PUMPS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, CLABURN S. McMAHAN, of Centreville, in the county of Wayne, and State of Indiana, 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 drawing, making a part of this specification, in which—

Figure 1 is a perspective view, and

Figure 2 a longitudinal section.

The same letters in the different figures relate to corresponding parts of the invention.

My invention is designed to obviate the liability of water to freeze in pumps, and thus render the latter inoperative, as with pumps of ordinary construction, during weather sufficiently cold. Another feature in my invention relates to the manner of constructing the piston of the pump, by which greater durability is obtained.

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

The lower valve, *c*, is operated by the rod *a*, which latter has its upper end, *t*, situated at a convenient height for operating, and extends down the pump-stock to near the bottom, and below the water-line, where it enters the pump through aperture *e*, and is then extended up the interior of the pump, with the end terminating in contact with valve *c*. The end, *h*, is brought to an acute angle, giving it more bearing-surface, and adapting it to the position of the valve when raised, and thus preventing the rod from being forced to one side. The aperture *e* is sufficiently large to admit of the necessary vertical play of the rod in operating the valve. An elongated loop is formed in the rod at *g*, which operates on a screw partially inserted, or other like projection, having a head to retain the loop, allows the rod sufficient vertical play, and serves to keep it in position against the pump.

An iron strap, *n*, screwed or otherwise secured to the pump-stock, under which the rod slides, when operated, also serves to keep the latter in position.

The valve *d* on piston *P* has attached to it the chain, *b*, which extends through the pump-cover, and terminates in ring *S*. An elongated link of said chain, at *i*, which is held against the pump-rod by means of a projecting pin having a head to prevent said link from being detached, allows the chain the necessary vertical play for raising the valve, but prevents it from dangling and thus injuring the valve during the operation of pumping.

The ordinary manner of constructing pump-pistons, by tacking the leather covering on a piston of uniform diameter, causes a very considerable wear of the inside of the pump in consequence of the rubbing of the tacks, and thus rendering said pump liable to soon become disordered. To obviate this objection, I propose to either taper the bottom of the piston or provide it with a circumferential groove, allowing sufficient room for a band, as seen at *J*. The edges of the leather are united by stitching, and thus no hard substance connected with said piston is brought in contact with the pump. A very simple and efficient band may be formed by drawing wire around the piston and twisting the ends together to secure it.

An aperture, *r*, near the top of the pump, over which is secured the spout or funnel *m*, is provided for convenience in pouring in water to start the pump, in case of the water having been let off.

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

The piston *P*, in combination with valves *C* and *d*, when the latter are provided with hoisting-appendages, as described, and the whole arranged and operating substantially as and for the purpose set forth.

CLABURN S. McMAHAN.

Witnesses:

JOHN S. LYLE,

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