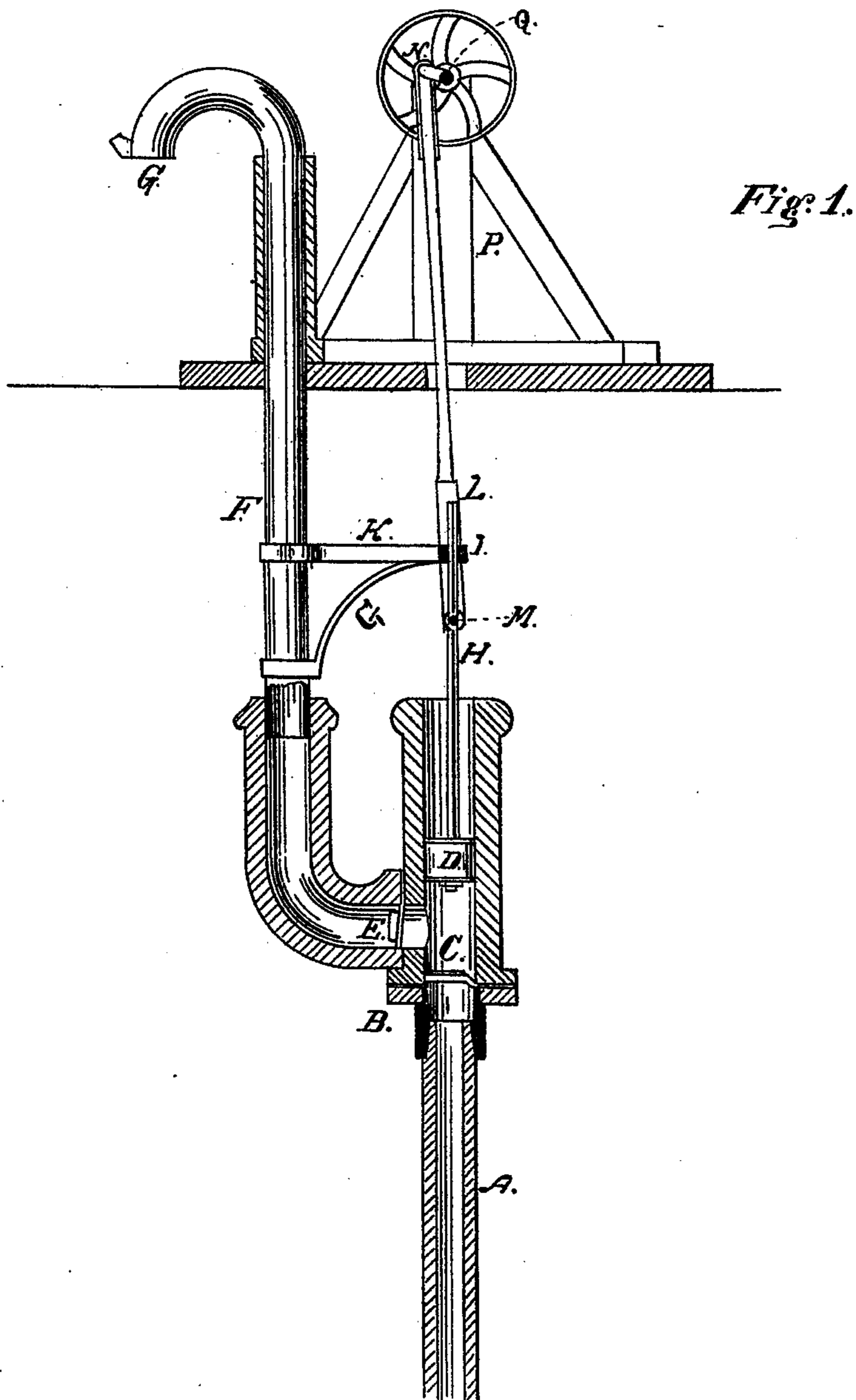


M. MAYER & F. WIRTZ.  
PUMP.

No. 180,774.

Patented Aug. 8, 1876.



WITNESSES:

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INVENTORS:

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J. B. Smith

# UNITED STATES PATENT OFFICE.

MICHAEL MAYER AND FREDERICK WIRTZ, OF TAYCHEEDAH, WISCONSIN.

## IMPROVEMENT IN PUMPS.

Specification forming part of Letters Patent No. 180,774, dated August 8, 1876; application filed June 15, 1876.

*To all whom it may concern:*

Be it known that we, MICHAEL MAYER and FREDERICK WIRTZ, of Taycheedah, in the county of Fond du Lac, in the State of Wisconsin, have invented certain Improvements in Pumps, of which the following is a specification:

Our invention has for its object the raising of water out of wells, and is a pump constructed on novel principles. The pump is made with a lifting-plunger, which raises the water up into a chamber, when a valve at the bottom of the chamber closes and holds the water, and on the return stroke of the plunger the water is pressed out of the chamber through a valve into a pipe, and is forced up through the pipe to any height, and out through a nozzle.

Figure 1 is a vertical sectional view of our invention.

A is the pipe which descends to the water; B, a valve at the head of pipe A, and at the bottom of chamber C. D is the plunger; E, a valve at the foot of the pipe through which the water is forced; F, the pipe through which the water is forced and out of the nozzle G. H is rod from the plunger, passing through a guide, I; K, a rod connected to plunger-rod H, with a crotched end, L, with a cross-bolt, which passes through the ends of the crotched

end L and the rod H. The rod K raised and lowered by means of a crank, N, on a shaft, O, which is supported by a trestle, P, and confined by boxes Q Q, and operated by crank R; S, a guide-brace for the rod H, secured to pipe F by clips round same.

The operation of this pump is as follows: Turn crank R, and by that means the plunger D is raised, and the water passes up through pipe A and valve B and fills the chamber C, and as the plunger is forced down the water is pressed through valve E and up through pipe F, and out through nozzle G. A balance-wheel may be placed on shaft O to facilitate the working of the pump.

We claim—

1. The combination and arrangement of rod H, pipe F, guide I, guide-brace S, for steadying the stem H clasped round pipe F, substantially as described.

2. Piston D, rod H, guide I, rod K, with its crotched end L and bar M, in combination with crank N, and shaft O, substantially as described.

MICHAEL MAYER.  
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Witnesses:

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