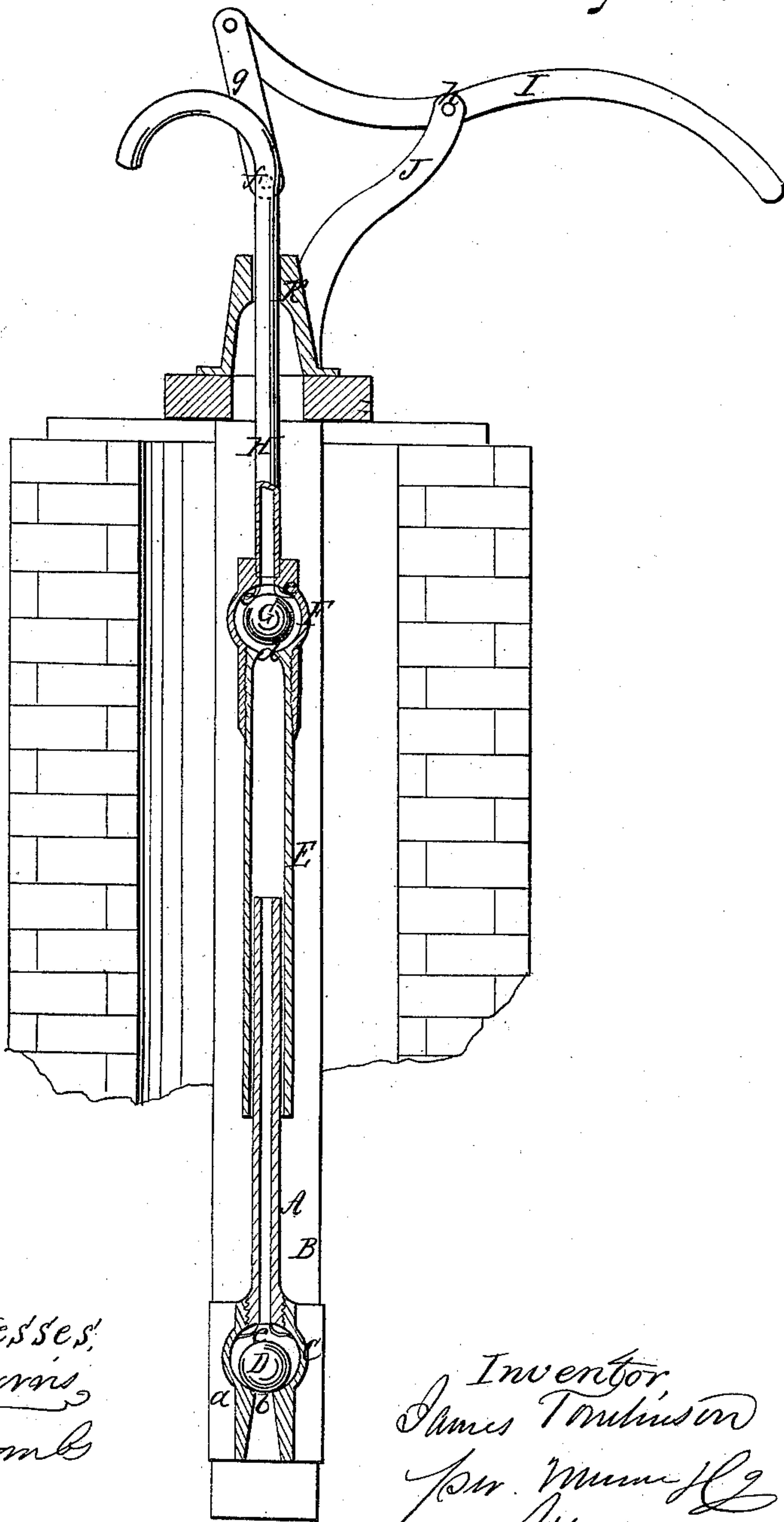


J. Tomlinson,

Pump Lift,

N^o 42,417.

Patented Apr. 19, 1864.



*Witnesses:
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UNITED STATES PATENT OFFICE.

JAMES TOMLINSON, OF RACINE, WISCONSIN.

IMPROVEMENT IN PUMPS.

Specification forming part of Letters Patent No. 42,417, dated April 19, 1864.

To all whom it may concern:

Be it known that I, JAMES TOMLINSON, of Racine, in the county of Racine and State of Wisconsin, have invented a new and useful Improvement in Pumps; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, making a part of this specification, and representing a longitudinal vertical section of a pump constructed according to my invention.

The object of this invention is to construct a pump with the least possible amount of valve-surface and with a long stroke, so that the same can be used in deep wells and comparatively little power is required for its operation.

The nature of my invention and its peculiar advantages will be readily understood from the following description:

A represents a stationery piston, cast or otherwise provided with a flange, *a*, and bolted on the upright post or scantling B, which extends down to the bottom of the well. This piston is perforated throughout its whole length and is furnished with a chamber, C, to contain the globe-valve D, of india-rubber or other suitable material. This valve closes down upon the seat *b*, and when it rises it strikes the fender *c*, so as to prevent it closing the upward passage and to allow the water to ascend freely through the perforated piston. The outside surface of the piston is turned off perfectly round and parallel from its upper end down to the valve-chamber, and it is fitted nicely into the movable cylinder E, which may be provided with suitable packing, so that it works up and down air-tight on the piston.

Said cylinder terminates at its upper end in a chamber, F, similar to the valve chamber C at the bottom end of the piston, and this chamber is occupied by a globe-valve G, of india-rubber or other suitable material, similar in

every respect to the globe-valve D in the chamber C.

The valve G closes down upon the seat *d*, and a fender, *e*, in the upper part of the valve-chamber C prevents it from rising to such a height that it interferes with the upward passage of the water.

H is the ascension-pipe, which screws in the upper end of the cylinder E, and connected by means of a pivot, *f*, and link *g* with the hand-lever I. This hand-lever has its fulcrum on a pivot, *h*, in a forked standard, J, which rises from the pump-stock K, and said pump-stock is intended to represent the trunk of a tree, with roots to bolt down to the plank on the top of the well-curb. The upper end of the ascension-pipe is curved downward so that it forms a spout from which the water will be conveniently received in a suitable vessel. If the handle I is depressed, the cylinder E rises and the valve G closes. The air in the hollow piston is rarefied, the valve D opens, and the water from below, impelled by the atmospheric pressure, rises into the hollow piston. On raising the handle the cylinder E is depressed, the valve D closes, and the water contained in the hollow piston opens the valve G and rises through the ascension-pipe H to the spout.

This pump is very simple in its construction, it can be made cheap, and it works easy in deep wells.

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

The stationary piston A, with globular chamber C and valve D, in combination with the reciprocating-cylinder E, globular chamber F, valve G, ascension pipe H, and hand-lever I, all constructed and operating in the manner and for the purpose herein shown and described.

Witnesses: JAMES TOMLINSON.
GEO. J. WRIGHT,
PETER ROBILLIARD.