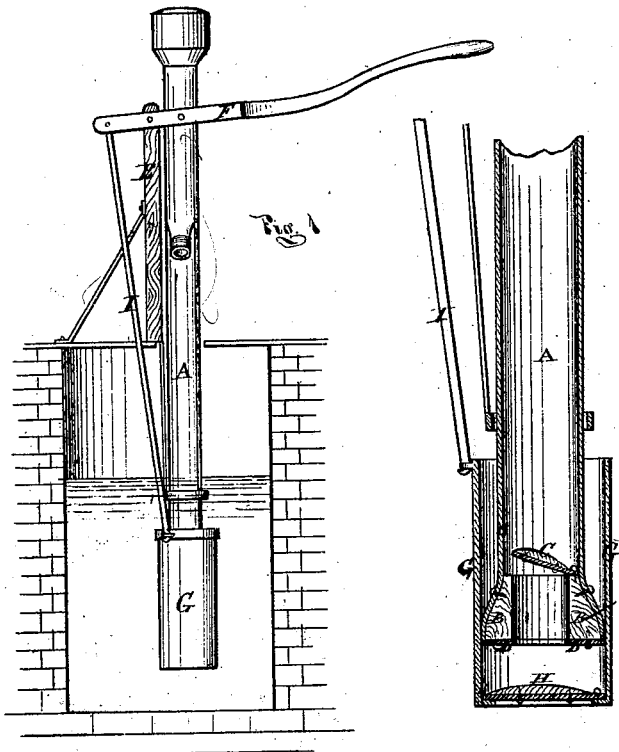


W.C. Barker,

Pump.

No. 108,954.

Patented Nov. 8. 1870.



ATTEST  
Frederick Eberts  
No. Stewart

INVENTOR  
W.C. Barker  
per W.C.  
Thos. S. Sprague

# United States Patent Office.

WILLIAM C. BARKER, OF YPSILANTI, MICHIGAN.

Letters Patent No. 108,954, dated November 8, 1870.

## IMPROVEMENT IN PUMPS.

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

### *To whom it may concern:*

Be it known that I, WILLIAM C. BARKER, of Ypsilanti, in the county of Washtenaw and State of Michigan, have invented new and useful Improvement in a Pump; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon and being a part of this specification, in which—

Figure 1 is an elevation of my pump.

Figure 2 is a vertical section of the same.

Like letters indicate like parts in each figure.

The nature of this invention relates to an improved construction of pumps; and

It consists in the peculiar arrangement, with a reciprocating pump-cylinder provided with a foot-valve, of a bucket reciprocated alternately with and surrounding it, whereby the labor of pumping is diminished as the weight of the cylinder is made available in forcing up the water therein.

In the drawing—

A represents a metallic tube forming the pump-cylinder, expanded at the lower end, where it receives a hollow wooden plug, B, provided on its upper surface with a foot-valve, C.

On the lower end of the plug is secured an annular gasket of leather or rubber, D, projecting outwardly from the edge thereof.

E is a standard erected on the well-curb, to which is pivoted the lever or brake F to a fork, in which the upper end of the cylinder is pivoted at a given distance from the fulcrum.

G is a cylindrical vessel or bucket surrounding the plug B, and is in like manner provided with a foot-valve, H.

I are connecting-rods, whose lower ends are piv-

oted to the bucket, and the upper are pivoted to the brake, at the other side of the standard, at an equal distance from the fulcrum, so that it will travel the same distance as the cylinder, but in an opposite direction. The packing at the end of the plug prevents leakage between it and the bucket.

It will be seen that, as the bucket and cylinder recede from each other, the former fills, and, as they come together, the water contained in the bucket is expelled, passing up through the cylinder to a discharge-spout on top, while the weight of the cylinder is made available for forcing up the water. Also, that the travel or throw of the lever is one-half less than in the ordinary single-acting pump.

I do not wish to confine myself to the use of a metallic pump-cylinder solely, as in shallow wells wooden ones answer as well, besides costing much less; nor to the location of the fulcrum midway between the cylinder and upper ends of the connecting-rods, as, when the cylinder is long and heavy, it may be placed nearer to the fulcrum, whereby the throw of the cylinder will be diminished, and that of the bucket increased.

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

The combination, with the reciprocating cylinder A, provided with the hollow plug B, valve C, and packing D, of the bucket G, surrounding the same and reciprocating alternately therewith, as and for the purpose herein set forth.

WILLIAM C. BARKER.

Witnesses:

FREDERICK EBERTS,  
M. STEWARTS.