

I. D. FEGELY.
Pump.

No. 220,593.

Patented Oct. 14, 1879.

Fig: 1.

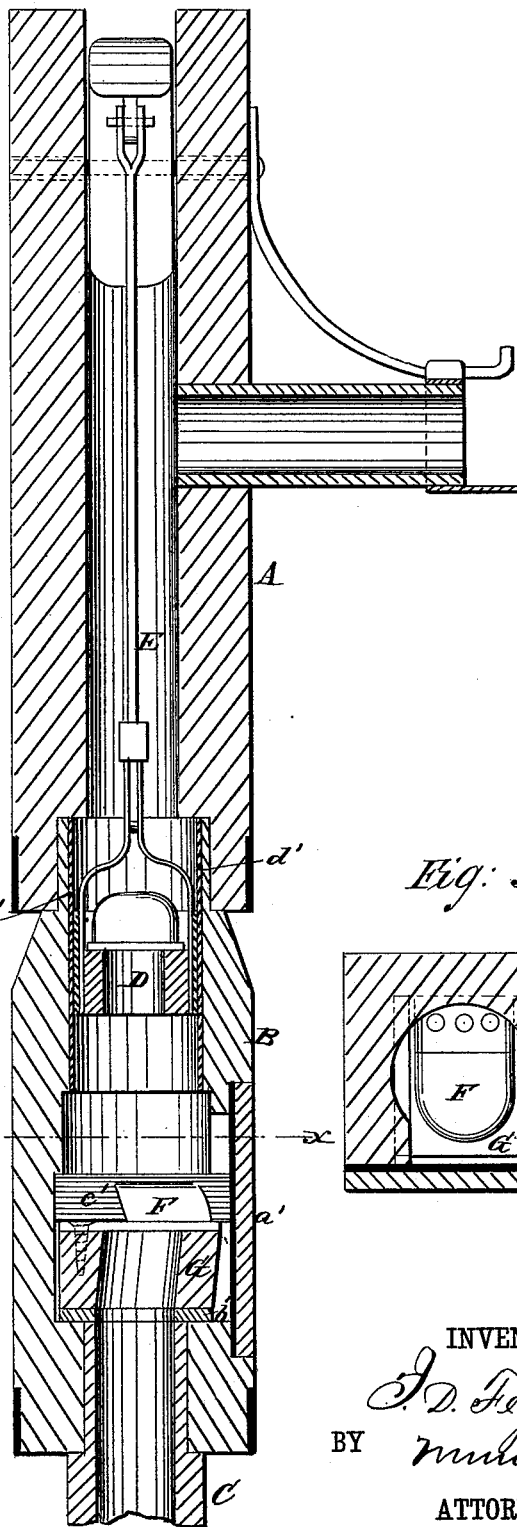
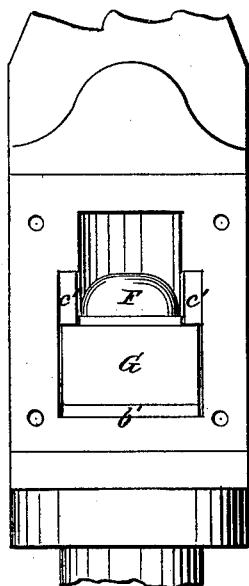


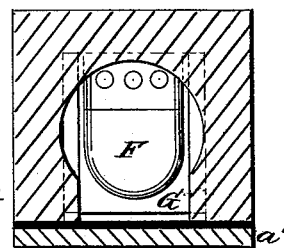
Fig: 2.



WITNESSES:

Achilles Seehel.
C. Seagorick

Fig: 3.



INVENTOR:

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UNITED STATES PATENT OFFICE.

ISAAC D. FEGELY, OF SHAMROCK, (LONG SWAMP P. O.,) PENNSYLVANIA.

IMPROVEMENT IN PUMPS.

Specification forming part of Letters Patent No. **220,593**, dated October 14, 1879; application filed April 8, 1879.

To all whom it may concern:

Be it known that I, ISAAC D. FEGELY, of Shamrock, (Long Swamp P. O.,) in the county of Berks and State of Pennsylvania, have invented a new and Improved Pump, of which the following is a specification.

Figure 1 is a sectional side elevation of the pump. Fig. 2 is a front elevation of the clack-box with the iron plate removed to show the interior of the box and the lower valve and valve-seat. Fig. 3 is a cross-section on line *x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of this invention is to provide a common hand-pump of cheap and simple construction that can easily raise water from a depth of one hundred feet or more.

The invention consists in a pump whose clack-box is combined with a bucket, valve, valve-seat, and keys, as hereinafter described.

I use a pump-stock, A, with a comparatively small bore, but otherwise of the ordinary design, and the clack-box B, of a considerably larger bore than the pump-stock and of the suction-pipe C, whose bore is of the same diameter as the bore of the pump-stock. These are all connected together in the order in which they are named.

The otherwise open front of the clack-box is closed with a plate, *a'*, tightly screwed on, so as to make an air-tight joint.

In order to attach the bucket D to the pump-rod E, the plate *a'* is removed and bucket introduced into the clack-box and these secured to the rod that is passed down from above. Then the bucket is raised, and the lower valve, F, and valve-seat G may be set in place—pref-

erably upon an elastic gasket, *b'*—and secured there with the keys *c' c'*, that also serve to make the joints between the valve-seat and sides of clack-box air-tight. The enlarged diameter of the bore of the clack-box corresponds exactly with the length of the stroke of the pump, and to make the pump always work easily, and to make it more durable, the bore in which the bucket works is lined with a sleeve, *d'*, of polished or smoothly-bored iron or other metal.

Some of the minor advantages of this device are that the bucket and valve can be removed for repairs and returned to their places much more easily than in any other pump. The joints about the lower valve are made air-tight. With a small discharge-pipe of less sectional area than the bucket a smaller amount of water rests above the bucket to be lifted at each stroke than is the case in pumps of the usual style, the lengths of the discharge-pipes being equal.

With a pump constructed as herein described water may easily be drawn up and discharged from a depth of a hundred feet, while from wells of ordinary depth water may be drawn with much more ease than by the pumps commonly in use.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

In combination with the clack-box B, the bucket D, valve-seat G, valve F, and keys *c' c'*, substantially as and for the purpose described.

ISAAC D. FEGELY.

Witnesses:

BENNEVILLE L. FEGELY,
WILLIAM SCHUBERT.