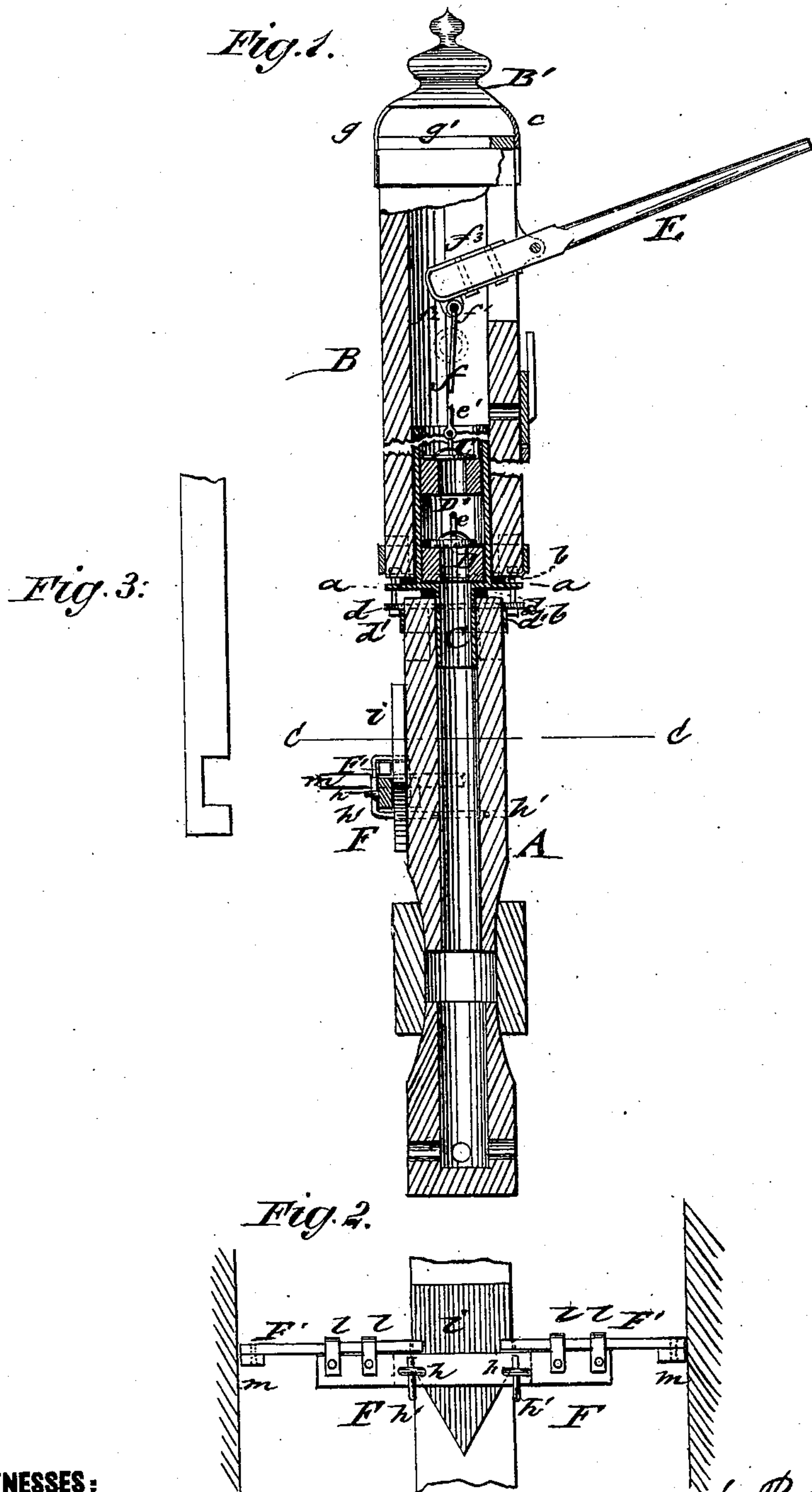


S. PETERSEN.
PUMP.

No. 187,045.

Patented Feb. 6, 1877.



WITNESSES:

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UNITED STATES PATENT OFFICE.

SWAN PETERSEN, OF KNOXVILLE, ILLINOIS.

IMPROVEMENT IN PUMPS.

Specification forming part of Letters Patent No. **187,045**, dated February 6, 1877; application filed November 4, 1876.

To all whom it may concern:

Be it known that I, SWAN PETERSEN, of Knoxville, in the county of Knox and State of Illinois, have invented a new and Improved Pump, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a vertical central section of my improved pump; Fig. 2, a side view of the lower pump-stock as braced to the well; and Fig. 3, a detail view of the recessed handle-rod, by which the brace is raised or lowered.

Similar letters of reference indicate corresponding parts.

The invention has reference to such improvements in pumps that the parts of the same are readily put up and tightly connected, easily repaired, and securely applied to and braced in the well.

The invention will first be described in connection with the drawing, and then pointed out in the claims.

In the drawing, A represents the lower, and B the upper pump-stock, which are coupled together by a tube-joint, C, that is made of greater length and diameter in the upper than in the lower pump-stock. A rim, *a*, extends around the tube C, intermediately between the ends of the pump-stocks, which are tightly seated against the rim by packing-rims *b*. The strong and rigid connection of the pump-stocks is obtained by projecting metallic lugs *d*, secured by bands extending around the ends of the pump-stocks, and by screw-bolts *d'*, attached to the lugs. A stationary piston, D, made of a hard-wood tube, is tightly fitted to the upper part of the metallic tube C, and seated on the shoulder formed at the bottom of the upper pump-stock. It is provided with a top valve and bail, *e*, and serves for the purpose of holding the water independently of the joint and lower pump-stock, so that the water cannot leak out even if the joint below the permanent piston D should get loose. The valve, being placed on a wooden instead of a metal surface, will hold the water better than when placed directly on the upper end of the lower pump-stock, while offering at the same time greater facility in repairing the valve by pulling it out of the upper pump-stock with a hook applied to its bail. A pis-

ton, D', made also of a tube of hard wood, slides in the upper metallic tube C, and lifts the water by a top valve to the spout. The piston D' fits tightly the tube C, and may be readily replaced when worn out. It is hung, by a rigid bail, *e'*, and rod *f*, to a pivot, *f*¹, at the end of the pump-handle E, the pivot-bolt *f*¹ being supported in lugs *f*², which are bent down, and made in one piece with a metallic capping, *f*³, bolted to the end of the pump-handle. The pump-handle swings in bearings at the outside of the pump-stock B, and may be thrown down to clear the interior of the pump-stock, and admit the ready taking out and replacing of the piston. The top of the upper pump-stock is closed by a metallic cap, B', that is secured to the stock to prevent the cutting of the upper part of the stock and its detaching, so as to allow any extraneous matter to be thrown into the pump-stock. The cap B' has a front opening, *g*, and horizontal partition *g'*, for storing the dipper in convenient manner. The lower pump-stock A is secured to the walls of the well by a brace, F, that is supported by staples *h* on metallic brackets *h'*, secured rigidly to the pump-stock. A suitable wedge-piece, *i*, that is driven in between the recessed brace F and the pump-stock, holds the brace in rigid position. Adjustable lateral pieces F' slide in guide-bands *l* on the top part of brace F, and bear, by pivoted I-pieces *m* at the ends, against the walls of the well. The wedge *i* serves also to lock the sliding pieces F' in position, and impart thereby the steady fastening of the lower pump-stock to the well without producing any shaking of the shank. The brace may be lowered by means of a recessed handle-rod, (shown in Fig. 3,) to be applied entirely from the top of the well without necessitating the descending into the same. The convenience of releasing the brace and taking out the lower pump-stock for repairs, as well as the reliable and effective working of the pump when properly coupled at tube-joint, furnishes a pump of substantial, durable, and convenient construction. An exit-opening and valve, *n*, above the tube C in the upper pump-stock, serves as an outlet for the water in the upper part of the stock, to prevent freezing up in winter-time.

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

1. The pump-stock sections A B, connected by a tube, C, having the rim *a* and packing-rings *b*, arranged substantially as shown and described.

2. The combination, with lugs *d* and bolts *d'*, of the bands extending around the ends, substantially as and for the purpose specified.

3. The pump provided with metallic cap,

having recess and cavity for storing dipper, substantially as described.

4. The combination of the lower pump-stock A, having brackets *h'*, with recessed brace F, sliding pieces F', and locking wedge-piece *i*, substantially as and for the purpose set forth.

SWAN PETERSEN.

Witnesses:

JOHN CHARLSON,
FRANK ANDERSON.