A. S. LEASON.

PUMP-HANDLE.

No. 185,937. Patented Jan. 2, 1877.

Fig. 1.

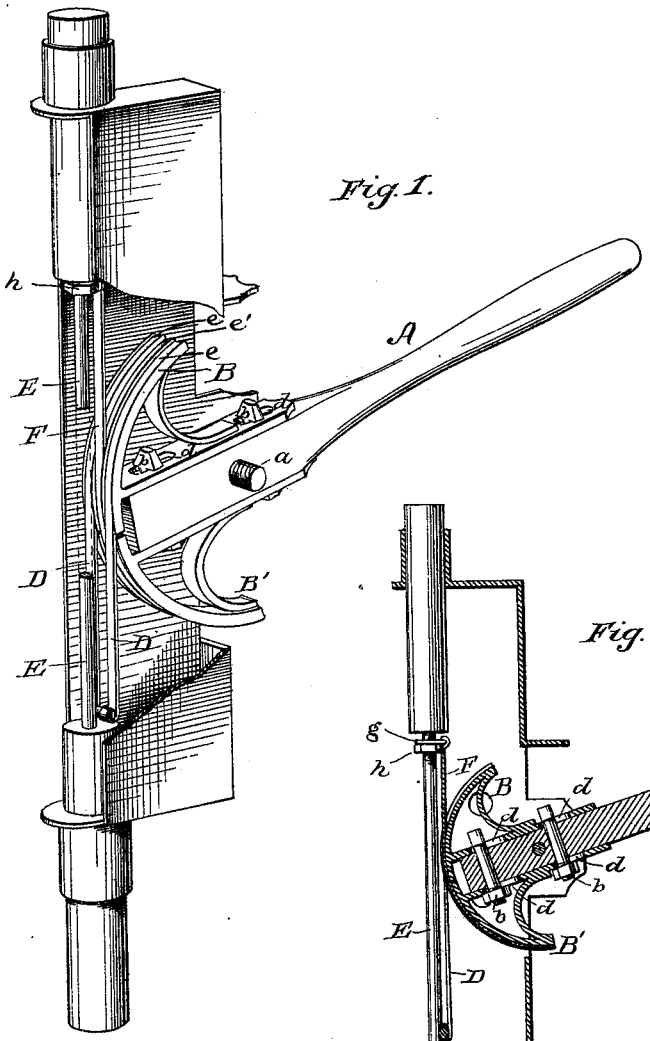
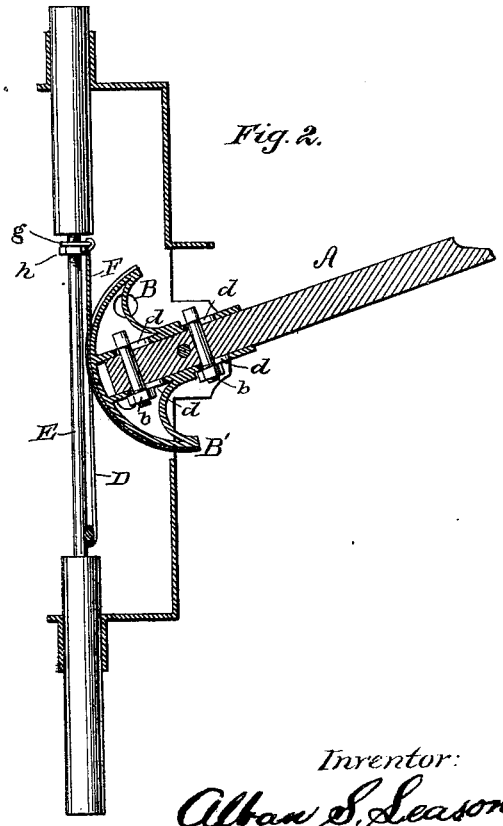


Fig. 2.



Attest:

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UNITED STATES PATENT OFFICE.

ALBAN S. LEASON, OF HINGHAM, WISCONSIN.

IMPROVEMENT IN PUMP-HANDLES.

Specification forming part of Letters Patent No. **185,937**, dated January 2, 1877; application filed November 1, 1876.

To all whom it may concern:

Be it known that I, ALBAN S. LEASON, of Hingham, in the county of Sheboygan and State of Wisconsin, have invented a new and useful Improvement in Pump-Handles; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, in which—

Figure 1 is a sectional perspective view of my invention. Fig. 2 is a sectional elevation of the same.

This invention relates to that class of pump-handles wherein the inner end of said handle is provided with a segment-rim, over which is placed a flexible connecting-strap of any suitable material, to unite said handle with the pump-rod, so as to secure a uniform leverage throughout the stroke; and it consists, mainly, in the structure of said segment, whereby it is rendered conveniently adjustable upon the handle, to lengthen or shorten the short arm of the lever, and thereby adapt the power of the pump-handle to wells of different depths. It also consists of a flexible connection having three straps, the two outer ones drawing in one direction, and the inner one drawing in the opposite direction, for the purpose of neutralizing side strains; and it further consists in the mode of straining these connections to keep them always in taut working order.

That others may fully understand my invention I will particularly describe it.

A is my pump-handle, working on the fixed pivot-bolt *a*. B B′ are the two parts of my segment, secured to the upper and lower sides of my handle A, respectively, by means of bolts *b b*, which pass through slots *d* in the base-plates, so that said segments are adjustable back and forth on said handle, to lengthen or shorten the short arm of the same, as may be desirable, to adapt the handle to a deep or shallow well, and enable the bucket to be raised with about the same expenditure of power in any case. The segments B B′ are provided with three face-grooves, *e*, *e*, and *e′*. The flexible straps or chains D are laid in the outer grooves *e e*, being secured therein, and having their other ends secured to the pump-rod E at the same point. A similar strap, F, is laid in the center groove *e′*, and secured therein at one end, while the other end of said strap is secured to the pump-rod at another point. Said straps are then in relative position as shown—viz., crossed at a point in or near to the horizontal plane of the pivot-bolt *a*—and in whatever part of its sweep the pump-handle may be, the point at which said straps cross will be in the same horizontal plane, and its distance from the pivot-bolt *a* will be correspondingly constant.

The strap F is located between the straps D D, and therefore there cannot be any twisting or side strains upon the pivot *a* as the handle A moves up and down, as would occur if there were less than three straps. It is evident, however, that a number greater than three may be employed without producing side strains, especially if the number is odd.

As the greatest power is required on the down-stroke, while the column of water in the pump is being lifted, I place the two straps D D so that they will be brought into action to lift the pump rod, as shown in the drawing.

The strap F is secured to the rod E by means of an adjustable ring or collar, so that the straps may be tightened up if they become slack from any cause, and thereby lost motion may be prevented. This I prefer to do by means of a collar, *g*, and a screw-nut, *h*, substantially as shown.

Having described my improvement, what I claim as new is—

1. A pivoted pump-handle, combined with a segment adjustable on said handle, so as to increase or decrease the length of the shorter arm thereof, as set forth.

2. The pivoted handle A, with the segment-plates B B′ independently adjustable on said handle, as set forth.

3. The pivoted pump-handle A and its segment-plate, constructed with three parallel grooves, *e e e′*, combined with flexible straps D D F, arranged, as shown, to draw uniformly on each side of the central plane, as set forth.

4. The pivoted lever A, with a segment-plate at the inner or short end thereof, combined with the straps D D F and the straining-nut *h* on the pump-rod.

ALBAN S. LEASON.

Witnesses:

F. A. BALCH,

W. B. PALMER.