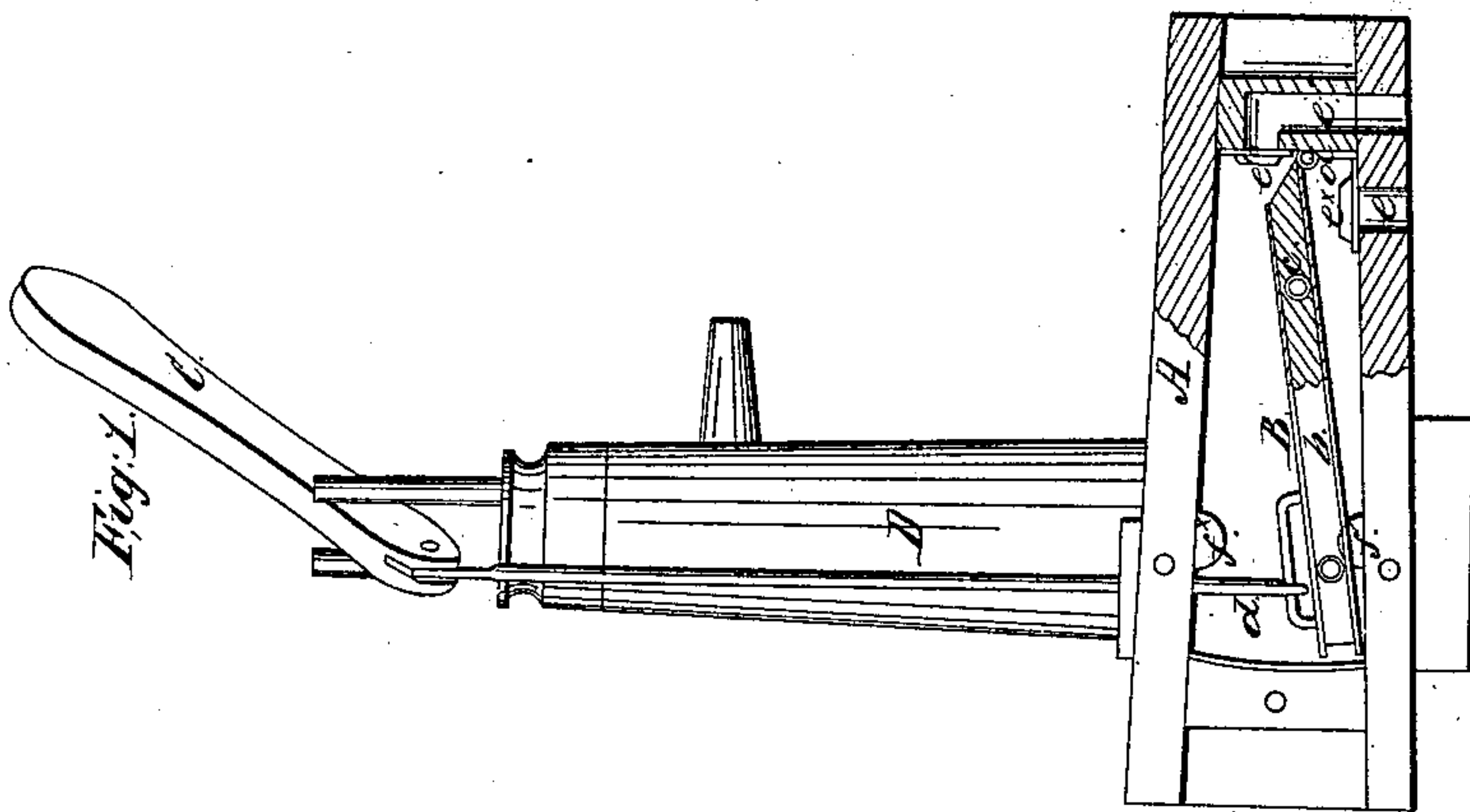
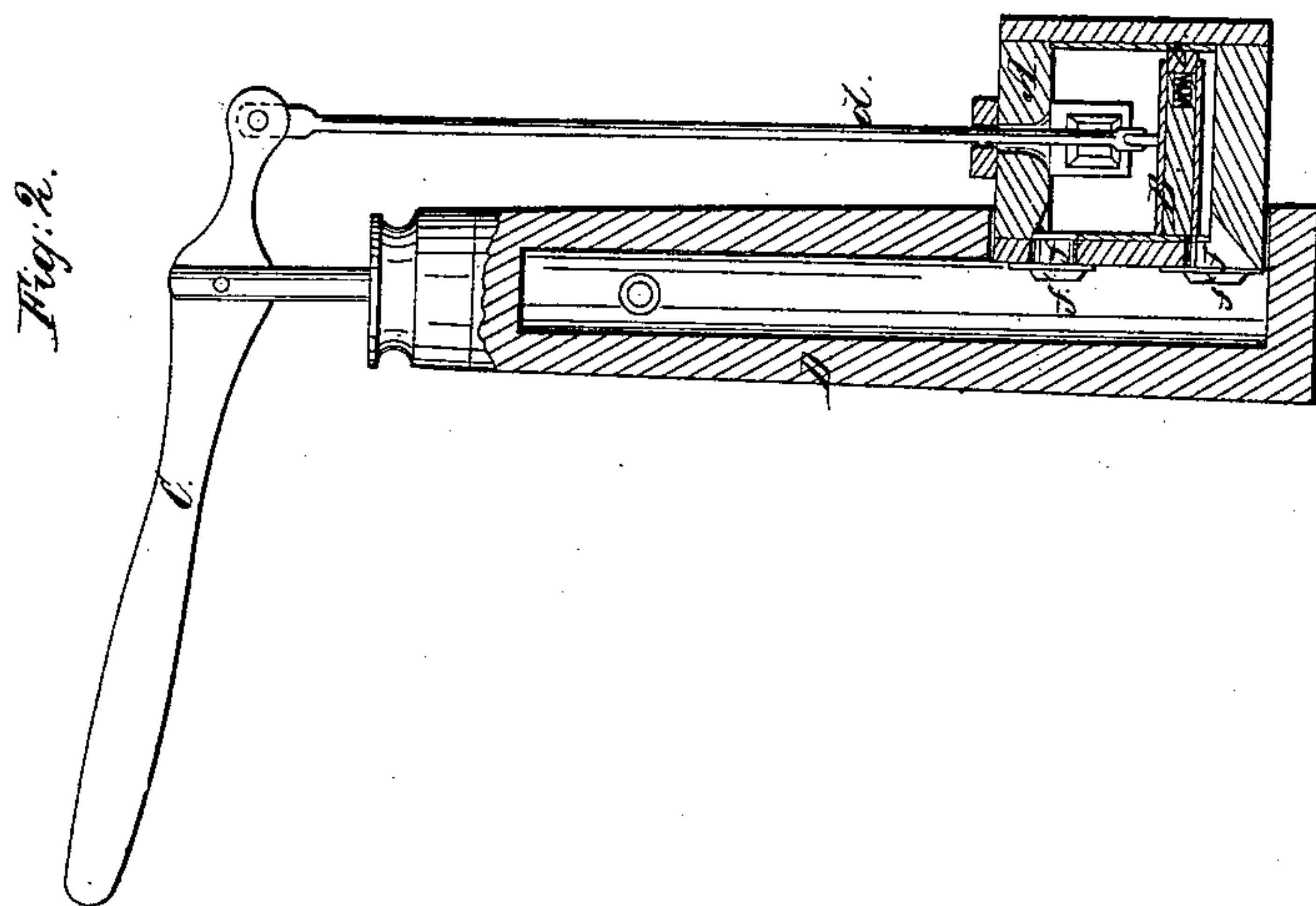


*J. P. Nevins*

*Pump Lift*

*N<sup>o</sup> 12,681.*

*Patented May 10, 1864.*



*Witnesses:*  
*J. W. Coombs*  
*Geo. Reed*

*Inventor:*  
*J. P. Nevins*  
*per Munn & Co*  
*attorneys*

# UNITED STATES PATENT OFFICE.

J. P. NEVENS, OF STARK, MAINE.

## IMPROVEMENT IN PUMPS.

Specification forming part of Letters Patent No. 42,681, dated May 10, 1864.

*To all whom it may concern :*

Be it known that I, J. P. NEVENS, of Stark, in the county of Somerset and State of Maine, have invented a new and Improved Pump; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a sectional front elevation of my invention. Fig. 2 is a transverse vertical section of the same.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to an improvement in that class of pumps in which a hinged plunger is employed which works in a suitable box, being connected at its loose end by means of a rod to a suitable hand-lever, so that an oscillating motion can be imparted to it.

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

A represents a box, made of wood or any other suitable material, square or oblong, or in any other suitable form or shape. The interior of this box is occupied by a plunger, B, which fits nicely within the box, and which is connected with the same by means of a hinge, *a*. This hinge is secured to one end of the box, at about the middle of its height, and when the plunger stands in a horizontal position it divides the box in two equal parts. The front end of the box is curved, being a part of a circle described from the hinge as a center, and the edges of the plunger are provided with suitable packing-strips, *b*, which are forced out against the inner surfaces of the box by means of springs *c*, so that a tight joint is effected all round between the plunger and interior surface of the box. The loose end of the plunger is suspended from a rod, *d*, which connects with a hand-lever, C, that has its fulcrum in the upper end of the pump-stock D, as clearly shown in Fig. 2 of the

drawings. By means of this lever an oscillating motion can be imparted to the plunger. The box A is provided with two inlet-ports, *e e'*, which communicate with the suction-pipe leading down into a well, and it is also furnished with two discharge-ports, *f f'*, which form the communication between the same and the stock D. The ports *e* and *f* lead to that portion of the box below the plunger and the ports *e'* and *f'* to that portion above the plunger, and the ports *e e'* are provided with valves *e\* e'\** opening inward, while the ports *f f'* are provided with valves *f\* f'\** opening outward. (See Fig. 2.) On raising the plunger B from the position shown in Fig. 1 the valve *e'* opens and water enters into the space below the plunger, and any water which may be found in the space above the plunger is forced out through the valve *f'\**. When the plunger has reached its highest position, the space below is filled with water, and on its return-stroke the plunger forces this water out through the valve *f\**, and at the same time the valve *e'\** opens, and the space above the plunger fills with water. By this arrangement a double-acting force-and-suction pump with an oscillating plunger is produced, and a pump can thus be constructed in a very simple manner without many tools, and so that a very large quantity of water can be raised to a considerable height with comparatively little exertion of the operator.

I do not claim as my invention a pump with an oscillating plunger; but

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

The combination of the inlet-ports *e e'* and outlet-ports *f f'*, with the oscillating plunger B, pump-box A, and stock D, all constructed and operating as and for the purposes shown and described.

JABES P. NEVENS.

Witnesses:

WM. B. SNOW,  
JOTHAN S. HARDY.