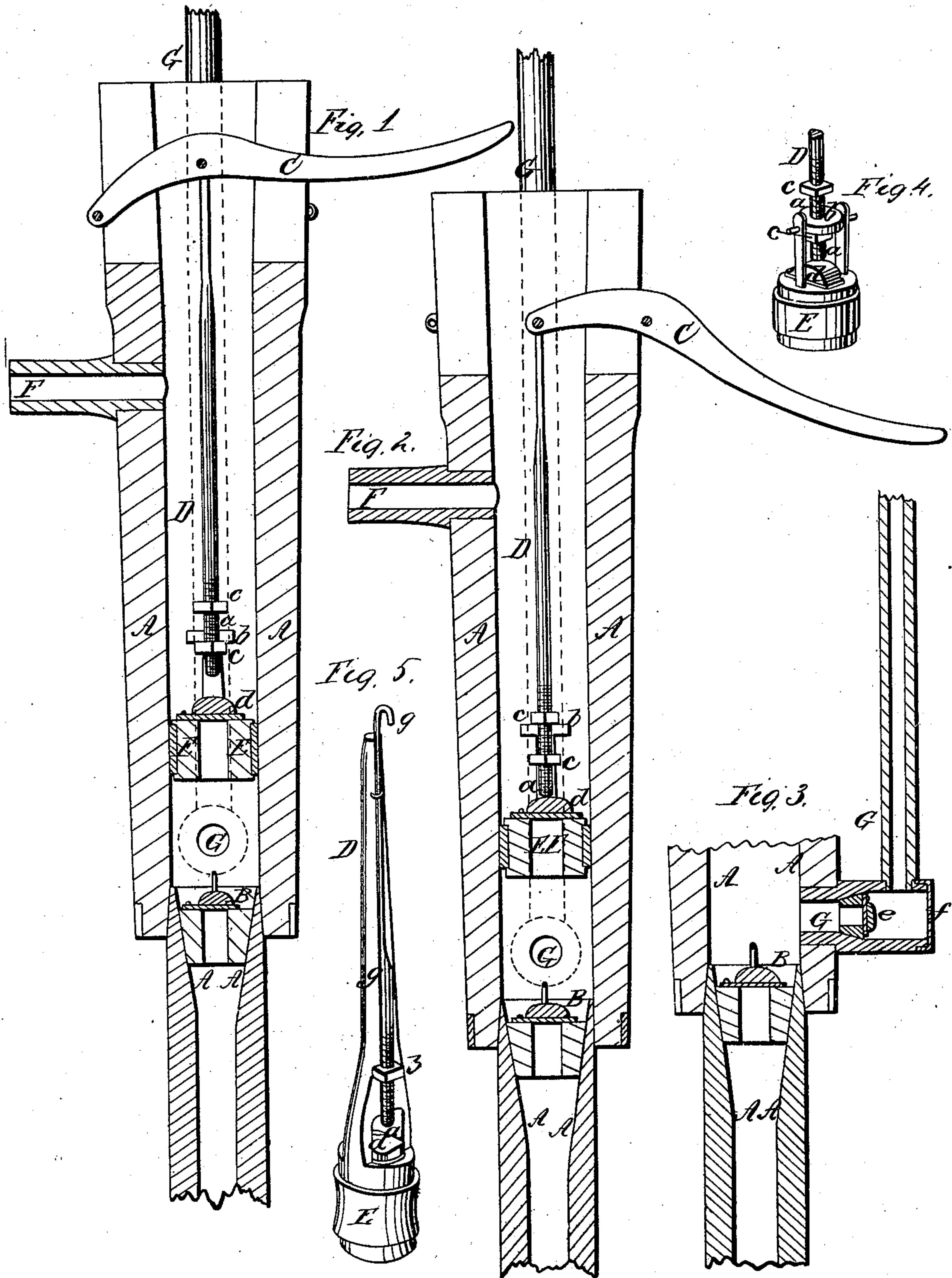


No. 16,785.

PATENTED MAR. 10, 1857.

J. F. BRICKLEY.

CONVERTING A LIFTING PUMP INTO A LIFTING AND FORCING PUMP
OR VICE VERSA.



UNITED STATES PATENT OFFICE.

JOHN F. BRICKLEY, OF WINCHESTER, INDIANA.

CONVERTING A LIFTING PUMP INTO A SUCTION AND FORCING PUMP, OR VICE VERSA.

Specification of Letters Patent No. 16,785, dated March 10, 1857.

To all whom it may concern:

Be it known that I, JOHN F. BRICKLEY, of Winchester, in the county of Randolph and State of Indiana, have invented certain new and useful improvements in the manner of constructing pumps, so to readily change them from a common lifting to a lifting and forcing pump, and vice versa, and that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1, represents a section through the pump when arranged as a common lifting pump. Fig. 2, represents a similar section of the pump when arranged for a lifting and forcing pump. Fig. 3, represents a broken transverse section through the pump, to show a valve, not shown in the other figures. Fig. 4, represents a detached view of the valve and valve box, connected to the brake. Fig. 5, represents a modification which will be specially referred to.

Similar letters of reference where they occur in the several drawings, denote like parts in all.

To enable those skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

A, represents an ordinary wooden pump stock, any other kind of stock, being equally as well applicable for the purpose.

B, represents the ordinary foot valve of a common pump.

C, in Fig. 1, represents the brake or handle of the pump, to which the rod D, is connected, said rod, at its lower end being furnished with a screw thread *a*, which passes through a female screw cut in the bail *b*, of the valve box E, which secures said valve box to said rod. Above and below the bail *b*, are screw nuts *c*, *c*, to prevent the rod D, from going too far through said bail, they being adjustable at proper distances on said rod for that purpose.

d, is a common flap valve on the valve box E, and hinged thereto, in the common well known manner.

F, is the pump nozzle.

This pump so far as shown, may be considered as an ordinary lifting pump, in its capacity. Now to change the pump to a lifting and forcing pump—the rod D, is de-

tached from the brake, and it is turned around until its lower end runs down against the flap valve *d*, as shown in Fig. 2, and holds down said valve. In this position the box E, becomes a solid plug or plunger, and instead of allowing the water to pass through it, it forces the water out of and up through, the pipe or passage G which has also a foot valve *e*, in it to catch and hold the column of water, when the force is off, and thus it becomes a lifting and forcing pump. The brake C, as shown in Fig. 2, is changed, so as to give more leverage, when the pump is used for lifting and forcing, than when used simply for lifting. The pipe G, may lead up into any upper apartment, and may be furnished with the usual stop, or draw off cocks; but even without stop cocks, when the pump is a lifting one only, the want of stop cocks, could do no harm, as the water would only rise in the pipe G, as high as the eduction nozzle F, though they might be profitably used to draw the water off from the pipe to prevent freezing.

f, is a removable cover, for getting at the valve *e*, for repairs.

Fig. 5, represents the plan to be pursued where the valve rod or stem D, is made of wood, as in the cheaper kind of pumps. In this case, a separate rod *g*, is used for closing the flap valve *d*, and this rod can be turned from the top of the pump, without detaching it from the brake. The rod or stem D, as shown in Fig. 1, may also be connected to the brake by a swivel-joint, so as to save detaching it, if found necessary, when it is to be turned to run it down on the flap valve.

Having thus fully described the nature of my invention, what I claim therein as new and desire to secure by Letters Patent, is—

So arranging a rod in connection with the valve of the pump, as that said valve may be closed or opened at pleasure by the user, for converting an ordinary lifting pump, into a lifting and forcing pump, or vice versa, as herein set forth, and for the purpose explained.

JOHN F. BRICKLEY.

Witnesses:

A. B. STOUGHTON,
W. P. BRICKLEY.