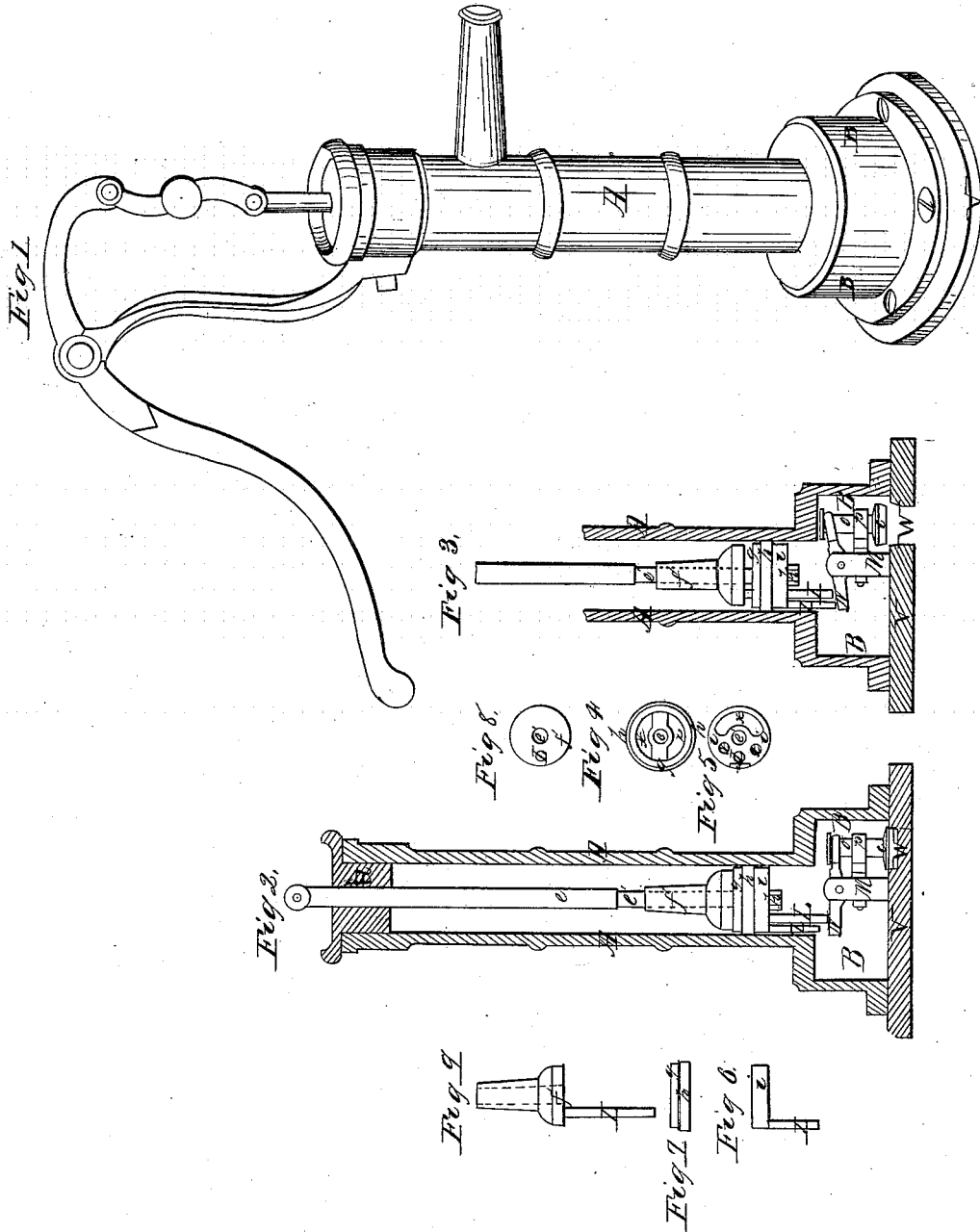


*Pike & Fisk,*

*Pump Lift.*

*N<sup>o</sup> 1285.*

*Patented Aug 13, 1839.*



# UNITED STATES PATENT OFFICE.

JAMES PIKE AND WILLARD FISK, OF CUMBERLAND, RHODE ISLAND.

## PUMP.

Specification of Letters Patent No. 1,285, dated August 13, 1839.

*To all whom it may concern:*

Be it known that we, JAMES PIKE and WILLARD FISK, of Cumberland, in the State of Rhode Island, have invented certain  
5 Improvements in the Manner of Constructing the Common Pump for Raising Water from Wells and other Reservoirs; and we do hereby declare that the following is a full and exact description thereof.

10 We ordinarily construct our pump of metal, as being preferable to any other material.

Figure 1 in the accompanying drawing shows the form in which we usually make  
15 it, but it may, of course, be varied in this respect. Fig. 2 is a vertical section through the cylindrical chamber, showing the arrangement of the piston, lower box, and other parts. Fig. 3 is a similar section, in  
20 part, exhibiting the piston and lower box in another position. The other figures show certain parts in detail.

In Figs. 2 and 3, and also in the detailed drawings, like parts are designated by the  
25 same letters of reference.

The principal improvements which we have made are intended to facilitate the supply of water through the lower valve, and to provide a more convenient way of letting off  
30 the water by opening both the valves than has been hitherto attained, in order to prevent its becoming frozen in the pump in cold weather.

A, A, is the cylinder within which is contained the piston and its appurtenances. Below the chamber in which the piston works there is an enlarged chamber B, B, within which is contained the lower valve C. This enlarged chamber will admit of the lower  
40 valve C, and the opening W in the plate V, which forms its seat being made as large as may be desired, so that it may be as great, or greater than the water way in the upper box.

45 *e*, is the piston rod, which toward its lower end, at *e'*, is made smaller than above to receive the upper valve *f*, which is made tubular, fitting close to but sliding freely upon the part *e'* of the piston rod, its lower side  
50 being made perfectly true that it may fit closely on the metallic rim *g*, of the piston which constitute its seat. The dotted lines on the sliding valve *f*, designate the tubular opening through it.

55 *h*, is a collar of leather constituting the packing of the pump, and fitted upon the lower part of the rim *g*. This rim is shown separately at Fig. 4, *h* *h*, being the collar of

leather, and *x*, *x*, the waterway. The same is shown edgewise at Fig. 7. The lower plate 60 of the piston is marked *i*, and this is represented as secured to the piston rod by the nut *k*. This lower piston plate is shown separately at Fig. 5, and edgewise Fig. 6.

The lower valve C, slides up and down 65 through a collar P, supported by a standard M, its shank or stem O being fitted into said collar, and the lever, or lifter N, embracing and raising it when necessary.

To the lower side of the upper valve *f*, 70 (Fig. 8) is attached a rod L, which passes down through the piston plates, and the lower end of which, when the pump brake is raised, and the piston depressed, will be brought into contact with the lever N, which 75 will cause the valve *f*, to rise. From the lower valve plate *i*, descends a shank or rod *z*, which, when the pump brake is raised to its greatest height, that is to say, to a greater height than ever takes place in the ordinary 80 operation of pumping, will be brought into contact with the lever N, and will raise the valve; and both valves being then open the whole of the water contained in the pump will descend into the well, or reservoir. 85

Having thus fully described the manner in which we construct our pump, and explained the operation thereof, we do hereby declare that we do not claim any of the parts mentioned by us which are common to other 90 pumps; nor do we claim to be the first to have devised a plan for the prevention of the freezing of water therein by the opening of the valves, but we do claim to have invented a mode of effecting this object which 95 is new, and superior to any of those heretofore adopted—that is to say,

We claim—

1. The manner in which we have constructed and combined the sliding valve *f*, 100 its rod L, and the lower piston plate *i*, with its shank or rod *z*, so as to act upon the lever N, and raise the valves C and *f*, simultaneously, substantially as herein set forth.

2. We also claim the forming of the enlarged chamber B, B, for the purpose of containing the lower valve C, increasing the waterway, and admitting the apparatus concerned in the raising of the valves, in the manner described. 105

JAMES PIKE.  
WILLARD FISK.

Witnesses:

PARDEN SAYLES,  
CHRISTOPHER ROBINSON.