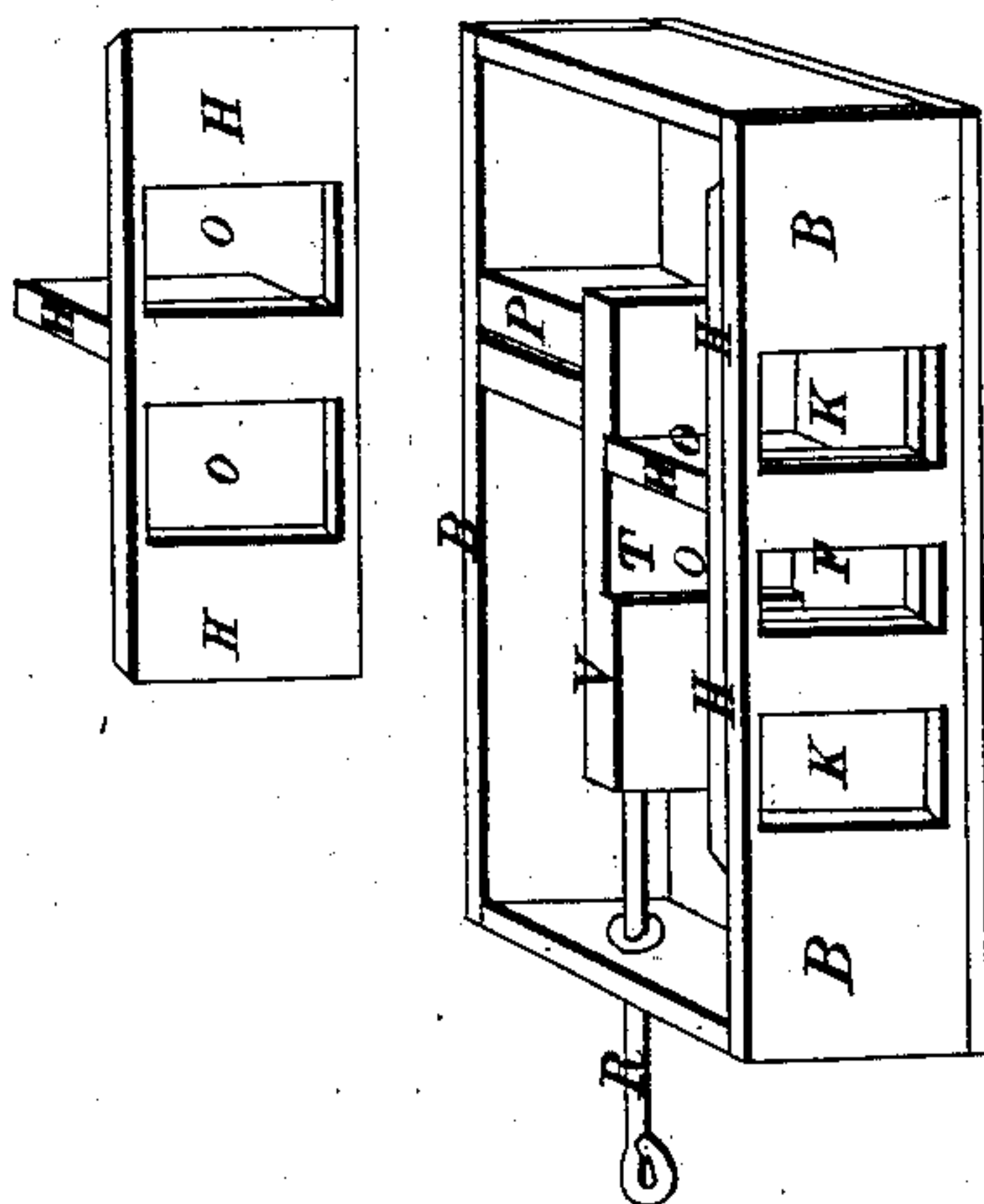
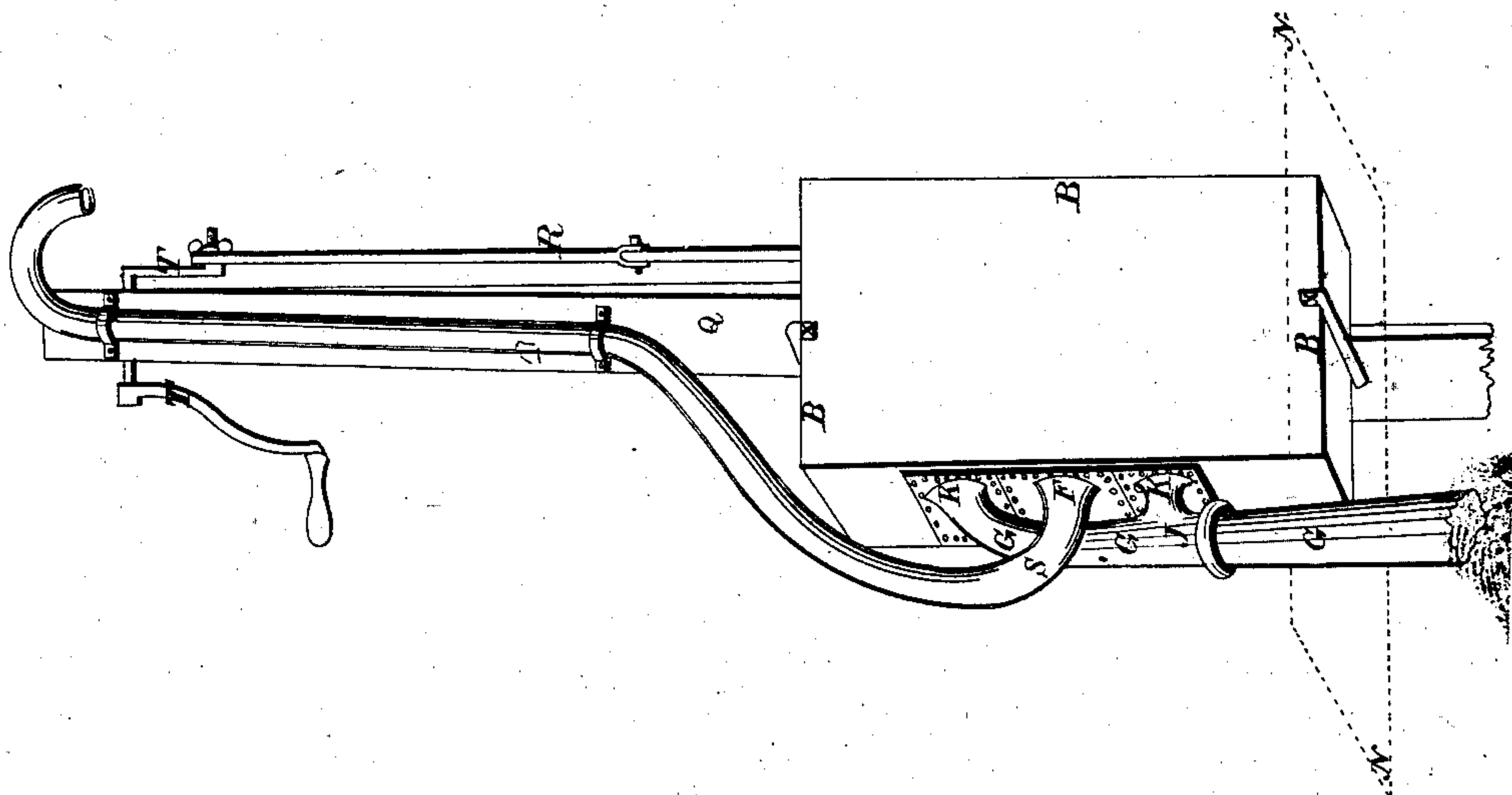


*E. Vance,
Pump Lift.*

N^o 470.

Patented June 7, 1838.



UNITED STATES PATENT OFFICE.

ELISHA VANCE, OF WILMINGTON, OHIO.

MODE OF RAISING AND FORCING WATER BY THE AID OF A TRIPLE SLIDING VALVE.

Specification of Letters Patent No. 770, dated June 7, 1838.

To all whom it may concern:

Be it known that I, ELISHA VANCE, of Wilmington, in the county of Clinton and State of Ohio, have invented a new and Improved Mode of Raising and Forcing Fluids or Liquids, and do hereby declare that the following is a full and exact description.

The nature of my invention is a triple-sliding-valve, which receives and discharges the fluid, alternately, into a box or double cylinder, by the action of a piston, on the fluid or liquid.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I construct my box, or double cylinder of any required size or form of wood or metal and construct my machinery upon the plan laid down in the draft and according to the following specifications to wit.

Figure 1 represents the sliding valve.

Fig. 2 B, B, B is a box or double cylinder. K, K, are apertures to receive the fluid, or liquid alternately. F, is an aperture through which the fluid or liquid is discharged. H, H, H is a triple sliding valve through which are two apertures marked O, O. P, is a piston; R, the piston rod. In the valve H, H, H, is a perpendicular piece attached between O, O, and when the piston is put in motion the valve moves from right to left alternately opening and closing K, K, to admit the fluids; and the perpendicular piece passes across F from side to side, to admit an alternate discharge of the liquid or fluid. T is a recess in the chamber. V,

is a partition between the slide valve and piston, which forms the chambers, with an opening at each end for fluid or liquid to pass or repass.

Figure 3. B, B, B, is the box before described G, G, G, is a descending tube, attached to the apertures K, K. J is a holding valve. S, is an ascending tube attached to the discharging aperture F. T, T, is a crank or lever, to which the piston rod R is attached. Q, is a piece of timber to which the box B, B, B and the tubes G, and S, are fastened by bolts as marked X X. When the lever or crank is put in motion, the piston rises and falls, which produces a vacuum above and below the same, and the liquor is forced by the pressure of the atmosphere into the tube G, G, G, alternately, and by the same motion of the piston the liquid is forced out through F into S, the ascending tube to any given height.

What I claim as new and as of my own invention and desire Letters Patent for is—

The manner of constructing and applying the triple sliding valve in a box or cylinder adapted thereto.

N. B.—The tube G, G, G, is only necessary when the liquid or fluid is to be drawn, or forced from below by atmospheric pressure, into the box B, B, B, which in Fig. 3 is represented as standing on the platform of a well marked N, N.

ELISHA VANCE.

Witnesses:

HARRISON GEFES,
O. F. EACHER.