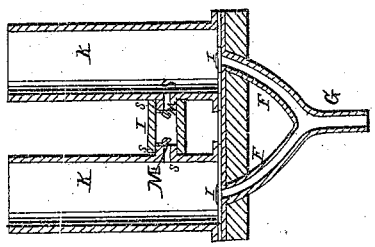
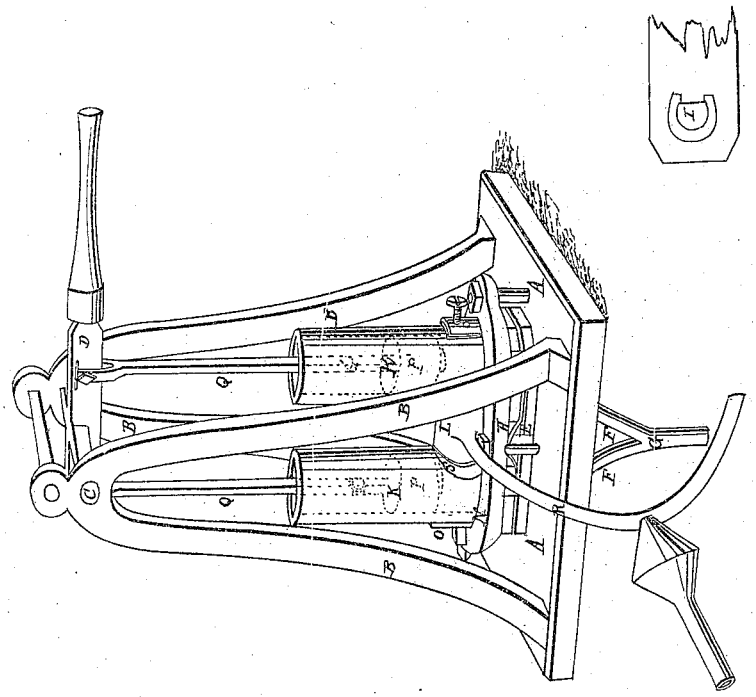
A. Kaslar,

Double-Acting Pump.

No. 443. Patented Oct. 28, 1837.





UNITED STATES PATENT OFFICE.

ABRAHAM KASSLAR, OF CANAJOHARIE, NEW YORK.

FORCE AND SUCTION PUMP.

Specification of Letters Patent No. 443, dated October 28, 1837.

To all whom it may concern:

Be it known that I, ABRAHAM KASSLAR, of Canajoharie, in the county of Montgomery and State of New York, have invented a new and useful Improvement in Suction and Force Pumps, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

A A, foundation or stock; B, standards supporting the fulcrum of the lever for working the pistons; C, fulcrum; D, lever or handle; E, bottom plate, perforated with two round apertures, from which extend branch tubes F F, united at a single tube G leading to the place from whence the water is raised; H, piece of leather placed upon the bottom plate in which are formed two valves II, opening upward over the two apertures in the bottom plate; K K, two upright cylinders with flanges erected upon the bottom plate—the axes of which are in a line with the axes of the apertures in the bottom plate; L, converting cylinder uniting the two vertical cylinders, made separate, and brought firmly against the sides of the vertical cylinders between which it is placed—circular rims or collars S around the apertures in the sides of the vertical cylinders being made to enter and fit into the ends of the cylinder L and leather packing being inserted between them to make the whole air tight; M M, valves opening into the horizontal connecting cylinder; N, collar embracing the vertical cylinders and resting upon the flanges of the same, bolted firmly to the stock A; O O, standards rising from the collar, through which pass screws turning against the sides of the cylinders for bearing them against the ends of the horizontal cylinder and thus confining the three cylinders together,—packing being placed between the cylinders to render them air tight, also a piece of leather between each set screw and the cylinder to preserve the latter; P P, pistons; Q Q, piston rods; R, center tube leading from the connecting cylinder for conveying the water to any place where it is to be forced.

The invention claimed consists—

In making the horizontal cylinder separate from the vertical cylinders and secured by pressing the latter against the sides of the former by means of the screws passing through the standards; or by wedges, the rims or collars around the apertures in the sides of the vertical cylinders fitting into the ends of the horizontal connecting cylinder placed between them.

ABRAHAM KASSLAR.

Witnesses:
WM. P. ELLIOT,
W. THOMPSON.