9220½X

Peters & Dean,

Rotary Pump,

Patented Oct. 31, 1835.

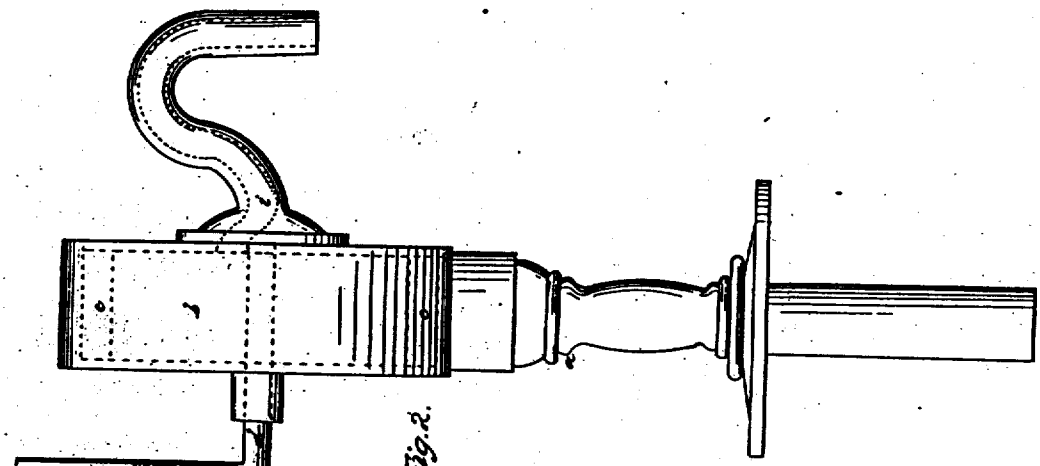


Fig. 2.

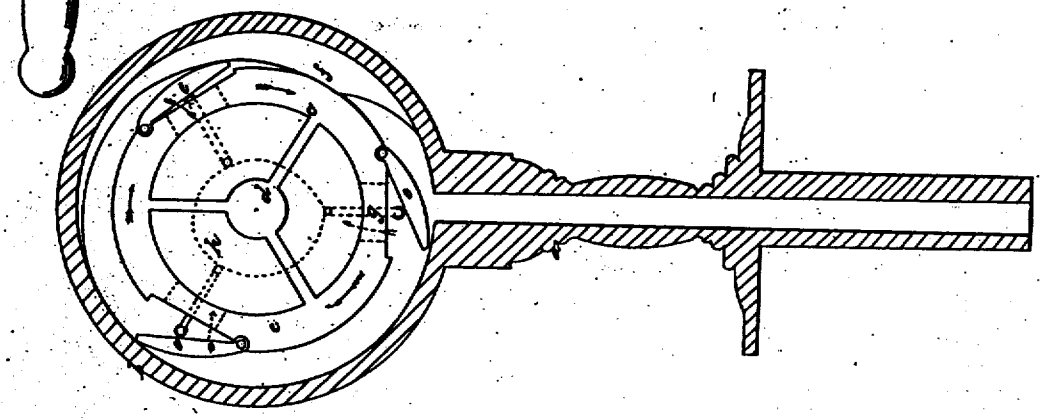


Fig. 1.

W. PETERS' PHOTO-LITHOGRAPHER, WASHINGTON, D.C.

9220½ X Dec. 31. 1835

Charles Peters and Benjamin Dean of Poughkeepsie N. Y.

Letters Patent

The Schedule referred to in these Letters Patent and making part of the same containing a description in the words of the said Charles Peters & Benjamin Dean themselves of their improvement in the Rotary Pump

To all to whom these presents shall come. Know Ye that We, Charles Peters and Benjamin Dean of the Village of Poughkeepsie in Dutchess County and State of New York. have jointly invented and brought into use certain new and useful improvements in the construction of a Rotary Pump. by which the lifting and forcing of water or other liquids may be effected separately or conjointly. by a continuous Rotary motion with more ease with the same power and greater abundance than hath been heretofore done, and that the said improvements and the methods of effecting, applying and using the same are set forth and shewn in the following descriptions and in the drawings annexed to and making part of this Specification. in such full, clear and exact terms as to distinguish the same from all other improvements before known

Wherein Figure 1. represents a vertical projection of one side of the circle or block of the pump with its wheel, valves, pipes and other parts in skeleton the covering plate on that side being removed to exhibit the interior parts. Figure 2. represents a vertical cross section of the same. with also induction and eduction pipes. the crank and spindle or arbor. The letters of reference apply to the similar parts in both figures, Number 1. and number 2. A. A. is the standard pipe which may be connected at the foot in any convenient manner with another pipe by being soldered or screwed on or by any other means this last mentioned pipe leads to the liquid in the well. tank, cistern Cask or other vessel. b. b. is a cylindrical box having two flat sides screwed in any convenient manner to the edge of the ring within this box is the Rotary cylinder C. having an eight cornered end three arms and working on an arbor or spindle d. and having the two flat external sides carefully fitted to work close to the side plates of the box

in the periphery of the cylinder C. are hinged valves, e.e.e. which are to be shut down by the slide curves f. as the valves pass along, or under it and the valves are to be again opened out by the operation of sliding levers g.g.g. shown in figure 1. by dotted lines. these levers at the inner end pass over and are regulated by the cam h. also shown by dotted lines as fixed on the lower plate on that side, and having room in a Counterwork space in the cylinder C. to lie into. The levers g.g.g. have each a small roller fitted into each of their ends, by a mortice to revolve on pins. and are fixed in, near one side of the cylinder C. Immediately under the valves e.e.e. are openings shown by dotted lines and cut as large as the metal will allow into the spaces between the arms and ring of the rotary Cylinder C. and in the cover plate on that side is an opening into the eduction pipe i. where a domed flanch covers that end of the spindle d. and also the eduction opening.

When the machine is to be used, the handle K. is to be turned so as to propel the cylinder C. and valves e.e.e. in the direction of the arrows. by these parts being fitted closely the air will drawn out of the pipe a. and the fluid below will rise therein and go under each valve in succession through the openings and into the interior of the cylinder C. in the course shown by the dotted arrows. whence by the continuance of the operation the fluid will be driven out through the eduction pipe i. Figure 2. The machine may be made of any convenient metal according to the size required and the description of fluid matter it is intended to operate on. bell metal is best for general use. The induction and eduction and eduction pipes must be in proportion to the size and strength of the barrel or shell and wheel of the pump and these should be in proportion to the quantity of liquor intended to be raised and delivered in a given space of time and the power to be applied should be in proportion to the whole.

The number of valves should not exceed four nor be less than two three has been found the most convenient and useful number.

The body or shell of the pump may be form 3 inches or more or any demensions size according to the use for which the pump is design

9220 ½ K

When the shell or circle of the pump is very large, the other parts must of course conform in size and strength. This pump may be made of a size and strength different to deliver a very large column of water too much larger than for common pumps.

We do not claim as our invention any of the parts of the above described pump separately, but we claim as our invention & improvement the spiral grooves of the helix on the wheel leading to and from its centre for the passage of the liquid and so combining them with the valves which cover them, and with the other parts of said pump adjusted and placed in manner aforesaid as to take up the water which comes into the pump to the centre of the wheel and thence deliver it. This plan of taking the liquid to the centre of the wheel and thence delivering it as we direct is the mode of effecting that object we believe to be new and we have found it very useful.

A pump constructed upon our aforesaid plan is much more simple much easier kept in order and much more powerful and will raise much more than the common lifting pump. By forcing a tapper pipe to the spout and drawing the orifice or aperture at which the water or liquid is delivered, it may be forced into any room in the house or to almost any height.

In testimony &c

Witnesses
John J. Staples
Chas A. Sherman

Charles Peters
Benjamin Dean

(1190 words)

(Patented October 31. 1835)

(Drawing)