J. Sheffield,
Oil Pump.

No. 48,105. Patented June 6, 1865.

Fig: 1.

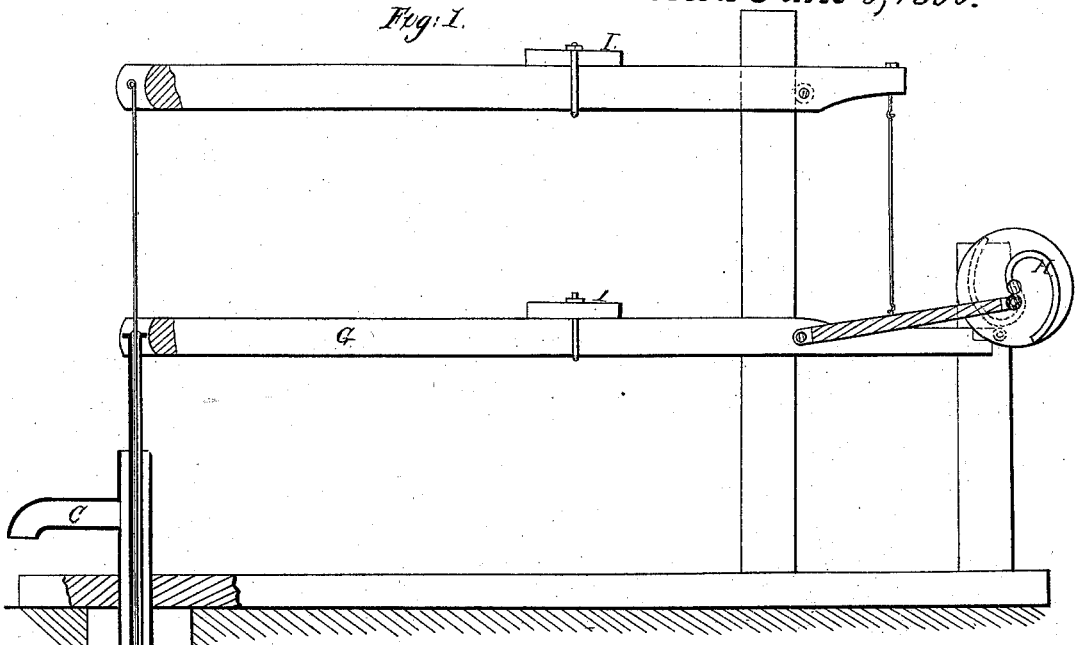
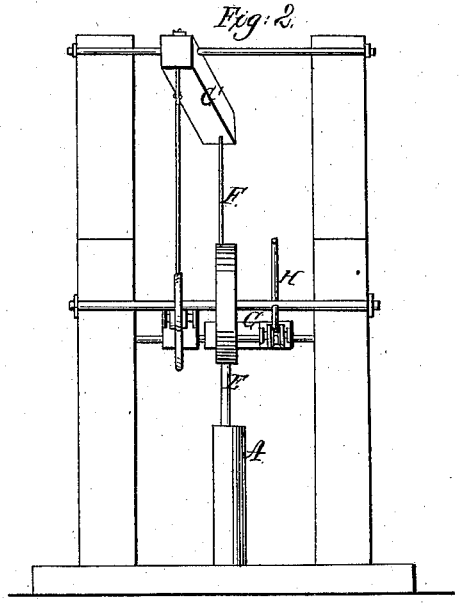
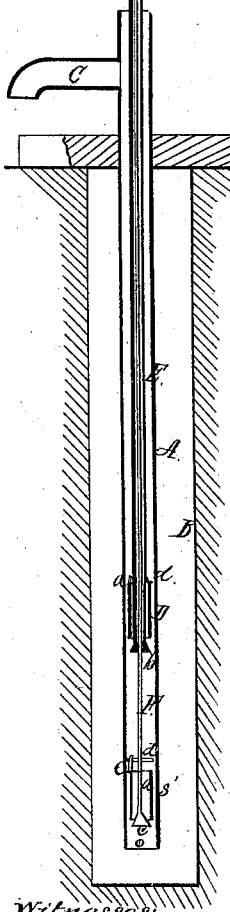


Fig: 2.





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UNITED STATES PATENT OFFICE.

JOHN SHEFFIELD, OF PULTNEYVILLE, NEW YORK.

IMPROVEMENT IN DEEP-WELL PUMPS.

Specification forming part of Letters Patent No. **48,105**, dated June 6, 1865.

To all whom it may concern:

Be it known that I, JOHN SHEFFIELD, of Pultneyville, in the county of Wayne and State of New York, have invented a new and Improved Pump for Oil and other Deep Wells; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side sectional view of my invention; Fig. 2, an end or rear view of the same.

Similar letters of reference indicate corresponding parts.

This invention relates to a new and improved pump for oil and other deep wells; and it consists in the employment or use of two pistons constructed, arranged, and operating in such a manner as to throw a continuous stream.

A represents the pipe, which is fitted in the well B, and extends nearly or quite to its bottom, as shown in Fig. 1. This pipe forms the pump-cylinder, and it extends above the well B, and is provided with a nozzle or spout, C. Within the pipe A there are fitted two pistons, D D′, each of which has an opening, *a*, extending vertically through it. The pistons D D′ work one above the other, and the rod E of the upper piston, D, is tubular, and has a valve, *b*, at its lower end of inverted conical form, as shown clearly in Fig. 1. The rod F of the lower piston, D′, is provided with a valve, *c*, at its lower end, which is precisely like the valve *b* of the tubular rod E, and the rod F passes through the valve *b* and tubular rod E, the two rods being connected to two different arms or levers, G G′. The pistons D D′ are raised by the valves *b c* closing against their lower ends as their rods are raised, and the pistons are forced down as their rods are forced down in consequence of bars *d*, which are attached to the rods above the pistons bearing upon the latter, the bars *d* at one end working in a guide, *e*. The arms or levers G G′ are operated by means of cams H, or any suitable mechanism, so arranged that the pistons will rise and fall alternately, the lower piston, D′, as it rises forcing the oil through the upper piston, D, which has its valve *b* open, and the latter rising to lift the oil above it while the lower piston descends with an open valve, *c*, for the oil to pass through, which is raised through the upper piston, D, when the lower piston, D′, ascends

Thus by this simple arrangement a pump of economical construction is obtained which will throw a continuous stream. The arms or levers G G′ are provided with adjustable or sliding weights I, for the purpose of regulating the dropping of the pistons according to the speed of the engine or other motor, when gravity is depended upon to effect that result.

I claim as new and desire to secure by Letters Patent—

The employment, in a lift-pump, with two tubular pistons, D D′, of the rods E F, their lower extremities, *b b*, constituting valves, and bars *d d*, substantially as and for the purposes described.

JOHN SHEFFIELD.

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