M. E. Rudasill,

Double-Acting Pump,

No. 30,354. Patented Oct. 9, 1860.

Fig. 2.

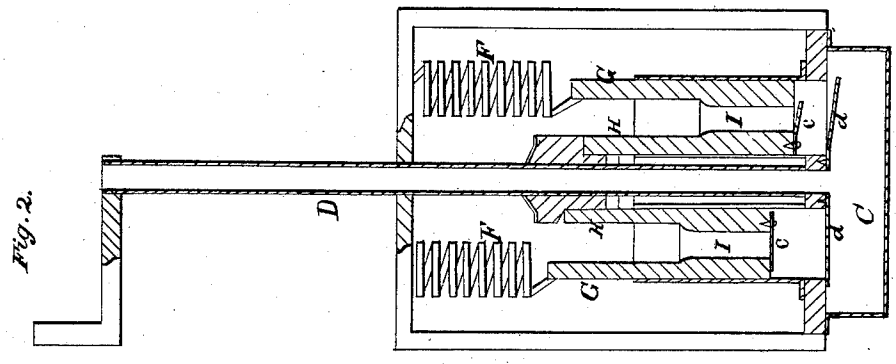
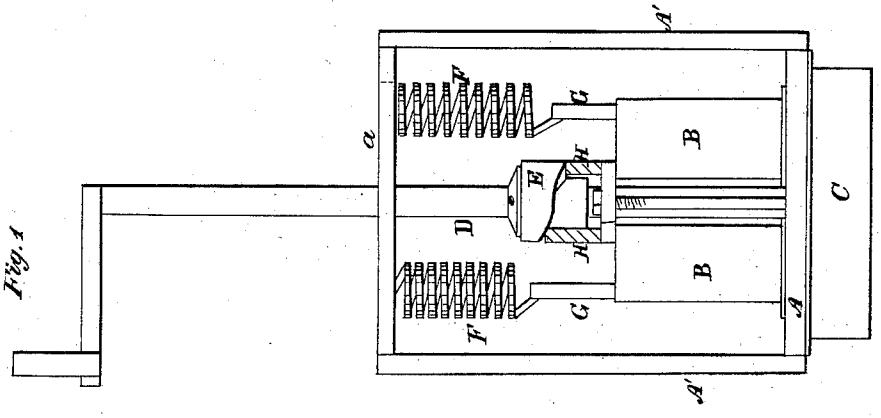


Fig. 1.



Witnesses

C M Alexander

A. A. Yeatman

Inventor

M E Rudasill

UNITED STATES PATENT OFFICE.

MICHAEL E. RUDASILL, OF SHELBY, NORTH CAROLINA.

PUMP.

Specification of Letters Patent No. 30,354, dated October 9, 1860.

To all whom it may concern:

Be it known that I, M. E. RUDASILL, of Shelby, in the county of Cleveland and State of North Carolina, have invented certain new and useful Improvements in Pumps; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of my invention consists in constructing and arranging the several parts of this pump in the manner hereinafter specified.

In the annexed drawings Figure 1 represents a side elevation. Fig. 2 is a vertical section.

In the figures A, represents a wooden or metallic plate upon which the cylinders are secured. Passing up from the ends of this plate are two supports, which are connected as shown at their tops by means of a cross-piece *a*, through which the pump shaft passes.

To the under side of the plate A, is secured a water box C, which is made in a strong and substantial manner.

B, B, represent two cylinders which are placed and secured upon the top of plate A. These cylinders are hollow, as represented, and are provided with hollow pistons which work in them—the pistons are marked I, I, and each one of them is provided with two rods or vertical bars G and H.

F, F, represent springs which connect the bars G, G, to the cross piece *a*, said springs serve to raise the pistons after they have been depressed.

D, represents a vertical shaft which is made hollow and which passes down between the cylinders and connects with and opens into the box C. This shaft D, passes up to the top of the well and is provided at its upper end with a crank handle. The shaft D, is also provided with a cam cylinder E, which is made in the form and shape represented in the figures. This cam serves to operate the bars H, H, and as said bars are placed on different sides of it they are moved alternately. As one is moving down the other is moving up, the piston being drawn up by means of the spring G. When the shaft D, revolves then, the two pistons I I are moved up and down alternately by means of the cam and the springs F, F.

c, *c*, represent valves secured to the bottom of the pistons and *d*, *d*, represent valves secured to the bottom of the plate A.

It will be readily seen that by this arrangement when the cylinders are immersed in water the up and down movement of the pistons will cause the water box C, to fill with water, and that the water will then be forced up through the hollow shaft and out at the top of said shaft. I am enabled by this arrangement to throw a large stream of water with comparatively little power.

Having thus fully described my invention what I claim as new and desire to secure by Letters Patent is—

The arrangement of the plate A, box, C, and cylinders B, B, with the pistons I, I, springs F, F, hollow shaft D, and cam cylinder E, the several parts being connected and made to operate substantially as and for the purpose herein specified.

M. E. RUDASILL.

Witnesses:

U. ARDEN SPENCER,

A. A. YEATMAN.