

L. H. ALLEN & WILLIAM BARTON.

Improvement in Steam Pumps.

No. 123,660.

Patented Feb. 13, 1872.

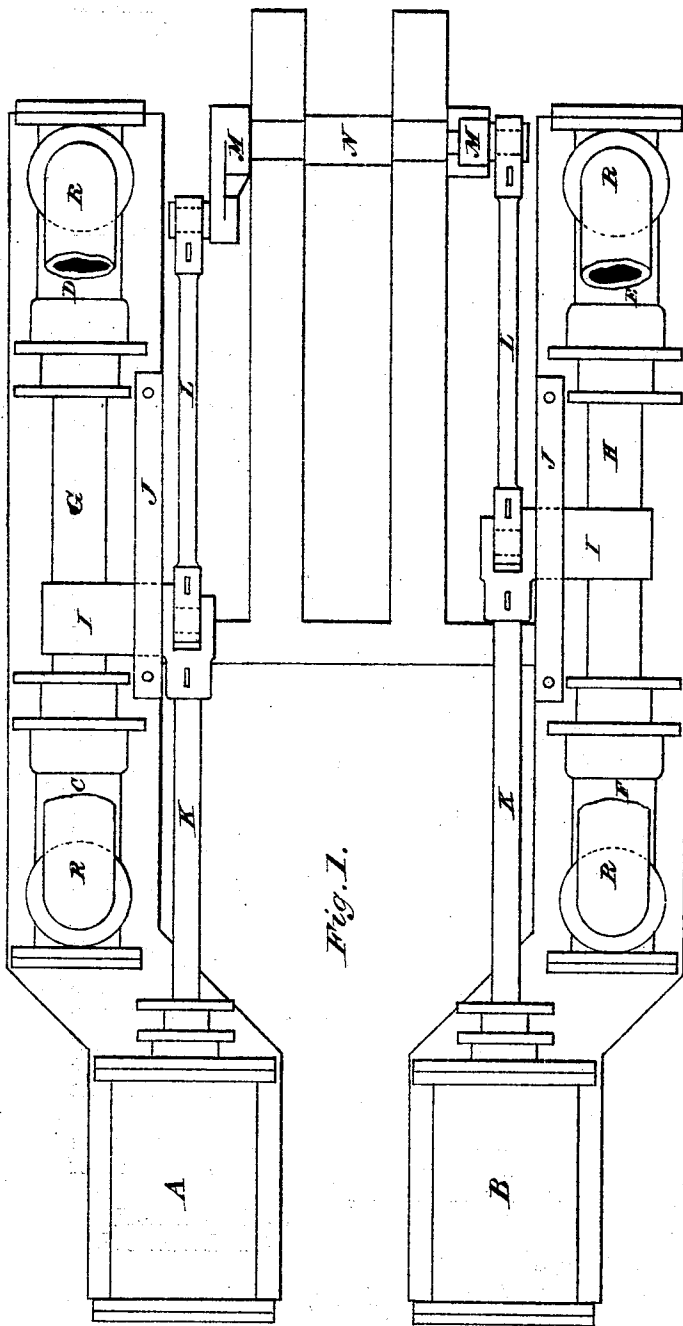


Fig. 1.

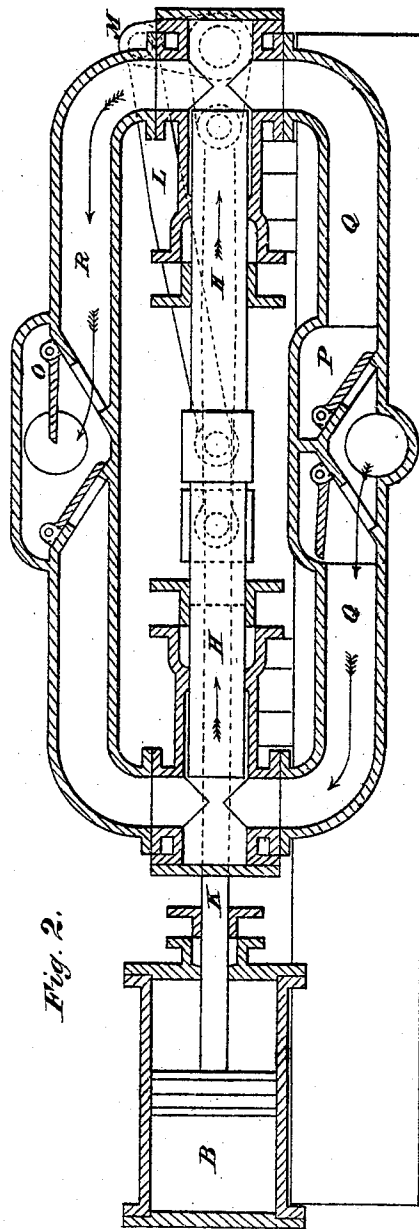


Fig. 2.

Witnesses:

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UNITED STATES PATENT OFFICE.

LUCIEN H. ALLEN AND WILLIAM BARTON, OF TAMAQUA, PENNSYLVANIA.

IMPROVEMENT IN STEAM-PUMPS.

Specification forming part of Letters Patent No. 123,660, dated February 13, 1872.

SPECIFICATION FOR IMPROVEMENT IN PUMPS.

We, LUCIEN H. ALLEN and WILLIAM BARTON, of Tamaqua, in the county of Schuylkill and State of Pennsylvania, have invented certain new and useful Improvements in Pumps; and do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

The nature of our invention consists of a pump to be used for mining and other purposes; and its object is to throw a continuous stream, and to keep the water at an uninterrupted flow, so that when the column of water is once started it will continue to move so long as the pump is in motion.

In order to enable others skilled in the art to which our invention appertains to make and use the same, we will now proceed to describe its construction and operation, referring to the annexed drawing which forms a part of this specification, and in which—

Figure 1 is a plan or top view of our improved pump. Fig. 2 is a longitudinal section of the same.

A B represent two steam-cylinders arranged in a horizontal or other position parallel to each other, or in any other position, as desired. C D E F are four pump-working barrels, C D arranged in line with each other, and E F in line with each other and parallel with each other. G H are two double pump-plungers, the ends of each working into separate working barrels. I I are two cross-head arms securely attached to plungers H G and working through guides J J. K K are two steam piston-rods; they, being attached to cross-head arms I I, impart a direct motion to pump-plungers H G. L L are connecting-rods, one end of each being attached to cross-head arms I I, the opposite ends to cranks M M, and they are placed at right angles with each other, and securely fastened to crank-shaft N, where-

by the steam-cylinders assist each other over the dead-point, and also keep the column of water in constant motion; one pump-plunger being at the end of the stroke, the other in the middle of stroke; the column consequently will be kept continually in motion. P shows receiving clack-chambers, one to be for each two pump-working barrels, as shown, connected. O shows discharge clack-chambers, one to be for each two pump-working barrels, as shown, connected. Q Q are pipes leading to pump-working barrels from clack-chamber P, the water passing from tail-pipe through clack-chamber P and pipes Q, direct to pump-working barrels. R R are pipes conveying the water from pump-working barrels to clack-chambers O; from thence it passes into and through column pipe to place of delivery.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination of the cross-head I I attached to pump-plungers G H, and connected to steam piston-rods K K and connecting-rods L L, whereby motion is communicated to pump-plungers G H, cranks M M, and shaft N, as set forth.

2. The combination and arrangement of steam-cylinders A B, piston-rods K K, plungers G H, cross-head arms I I, guides J J, connecting-rods L L, cranks M M, shaft N, clack-chambers P O, receiving-pipes Q, discharge-pipes R, all constructed to operate substantially as and for the purposes hereinbefore set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 18th day of December, A. D. 1871.

L. H. ALLEN.
WM. BARTON.

Witnesses:

THOMAS D. BOOM,
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