G. M. Fulton,

Steam Pump.

No. 6,486. Patented May 29, 1849.

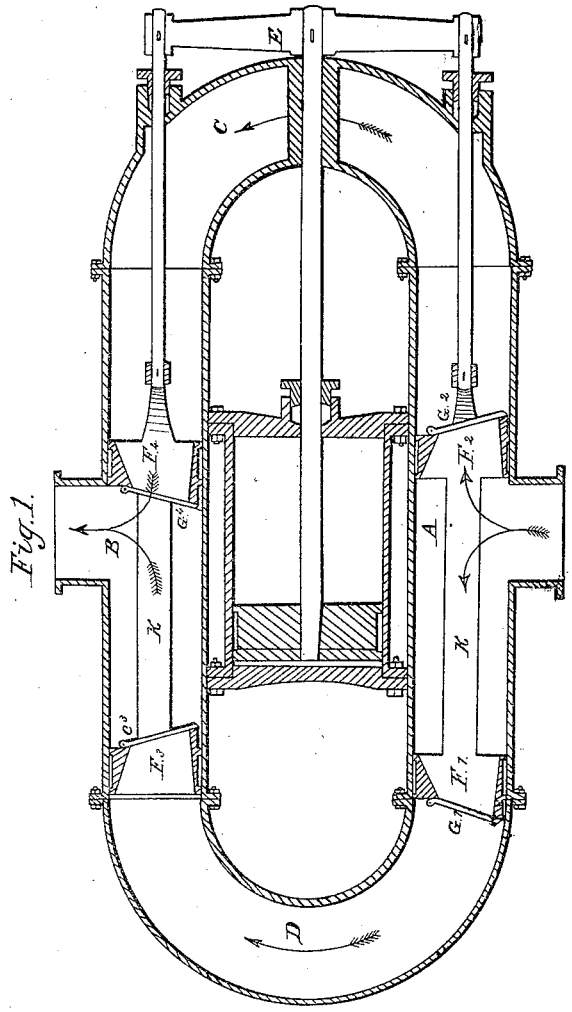

Fig. 1.

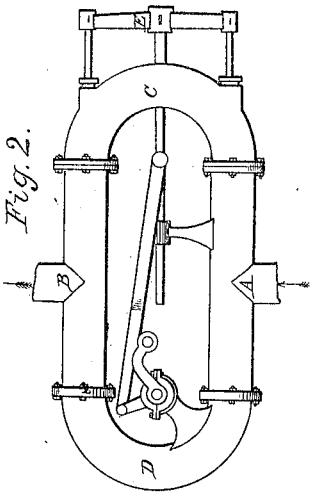

Fig. 2.

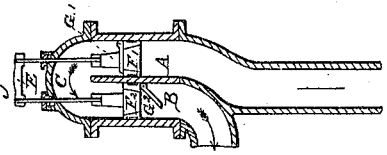

Fig. 3.

UNITED STATES PATENT OFFICE.

GEO. W. FULTON, OF BALTIMORE, MARYLAND.

PUMP.

Specification of Letters Patent No. 6,486, dated May 29, 1849.

To all whom it may concern:

Be it known that I, GEO. W. FULTON, of the city of Baltimore and State of Maryland, have invented a new and useful Improvement in the Form and Construction of Pumps for the Raising or Forcing of Water or other Fluids; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a longitudinal section, showing the whole internal construction of the said improved pump and also a mode of uniting the same to reciprocatory steam engines so as to constitute an independent steam pump for supplying boilers, or for other purposes; Fig. 2 is a view of the aforesaid pump as arranged to be worked by hand or other power; Fig. 3 is a section of a single pump for small purposes.

The similar parts of each figure are designated by the same letters.

Fig. 3 exhibits the construction of my improved pump in its simplest form, (A) and (B,) being parallel cylinders connected at one end by the curved pipe, C, and, when thus united, forming one pump, the water passage being indicated by the arrows. In each cylinder I place a piston (Fig. 1 and Fig. 2) so connected by rods and the crosshead (E), or by any other convenient method, as to be only capable of moving in unison. Each piston has a water passage through it fitted with a valve, (as G′ and G^2.) G′ opening toward the curve and G^2, in the opposite direction. Fig. 2, and 1, each, represent two such pumps as Fig. 3 so united as to be worked by one crosshead and one pair of pump rods, and receiving and discharging the water from the same orifices; the pistons of the saparate pumps being united by longitudinal connecting bars (K, K) lying against sides of the pump cylinders, leaving sufficient room, between them, for the passage of the water.

Having thus described the different parts of my invention the operation will be clearly understood as follows: By reference to Fig. 3 (the pistons being on the upward stroke) it will be seen that the valve G′, being closed, will cause the water to flow from (A) to (B) around the curve (C) and through the piston (F^2) which is moving toward the top of (B). Upon reversing the motion of the pistons, the valve (G^2,) will close driving the water before it and drawing the column behind it through the piston (F′) during its descent to the bottom of (A) thus maintaining a continuous stream from (A) through (B). By joining two pumps, thus constructed, as represented in Fig. 1, the strain upon the ends of the crosshead (E) is equalized—the valves (G^2 and G^3) having hold of the water on the outward stroke and (G′ and G^4) on the reverse, thus maintaining two continuous currents from the induction pipe, joined to the center of (A), to the discharge at the center of (B) passing around the curves (C and D) as indicated by the arrows. The piston rod of the steam engine is represented as passing through the center of the curve (C) which has a tube cast in it for that purpose and is sufficiently enlarged at that point to allow free passage to the water.

What I claim, as my invention and desire to secure by Letters Patent, is—

The union of two parallel pump cylinders by means of a curved pipe as herein described, and the working of pistons, with valves, in each, said pistons being united in motion and the valves arranged substantially as herein set forth. I also claim the union of two such pumps in the manner and for the purpose herein described.

GEO. W. FULTON.

Witnesses:
C. W. KIMBERLY,
JNO. M. HAHLESTON.