(No Model.)

J. MEYRICK, Jr., & W. MELCHER.

PUMP.

No. 261,019. Patented July 11, 1882.

Fig. 2.

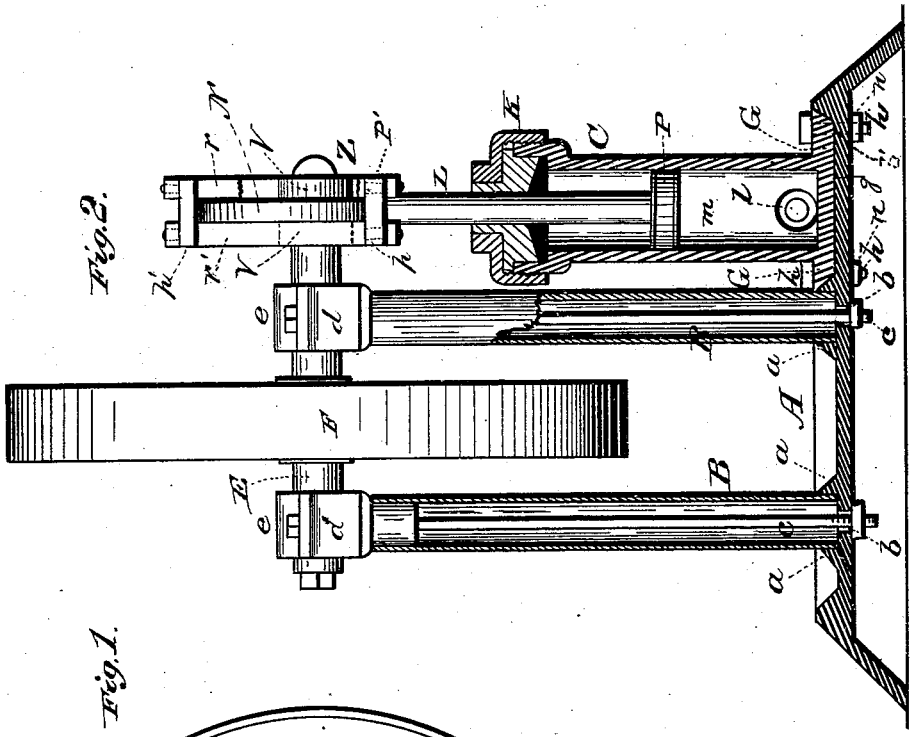
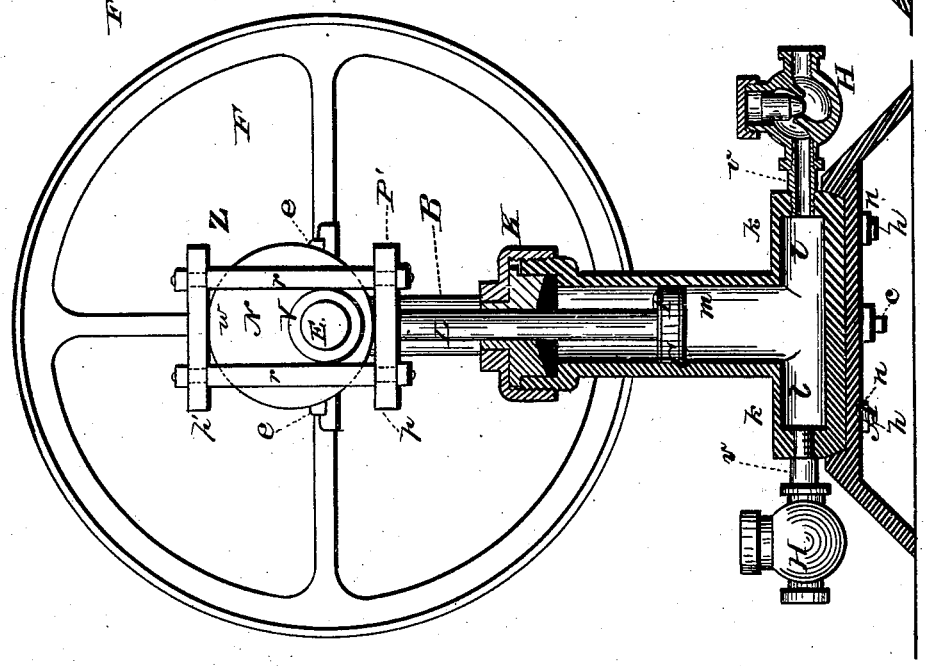


Fig. 1.



WITNESSES

Emory N. Bates

Philip Lemasi.

INVENTORS

Joseph Meyrick Jr.

William Melcher.

by Anderson & Smith

their ATTORNEYS

UNITED STATES PATENT OFFICE.

JOSEPH MEYRICK, JR., AND WILLIAM MELCHER, OF LOUISVILLE, KY.

PUMP.

SPECIFICATION forming part of Letters Patent No. 261,019, dated July 11, 1882.

Application filed April 20, 1882. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH MEYRICK Jr., and WILLIAM MELCHER, both citizens of the United States, of Louisville, in the county of Jefferson and State of Kentucky, have invented a new and valuable Improvement in Pumps; and we 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, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a vertical sectional view of our pump, and Fig. 2 is a longitudinal sectional view of the same.

This invention has relation to plunger-pumps; and it consists in the construction and novel arrangement of the yoke-connection, its corner guides, and the plunger-plate, and in connection therewith the eccentric and the collars arranged on each side thereof, on the counter-shaft.

The invention also consists in the combination, with the bed-plate, of the counter-shaft supports and pump-body, all as hereinafter set forth.

In the accompanying drawings, the letter A designates the base-plate or bed-plate, which is made long enough to support the pillars B B and the body C of the pump. The pillars B are usually made tubular or hollow, and their lower ends are fitted into bearings *a*, which are formed in the bed-plate, central apertures, *b*, being made through said bearings for the passage of the tie-bolts *c*, which extend through the pillars to the box-heads *d*, which form the bearings for the journals of the counter-shaft E. The journal-caps *e* are bolted to the box-heads and secure the shaft in position.

F indicates the driving-pulley, which is keyed to the counter-shaft.

The pump-body C is formed with a base-flange, G, which is designed to be seated in a recess, *g*, in the upper surface of the bed-plate, and secured in its seat by means of bolts *h*, which extend down through openings *b'* in the bed-plate to receive the fastening-nuts *n*.

Above the base-flange, on each side of the pump-body, are the transverse abutments *k*, through which extends the transverse passage *l*, which communicates with the vertical plunger-chamber *m*. The ends of the passage *l* are internally threaded to engage the connections *v*, whereby the valve-cases H are joined to the pump-body. Two way valves are employed, checking in the same direction, as indicated in the drawings.

At the upper end of the pump-body is its threaded cap K, provided with a stuffing-box or gland, through which passes the stem L of the plunger P. The stem is provided at its upper end with a head-plate, P', which forms the bottom of the yoke Z, which engages the eccentric N on the counter-shaft.

The yoke Z consists of the upper and lower horizontal bearing-plates, *p'* and *p*, the latter being the head-plate of the stem L, and the vertical corner rods or upright bearings *r r'*, which are four in number and connect the plates *p* and *p'*. The breadth of the yoke is transversely arranged with reference to the counter-shaft, the end of which passes through it between the pair of guide-rods *r* and the pair of guide-rods *r'*. The eccentric N, carried on the shaft, is equal in diameter to the distance between the bearing-plates *p* and *p'*, and it plays between the rods *r* on one side of the shaft and between the rods *r* on the other side, engaging their transverse bearings, its thickness being equal to the distance between the rods of each pair. On the shaft E, on each side of the eccentric, are placed the concentric collars V V, each of which engages a guide-rod *r* and a guide-rod *r'*, playing up and down, as the eccentric moves, in the guideways *w*, which span the counter-shaft, while the eccentric engages the guideways *w'* on each side of the shaft. By means of this yoke the movement of the plunger-stem and plunger is made true and positive, as the stem extends downward from the center of the lower yoke-plate or head-plate, *p*.

Having described this invention, what we claim, and desire to secure by Letters Patent, is—

1. In a plunger-pump, the combination, with the eccentric and the collars on the counter-shaft, of the guide-yoke Z, having the corner guide-rods *r r'*, upper plate, *p'*, and lower plate or head-plate, *p*, carrying the plunger-stem L, substantially as specified.

2. In a plunger-pump, the combination, with the bed-plate having the bearings *a*, recess *g*, and the bolt-apertures *b b'*, of the pillars B, tie-bolts *c*, box-heads *d*, counter-shaft E, pulley F, pump-body C, plunger P, and yoke-connection, with the eccentric and guide-collars on the counter-shaft, substantially as specified.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

JOSEPH MEYRICK, JR.
WILLIAM MELCHER.

Witnesses:
JOHN FOWLER,
JAMES T. A. BAKER.