J. M. LANGLEY.

Pitman-Connection for Pumps.

No. 161,971. Patented April 13, 1875.

Fig. 1

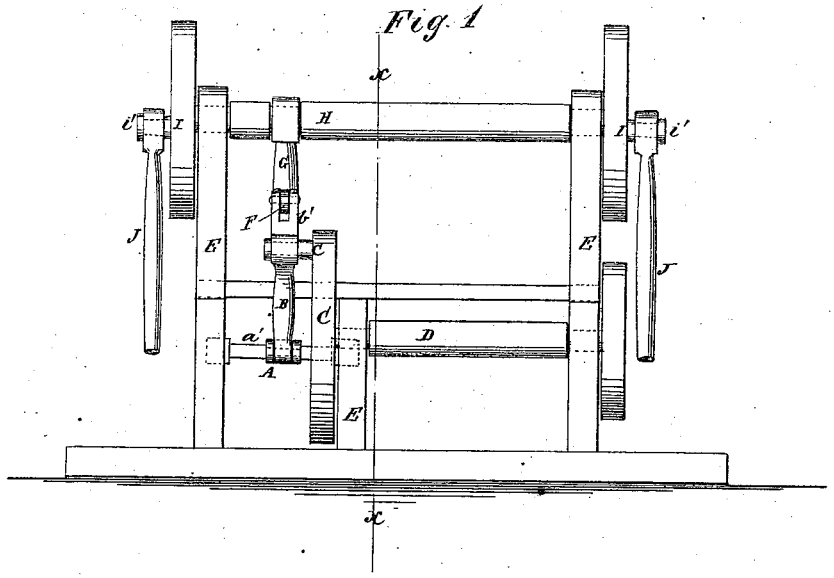
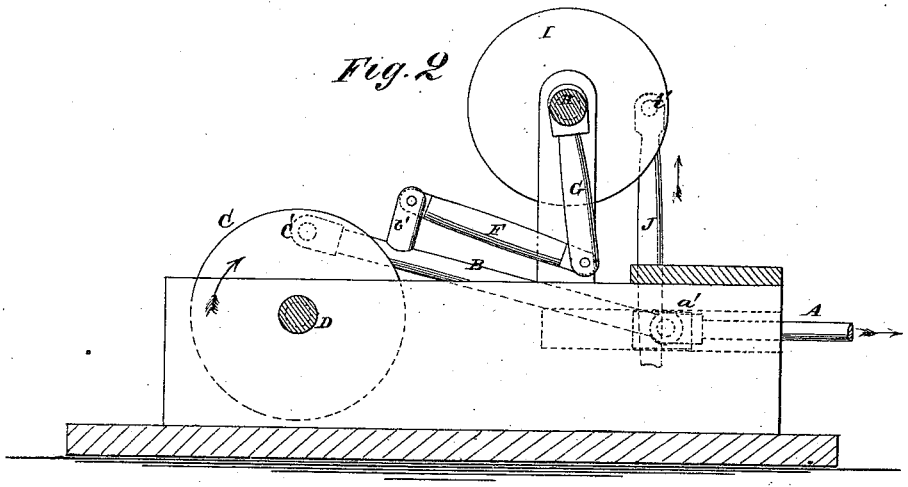


Fig. 2



WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES M. LANGLEY, OF DOUBLE BRIDGES, TENNESSEE, ASSIGNOR OF ONE-THIRD HIS RIGHT TO JAMES C. SAWYER, OF SAME PLACE.

IMPROVEMENT IN PITMAN-CONNECTIONS FOR PUMPS.

Specification forming part of Letters Patent No. **161,971**, dated April 13, 1875; application filed March 13, 1875.

To all whom it may concern:

Be it known that I, JAMES M. LANGLEY, of Double Bridges, Lauderdale county, Tennessee, have invented a new and useful Improvement in Pitman-Action Pump-Power, of which the following is a specification:

Figure 1 is a front view of my improved device; and Fig. 2 is a vertical longitudinal section of the same, taken through the line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of my invention is to furnish an improved device, simple in construction, durable, not liable to get out of order, and which will avoid the necessity of using belt or cog gearing for connecting the engine with the pumps.

The invention consists in the combination of the stud, the pitman, and the arm with the crank and pitman operated by the piston-rod of the engine, and with the rock-shaft and cranks that operate the pumps, as hereinafter fully described.

A represents the piston-rod of a steam-engine, the cross-head *a'* of which slides in ways in the frame-work E. To the end of the piston-rod A is pivoted the end of the pitman B, the other end of which is pivoted to the crank-pin *c'* of the crank or crank-wheel C. The shaft D of the crank or crank-wheel C revolves in bearings in the frame-work E. To the pitman B, at a little distance from the crank C, is rigidly attached a short stud, *b'*, to the upper end of which is pivoted the end of the pitman F. The outer end of the pitman F is pivoted to an arm, G, rigidly attached to the shaft H, that rocks in bearings in the frame E. To the rock-shaft are attached one, two, or more cranks or crank-wheels, I, to the crank-pins *i'* of which are pivoted the ends of the piston-rods J of the pumps, so that the pumps may be operated by the rocking of the shaft H.

When two suction or force pumps are used, their crank-pins *i'* should be placed upon the opposite side of the shaft H; but when a suction and a force pump are used, the crank-pins *i'* should be placed upon the same side of the said shaft, so that, in either case, the two pumps may balance each other, and thus facilitate steadiness of motion.

By this construction the necessity of using belting or toothed gearing is avoided, and the device may be so placed as to be entirely out of the way of the necessary movements about the engine.

The shaft H may be extended to any desired extent, and any desired number of pumps may be connected with it.

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

The combination of the stud *b'*, the pitman F, and arm G with the crank C and pitman B, operated by the piston-rod A of the engine, and with the rock-shaft H and crank I, that operate the pumps, substantially as herein shown and described.

JAMES M. LANGLEY.

Witnesses:
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