(No Model.) 2 Sheets—Sheet 1.

W. B. McGINNIS.

PUMP.

No. 379,237. Patented Mar. 13, 1888.

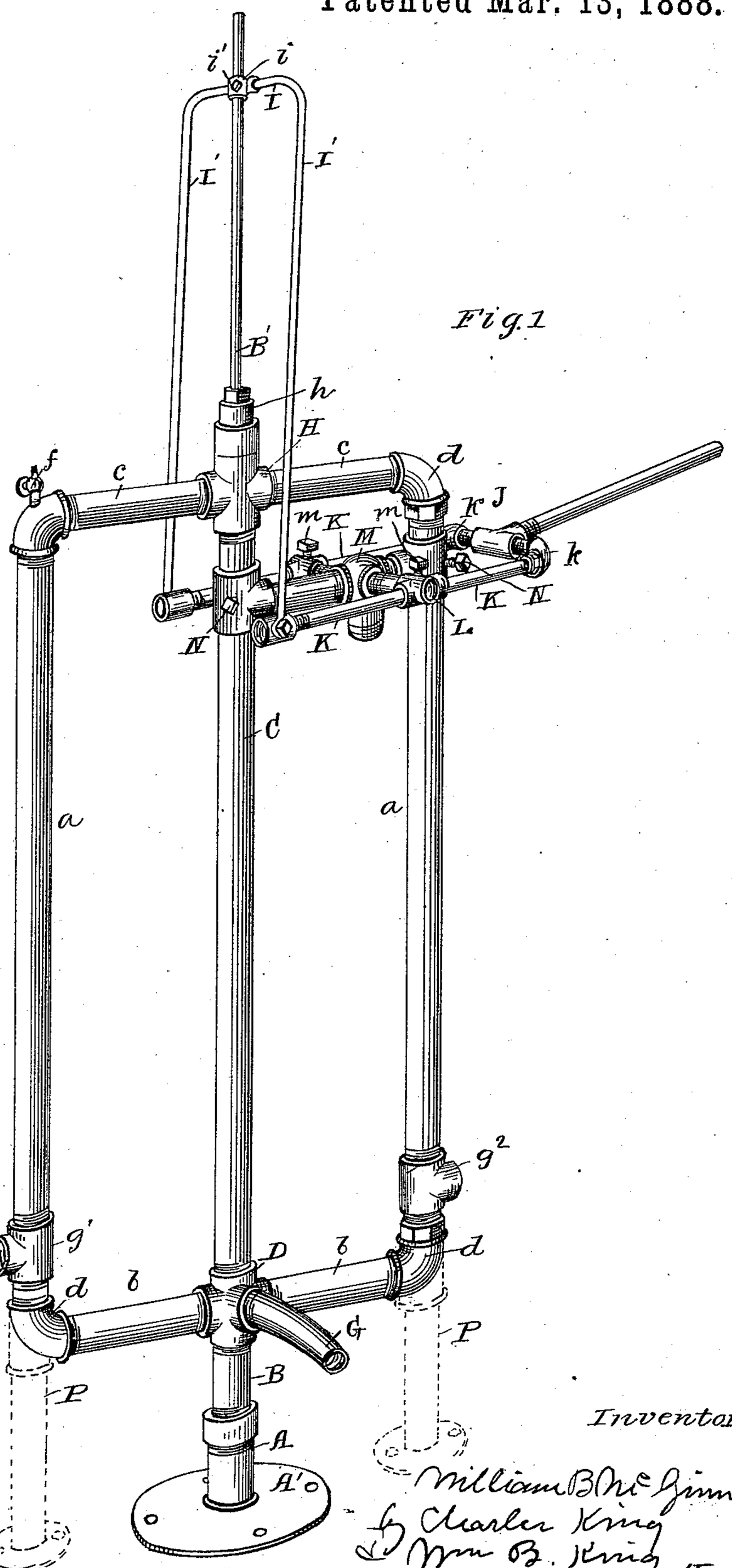

Fig. 1.

Witnesses:
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(No Model.) 2 Sheets—Sheet 2.

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PUMP.

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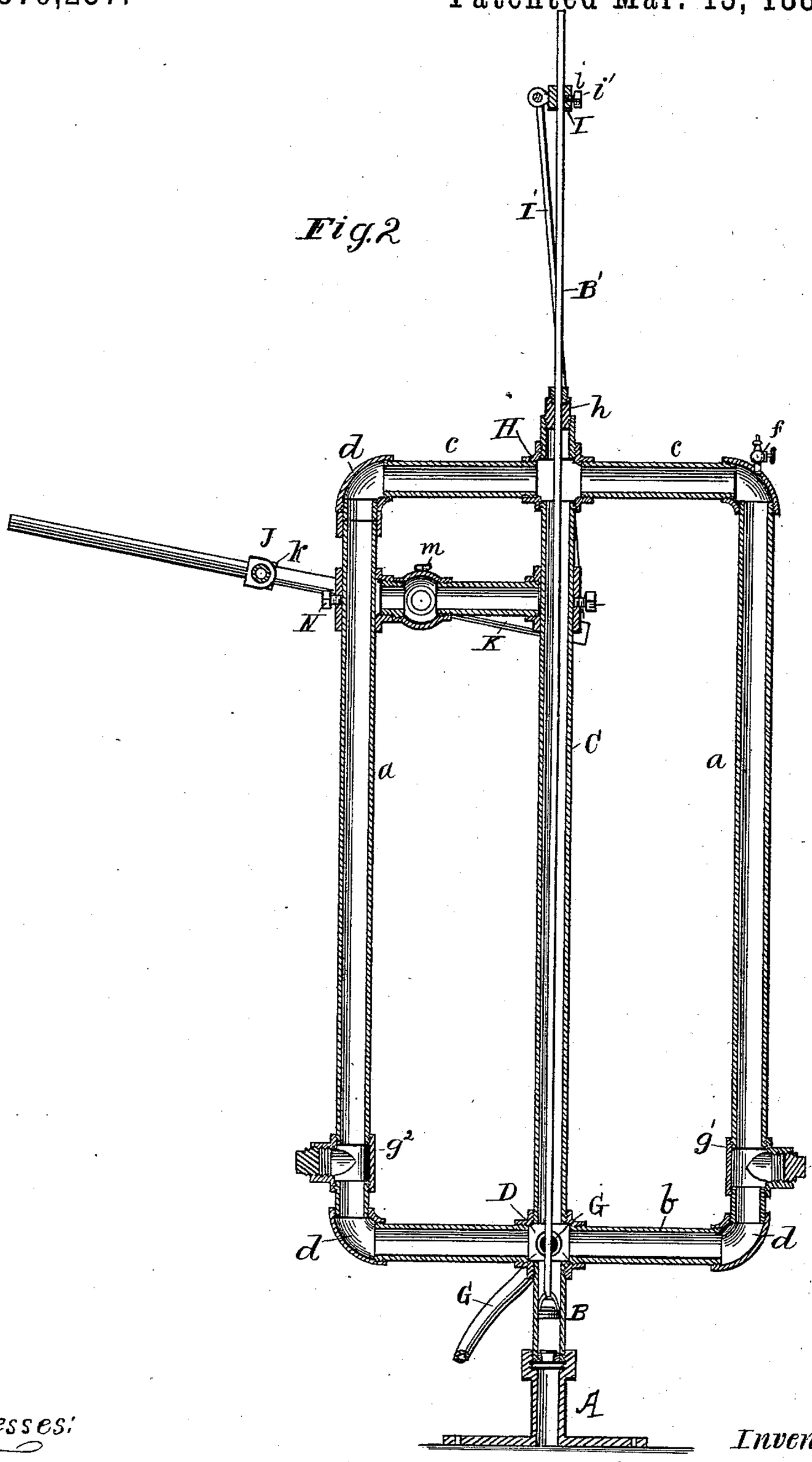
Fig. 2



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UNITED STATES PATENT OFFICE.

WILLIAM BAKER McGINNIS, OF NEVADA, MISSOURI.

PUMP.

SPECIFICATION forming part of Letters Patent No. 379,237, dated March 13, 1888.

Application filed May 23, 1887. Serial No. 239,088. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM BAKER McGINNIS, a citizen of the United States, residing at Nevada, in the county of Vernon and State of Missouri, have invented certain new and useful Improvements in Pumps, of which the following is a specification, reference being had therein to the accompanying drawings.

Figure 1 is a perspective view of the pump embodying my improvements. Fig. 2 is a vertical section.

A is a standard, the base A′ of which is adapted to be bolted to a flooring, and thus support the pump in proper working position.

The barrel B of the pump is firmly mounted within the upright part A of the standard and connects with the horizontal arms of a hollow frame-work, which is made in rectangular form of sections, *a a b b c c*, of gas-pipe mounted by suitable elbow-couplings, *d d*, in one of which is screwed an ordinary petcock, *f*. This hollow frame-work or air-chamber has a central hollow tube, C, preferably of gas-pipe, and connected at its lower end to the gas-pipe sections *a a* by means of a suitable T-coupling, D. This coupling D is of an ordinary well-known form, except that it is provided upon one side with a short tube section or nipple, *g*, to receive a discharge-pipe, G; or, when preferred, this discharge-pipe may be connected with the air-chamber by means of an ordinary T-coupling arranged at either *g′* or *g²*. The two gas-pipe sections *c c* are united to a T-coupling, H, which also receives the upper end of the central tube of pipe C.

h is a stuffing-box of any usual or approved construction, applied to the upper arm or leg of the T-coupling H, and through this stuffing-box passes the upper end of the pump-rod B′.

I is a cross-head attached to the upper end of the pump-rod by a T-coupling, *i*, to which it is secured firmly but adjustably by a set-screw, *i′*. The cross-head passes through the T-coupling and can rock or oscillate therein.

I′ I′ are legs or arms or links projecting downward from the ends of the cross-head; or they may be made in one piece with the cross-head and bent into the proper shape after the bar has been thrust through the tubular hole in the T-coupling.

J K K is a bifurcated lever, of which the part J carries at its inner end a T-shaped coupling, in the outer ends of which are screwed two short pipe-sections with elbows *k k*, in which the pipe-sections K K are screwed. The lower ends of the arms or links I′ I′ are attached to the nearer end of the pipe-sections K K. These pipe-sections are fulcrumed about midway between their ends, and for this purpose I pass them through T-pieces L, screwed onto the ends of either a horizontal pipe-section or nipples, which are supported in a T-piece, M, arranged between the pipe-section C and one of the side pieces of the air-chamber. In practice I prefer to support this fulcrum by means of T-pieces N N, surrounding the respective pipe-sections *b c* and connected therewith by set-screws or their equivalents, whereby the fulcrum is capable of vertical adjustment. In some cases I propose to connect the inner ends of the bifurcated lever adjustably with the legs or arms I′ I′; but the fulcrum need not necessarily be adjustable, in which case the T-pieces N N may be screwed to and form practically integral parts of the pipe-sections. Of course the T-piece through which these pipe-sections K K pass must fit the threaded ends of their separate pipe-sections or nipples somewhat loosely, so that they will turn thereon without undue friction.

m m are set-screws by means of which the pipe-sections K K can be fixed in their positions relatively to the fulcrum, and the use of these set-screws enables me to adjust the leverage by changing the position of the lever relatively to this fulcrum.

Instead of connecting the inner ends of the lever directly to the cross-head by means of two links, one on either side, I may connect each end of the cross-head to one end of a lever, O, fulcrumed centrally upon the frame, and connect the opposite end of each of these levers to the inner end of one of the pipe-sections K K by means of the link *o*. Instead of or in addition to the standard A A′, I may provide each side piece of the air-chamber with a foot-piece, as indicated in dotted lines at P P, such construction being a good one when it is desired to place the working-barrel of the pump some distance down in deep wells.

What I claim is—

1. In a pump, the combination, with the working-barrel, of the rectangular frame having a vertical tube, C, a vertical tube, *a*, and bottom and top horizontal tube-sections, *b c*, said tube-sections *a*, *b*, *c*, and C forming a substantially continuous chamber adapted to hold air in the parts *a c* C above the water-exit, and the piston-rod situated in the tube C, substantially as described.

2. The combination of the tubular frame having a vertical tube-section joined by the top and bottom horizontal tubes, the tube-sections C, joined air-tight to the top and bottom horizontal tubes by the couplings D H, and the piston-rod situated in the central tube, C, and passing through the said coupling D, substantially as set forth.

3. The combination, with the pump-tube C and the vertical tube *a*, parallel with and communicating with the said tube C, of the fulcrum M, the tubular supports N therefor, vertically adjustable on the tubes C *a*, the handle, the connecting-tubes K K, one on each side of the tubes C *a*, and both pivotally connected with the adjustable fulcrum M, substantially as set forth.

4. The combination, with the pump-tube C and the tube *a*, parallel with and connected to the pump-tube C, of the fulcrum M, the supports N N therefor, connected to the tubes *b c*, the handle, and the tubes K K, one on each side of the tubes C *a*, and both adjustably and pivotally connected to said fulcrum M, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM BAKER McGINNIS.

Witnesses:

J. B. HARRIS,

JOHN T. BIRDEYE.