

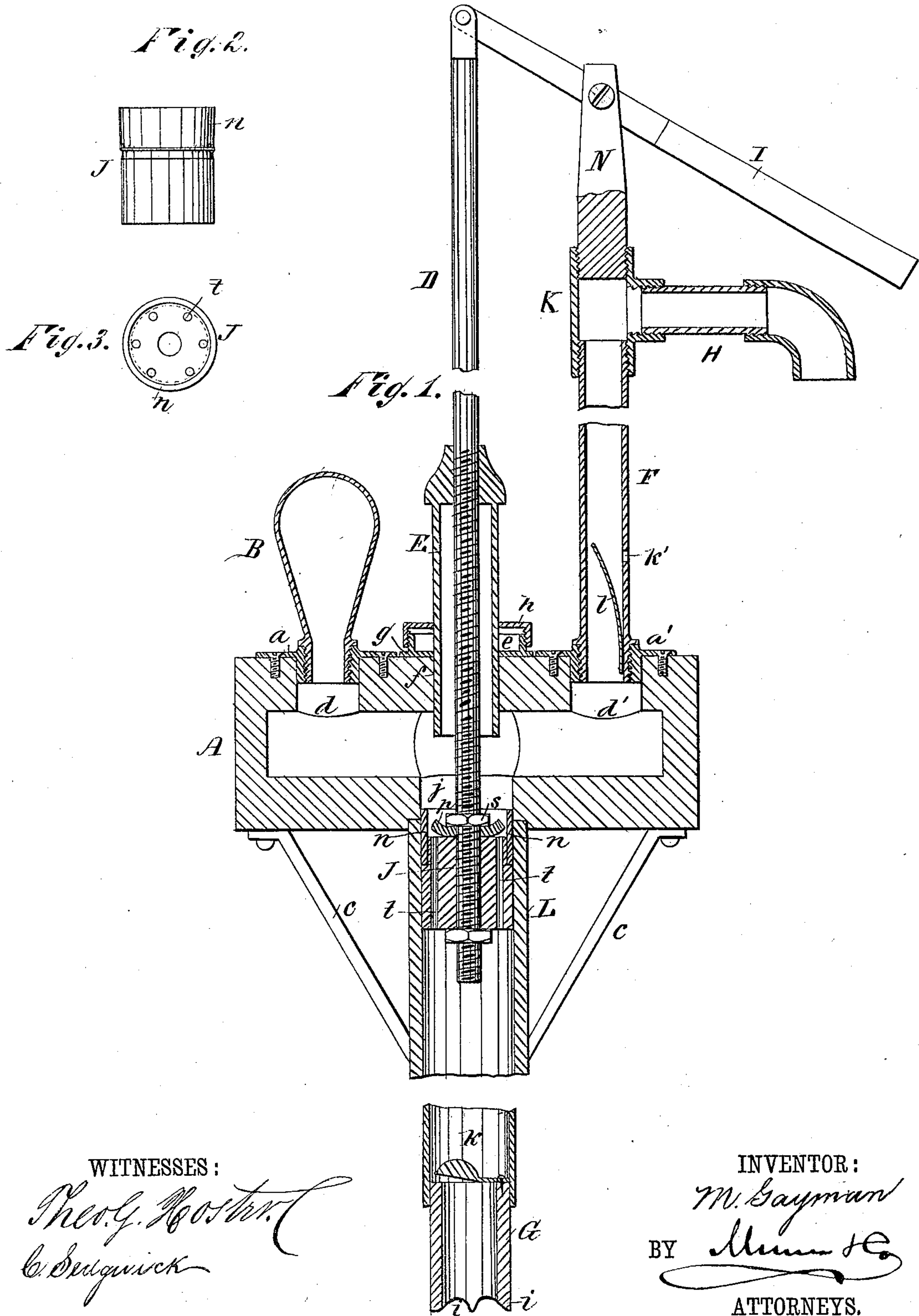
(No Model.)

M. GAYMAN.

PUMP.

No. 255,966.

Patented Apr. 4, 1882.



UNITED STATES PATENT OFFICE.

MOSES GAYMAN, OF CANAL WINCHESTER, OHIO, ASSIGNOR TO HIMSELF
AND O. P. GAYMAN, OF SAME PLACE.

PUMP.

SPECIFICATION forming part of Letters Patent No. 255,966, dated April 4, 1882.

Application filed November 19, 1881. (No model.)

To all whom it may concern:

Be it known that I, MOSES GAYMAN, of Canal Winchester, in the county of Franklin and State of Ohio, have invented a new and useful Improvement in Pumps, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional elevation of my improved pump. Fig. 2 is a side elevation of the plunger or bucket, and Fig. 3 is a plan view of the same.

The invention consists in certain combinations which will be described in connection with the drawings, and then pointed out in the claims.

This pump is adapted to be used in either open wells, driven wells, or cisterns, or at any place where a pump is wanted, and to be used for extinguishing fires, sprinkling streets, &c., and it is not to be hung upon the curb or platform of the well, as is the case with ordinary force and lift pumps, but is adapted to be supported at or from the bottom of the well.

The water-chamber A may be made of iron or of wood. If made of wood, the side openings, *d d'*, will be faced with the flanged and internally-threaded metal thimbles *a a'*, and the central opening, *f*, will be faced with the externally-threaded annular metal cup or collar *g*, which is provided with the annular screw-cap *h*, which, together with the cup *g*, forms the stuffing-box *e*, which surrounds and makes a tight joint with the valve-rod D, or with the sleeve E, as the case may be.

In the thimble *a* is screwed the air-chamber B, and in the thimble *a'* is screwed the discharge-tube F. In case the chamber A is made of iron, of course the side openings will be internally-threaded to receive and hold the air-chamber and the eduction or discharge pipe, and the thimbles *a* and *a'* will be dispensed with.

In the opening *j* in the under side of the chamber A, which registers with the opening *f*, is secured, preferably by means of the braces

e e, the large induction-pipe L, in which the valve or bucket J, secured upon the lower end of the rod D, moves. To the lower end of the pipe or cylinder L is secured the bottom pipe, G, which may be wood or iron. When it is wood it carries at its upper end the flap-valve K, and when it is iron the flap-valve is secured in the bottom of the cylinder L. The lower end of the pipe G rests on the bottom of the well at *i i* and supports the whole pump. The valve or bucket J has secured upon its upper end the leather sleeve *n*, which projects above the solid portion of the valve or bucket, as shown in Fig. 1.

Within the space surrounded by the leather sleeve, above the solid portion of the valve or bucket, is placed upon the rod D the circular leather flap or disk *p*, which is held upon the upper end of the solid portion of the bucket by the nut *s*, and serves to close in the ordinary way the passages *t t* through the solid portion of the bucket. By this means the flap is protected from contact with the walls of the pipe L, and the edge of it coming against the inner wall of the leather sleeve when closed makes a tight joint therewith and prevents all backward flow of water.

In case the pump is to be made double-acting, I place upon the rod D the inverted elongated cup or sleeve E, which moves with the said rod and serves to diminish the space in the water-chamber and cylinder upon the down-stroke of the rod, and thus forces the water therefrom through the discharge or eduction pipe. This inverted cup or sleeve is adjustable vertically upon the rod by means of the screw-thread of the rod, as will be clearly understood from the drawings.

The spout H is made reversible, or so that it can be turned to either side of the pipe F to suit the position of the pump-handle I. This is accomplished by means of the three-way joint K, which is internally screw-threaded at all of its openings, as shown, and receives the upper end of the pipe F, the horizontal spout H, and the fulcrum-post N of the lever. This joint may be turned so as to hold the spout in any direction from the pipe F desired.

The pipe F is provided with the perforation or winter-leak *k'*. Below the perforation or leak is riveted the spring *l*, which closes over the perforation while water is being forced through the pipe F, but which automatically springs back to the position shown in the drawings when pumping ceases, and thus opens the leak and permits the water in the pipe to escape.

10 In case the pump is not to be made double-acting, the inverted cup or sleeve E will not be used, and, as above intimated, the stuffing-box *e* will be made to fit the rod D, or the rod may be made to fit so closely in the opening *f* that
15 a stuffing-box will not be needed.

The induction-pipe L, instead of being held by the rods or braces *c c*, may be screwed into the water-chamber.

20 The water chamber A and induction pipe or cylinder L may be made as one casting or frame, with an opening or passage upward through the water-chamber sufficiently large to admit the valve or bucket J, and this passage to have openings at either side to admit the water to

the openings *d d'*, and the top of this passage 25 to be closed by means of a metal plate having in it the stuffing-box *e*.

I am aware that it is not new to use an air-chamber screwed in the upper end of stock or connected rigidly with the plunger, or to make 30 an air-chamber in the form of an inverted cup on the end of piston-rod; but

What I claim as new is—

1. The combination, with the externally end-threaded pipes F H and fulcrum-post N, of the 35 three-way joint K, internally screw-threaded at each of its openings, as and for the purpose specified.

2. The combination, with the discharge-pipe F, having waste-hole *k'*, of the plate-spring 40 fastened at bottom, arranged to cover the hole when the pump is in operation and to spring away from the hole as soon as the pump ceases to work, as shown and described.

MOSES GAYMAN.

Witnesses:

GEO. F. BAVIS,
JACOB A. KUMLER.