

No. 720,748.

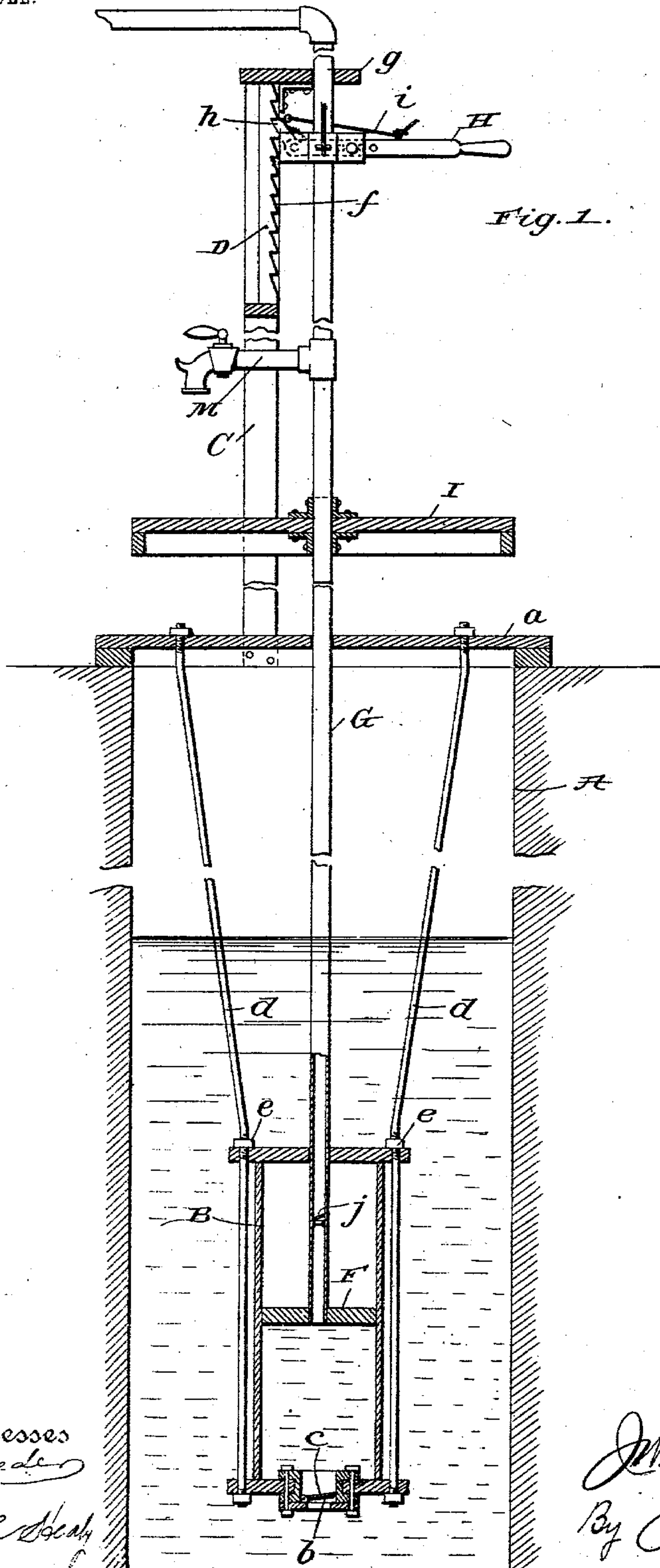
PATENTED FEB. 17, 1903.

J. W. SIMMONS.
PUMPING APPARATUS.

APPLICATION FILED SEPT. 8, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses
W. C. Baecker
N. C. Baecker

Inventor
J. W. Simmons
By *Geo. J. Sheehy*
Attorney

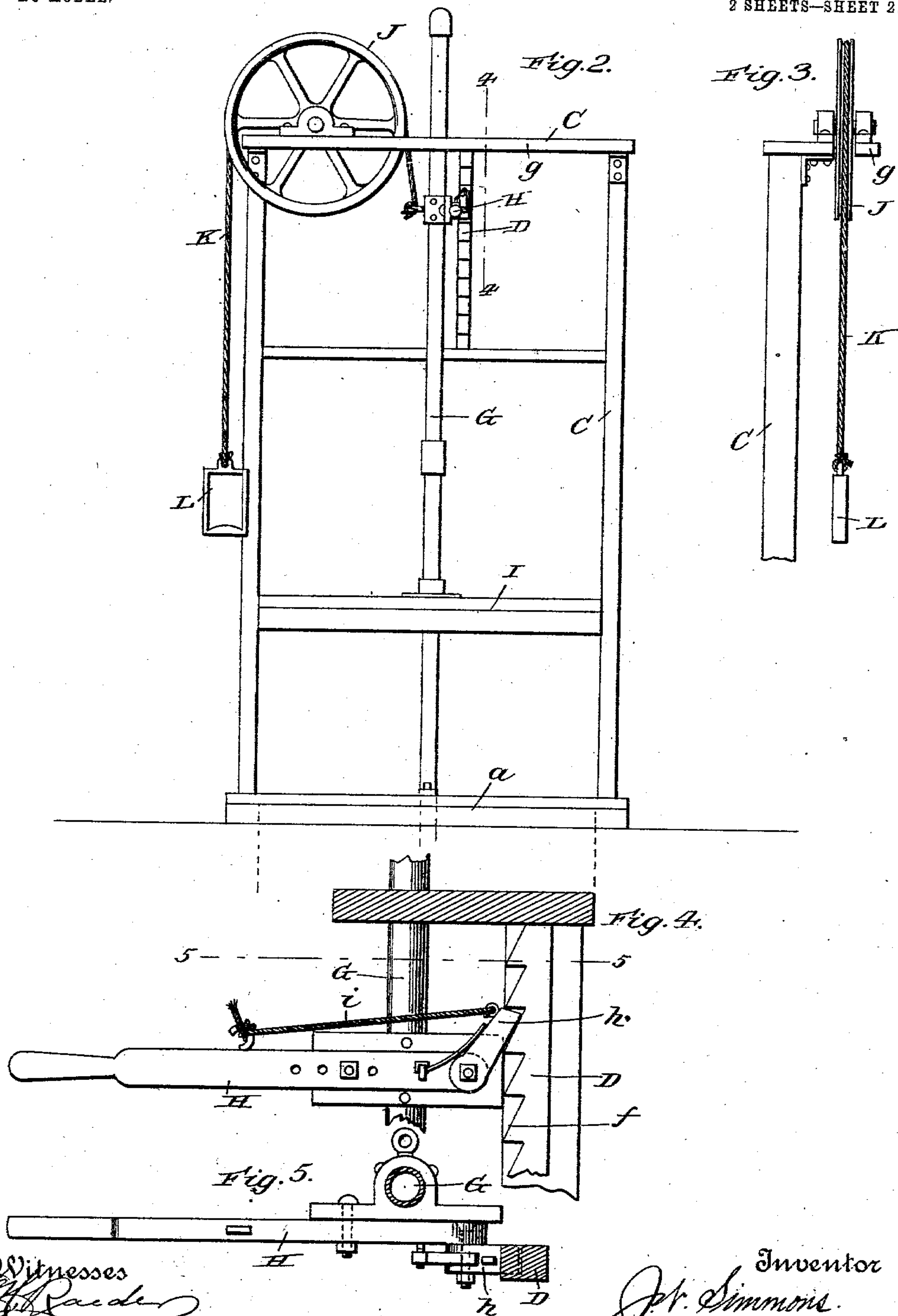
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Witnesses
Chas. Raeder
W. C. Healy

Inventor
J. W. Simmons
By *Geo. J. Sheehy*
Attorney

UNITED STATES PATENT OFFICE.

JESSIE W. SIMMONS, OF ALVARADO, TEXAS.

PUMPING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 720,748, dated February 17, 1903.

Application filed September 8, 1902. Serial No. 122,537. (No model.)

To all whom it may concern:

Be it known that I, JESSIE W. SIMMONS, a citizen of the United States, residing at Alvarado, in the county of Johnson and State of Texas, have invented new and useful Improvements in Pumping Apparatus, of which the following is a specification.

My invention relates to pumping apparatus, and is designed more particularly as an improvement upon the apparatus forming the subject-matter of my Letters Patent No. 702,496, bearing date of June 17, 1902.

The general object of the present invention is to provide a simple, inexpensive, and easily-operated apparatus through the medium of which water may be forced from a well, stream, or other source of supply by the weight of a person.

With the foregoing object in mind the invention will be fully understood from the following description and claims when taken in conjunction with the accompanying drawings, in which—

Figure 1 is a broken vertical section illustrating my improved apparatus in its proper operative position with respect to a well. Fig. 2 is an elevation of the upper portion of the apparatus, taken at right angles to Fig. 1. Fig. 3 is a detail view taken at right angles to Fig. 2 and illustrating the cable, stirrup, and sheave of the apparatus. Fig. 4 is an enlarged detail section taken in the plane indicated by the broken line 4 4 of Fig. 2, and Fig. 5 is a section taken in the plane indicated by the broken line 5 5 of Fig. 4.

Similar letters of reference designate corresponding parts in all of the several views of the drawings, referring to which—

A is a well having a suitable cover *a*, and B is an upright cylinder supported in the water in the well and provided at its lower end with an inlet-port *b* and a downwardly-seating non-return valve *c*, arranged to control said port. In the present and preferred embodiment of my invention the cylinder is connected with the well-cover by rods *d*, which extend through the heads of the cylinder and are fixed thereto by nuts *e* or other means.

C is a frame connected to and rising from the well-cover; D, a vertically-disposed bar

supported by said frame and having ratchet-teeth *f*; F, a piston movable in the cylinder B; G, a pipe connected to and movable with the piston and extending through aligned apertures in the upper head of the cylinder and the well-cover and also by preference through a guide *g* on the frame C; H, Figs. 1, 4, and 5, a hand-lever fulcrumed on and movable with the pipe G and having a spring-backed pawl *h* arranged to engage the teeth of the ratchet-bar D and also having a cord *i* extending from said pawl to a suitable point on its long arm; I, a platform disposed above the well-cover and fixedly mounted on the pipe G, so as to move vertically therewith; J, Figs. 2 and 3, a vertically-disposed sheave mounted on the frame C, and K a cable arranged on the sheave and connected at one end to the pipe G and having a stirrup L at its opposite end.

The pipe G is provided at about the proportional distance illustrated above the platform I with a valved spout M, and its portion which extends through the guide *g* is designed to be connected to a hose or to a house-pipe. (Not shown.)

The manner in which my improved apparatus is operated is as follows: When the piston F is in a low position in the cylinder—*i. e.*, adjacent to the lower head of the cylinder—the operator disengages the pawl *h* on lever H from the teeth of the bar D and applies pressure to the stirrup L to raise the piston in the cylinder and to also raise the pipe G and the platform I thereon. After the piston, pipe, and platform are raised, as stated, the operator steps on the platform, when, as will be readily appreciated, his or her weight will operate to depress the platform, pipe, and piston and force the water drawn into the cylinder on the preceding up movement of the piston up through the pipe. In the event of the weight of the operator being insufficient to effect the discharge of the water as fast as desired the operator while standing on the platform actuates the lever H, and thereby accelerates the downward movement of the piston and the expulsion of water from the cylinder.

The pipe G may be and preferably is provided at about the point shown with a check

or non-return valve *j*, designed to prevent water from flowing from the pipe back into the cylinder.

It will be appreciated from the foregoing
5 that a solid stream of water is forced through the pipe *G* incident to the downward movement of the piston and pipe; also, that the discharge of water may be quickly stopped, when desired, by the operator stepping off the
10 platform *I* and ceasing to actuate the lever *H*.

When desirable, a weight may be employed on the cable *K* in lieu of the stirrup *L* without involving a departure from the scope of my claims.

15 I have entered into a detailed description of the construction and relative arrangement of the parts embraced in the present and preferred embodiment of my invention in order to impart a full, clear, and exact understanding of the same. I do not desire, however,
20 to be understood as confining myself to such specific construction and arrangement of parts, as such changes or modifications may be made in practice as fairly fall within the
25 scope of my invention, as claimed.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a pumping apparatus, the combination
30 of a cylinder having a valve-controlled inlet, a piston movable vertically in the cylinder, a pipe connected to and movable with the piston, and arranged to receive from the cylinder, a horizontal platform fixed on and
35 movable with said pipe, a sheave, a cable

passed over the sheave, and having one of its ends connected to the pipe, a vertically-disposed, fixed bar having ratchet-teeth, and a lever fulcrumed on the pipe, and having a pawl arranged to engage said ratchet-teeth. 40

2. In a pumping apparatus, the combination of a cylinder, a piston movable vertically therein, a discharge-pipe connected to and movable with the piston, and arranged to receive from the cylinder, a vertically-disposed, fixed ratchet-bar, and a lever fulcrumed on the discharge-pipe, and having a pawl arranged to engage the ratchet-bar. 45

3. In a pumping apparatus, the combination of a cylinder suitably supported in a body of water, and having a valve-controlled inlet, a vertically-disposed, fixed ratchet-bar, a piston movable vertically in the cylinder, a discharge-pipe connected to and movable with the piston, and arranged to receive from the
55 cylinder, a horizontal platform fixed on the discharge-pipe, a lever fulcrumed on the pipe above the platform and having a pawl arranged to engage the teeth of the ratchet-bar, a sheave, and a cable passed over the sheave
60 and having one of its ends connected to the pipe, and a stirrup on its other end.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JESSIE W. SIMMONS.

Witnesses:

O. S. CARLOW,
J. K. SCOTT.