(No Model.)

W. H. FETTERS.

PUMP.

No. 519,081. Patented May 1, 1894.

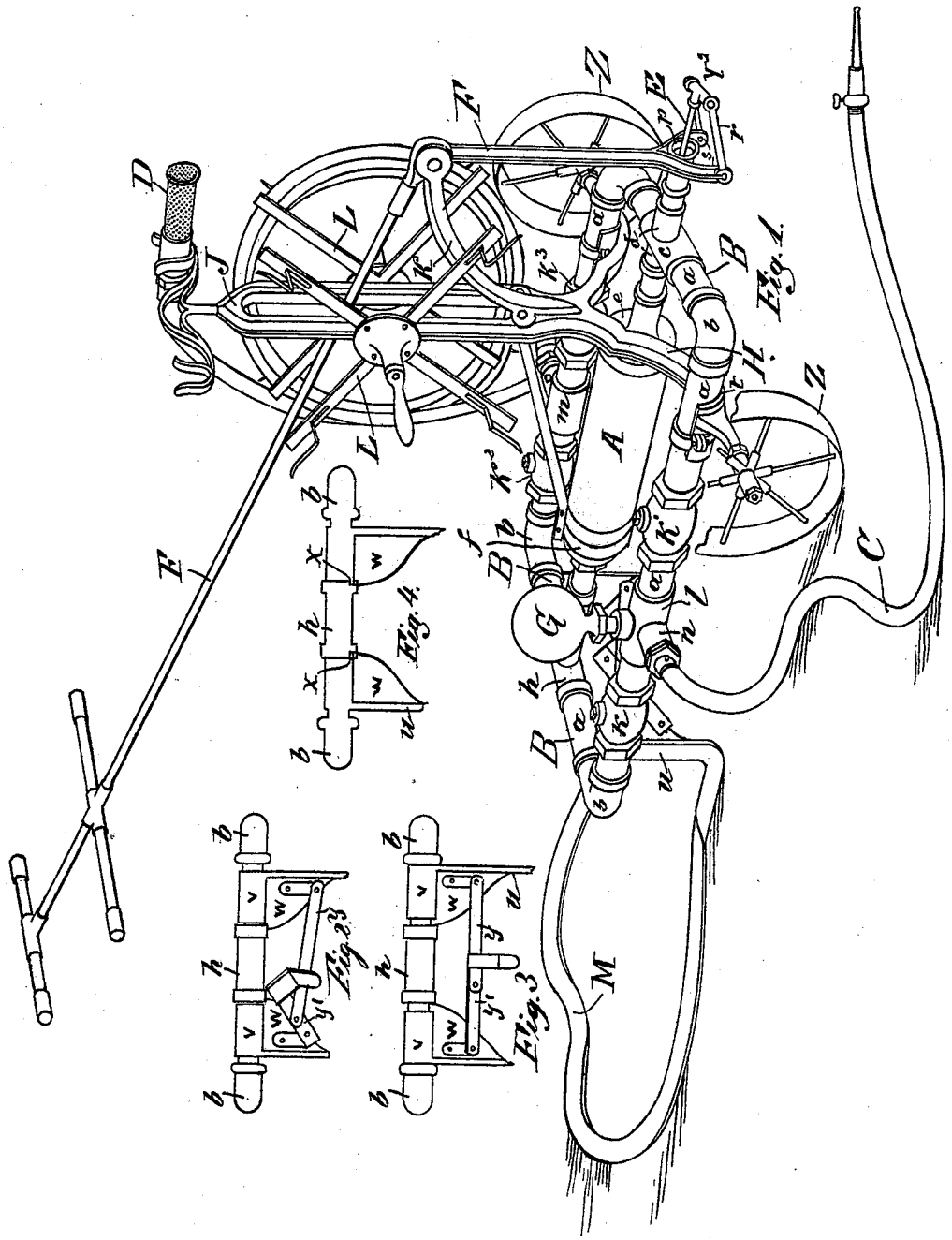

Fig. 1.

Fig. 4.

Fig. 2.

Fig. 3.

WITNESSES
Theo. Sitter
Burt B. Miller

INVENTOR
William H. Fetters
By W. K. Miller
Attorney

THE NATIONAL LITHOGRAPHING COMPANY.
WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM H. FETTERS, OF GREENTOWN, OHIO.

PUMP.

SPECIFICATION forming part of Letters Patent No. 519,081, dated May 1, 1894.

Application filed January 31, 1893. Serial No. 460,393. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. FETTERS, a citizen of the United States, and a resident of Greentown, county of Stark, State of Ohio, have invented a new and useful Improvement in Pumps, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

My invention relates to an improvement in pumps and particularly to that class adapted for extinguishing fire or spraying trees.

With these objects in view my invention relates to certain features of construction and combination of parts as will be hereinafter described and pointed out in the claims.

Figure 1, of the accompanying drawings is a view in perspective of a lift and force pump and supporting frame, illustrating my invention. Fig. 2, is an elevation of the front end of the pipe frame and its support showing the parts locked in rigid relation. Fig. 3, is a similar view showing the parts disengaged, and Fig. 4, is a longitudinal section through the front end of the pipe frame and support.

Referring to Fig. 1, A represents the pump cylinder and B the cylinder or pump supporting frame which is preferably made of short sections as *a* of metal pipe that are threaded and turned into threaded cast metal steam or water fittings as *b* which are in the form of right angled elbows which form the corner portions of the frame B, which is constructed substantially as shown. The middle end portion *c* of the frame is in the form of what is termed a four-way coupler having branches *d*, diametrically opposite as shown. On the end of the cylinder A is placed a head *e* having a reduced neck portion that is coupled to the inner branch *d* of the T *c*. The other or front end of the cylinder A is provided with a head portion *f* that is by a reduced portion connected to the front middle portion *h* of the frame.

In the side sections or portions of the frame B, are placed check valves *k*, *k'*, k^2, and k^3, which may be of any of the well known and approved forms. Between the valves and about central to the sides of the frame are placed T couplers *l* and *m;* to the side branch *n* is secured the hose C, and to a similar projection *o* on coupler *m* is secured the suction hose D, thus forming a quadrilateral hollow frame for the support of the pump cylinder and the valves as well as a conductor for the water from the suction to the pressure hose.

The pump rod E secured to the piston head hereinbefore referred to, passes through the section *c*, and packing box *p*, and on the end of the rod E is a cross head y^2 to which is pivotally secured the connecting rods *r* that have a pivotal connection with the prongs *s* of the actuating lever F. The globe G serves as an air spring to regulate the flow of water from the nozzle.

The parts hereinbefore described are supported on an axle H, in sockets *t* provided therein to receive the portion *a* of the frame, and at the end portions of the axle are provided spindles on which the supporting wheels Z rotate. The central portion of the axle is elevated to form a vertical standard J to which the lever bracket K is secured, the standard also serves as a support for the hose reels L, on which the hose C and D, are wound when not in use.

About the front part of the frame is hinged a bail portion M having vertical portions *u* to serve as a support for the front end of the machine when in service; at the end portions of the parts *u* are provided sleeves *v* that embrace the frame and in the angular spaces between the sleeves *v* and parts *u* are webs or flanges *w*. These flanges extend horizontally beyond the inner end of the sleeves *v* and engage notches *x* in the rims of the casting *h*, see Fig. 4, and thus lock, when moved inward, said casting to the bail.

Toggle levers *y y'* are pivotally secured to the flanges *w*, which serve to hold the flanges and sleeves out of engagement with the part *h* as shown in Fig. 3, and to engage the bail to the frame, the toggle is relaxed as shown in Fig. 2. The spring or tension of the bail will throw the edge of the flange into the notches *x* as shown in Figs. 2 and 4. This bail serves the double purpose of a support for the front end of the machine and a means by which the machine is drawn, when used to draw the machine or pump, the toggle is pressed into position shown in Fig. 4, and the bail raised up toward the lever F.

In use the operators stand on the bail M, their weight holding the front end of the

frame down when the operators lift on the lever F. When the lever F is pressed down the piston in the cylinder A will move to the rear, water will flow through the hose D into the hollow frame at m, through valve k^2, into the front end of the cylinder, and when the lever F is raised the water that was in the front end of the cylinder will be forced out through valve k and hose C, and at the same time water will be drawn from the place of supply through hose D and valve k^3, into the rear end of the cylinder, which by a reverse movement of the lever will be forced out through valve k' and hose C.

The toggle referred to serves to lock the bail in rigid engagement with the frame so that the bail may be used to draw the machine and when not so engaged the bail may be folded.

When the levers are placed as shown in Fig. 3, the web or flange w of the sleeve is held out of notch x in the rim of the casting h, see Fig. 4.

Having thus fully described the nature and object of my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination of the quadrilateral hollow frame and cylinder A of the axle H, having socket t to receive the frame, a vertical standard portion J, reels L, and supporting wheels Z, substantially as described and for the purpose set forth.

2. The combination with the frame B, of the bail M, having vertical portions u, provided with sleeves at their upper ends embracing said frame, the flanges extending inwardly beyond the sleeves formed with or secured to said portions u, the casting h on said portion having notches with which the edges of said flanges engage, and the toggle levers pivoted to said flanges, substantially as herein described.

3. The combination with the supporting frame, of a spring bail hinged and normally locked thereto, and toggle levers pivoted to the ends of said bail whereby when said levers are distended the bail is released from its locked position and is allowed to turn on said frame, substantially as herein described.

In testimony whereof I have hereunto set my hand this 10th day of January, A. D. 1893.

WILLIAM H. FETTERS.

Witnesses:
W. K. MILLER,
BURT W. MILLER.