

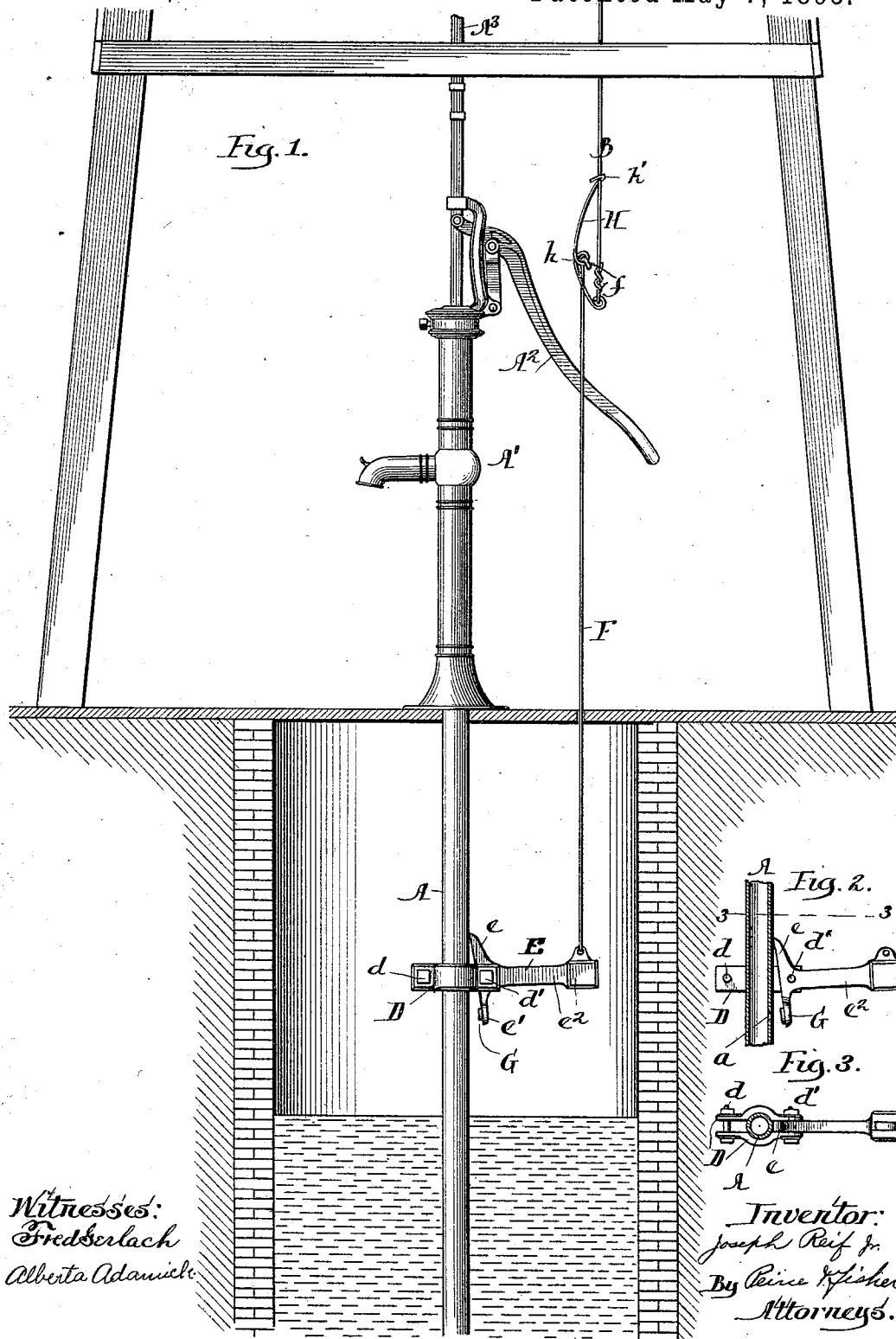
(No Model.)

J. REIF, Jr.

VENT CONTROLLING MECHANISM FOR PUMPS.

No. 538,882.

Patented May 7, 1895.



UNITED STATES PATENT OFFICE.

JOSEPH REIF, JR., OF HEBRON, INDIANA, ASSIGNOR OF ONE-HALF TO ELMER M. NICHOLS, OF SAME PLACE.

VENT-CONTROLLING MECHANISM FOR PUMPS.

SPECIFICATION forming part of Letters Patent No. 538,882, dated May 7, 1895.

Application filed December 20, 1893. Serial No. 494,193. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH REIF, Jr., a citizen of the United States, residing at Hebron, county of Porter, State of Indiana, have invented certain new and useful Improvements in Vent-Controlling Mechanism for Pumps, of which I do declare the following to be a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

Figure 1 is a view, partly in side elevation and partly in vertical section, through a well and pump having my invention applied thereto, a part of the windmill structure being shown above the well-curb. Fig. 2 is a detail view, in side elevation, of a part of the well-tube, showing the manner of clamping the vent-controlling mechanism in place thereon. Fig. 3 is a view in section through the pump-tube at a point above the vent-controlling mechanism, such mechanism being shown in plan.

My present invention has for its object to provide improved mechanism whereby the water from a well tube may be allowed to escape to such distance below the well curb that all danger of the freezing of the water within the tube will be avoided; and a further object of my invention is to provide the vent controlling mechanism with means whereby it shall be held out of action by the cord or wire whereby the wind-mill is also thrown out of action, so that when the wind-mill is to be held out of action its controlling wire or stop wire can be connected with the cord or wire that controls the vent mechanism and thus insure against the danger of leaving the vent closed and so permitting the water to freeze within the pump tube during very cold weather.

My invention consists in the improvements of construction hereinafter described, illustrated in the accompanying drawings and particularly pointed out in the claims at the end of this specification.

A designates the well tube that leads to a suitable pump A', the rod of which is shown as connected with a suitable hand-lever A² and also as connected to the rod A³ that is operated by the wind-mill. (Not shown.) The wind-mill will be thrown into and out of ac-

tion by means of a suitable cord or wire B, which also serves in my present invention to hold the vent controlling mechanism in proper position for allowing the free escape of water from the pump tube.

My improved vent controlling mechanism comprises a lever E that is pivoted between the clamp jaws D, these jaws being fastened to the pump tube by the through-bolts *d* and *d'*, the through-bolts *d'* serving also as a pivot for the elbow lever E. This lever E is formed with the upper and lower branches *e* and *e'* and with a weighted longer arm *e*², from the end of which arm *e*² leads the cord or wire F that is provided at its upper end with a hook *f* to engage with the lower end of the wind-mill controlling cord or wire B. The lower arm *e'* of the lever E is provided with a stopper or valve G that will close over the vent hole *a* formed in the well tube A at a distance below the curb; and the upper arm *e* of the lever E is arranged to engage the wall of the well tube A and thus limit the upward movement of the weighted lever E. By preference the lower end of the wind-mill cord or wire B has linked thereto the tension lever H having an eye *h* that will be engaged by the hook at the upper end of the cord F when the wind-mill and the lever E are to be held out of action; and the lower end of the tension lever H is provided with a hook *h'* so that after the hook *f* of the cord or wire F has been engaged with the eye *h* of the lever H, the lever H can then be turned upward until its hooked end *h'* engages with the wind-mill cord or wire B. As the lever H is thus turned upward it will exert a strain upon the cord or wire B and thus securely set the brake to hold the wind-mill out of action.

From the foregoing description it will be seen that when the parts are in the position illustrated in Fig. 1 of the drawings a free escape for the water is permitted from the vent hole *a* of the well tube, the water flowing back into the well, and at the same time the wind-mill is held out of action by reason of the engagement of its controlling cord or wire B with the cord or wire F that is attached to the vent controlling lever E. Inasmuch as the lever E is provided with the upper arm *e*, it is obvious that any strain upon the lever

in upward direction will be resisted by this arm and without danger of shifting the position of the clamp upon the well tube. This feature is of importance, since manifestly, if the clamp is shifted the stopper G upon the lower arm *e'* of the lever will not properly close the vent hole *a* of the well tube. If, now, it is desired to operate the pump, it is only necessary to disconnect the cords B and F, when the wind-mill may be thrown into action, or the pump operated by the hand-lever A², and the weighted lever E will rock downward causing the stopper G to tightly close the vent hole *a* of the well tube so as to permit the raising of the water there-through.

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

1. The combination with a cord or wire B for controlling the wind-mill, of a pump tube provided below the well curb with a vent hole,

a pivoted lever provided with a valve or stopper for closing said vent hole and with an arm to positively resist the upward movement of said lever and a controlling cord or wire leading from said lever to a distance above the well curb and means for connecting said cord or wire to the wind-mill wire, substantially as described.

2. The combination with the cord or wire B for controlling the wind-mill, of a pump tube provided below the well curb with a vent hole, a pivoted lever provided with a valve or stopper for closing said vent hole, and a controlling cord or wire leading from said lever to a distance above the well curb and a tension rod or lever whereby said lever wire may be joined to said wind-mill wire, substantially as described.

JOSEPH REIF, JR.

Witnesses:

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