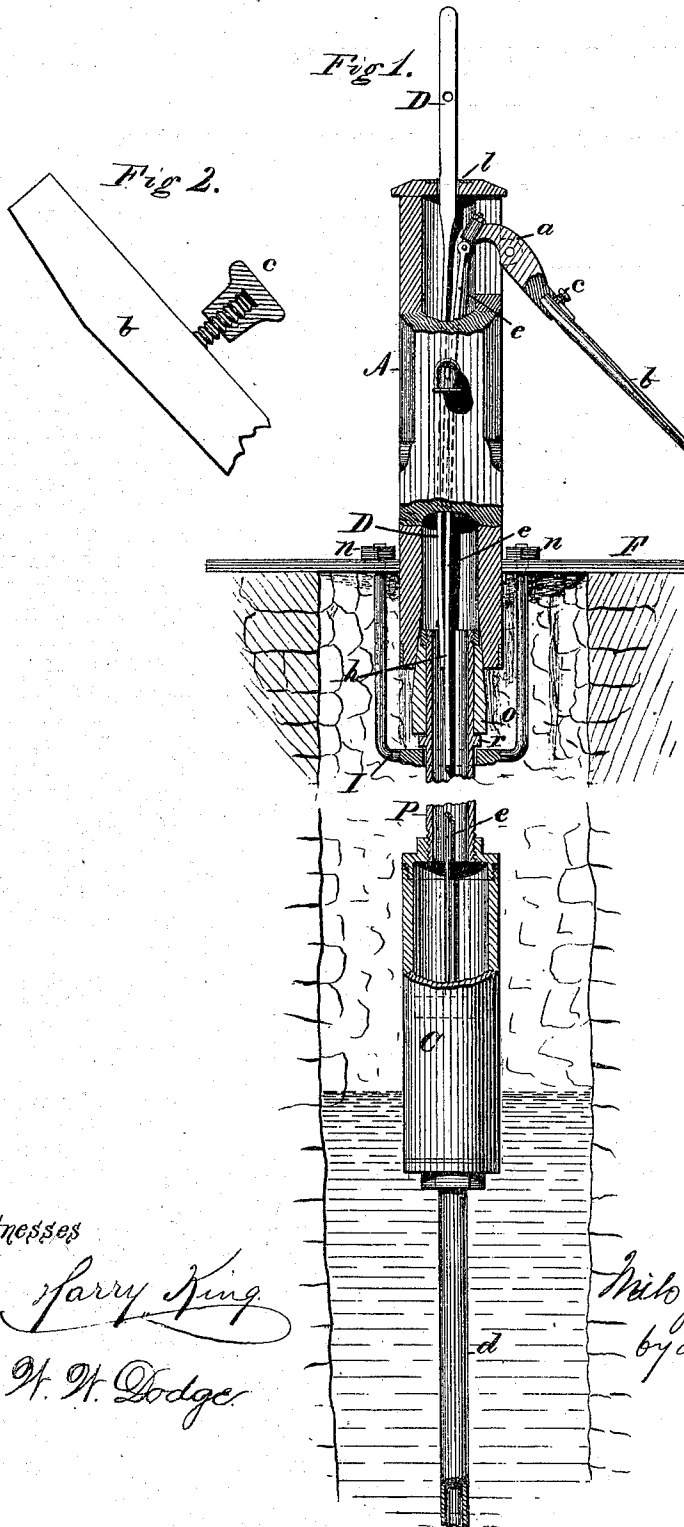


M. J. ALTHOUSE.
Improvement in Pumps.

No. 128,576.

Patented July 2, 1872.



Witnesses

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UNITED STATES PATENT OFFICE.

MILO J. ALTHOUSE, OF WAUPUN, WISCONSIN.

IMPROVEMENT IN PUMPS.

Specification forming part of Letters Patent No. 128,576, dated July 2, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that I, MILO J. ALTHOUSE, of Waupun, in the county of Fond du Lac and State of Wisconsin, have invented certain Improvements in Pumps, of which the following is a specification, reference being had to the accompanying drawing:

My invention consists, first, in a novel method of combining a wooden pump-head with a metallic pump and pipe; and second, in certain improvements in the hand-pump, whereby it is adapted for use in connection with a windmill or similar power, as hereinafter more fully explained.

Figure 1 represents a pump containing my improvements applied to a well, with portions shown in section for the purpose of more fully illustrating the invention. Fig. 2 is a view of the handle detached.

In the extreme northern portions of the country it is specially desirable to use wooden pumps, for the reason that ice does not form in and on them so readily as on metal pumps. In other sections, also, it is desirable to use wooden bodies, for the reason that they do not rust, and thus keep the water free from iron rust, which is specially objectionable when the water is to be used in washing clothes, or for chemical purposes. At the same time, it is desirable to construct the valve-chamber and pipe of metal, on account of its greater durability; and it is to accomplish these purposes that the first part of my invention is intended. It is also desirable to so construct the ordinary hand-pump that it can be readily operated either by hand or by power, more especially by windmills, which are now extensively used for that purpose; and to accomplish this is the object of the second part of my invention.

In order to accomplish these objects I construct my improved pump as follows: The head or body A I make of wood, in the usual manner, of sufficient length to extend a short distance into the top of the well, as represented in the drawing. At its lower end the interior opening of this part A is slightly enlarged in a conical form, as represented. I then provide a metallic valve-chamber, C, of any suitable size, from the top of which extends a pipe or tube, P, which is provided with a collar or flange, *r*, as shown in the drawing. I then pro-

vide a strong metallic stirrup, I, which is slipped over the pipe P before the latter is connected to the valve-chamber C, the ends of this stirrup extending up through holes in a timber or plank, F, to which they are secured by nuts *n*, as shown in the drawing; the stirrup thus supporting and holding the tube P with its attachments firmly in place. The valve-chamber may be placed at any desired depth, and should be so located as to be at least partially covered by the water, in order that it may always be primed and ready for action. A smaller pipe, *d*, may be attached to the bottom of the valve-chamber, and extend to any desired depth below, as represented, by which means the water will always be taken from the lower portion of the well; and by which means, also, water can be drawn when, as in periods of drought, the water in the well may fall below the level of the valve-chamber. By this method of supporting the pump, it can be held clear from the bottom of the well, and thus prevent drawing into the pump the sand and other sediment at the bottom of the well. Upon the tube P, above the flange *r*, I place a conical wooden jacket, *o*, which, being secured firmly in place, serves to receive and support the wooden body or head A, which is simply set or forced therein, as represented in the drawing; the conical portions forming a tight joint, and tending to hold the body A firmly in position. By these means I use a wooden body, while the valve-chamber and pipes in the well are of metal.

In order to enable the pump to be operated by hand or power at will, I use the ordinary valve-rod *e*, which is connected to the handle in the usual manner; and in addition to this, I provide another rod, D, which extends down through an opening in the top of the pump body A, and is connected to the valve-rod *e* at or near the bottom of the body A, as shown at *h*. Where this rod D passes through the top of the body A, I secure a metal plate, *l*, to afford a bearing for the rod, and to prevent the hole from becoming unduly enlarged or worn. The end of this rod D extends some distance above the top of the body A, and is provided with a hole, through which a bolt is inserted to connect it with the pitman of the wind-wheel, or other motor, located above.

The handle for operating it by hand is com-

posed of two parts—the one part, *a*, which is pivoted to the body, and to which the valve-rod *e* is connected, being made of metal, with a socket in its outer end, into which is inserted the remaining part *b*, which is made of wood—a set-screw, *c*, being provided, as represented, to secure the two parts firmly together, and to permit the part *b* to be detached when desired. The metal portion *a* is so made as to be about equally balanced on opposite sides of its fulcrum, when the part *b* is detached. When the pump is to be operated by power the part *b* of the handle is detached, and the rod *D* is connected to the pitman of the wind-wheel or other motor; and when it is desired to operate it by hand, as is sometimes necessary, when there is no wind, the rod *D* is disconnected from the motor, and the handle *b* is attached, when it is operated in the usual manner.

By making the conical connection of wood, the parts are prevented from being rusted, and can be readily disconnected at any time, and united again so as to form a tight joint, without any refitting. In this way I am able to

furnish a pump that is specially adapted to the wants of farmers and others, and that is always ready for use, either by power or by hand, and which is both cheap and durable, and much less liable to get out of order than the ordinary pump, made wholly of either wood or metal.

Having thus described my invention, what I claim is—

1. The combination of the wooden top *A* with the metallic pipe *P*, provided with the valve-chamber *c*, collar *r*, and wooden jacket *o*, suspended by the stirrup *I*, all constructed and arranged to operate substantially as described.

2. In combination with the valve-rod *e*, having the balanced lever *a* attached thereto, I claim the pitman *D*, arranged as herein set forth.

MILO J. ALTHOUSE.

Witnesses:

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