

(No Model.)

J. PFENDER.
PUMP.

No. 532,180.

Patented Jan. 8, 1895.

Fig. 1.

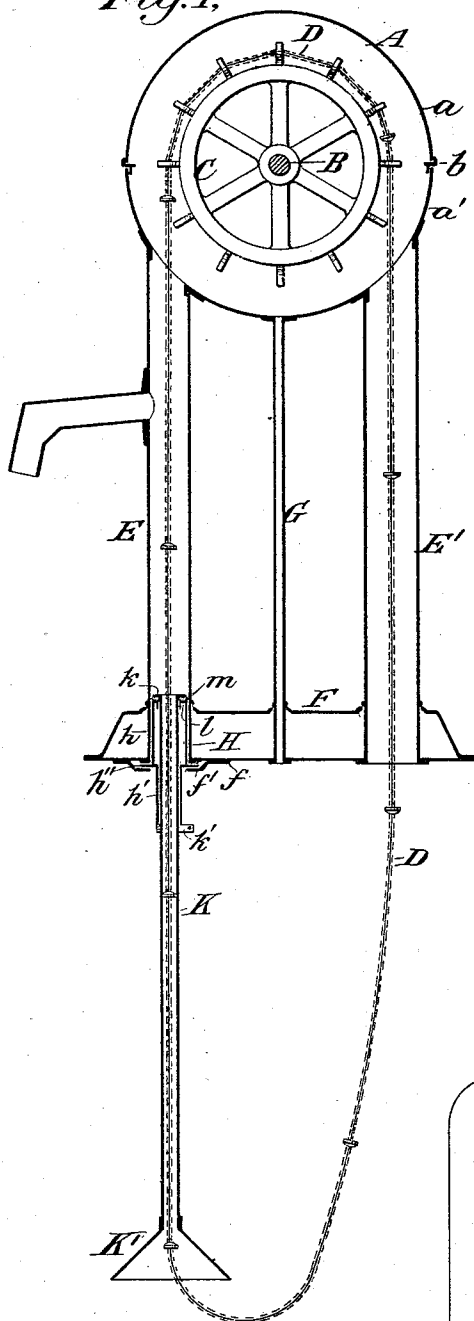


Fig. 2.

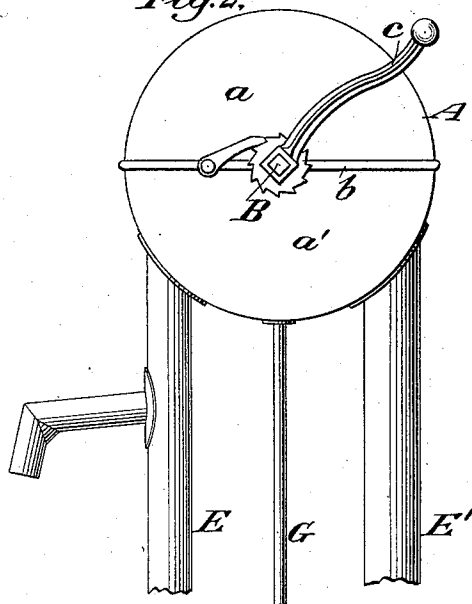


Fig. 3.

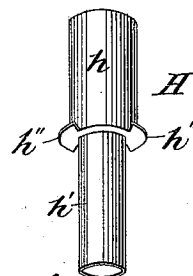
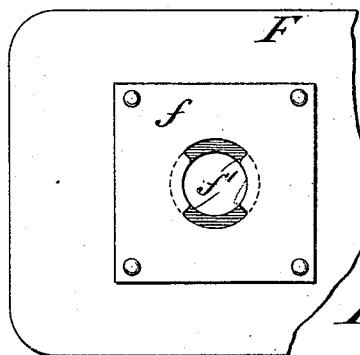


Fig. 4.



Witnesses:-

N. H. Hayworth

Henry Fletcher

Inventor:-

John Pfender,
by his attorney
Nicholas H. Goodlett

UNITED STATES PATENT OFFICE.

JOHN PFENDER, OF EVANSVILLE, INDIANA.

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SPECIFICATION forming part of Letters Patent No. 532,180, dated January 8, 1895.

Application filed September 9, 1893. Serial No. 485,143. (No model.)

To all whom it may concern:

Be it known that I, JOHN PFENDER, a citizen of the United States, and a resident of Evansville, in the county of Vanderburg and State of Indiana, have invented a new and useful Improvement in Pumps, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates especially to chain pumps, and has for its object the improvement of various details of construction and the provision of suitable means for draining back into the cistern or well, all the surplus water left in the pump after its operation.

The invention consists of the devices hereinafter set forth.

Referring now to the drawings, in which like letters of reference denote corresponding parts in all the figures, Figure 1 is a vertical central section of a pump embodying my invention. Fig. 2 is a side elevation of the pump, the lower part being broken away. Fig. 3 is a perspective view of a pipe connection, and Fig. 4 is a plan view of the lower side of one end of the base of the pump.

The wheel box A, as shown in the drawings, is cylindrical in form and comprises the upper and lower separable parts *a* and *a'*, the part *a* being hinged or suitably connected to the lower part *a'* in any well-known manner. When the wheel box is made of sheet metal, of which I prefer to construct the entire pump, the part *a'* has a bead *b* extending around its upper rim which supports in suitable bearings the shaft B of the wheel C. The wheel shaft is provided as usual with pawl and ratchet and with the crank arm *c*. The carrier chain D passes over the wheel and through the front and back chain pipes E and E' connected at their upper ends to the part *a'* of the wheel box, and at their lower ends to the base F. A drain tube G is connected at its upper end to the bottom of the part *a'* of the wheel box, and at its lower end to the base F. This drain tube catches all the surplus water left in the wheel box after the pump has been operated, and delivers it back,

into the cistern, thus preventing corrosion or decay of the wheel box occasioned by the water that is ordinarily left standing therein. 50

The base F is made in the form of a chamber, and the pipes E and E' and the tube G pass through it and, when these parts are made of sheet metal, are flanged at their lower ends and soldered or otherwise connected to the lower side of the base, as shown. The base F is provided with a plate *f* on its lower side surrounding the pipe E, and this plate has a pair of circumferential flanges *f'*. The chain pipe K, which is provided with an inlet funnel K', is a continuation of the pipe E but is smaller in diameter. It is connected to the pipe E and the base F by means of the coupling H. This coupling comprises an upper part *h*, a little smaller in diameter than the pipe E, and a lower part *h'* a little larger in diameter than the pipe K, so as to fit snugly in pipes E and K. The coupling has a pair of flanges *h²* at the junction of its parts *h* and *h'*, which are turned under the flanges *f'* of the plate *f*, so that the coupling is held securely in place. The upper end of the coupling is inwardly flanged at *l* to provide a support for the pipe K, whose upper end passes through the coupling and is provided with a flange *k* to rest on the flange *l*. A gasket *m* rests between the flanges *k* and *l* to make a water tight connection, and the pipe K is provided with an adjustable collar *k'* which is fastened just below the coupling H in order to prevent the pipe K from slipping upward and to compress the gasket *m*. 55 60 65 70 75 80

As above stated I prefer to make the entire pump of sheet metal, but other material may be used if desired. Various changes may be made in the construction without departing from the spirit of my invention. 85

What I claim as new, and desire to secure by Letters Patent, is—

1. In a pump the combination of a wheel box, a base provided with flanges *f'*, chain pipes connecting the wheel box and base, a chain pipe K having a flange *k* at its upper end and a coupling H provided with a flange 90

l on which the flange k rests, and with flanges h^2 resting on the flanges f' , substantially as set forth.

2. In a pump, the combination of a wheel
5 box, a base provided with flanges f' , chain
pipes connecting the wheel box and base, a
chain pipe K having a flange k at its upper
end, a coupling H provided with the flange l
on which the flange k rests, and with flanges

h^2 resting on the flanges f' , a gasket m rest- 10
ing between the flanges k and l , and a collar
clamped to the pipe K beneath the coupling,
substantially as set forth.

JOHN PFENDER.

Witnesses:

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JOHN M. CHARLES.