

No. 105,913.

PATENTED AUG. 2, 1870.

N. T. COFFIN.
PUMP VALVE.

Fig. 1.

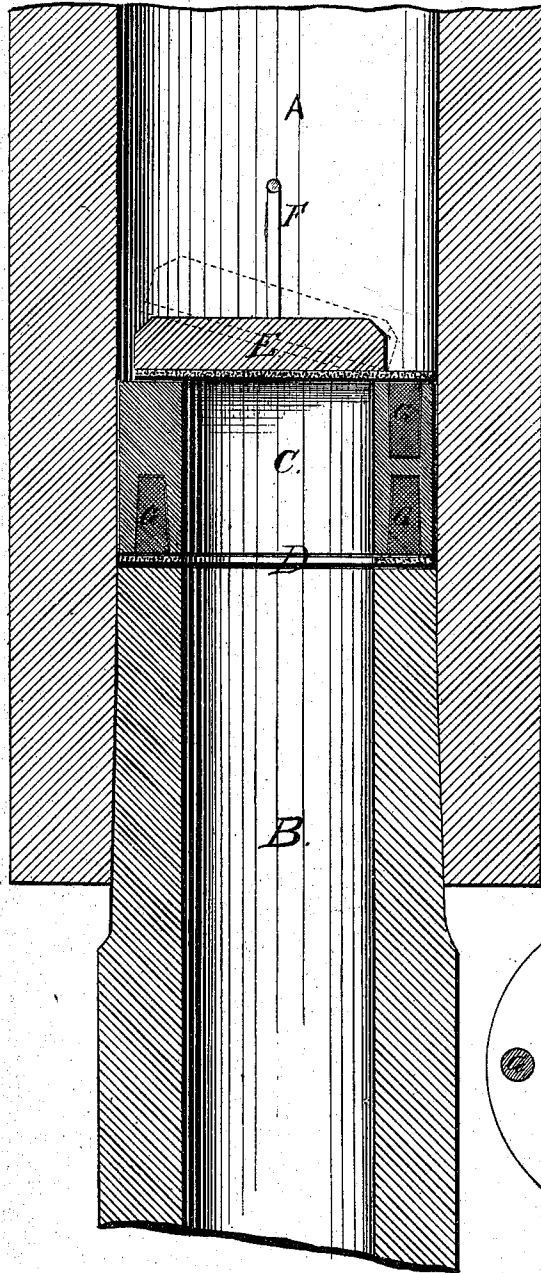
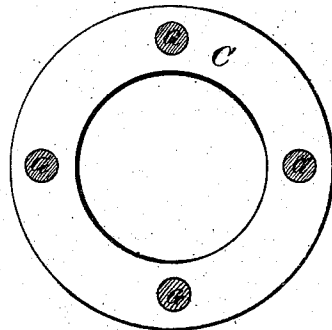


Fig. 2.



WITNESSES.

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Nathan T. Coffin INVENTOR.

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NATHAN T. COFFIN, OF KNIGHTSTOWN, INDIANA.

Letters Patent No. 105,913, dated August 2, 1870.

IMPROVEMENT IN PUMP-VALVES.

The Schedule referred to in these Letters Patent and making part of the same.

I, NATHAN T. COFFIN, of Knightstown, in the county of Henry and State of Indiana, have invented certain Improvements in Pump-Valves, of which the following is a specification.

Nature and Objects of the Invention.

My invention relates to the lower valve of pumps, or the drop-bucket valve in wooden pumps; and

It consists in constructing the valve-bucket of cast iron, in such manner that it will rest by its own gravity on the end of the tubing inserted in the bottom end of the upper stock, the under side of the valve having a packing of leather, to make it water-tight on its seat, the object being to make the valve more easily removable for repairs, and, at the same time, more durable and less liable to get out of order than either the old drop-bucket valve, or the more modern construction of securing the valve directly to the end of the tubing.

Description of the Accompanying Drawing.

Figure 1 is a transversal vertical section through the lower end of a wooden pump-stock, and the upper end of the inserted tubing, and the drop-bucket, embodying my invention.

Figure 2 is a bottom view of the drop-bucket valve.

General Description.

A is the pump-stock; and

B, the tubing, inserted in the lower end of the stock A.

One common manner of constructing the lower valve has been to attach the valve to the top of a wooden bucket, to be dropped into the stock, the stock being made with a tapering bore in the part where the valve rests, and the drop-bucket of corresponding shape, and having a groove around it to receive packing, so that the bucket would wedge into the bore, and thus be made water-tight.

A serious objection to this manner of putting in the valve is, that it is exceedingly difficult to remove after being in the pump any length of time.

Another common method has been to attach the valve directly to the upper end of the tubing inserted in the lower end of the pump-stock. The objection to this is that, when the valve gets out of order, it becomes necessary to draw out the pump to repair it.

My invention consists in constructing the valve-bucket C of cast iron, of sufficient weight to rest on its seat without danger of floating. A leather or rubber packing-ring, D, is attached to the bottom of the bucket to form a water-tight joint with the end of the tubing B, as shown.

The bucket is provided with a bale, F, by which to lift it out of the pump. The packing-ring D and valve E are attached to the bucket by means of nails driven into wooden pins, G, inserted in holes drilled therein, whereby I am enabled to remove them for repairs as conveniently as from wooden buckets.

The pump-stock is bored of uniform size, and the valve-bucket is made to fit so loosely that it will drop freely into place. When it becomes necessary to remove the bucket for repairs, this is easily accomplished, as no greater force is required than simply to lift the weight of the bucket.

Claim.

I claim as my invention—

The valve-bucket C, furnished with the packing D, and wooden pins G, and arranged to form a water-tight joint by resting loosely, by its own gravity, on a seat formed by the upper end of the tubing B, substantially as and for the purpose set forth.

NATHAN T. COFFIN.

Witnesses:

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