

Turner & Woodward,

Chain Pump.

No. 102,972.

Patented Dec. 6. 1870.

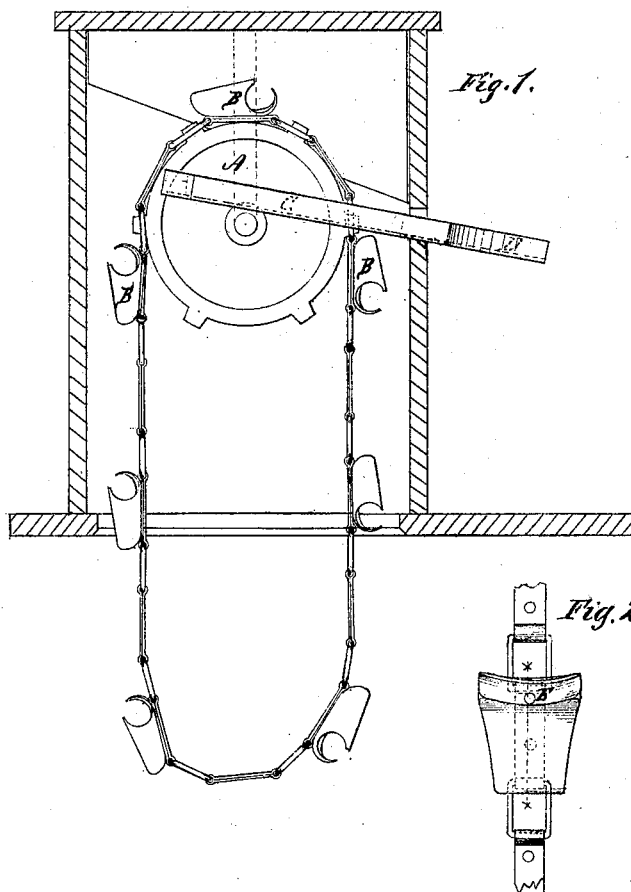


Fig. 3.



Fig. 2.

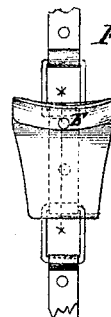
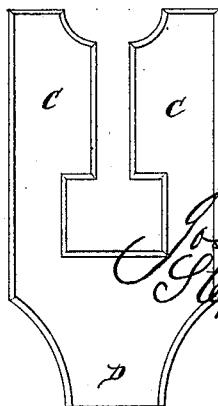


Fig. 4



Witnesses

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W. C. Sturges

Inventor

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# United States Patent Office.

JOSIAH TURNER AND STEPHEN WOODWARD, OF SUNAPEE, NEW HAMPSHIRE.

Letters Patent No. 109,972, dated December 6, 1870.

## IMPROVEMENT IN MODE OF DRAWING WATER FROM WELLS.

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

### *To all whom it may concern :*

Be it known that we, JOSIAH TURNER and STEPHEN WOODWARD, of Sunapee, in the county of Sullivan and State of New Hampshire, have invented a new and improved Mode of Drawing Water from Wells; and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

The nature of our invention consists in attaching to an endless chain, constructed of flat and open links, buckets of a peculiar shape, which draw the water from the well and empty it over the shaft, instead of under, and in dispensing entirely with rolls or pulleys in the well, round which chains for like purposes generally revolve.

To enable others skilled in the art to make and use our invention, we will proceed to describe its construction and operation.

We use a wheel, as shown in Figure 1, letter A, of the accompanying drawing.

Said wheel A has cogs on its periphery that mesh into the open links of the endless chain, thus obviating the slipping, which occurs in ordinary chain-pumps.

The buckets B are provided with tunneling or curving ears, so that the water discharges at the sides upon the discharge-table C, and out at the spout D, in Figure 4. The discharge-table may be made of cast-iron, or it may be constructed of wood.

Figure 3 is a side view of the bucket with its curved

ear. Said bucket may be made of leather, tin, wood, or cast-iron, and its size may be varied to the quantity of water required to be raised, and the speed of the wheel A' may be reduced by the application of a back gear.

Figure 2 is a front view of the bucket and the flat and open links of the chain, the buckets being attached to the flat links by means of rivets or screws, as seen at E, fig. 2.

The advantages to be gained by our invention, as compared with ordinary collar or flange chain-pumps, is that all the water in the bucket, when it leaves the surface of the water in the well, reaches the top or place of delivery without leakage or loss, and that all regulating apparatus in the well for the chain to pass round is rendered unnecessary, and, of course, all the friction and contamination of the water connected with such apparatus is done away with.

What we claim, then, as our invention, and desire to secure by Letters Patent, is—

The endless chain and buckets, flaring laterally, each of which buckets has, at its open end, a transverse segmental spout, resembling a hood, when the bucket is upright, in combination with the discharge-table, substantially as herein set forth.

JOSIAH TURNER.  
STEPHEN WOODWARD.

Witnesses:

EDWARD R. PERKINS,  
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