

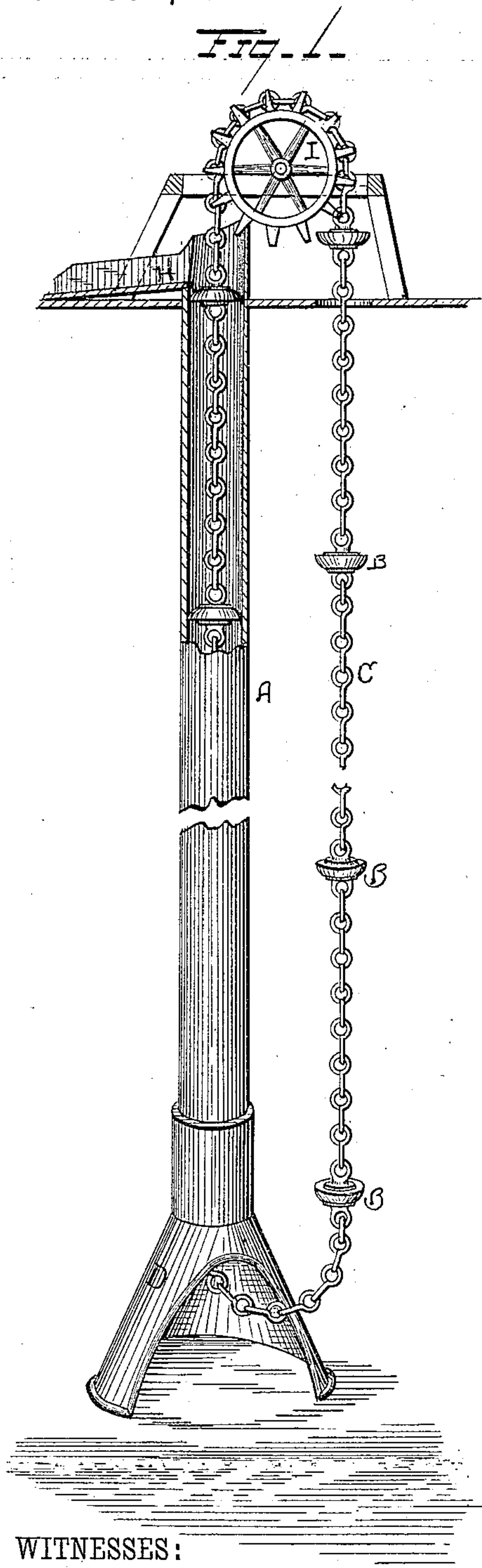
(No Model.)

M. S. TYLER & T. H. CARTER.

CHAIN PUMP.

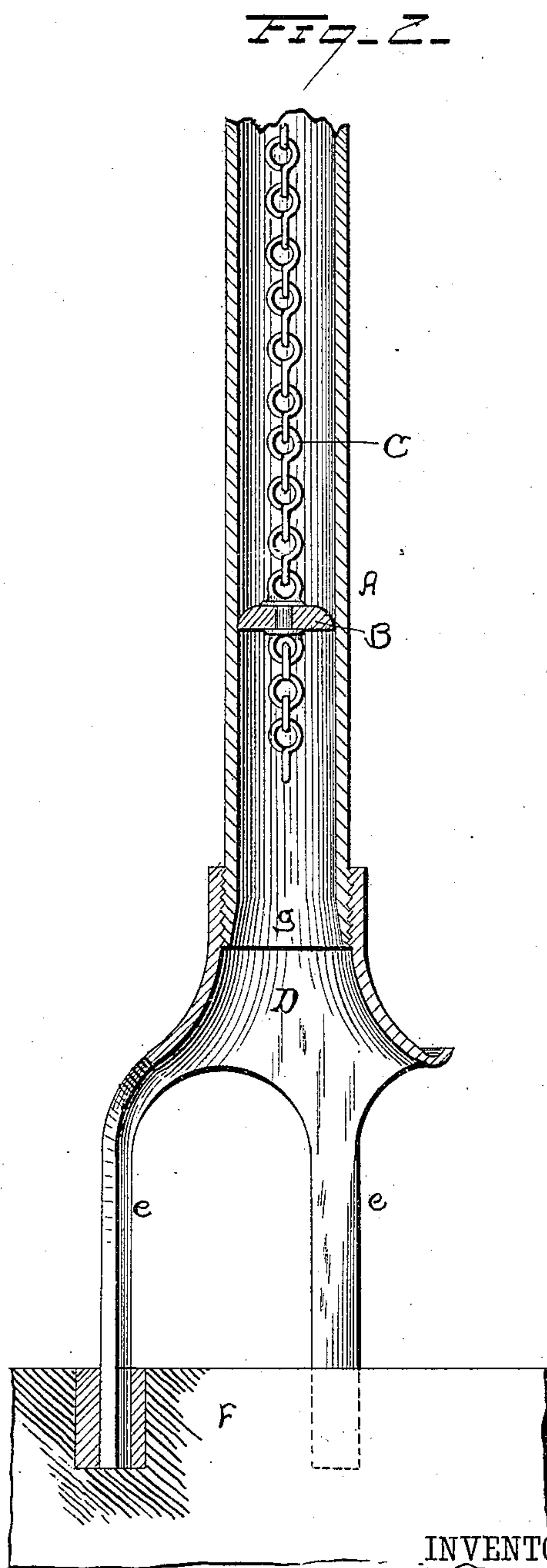
No. 337,354.

Patented Mar. 2, 1886.



WITNESSES:

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INVENTOR

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# UNITED STATES PATENT OFFICE.

MATTHIAS S. TYLER AND THOMAS H. CARTER, OF MOUNT STERLING, KENTUCKY; SAID CARTER ASSIGNOR TO SAID TYLER.

## CHAIN-PUMP.

SPECIFICATION forming part of Letters Patent No. 337,354, dated March 2, 1886.

Application filed July 6, 1885. Serial No. 170,734. (No model.)

*To all whom it may concern:*

Be it known that we, MATTHIAS S. TYLER and THOMAS H. CARTER, of Mount Sterling, in Montgomery county and State of Kentucky, have invented a new and useful Improvement in Chain-Pumps; and we do hereby declare that the following is a full and accurate description of the same.

In many sections of the country rain-water stored in cisterns underground is in common use for culinary purposes and for drinking. It is of the highest importance that it shall be kept pure, and especially in the Southern States it has been found useful to aerate the water frequently. For this reason chain-pumps are almost exclusively employed to draw water from cisterns, the exposure of the constantly-returning portion of the column set in motion by the chain-buckets, as well as the passage of the buckets themselves through air and into the water, serving an admirable purpose in aerating the water in the cistern.

The pipes for chain-pumps have been made from wood, iron, or copper. The latter is objectionable on account of its cost and liability to corrosion, by which it is rendered detrimental to health, and the former is objectionable because it is not durable, and when in decay it taints the water which is in contact with it. Besides, wooden pipes, owing to their lightness, require to be braced and fastened in position at the bottom to keep the foot in place and down on the bottom, so that there is difficulty in removing the pump, as it is occasionally necessary to do for repairs or other reasons.

Our improvement has for its object to make the pipe and its attachments sufficiently heavy to enable it to keep its position in the cistern without foot-bracings.

In the following particular description reference is had to the accompanying drawings, wherein Figure 1 is a perspective view of our pump in position, partly in section. Fig. 2 is a longitudinal section enlarged.

A is the pump pipe or barrel, of wrought-iron galvanized water-piping. If the required

length is greater than can be procured in one piece, two or more pieces may be joined with thimbles in the usual way; but in that event the ends should be beveled interiorly, as at *g*, and made smooth, and they should also be run into the thimbles until they abut together, to facilitate the passage of the bucket-buttons B on the chain C. At the upper end the pipe A terminates in a box or trough, H, provided with a discharge nozzle or pipe on one side, and the chain C is actuated by a sprocket-wheel, I, with crank and click, as usual.

The object sought and attained by our improvement is the self-ability to maintain the proper position at the bottom of the cistern or well. We therefore make the pump, and especially the bottom, so heavy that gravity causes it to be securely anchored. We place at the bottom of the pipe a funnel-shaped guide, D, to insure the entrance of the chain and bucket, and provide it with legs *e*, the lower ends of which are securely embedded in a stone slab, F, whereby weight is secured sufficient to securely anchor the foot of the pipe; or, if preferred, the funnel D may be made, as shown in Fig. 1, to form a broad foot, which, with the weight of the superincumbent pipe A, will give a firm anchorage.

Having described our invention, we claim—

1. A chain-pump whereof the pipe or barrel is of iron tubing, provided at its bottom with a funnel-shaped foot, which, with the superincumbent weight of the pipe, will, when resting on the bottom of the cistern, securely anchor the foot without bracings.

2. A chain-pump whereof the barrel or pipe is entirely of galvanized iron, with the several ends funnel-shaped to facilitate the passage of the chain-buckets, a discharge trunk or box at the top, and a funnel-shaped foot at the bottom, substantially as set forth.

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Attest:

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