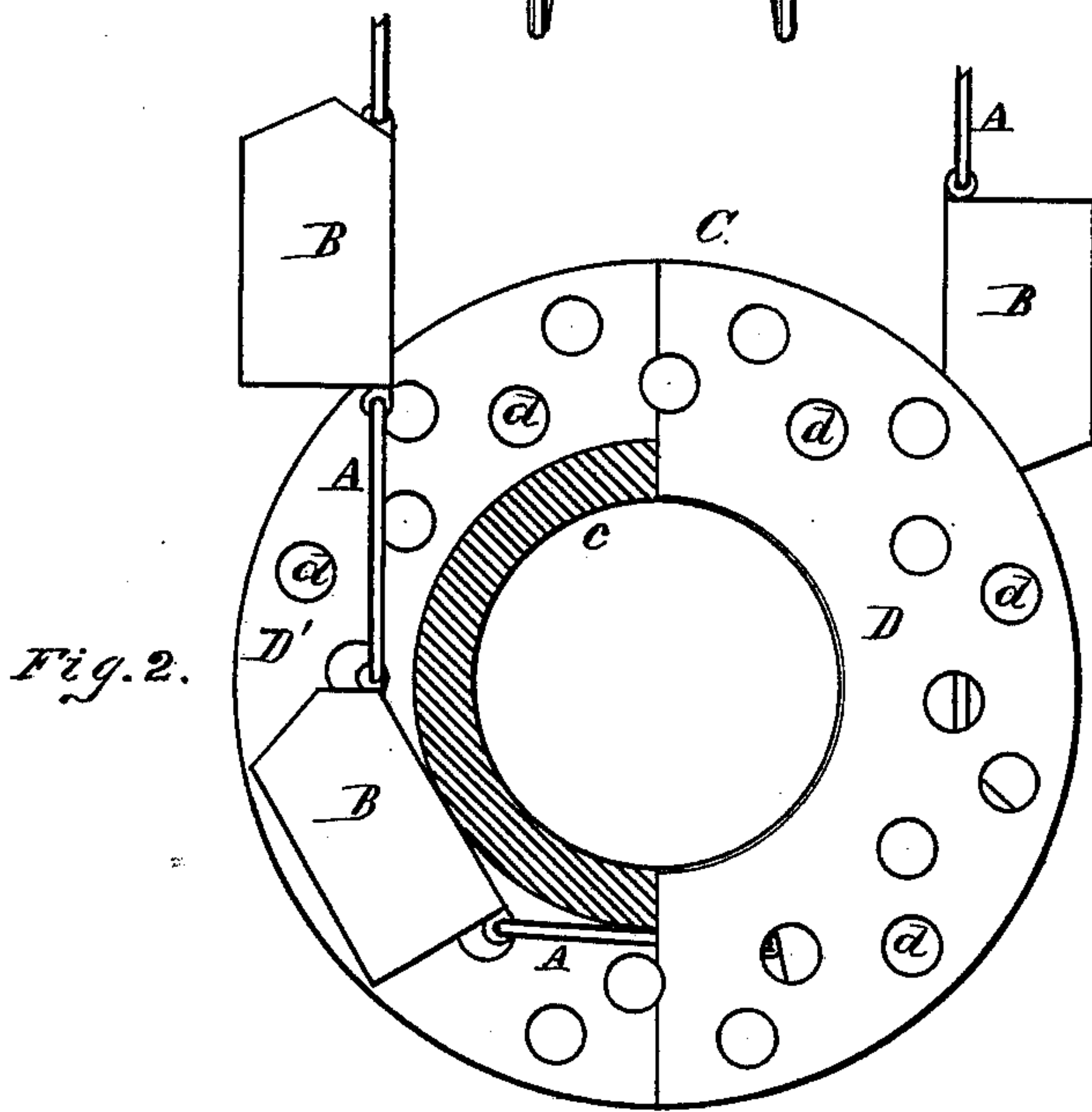
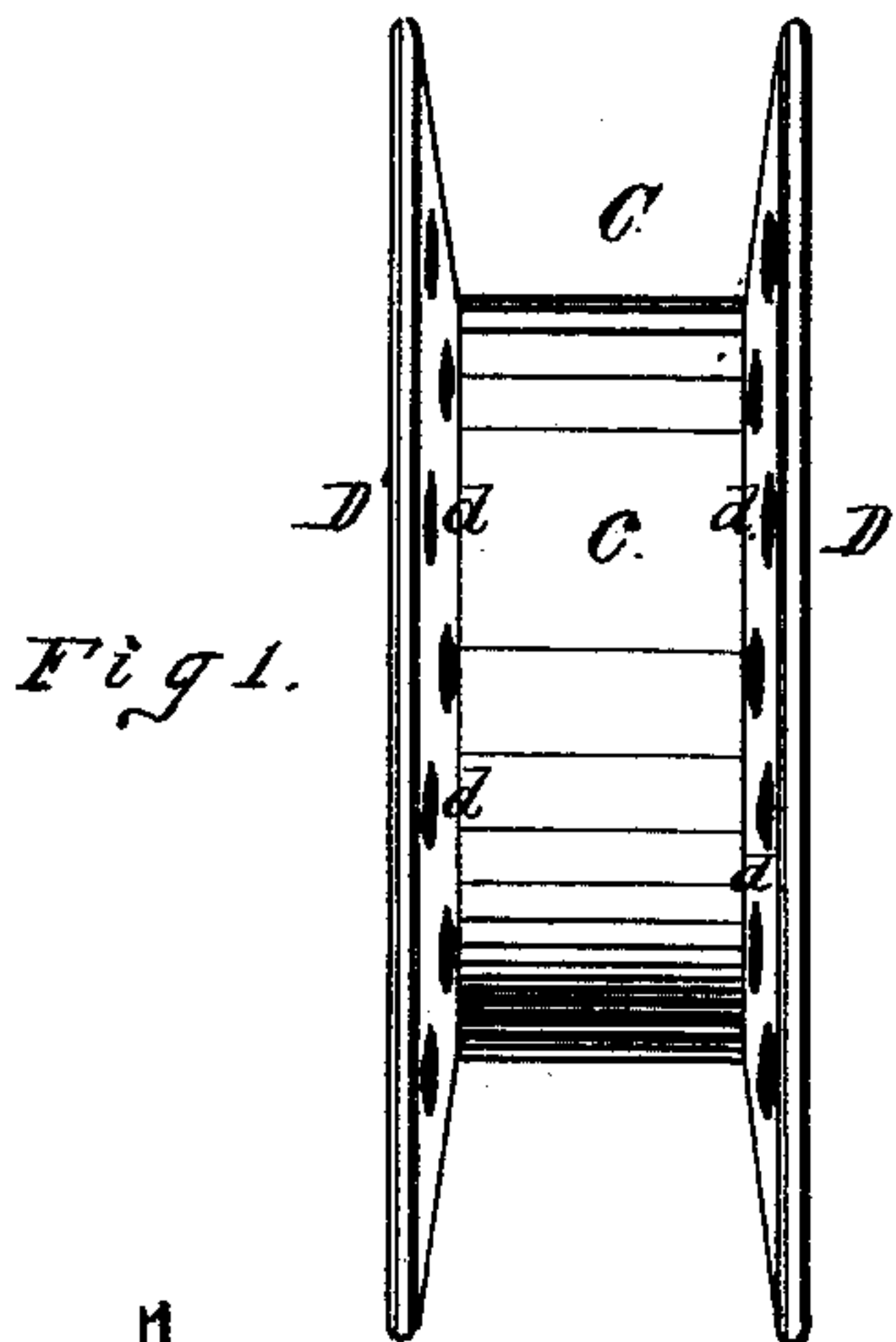


E. L. BROWNING.
Water-Elevator.

No. 222,239.

Patented Dec. 2, 1879.



Attest:
Geo. H. Knight
Walter Allen

Inventor:
Edward L. Browning
By Knight Bros.
Atty.

UNITED STATES PATENT OFFICE.

EDWARD L. BROWNING, OF MAYFIELD, KENTUCKY, ASSIGNOR OF ONE-HALF
OF HIS RIGHT TO JAMES E. ASHCROFT, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN WATER-ELEVATORS.

Specification forming part of Letters Patent No. **222,239**, dated December 2, 1879; application filed
August 7, 1879.

To all whom it may concern:

Be it known that I, EDWARD L. BROWNING, of Mayfield, in the county of Graves and State of Kentucky, have invented a certain new and useful Improvement in Water-Elevators, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to an improvement on the water-elevator patented by Isaac Mayfield, dated September 26, 1871, No. 119,380; and my improvement consists in constructing the hanging wheel with broad perforated flanges, as and for the purpose hereinafter set forth.

Figure 1 is an edge view of the wheel. Fig. 2 shows the wheel one-half in side elevation and one-half in section.

In the Mayfield patent (No. 119,380) the endless chain is stretched by suspending in its lower bend a wheel whose whole bearing is upon the chain.

My improvement applies to this wheel, and gives to it three advantages not found in this wheel as heretofore constructed: First, the breadth of the flanges prevents the wheel becoming dislodged from the chain even when the utmost violence is used in turning and reversing the chain; second, the perforations cause the agitation of the water as the wheel turns; third, the perforations provide means for the removal of the wheel from the bottom of the well when it may have been dropped by

the breaking of the chain, a simple hook being engaged in one of the perforations.

A is the elevator-chain, and B the buckets. These may be of any suitable construction. My improvement does not relate to them.

C is the wheel, having a hub, *c*. D D' are the side flanges. The outer faces of the flanges may be parallel with each other, but their inner faces should incline somewhat outwardly, so that the flanges are thinner toward the periphery. Thus the inner faces will act as a guide to the chain at the sides. At *d* are shown perforations in the flanges D D', for the purpose before set forth.

I do not confine myself to any definite size or number of perforations in the wheel, but may state that I propose to make the flanges *d* about three inches in depth, with a wheel about fourteen inches in extreme diameter; but it is obvious that these dimensions form no essential feature of the invention, and may be changed without affecting its principle.

I claim as my invention—

The hanging wheel C, for water-elevators, having perforated flanges D D', substantially as set forth.

In testimony whereof I have hereunto set my hand this 25th day of July, 1879.

EDWARD L. BROWNING.

In presence of—

GEO. H. KNIGHT,
GEO. D. KNIGHT.