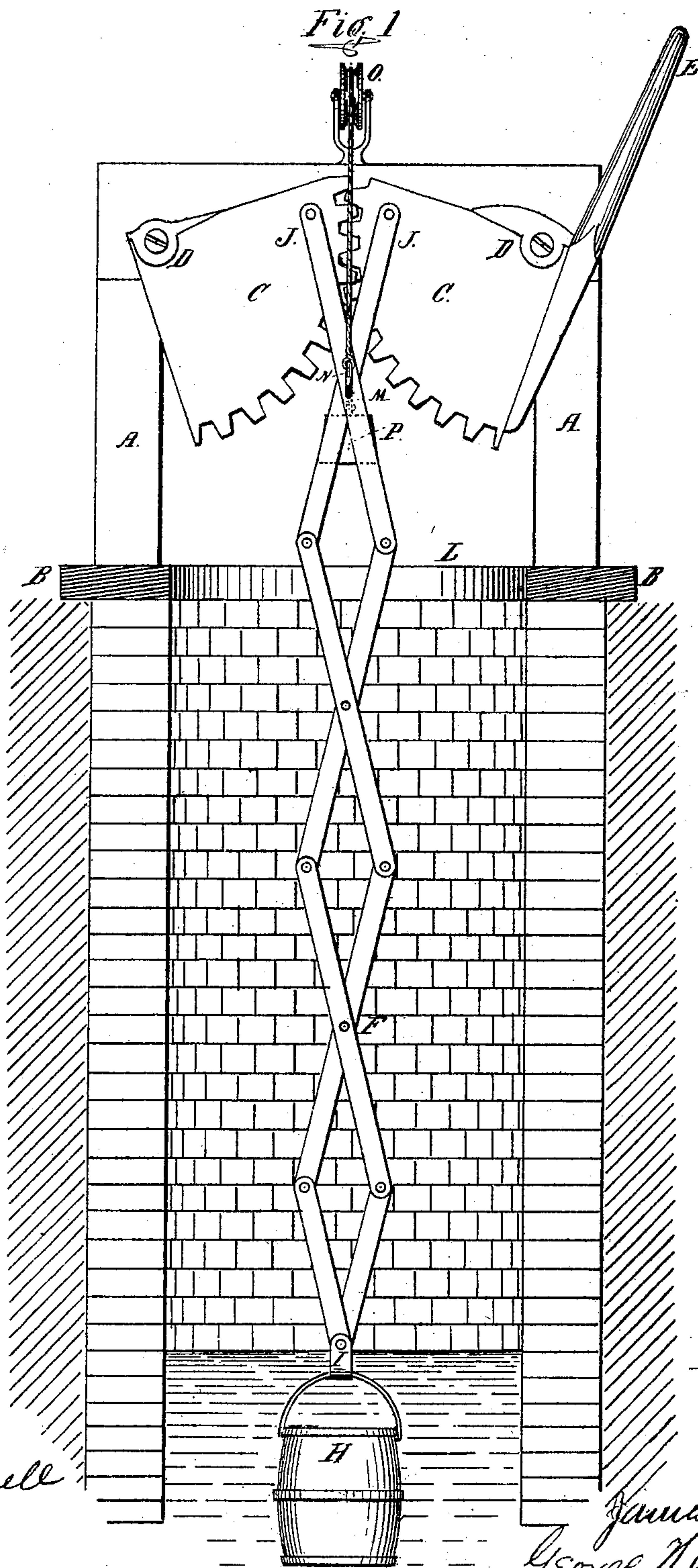


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Water-Elevators.

No. 136,368.

Patented March 4, 1873.



Witnesses.

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Inventors.

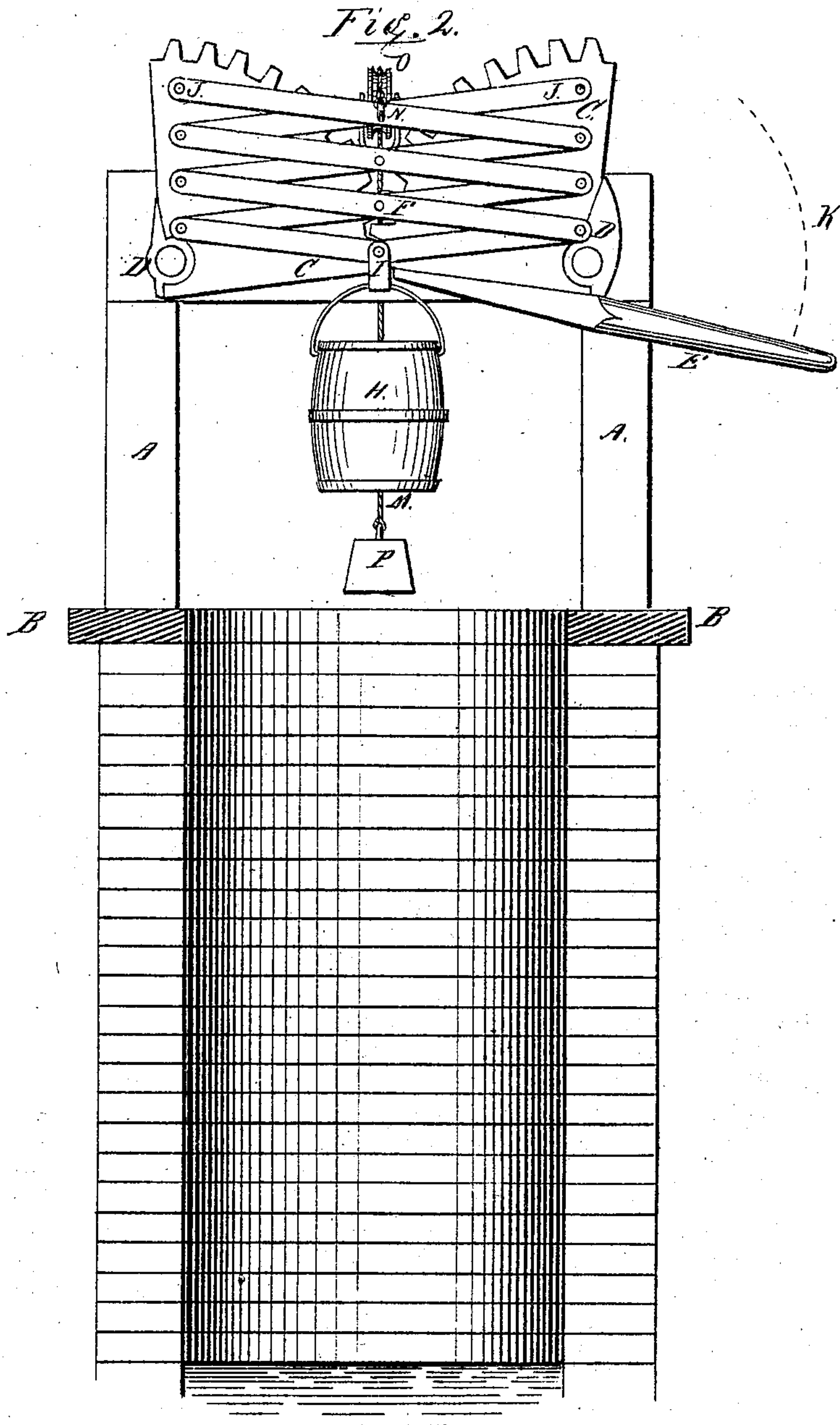
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# UNITED STATES PATENT OFFICE.

JAMES B. ERWIN AND GEORGE H. SHOULTERS, OF BATAVIA, NEW YORK.

## IMPROVEMENT IN WATER-ELEVATORS.

Specification forming part of Letters Patent No. 136,368, dated March 4, 1873.

*To all whom it may concern:*

Be it known that we, JAMES B. ERWIN and GEORGE H. SHOULTERS, of Batavia, in the county of Genesee and State of New York, have invented certain Improvements in Machines for Drawing Water, of which the following is a specification:

Our invention relates to improvements in apparatus for raising water; and the invention consists in a new and improved combination of devices whereby water or other liquids may be elevated without pumping, all as hereinafter more fully set forth.

In the accompanying drawing, Figure 1 is an elevation of our improved apparatus, showing the position of the levers when the bucket is lowered. Fig. 2 is an elevation of the same, showing the position of the apparatus when the bucket is raised.

A A represent the frame-work which supports the apparatus, made of any strong and durable material suitable for the purpose. B is the platform at the top of the well. C C are two quadrant or segmental gears, which are pivoted to the frame A by bolts D D, respectively. E is a handle secured to one of the gears C. F represents that combination of pivoted levers technically called lazy-tongs. The upper series of these levers F is secured to the gears C C by bolts J J. H is a bucket secured to or suspended from the lower series of the levers F at I. M is a rope or chain, one end of which is attached to the upper levers F at N. It is passed over a pulley, O, which is secured on the top of the frame A. P is a hanging weight attached to the other end of rope M.

The operation of the apparatus is as follows: The handle E is moved up and down, describing the arc shown by dotted lines K in Fig. 2 of the drawing. When in position shown in Fig. 1 the handle is elevated, the levers F of the lazy-tongs extend downward into the well

their full length, and the bucket H, being thus immersed, is filled with water or other liquid to be elevated. By forcing down the handle E the gears C describe a partial revolution, thereby raising the levers F of the lazy-tongs into the position shown by Fig. 2, and bringing the bucket to the surface of the well, where it may be emptied by hand or brought into contact with a suitable device for emptying it of its contents automatically, as found most convenient and desirable. When the handle E is in position shown by Fig. 2 the balance-weight P has descended to its lowest point; and as the handle is raised it rises until it attains its maximum height, as shown by Fig. 1.

The weight thus acts as a counterpoise to the weight of the lazy-tongs and bucket, and aids in the raising of the full bucket by its gravity when the handle is forced downward.

With a machine of this construction it is obvious that the upward and downward stroke of the handle, through the operation of the quadrant-gears, causes the lazy-tongs to extend and contract, thereby lowering and raising the bucket so as to elevate the water or other fluid without the aid of a force or suction pump. Further description of our improved apparatus is therefore deemed superfluous.

What we claim as our invention is—

1. The combination of the gears C C with the series of levers F, substantially as and for the purpose specified.

2. The combination of the gears C C, series of levers F, and the balance-weight P, operating in the manner substantially as and for the purpose specified.

JAMES B. ERWIN.

GEORGE H. SHOULTERS.

Witnesses:

WILLIAM TYRBELL,  
C. D. WING.