

(No Model.)

2 Sheets—Sheet 1.

C. M. KIMBALL.

WATER ELEVATOR.

No. 344,911.

Patented July 6, 1886.

Fig. 1.

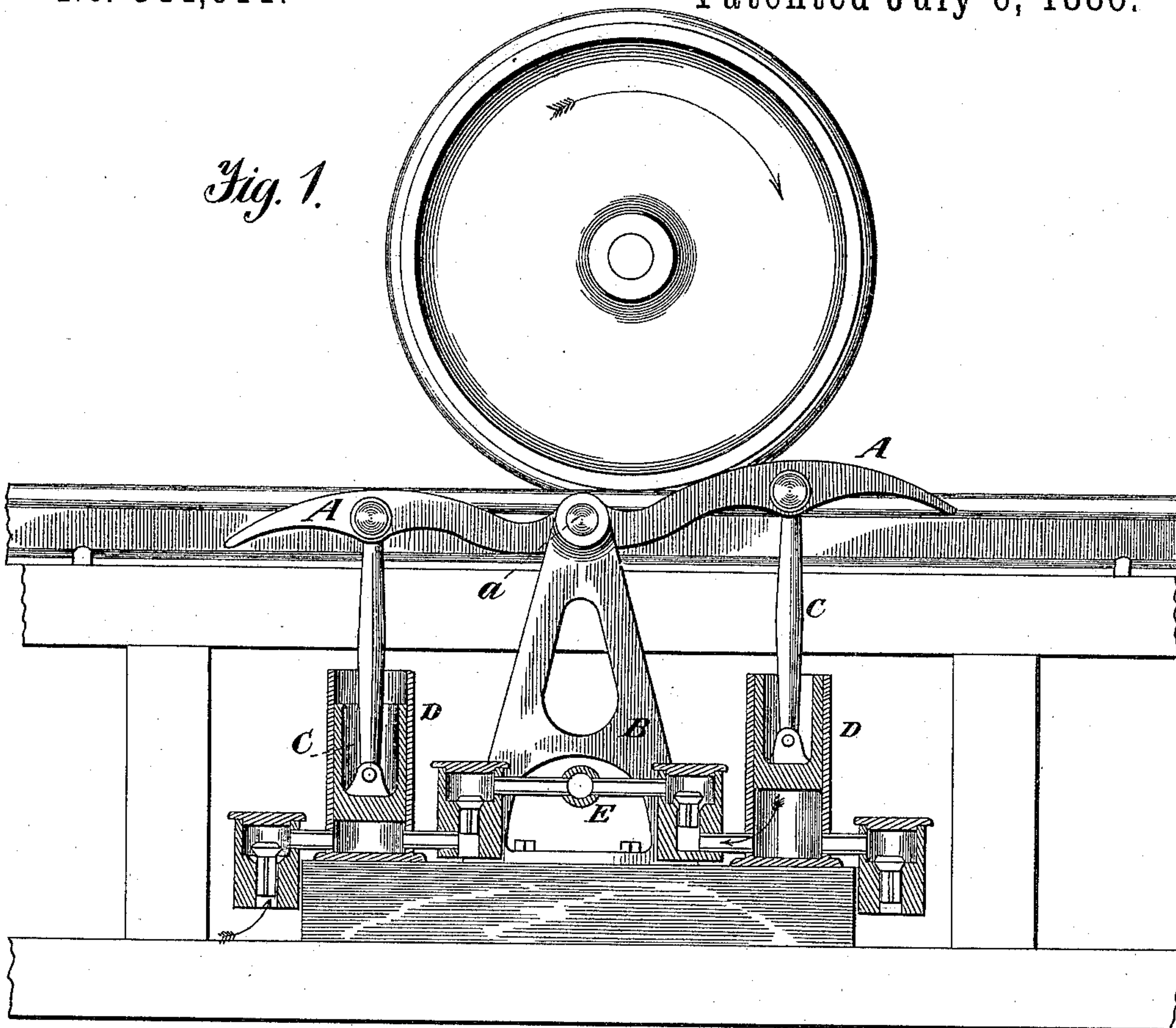
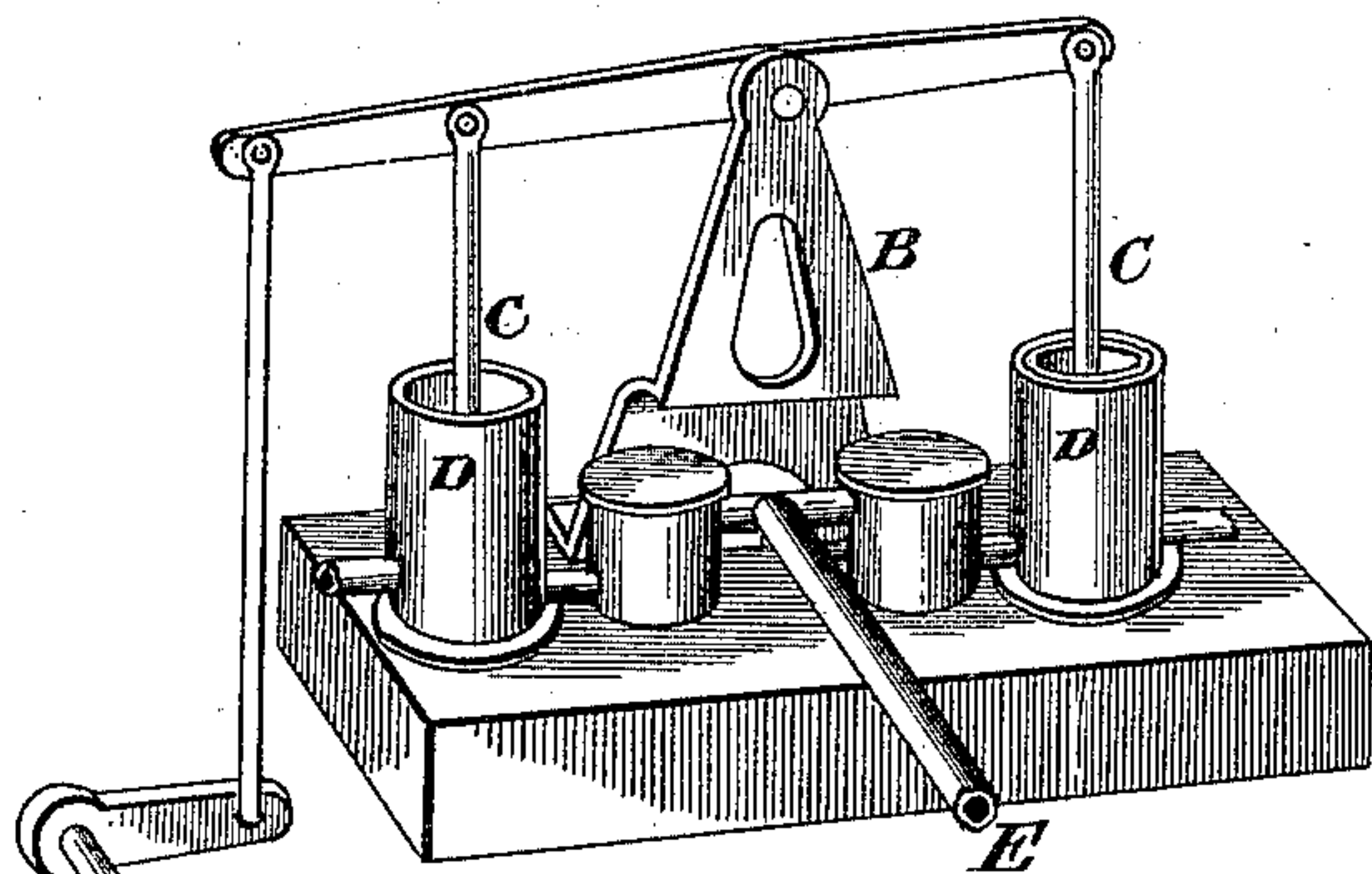


Fig. 2.



Witnesses:

A. Ruppert.

E. Bruce.

Inventor:

Charles M. Kimball,

by J. H. M. J. Howard,
att'y.

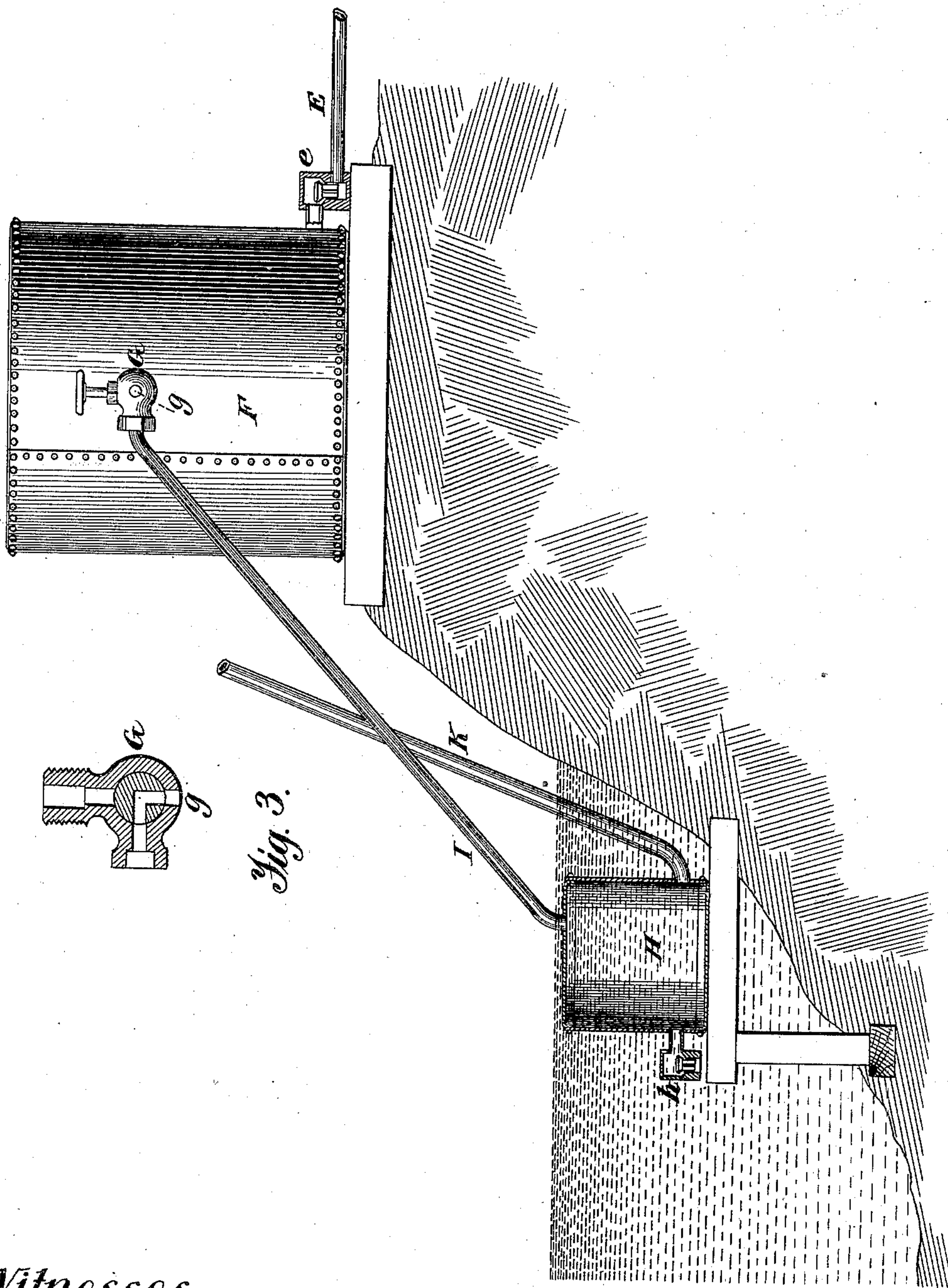
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UNITED STATES PATENT OFFICE.

CHARLES M. KIMBALL, OF TOLEDO, ASSIGNOR OF ONE-HALF TO PATRICK DOWLING, OF HOLLAND, OHIO.

WATER-ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 344,911, dated July 6, 1886.

Application filed October 30, 1885. Serial No. 181,418. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. KIMBALL, of Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful
5 Improvements in Water-Elevators, of which the following is a specification, reference being had to the accompanying drawings and to the letters of reference marked thereon.

My invention has special reference to an
10 apparatus to be located on the lines of railroads, having a tank into which water is to be elevated for supplying the tanks of locomotive-tenders, or for other purposes for which water is required upon lines of railroad.

15 In the drawings, Figure 1 is a vertical longitudinal section of the apparatus for pumping air into the compressed-air tank. Fig. 2 is a view of the compressed-air tank and the submerged tank, partly in section. Fig. 3
20 shows a modification of the air-pumping apparatus.

Similar letters of reference indicate similar parts in the respective figures.

In the drawings, A is a double rocker pivoted
25 at its center *a* to a standard, B, which is supported on suitable frame-work built in a pit alongside the railroad-track. The rockers are placed close to the rail and in such a position that the overlapping tread of the wheels of a
30 passing train will serve to give them an oscillating motion. To each of the rockers is attached a piston, C, of an air-pump, D. Each of the pumps D connects with the pipe E, which leads to the compressed-air tank F, and
35 is provided with a check-valve, *e*. The tank F, which is air-tight and made of boiler-iron, is connected with the submerged tank H by means of the pipe I. The pipe I is provided with a two-way cock, G, so arranged that
40 when communication is shut off between the tanks F and H, the pipe I will be in communication with a vent, *g*, for a purpose hereinafter described. The tank H is provided with a check-valve, *h*. The tank H also has a pipe,
45 K, which leads to the elevated storage-tank. (Not shown in the drawing.)

The operation is as follows: When a train passes the wheels will oscillate the rockers A,

and thereby pump air into the tank F. In its normal condition the submerged tank H is 50 full of water, which enters through the valve *h* from the source of supply. When it is desired to force water from the tank H to the elevated storage-tank, the cock G is turned to open communication between the tanks F and 55 H, and the compressed air entering the tank H will, by means of its pressure on the water in the tank, close the valve *h* and force the water up the pipe K into the elevated storage-tank. When communication is closed be- 60 tween the tanks F and H, the pressure on the water in the tank H will of course be removed, and the water from the source of supply again pass through the valve *h* into the tank H, and force the air from the tank H up the pipe I, 65 whence it will escape through the vent *g*.

I do not limit myself to the placing of the air-pumps below the surface of the railroad, as they may be above the track and housed in, as shown in Fig. 3. 70

Having described my invention, I claim—

1. In a device for elevating water, the rockers A, adapted to be oscillated by the wheels of passing trains, combined with air-pumps and a tank for the storage of compressed air, 75 substantially as set forth.

2. In a device for elevating water, the rockers A, adapted to be oscillated by the wheels of a passing train, air-pumps, and a storage-tank for compressed air, combined with a tank 80 submerged in a water-supply and having pipe-connection with the tank for compressed air, substantially as set forth.

3. In a device for elevating water, the combination of the rockers A, air-pumps D, tanks 85 F and H, pipe I, two-way cock G, and pipe-connection between the tank H and an elevated storage-tank, substantially as set forth.

In testimony whereof I have hereunto set my hand and seal this 13th day of October, 90 1885.

CHARLES M. KIMBALL. [L. S.]

Witnesses:

PAUL RAYMOND,
J. E. HUNT.