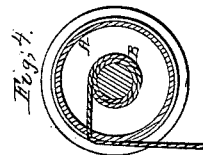
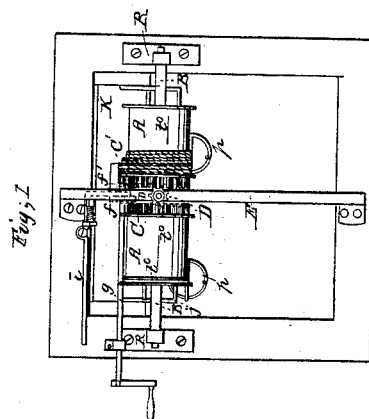
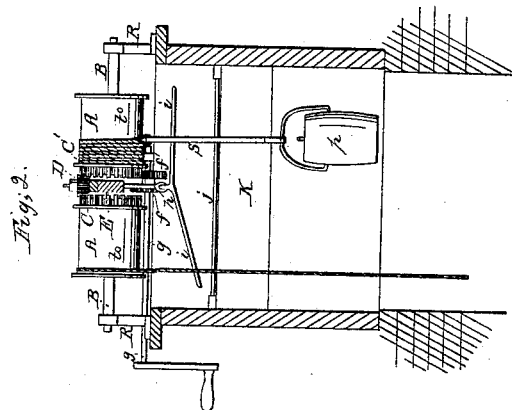
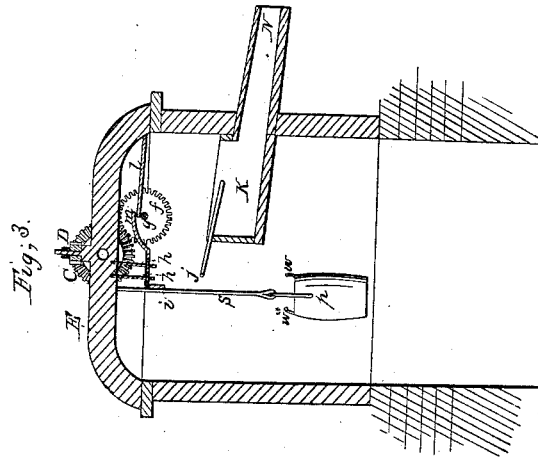


*Sabin & Benton,*  
*Windlass - Water Elevator,*  
*N<sup>o</sup> 6,190. Patented Mar. 13, 1849.*



# UNITED STATES PATENT OFFICE.

H. W. SABIN, OF REEDS CORNER, AND L. B. BENTON, OF PENN YAN, NEW YORK.

## APPARATUS FOR RAISING AND TILTING WATER-BUCKETS.

Specification of Letters Patent No. 6,190, dated March 13, 1849.

*To all whom it may concern:*

Be it known that we, HARVEY W. SABIN, of Reeds Corner, in the county of Ontario and State of New York, and LUTHER B. BENTON, of Penn Yan, in the county of Yates and State of New York, have invented a new and Improved Apparatus for Drawing Water from Wells; and we do hereby declare the following to be a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification.

Similar letters indicate like parts in all the figures.

15 A, A, are the drums upon which the ropes are wound by which the buckets *p*, *p*, are alternately raised and lowered in the well: the shafts B, B, of the said drums, have their bearings in the standards R, R, and the  
20 arched supporting beam E, which rise from, and are secured to, the top of the well curb,—as shown in the drawings. The drums (A, A,) are connected to their shafts (B, B,) in such a manner that they can be turned  
25 upon them in either direction and secured in any desired position; the upper ends of the well ropes pass through apertures *t*, *t*, in the drums and are secured to the shafts B, B, by which arrangement, the length of  
30 the well ropes can be adjusted to suit the height of the surface of the water in the wells at pleasure; the surplus portion of each rope being wound upon its shaft within the drum, and only enough wound upon  
35 the drum to extend to the surface of the water in the well.

40 Cog wheels C, C', are placed opposite each other on the inner ends of the drum shafts B, B, and connected to each other by the intermediate pinion D, which works upon a spindle rising from the beam E.

Motion is imparted to the drums A, A, in either direction, through the medium of the crank shaft *g*, and the cog wheels *f*, *f*, ' secured to the same; the crank shaft *g*, can be  
45 moved lengthwise in its bearing boxes a sufficient distance to throw the cog-wheel *f*, ' upon the same, into gear with the drum shaft cog wheel C';—in doing which, the cog  
50 wheel *f*, upon the crank shaft, will be thrown out of gear with the drum cog-wheel C,—and vice versa. By this combination and arrangement of gearing, connecting the  
55 crank shaft with drums, the motion of the crank shaft can be continued in one direction, and the motion of the drums reversed

at pleasure: at the moment that the contents of one bucket is emptied into the discharging box K, the other bucket enters and is filled with water in the well; when this takes  
60 place, the operator has only to move the crank shaft lengthwise, and continue its motion in the same direction as before, to reverse the motion of the drums, and cause the empty bucket to descend and the full  
65 bucket to rise in the well.

The lengthwise movement of the crank shaft *g*, may be assisted by a lever,—arranged like the angular lever *l*, shown in Figs. 1 and 3, or in any other manner, by which it can  
70 be brought within convenient distance of the person operating the crank shaft.

The full bucket (*p*,) as it rises in the well, is prevented from swaying to and fro and striking against the sides thereof, by the  
75 steadying action of one end of the bar *i*, which bears slightly against the elevating rope of the bucket. The end of the bar *i*, that acts upon the rope of the ascending bucket, is thrown into a horizontal position  
80 for the purpose of better performing its duty, in the following manner: the bar *i*, is made fast at its center, to a short shaft *m*,—at right angles with the same—that hangs in the bearings *h*, *h*, descending from the  
85 under side of the beam E; the shaft *m*, is curved upward at its rear end and passes between the cog wheels *f*, *f*, ' on the crank shaft; so that the lengthwise movement of the crank shaft—to reverse the movement  
90 of the drums, acts upon the shaft *m*, and produces sufficient movement to throw the end of the bar *i*, that is to bear against the rope of the ascending bucket, into a horizontal position, and depresses its opposite end—  
95 as represented in Fig. 2.

Each bucket is connected to its rope through the medium of a broad strap *s*, of a few feet in length, which strap—by the action of the bar *i*,—serves to partially turn  
100 the bucket as it rises into the well curb, so that one of the hooks *w*, rising from the bucket, will take hold of the tilting rod *j*, and throw the bucket as it is drawn up, into  
105 such a position as to empty its contents into the discharging trough K.

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

The combination of the vibrating arms *i*, *i*, with the cog wheels *f*, *f*, ' of the crank  
110 shaft, in such a manner that by the lengthwise movement of the crank shaft, one of

the arms (*i*,) is thrown into and retained in a horizontal position for bearing against the rope of the ascending bucket to steady the same; and also—in combination with the  
5 strap *s*, by which the bucket is connected with its rope—serving to turn and guide the bucket so that it will be caught and capsized by the tilting bar *j*, substantially as herein set forth.

The above specification signed and witnessed this twenty first day of December 1848.

HARVEY W. SABIN.  
LUTHER B. BENTON.

Witnesses:

WILLIAM H. SHERLAND,  
SAMUEL McPHERSON.