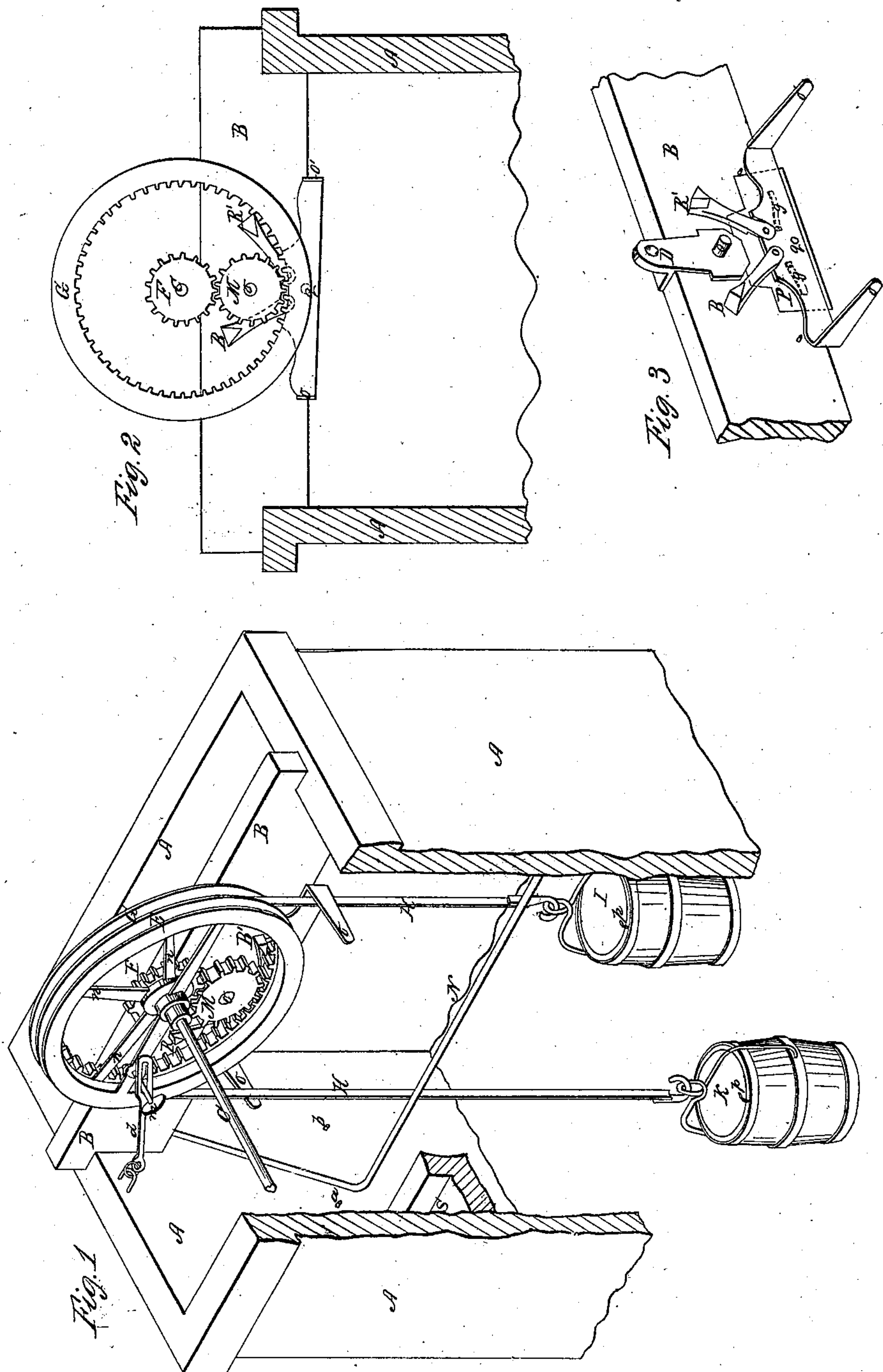


H. B. Barber,

Windlass Water Elevator

N^o 15,273.

Patented July 8, 1856.



UNITED STATES PATENT OFFICE.

H. B. BARBER, OF SCOTT, NEW YORK.

METHOD OF DRAWING WATER FROM WELLS.

Specification of Letters Patent No. 15,273, dated July 8, 1856.

To all whom it may concern:

Be it known that I, H. B. BARBER, of Scott, in the county of Cortland and State of New York, have invented certain new and useful Improvements in Machinery for Drawing Water from Wells; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Fig. 1, represents a perspective view of said machine, with the curb partly broken away. Fig. 2, a vertical section taken in front of the gearing. Fig. 3, a perspective view of the lever and pawls to be hereafter described.

The nature of my invention relates to such an arrangement of machinery for drawing water, as that the buckets when in motion shall regulate by means of their own action the movements of the pulleys, that is to say, they stop said movement altogether when arrived at their highest point, and then permit them to turn in a contrary direction and also to the arrangement which affords the means to use both buckets in drawing water or one as occasion may require.

To enable others skilled in the art to make and use my invention I will proceed to describe its construction and operation.

A represents a wooden curb or frame placed on the top of the well; it is represented in the drawings as partly broken out to show the interior arrangement; it supports a cross piece B, on which the water drawing apparatus is mounted.

The driving shaft C as supported at one end by a pillar block resting on the frame A, and at the other end by a support D (Fig. 3), resting on the cross piece B; to this shaft are attached the pulleys E and G, and the pinion F in the following manner. The pulley E turns loosely on the shaft C, and does not revolve with same without being coupled to it; the pulley G and pinion E are permanently secured to it, and revolve with the same. The cord or metal strips H, to which the buckets I and K, are attached are wound around the pulleys E and G in a contrary direction. If it is desired to use only one bucket for drawing water, then the hasp *d*, is placed over the thumb screw *m*, which is fastened in an arm of the pulley E, which latter is thus kept

steady; when it is desired to work both pulleys then the hasp *d* is withdrawn from the thumb screw *m*, and the latter screwed down so as to project against one of the arms *n*, of the pulley G in which manner the two pulleys are then coupled together, and move in the same direction with the shaft C. When the shaft C is turned the pinion F moves with the same, and the latter meshing into the pinion M on shaft *o* (Fig. 3) imparts said motion to the pulley G and raises the bucket K, and if both pulleys are worked lowers the bucket I. On its way upward the bucket K, strikes when at a certain point against the rod N, which is hinged at its bent ends to the inner sides of the curb A, in such manner that it can only turn on these ends, but is prevented by means of the two pins *a* and *b*, from being raised or lowered to a greater extent than is suitable for the proper working of the buckets. The hook *p*, on the upper edge of the buck K, hooks into the rod N, and thus the bucket is turned into an inclined position to discharge the water as hereafter described. At the same moment the upper edge of the bucket strikes against the lever O, which latter is represented in detail at Fig. 3. The two arms of the lever O, are bent out at right angles for purpose to be hereafter described—said lever has its fulcrum at the pivot *q*, which is fastened in the face plate P, the latter being fastened to the cross piece B. Two pawls R and R', hinged at their ends onto corresponding recesses of the lever O, in such a manner that they can only assume a very minute motion in said recesses.

When the upper edge of the bucket K strikes against the lever O, it pushes the latter upward, and brings down the ends O' as represented in Figs. 2 and 3. The pawl R', then assumes the position shown in Figs. 1 and 2, and prevents the pulley from turning any farther by falling in between the teeth of the pulley G; the bucket is thus kept suspending and discharges the water into the trough S. If the motion of the driving shaft is now reversed then the bucket I will rise and go through the same operation as described. In a similar manner one bucket only can be used by uncoupling the pulleys, and fastening the pulley E, as above described. To prevent the lever O from falling by its own weight to one or the other side the two springs *g* are

fastened to the face plate P, and press against the lever C, thus preventing it from being turned by any other action than that of the buckets.

6 Having thus fully described the nature of my invention, what I claim therein as new, and desire to secure by Letters Patent is,

3 1. The use of the lever O in combination with the two pawls R and R', and toothed pulley G, or their mechanical equivalents constructed and arranged as above described for the purpose of automatically arresting the pulleys when the buckets are at a given height and keeping them suspended

during their discharge, substantially as described. 15

2. I further claim combining the two pulleys E and G, mounted on one shaft, and driven by the same pinion, with the hasp *d*, and thumb screw *m*, for the purpose of connecting or disconnecting said pulleys, and thus working one or two buckets, substantially as set forth. 20

H. B. BARBER.

Witnesses:

L. H. BABCOCK,
W. H. BABCOCK.