J. McARTHUR.

Water Elevator.

No. 30,490. Patented Oct. 23, 1860.

Fig. 1.

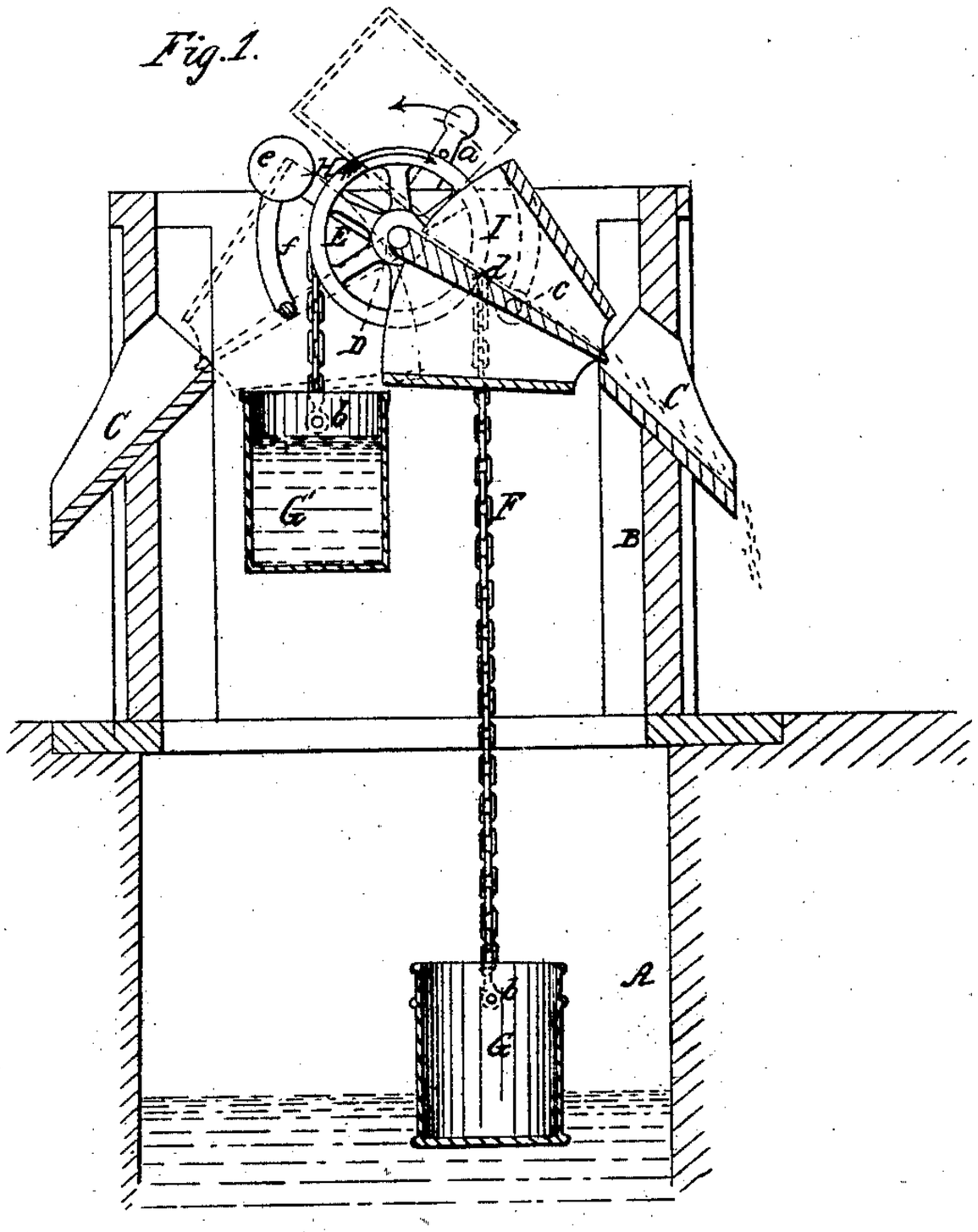
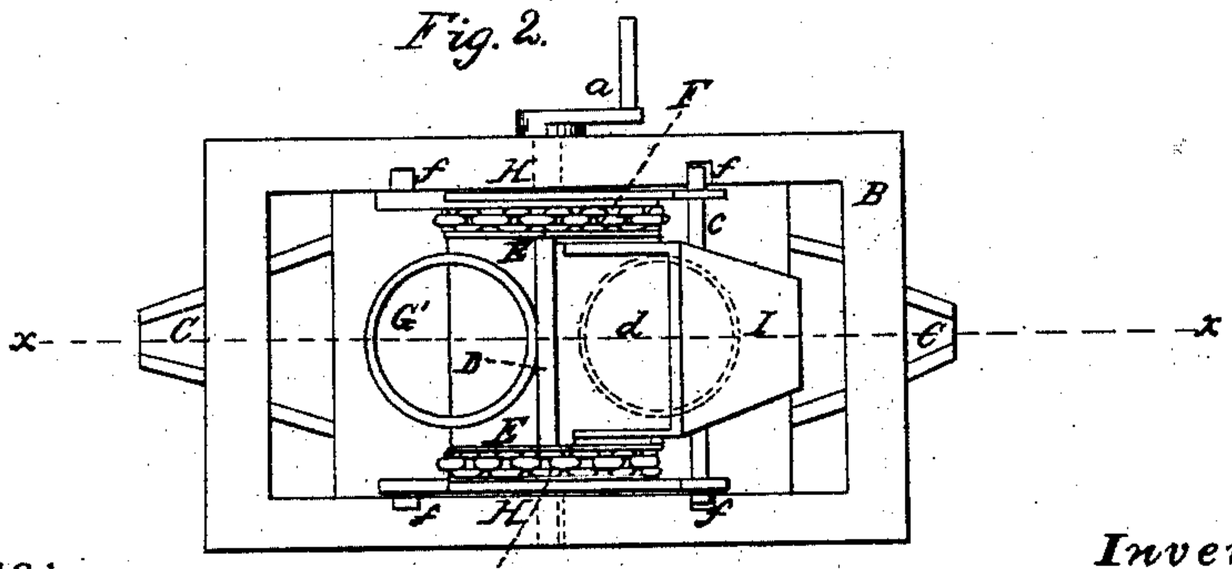


Fig. 2.



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UNITED STATES PATENT OFFICE.

JOHN McARTHUR, OF AURORA, ILLINOIS.

METHOD OF ELEVATING WATER FROM WELLS, &c.

Specification of Letters Patent No. 30,490, dated October 23, 1860.

To all whom it may concern:

Be it known that I, JOHN MCARTHUR, of Aurora, in the county of Kane and State of Illinois, have invented a new and Improved Water-Elevating Device; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a side sectional view of my invention taken in the line *x*, *x*, Fig. 2. Fig. 2 is a plan or top view of the same.

Similar letters of reference indicate corresponding parts in the two figures.

The object of this invention is to obtain a simple device for drawing water from wells, designed for domestic use, and to facilitate the work, that females and children may draw the water without the least difficulty.

The invention consists in the employment or use of a swinging balanced spout in connection with a windlass and buckets and two stationary spouts; the above parts being all arranged in a suitable curb or box to operate as hereinafter described and effect the desired end.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A represents a well, and B, a curb which is placed at its top. This curb may be of rectangular or other suitable form, constructed of wood and provided at two opposite sides with inclined spouts C, C.

In the upper part of the curb B, there is placed a shaft D, having a crank *a*, at one end, and two grooved pulleys or wheels E, E, on it, around which chains F, F, pass, the ends of said chains being connected by rods *b*, which pass through the upper parts of buckets G, G′.

On the shaft D, there are placed two arms H, H. These arms are at the outer sides of the wheels E, E, and they are connected at one end by a rod *c*, which passes through the partition *d*, of a double spout I. The inner end of this partition *d*, bears against the shaft D, and its outer end extends as far as the inner end of either spout C. This double spout I, is balanced on the shaft D, by protuberances or weights *e*, on the ends of the arms H, H, and the latter are fitted snugly but loosely on the shaft D. The ends of the rod *c*, project beyond the sides of the arms H, and fit in curved grooves *f*, in the sides of the curb B.

The operation is as follows: Suppose for instance that the bucket G, is just entering the water in the well A, and the other bucket G′, above the well in the curb B. By rotating the shaft D, in the direction indicated by the black arrow, the bucket G′, will be turned over the shaft and its contents emptied into the upper division of the spout I, see blue lines in Fig. 1. When this bucket is emptied the motion of the shaft D, is reversed and the empty bucket G′, descends while the bucket G, which was filled when the bucket G′, passed over shaft D, ascends. When the motion of the shaft D, is reversed the arms H H, being balanced, the friction of the shaft is sufficient to turn the arms and the spout I, is thrown over the shaft in a reverse position so as to communicate with the other spout C, the division of the spout I, which was previously below being uppermost to receive the contents of the bucket G, when the latter passes over shaft D.

The grooves *f*, serve as stops and determine the movement or throw of the spout I, and when the spout is arrested the shaft D, of course is allowed to turn freely, the arms H, being fitted snugly but not tightly on the shaft. When the bucket G, is emptied the motion of shaft D, is reversed and the spout I, thrown back to its original position, the bucket G′, being filled and ascending while the bucket G, descends to be filled.

From the above description it will be seen that two pails may be placed at the curb A, one under each spout C, and both filled without either being required to be moved until both are filled, the pails being filled consecutively. The device is extremely simple, the filled buckets cannot fall with a run, and the device may be operated with a very small expenditure of power.

Having thus described my invention what I claim as new, and desire to secure by Letters Patent, is:—

The swinging and balanced spout I, in connection with the two stationary spouts C, C, in the curb B, and the shaft D, provided with the pulley or wheels E, E, over which the bucket chains F, F, pass, the arms H H, of the spout I, being placed on the shaft D, and all arranged essentially as and for the purpose set forth.

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