

E. Puffer,

Windlass Water Elevator,

N^o 25,912.

Patented Oct. 25, 1859.

Fig. 1.

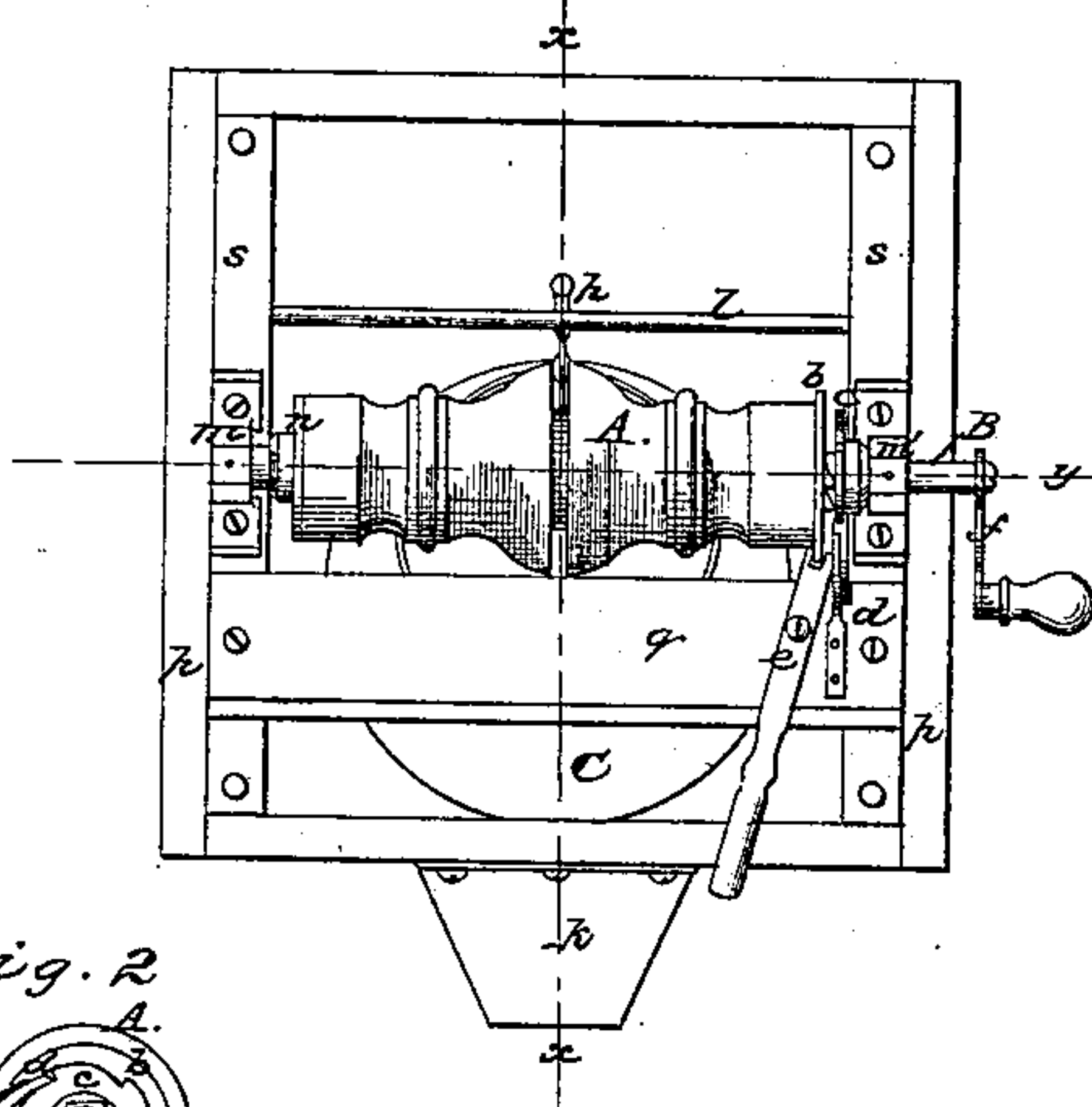


Fig. 4.

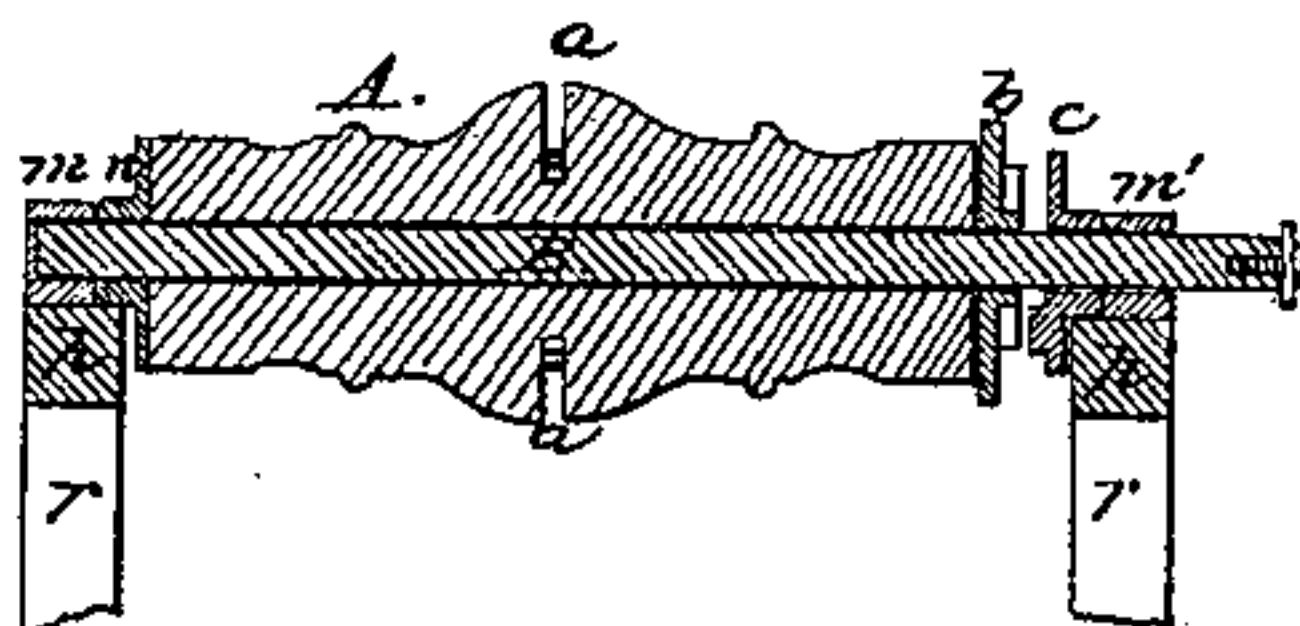


Fig. 2.

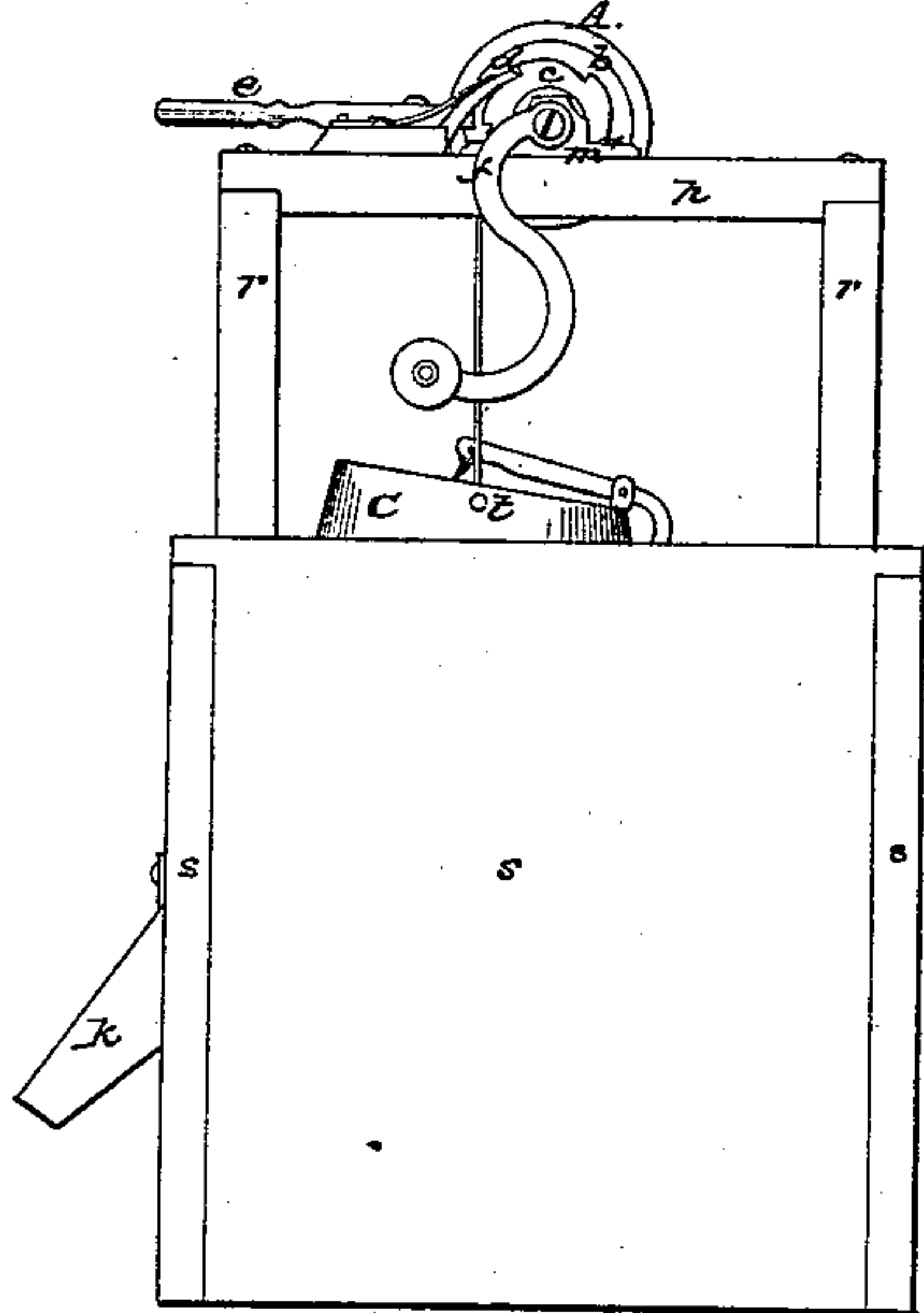
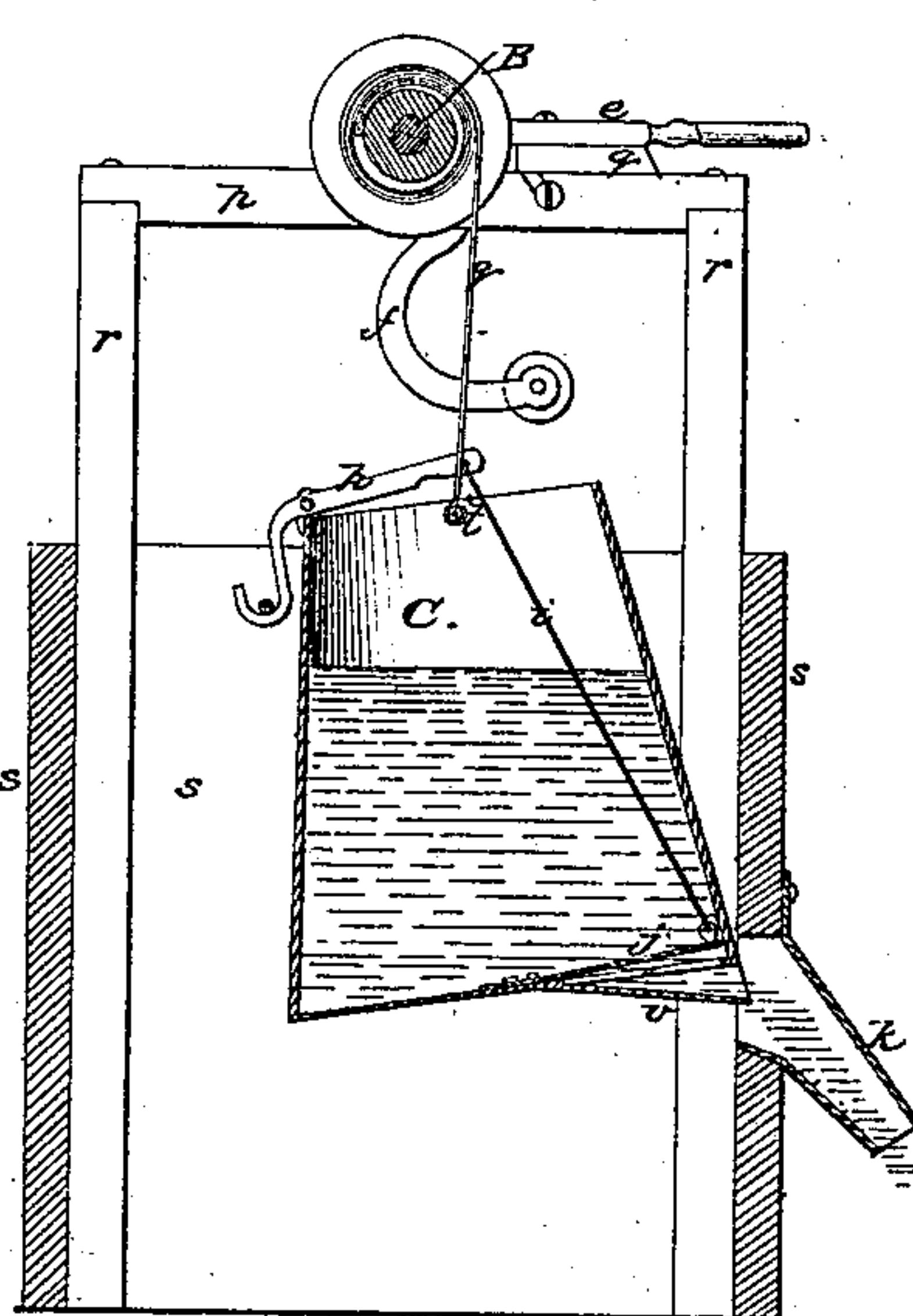


Fig. 3.



Witnesses:
Robert A. Stanton
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UNITED STATES PATENT OFFICE.

ELHANAN PUFFER, OF OXFORD, NEW YORK.

APPARATUS FOR RAISING WATER FROM WELLS, &c.

Specification of Letters Patent No. 25,912, dated October 25, 1859.

To all whom it may concern:

Be it known that I, ELHANAN PUFFER, of Oxford, in the county of Chenango and State of New York, have invented an Improved Apparatus for Drawing Water from Wells; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification, Figure 1 being a top view of said apparatus; Fig. 2, a side view of the same; Fig. 3, a section in the line *x, x*, of Fig. 1; and Fig. 4, a section of a portion of said apparatus, in the line *y, y*, of Fig. 1.

Similar letters indicate like parts in each drawing.

The supporting frame and curbing of my improved water-drawing apparatus, may be formed of any suitable materials and in any suitable mechanical manner. The accompanying drawings represent a frame composed of the four corner posts *r*, the curbing planks *s*, the pair of capping-beams *p*, and the breast-plank *q*; the said curbing planks being secured to the lower portions of the corner posts, the beams *p, p*, capping the right and left hand pairs of said corner posts, and the breast-plank *q*, being secured to the said beams, near to their front ends.

The bucket *C*, of my improved water-drawing apparatus is elevated, the water is discharged therefrom, and it is again lowered into the well, in the following manner; viz; the crank-shaft *B*, which receives the windlass-roller *A*, works in the journal-boxes *m, m'*, that are secured to the cap-beams *p, p*. The windlass-roller *A*, can be turned freely around the crank-shaft, when not clutched thereto by means of a lengthwise movement of said roller. A lengthwise movement of the said windlass-roller *A*, upon the crank-shaft, may be effected by means of the lever *e*, which is pivoted to the breast-plank *q*, and whose forked end embraces the radiating edge of the clutch-plate *b*, which is secured to the right-hand end of said windlass-roller. When moved to the right, the teeth on the face of the clutch plate *b* are thrown into connection with corresponding teeth on the inner face of the ratchet-wheel *c*, which is secured to the right hand end of the crank-shaft. A metallic head secured to the left-hand end of the windlass-roller, has an annular central projection *n*, that can be pressed with such a degree of force against the inner face of the journal-box *m*,

by pulling upon the lever *e*, as to cause the bucket *C*, after it has been emptied of its contents and unclutched from its connection with the crank-shaft, to descend as slowly and steadily into the well as may be desired. A thin metallic strap *g*, serves as the connecting medium between the bucket and the bottom of the central guiding groove *a*, in the windlass-roller *A*. The said strap is connected to the bucket, by means of the straight rod *t*, which passes across the center of its mouth and is permanently secured in the sides thereof.

The orifice in the bottom of the bucket (*C*), immediately over the discharging spout *v*, of said bucket, is covered by the hinged valve *j*; the lever *h*, which is pivoted to the rear edge of the mouth of the bucket, has its inner end connected to the aforesaid valve *v*, by means of the rod *i*. The outer end of the bucket-lever *h*, is of a hook-shape, and as the bucket is elevated into the well-curb, the hook-end of said lever will take hold of the rod *l*, which passes across the well-curb, and by so doing, it causes the upward movement of the bucket to throw forward the bottom of the same and thereby places its discharging spout *v*, within the mouth of the discharging spout *k*, of the well-curb, at the same instant that the valve *v*, will be lifted for the discharge of the water from said bucket out through the said discharging spouts into any vessel that may be ready to receive it; which operation is clearly represented by Fig. 3, of the drawings.

The spring-pawl *d*, which works upon the face of the ratchet-wheel *c*, prevents the crank-shaft *B*, from ever turning in a reverse direction. The arrangement of parts which prevents the necessity of ever giving a reverse movement to the crank-shaft, is one of the important features of this invention. After the bucket has discharged its contents, all that is necessary to cause its descent again into the well, is to draw upon the hand-lever *e*, with sufficient force to unclutch the windlass-roller from its hold upon the ratchet-wheel *c*, of the crank-shaft, and then by exerting a sufficient degree of force upon said lever, the descent of the bucket may be perfectly controlled, as hereinbefore set forth.

My improved water drawing apparatus being arranged in such a manner as to discharge the water from the bottom of the bucket, enables the supporting frame and

the well curb of said apparatus, to be simply large enough to allow the bucket to pass freely up into the same.

Having thus fully described my improved apparatus for drawing water from wells, &c., what I claim as my invention, and desire to secure by Letters Patent, is—

1. Producing and controlling the movements of the windlass-roller A, upon and with its actuating shaft B, in such a manner as to prevent the necessity of ever imparting a reverse rotary movement to the windlass-shaft, while operating said apparatus, and by means substantially the same as those herein represented and described.

2. I also claim combining the valve j, which closes the discharging aperture in the bottom of the bucket, (C,) with the inner

end of the lever h, which is pivoted to the after edge of the mouth of said bucket, when a rod l, or the equivalent of the same, is so situated within the curb, as to be taken hold of by the hook-shaped outer end of said lever just before the bucket reaches its highest position, for the purpose of causing the further upward movement of said bucket to throw forward its bottom and discharge its contents substantially as herein set forth.

The above specification of my improved apparatus for raising water from wells, signed and witnessed this 18th day of August 1859.

ELHANAAN PUFFER.

Witnesses:

HORACE PACKER,
ROBERT A. STANTON.