J. F. Keller,

Windlass Water Elevator.

No. 30,881. Patented Dec. 11, 1860.

Fig: 1.

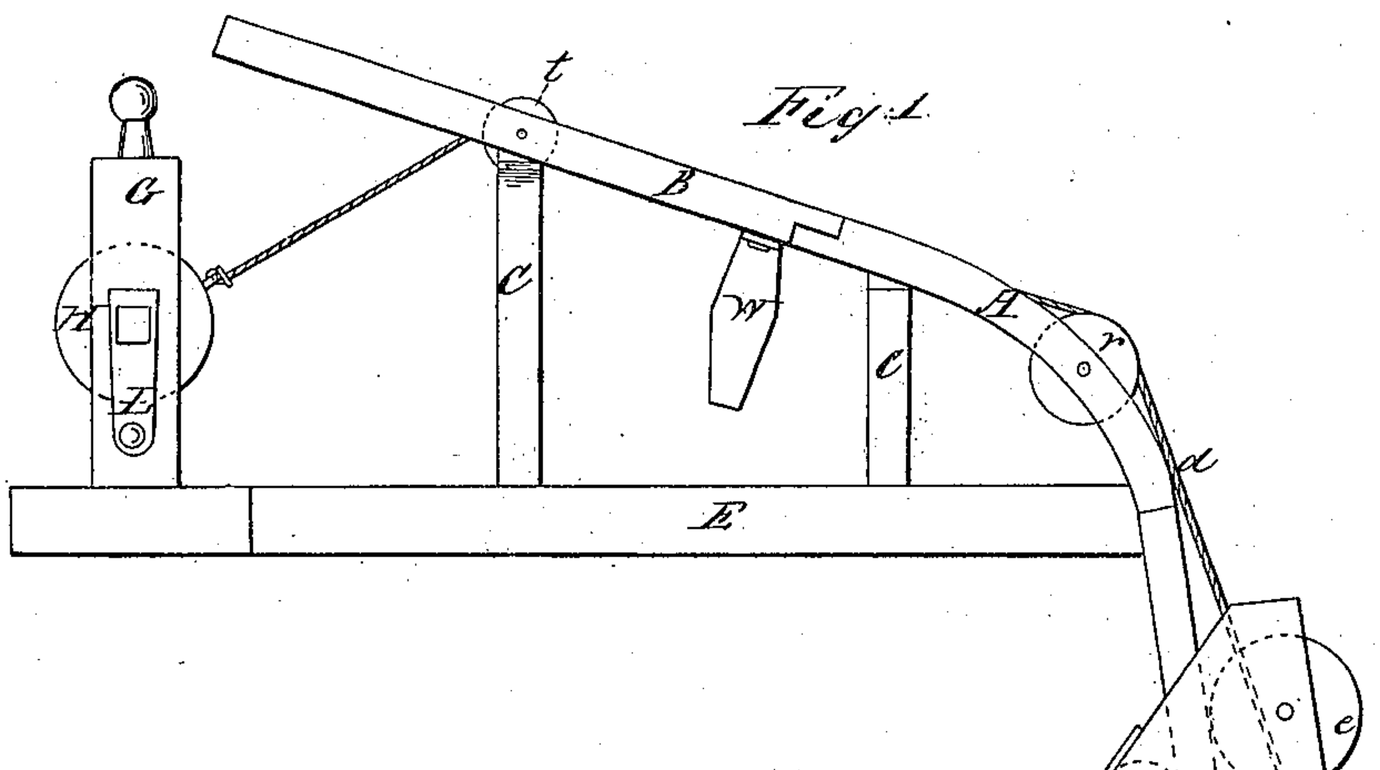

Fig: 2.

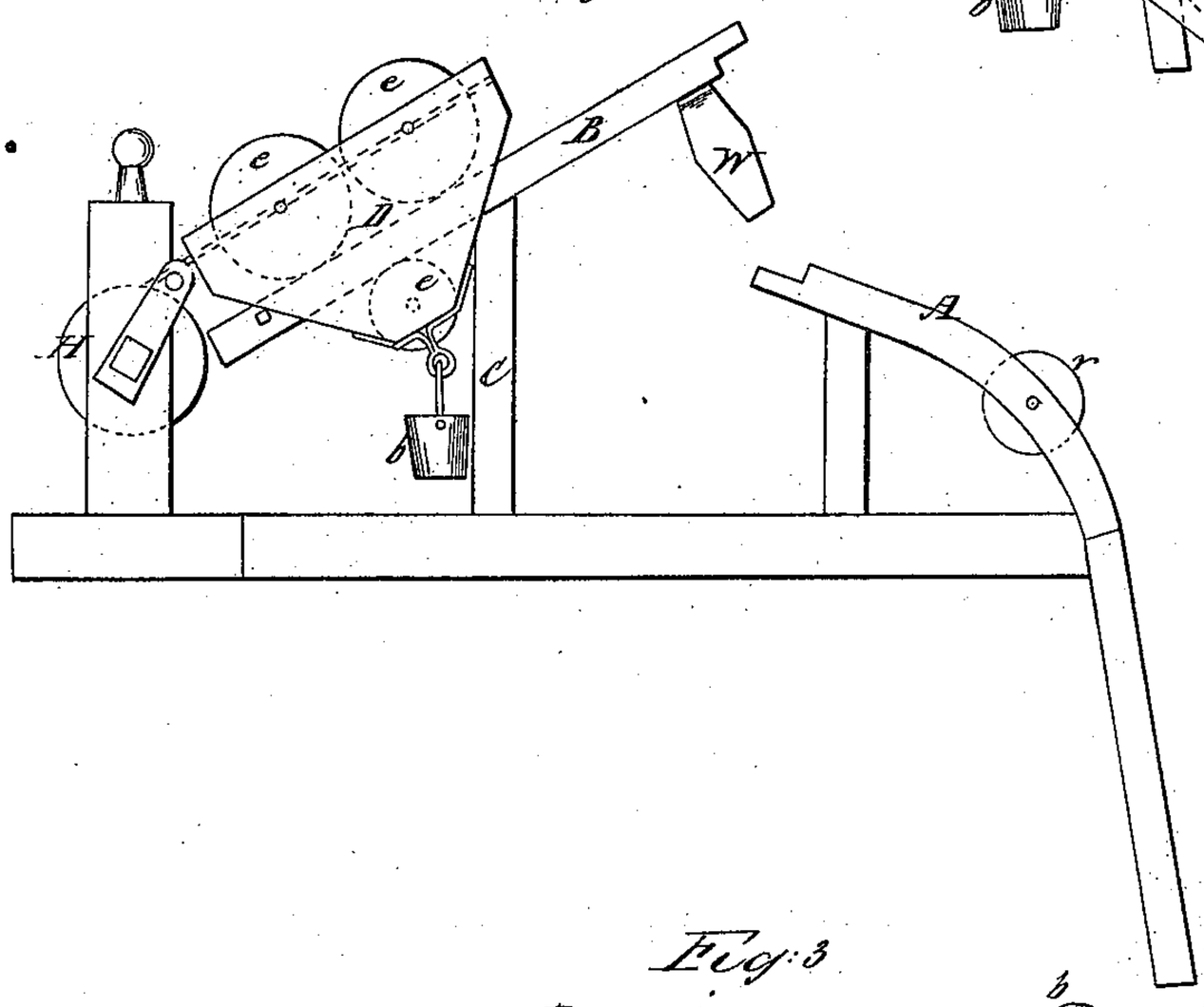

Fig: 3.

UNITED STATES PATENT OFFICE.

JOHN F. KELLER, OF GREENCASTLE, PENNSYLVANIA.

IMPROVEMENT IN WATER ELEVATORS AND CONVEYERS.

Specification forming part of Letters Patent No. **30,881**, dated December 11, 1860.

To all whom it may concern:

Be it known that I, JOHN F. KELLER, of Greencastle, in the county of Franklin and State of Pennsylvania, have invented a new and useful Improvement in Water Elevators and Conveyers; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The chief object of my invention is the adaptation of a railway and water-carrier to the vertical elevation of water from wells or reservoirs; and my invention consists in a peculiar arrangement of railway and water-carrier, the latter being operated by means of a windlass.

In the accompanying drawings, Figure 1 is a side view of my machine, the water-buckets being lowered in position for filling with water. Fig. 2 is also a side view, the water-buckets being shown in position for emptying. Fig. 3 is a top view of my machine.

The bed E of my machine may be of any suitable form. Upon this bed are erected several standards C for supporting the rails A and B. The lower ends of rails A are nearly vertical, having just enough inclination to allow the weight of carriage D, with the water-buckets *b*, to gravitate to the rails, and thus keep the wheels *e* in place upon the rails in ascending and descending. The portions B of the rails may be nearly horizontal and may extend to a greater or less distance, according to the distance the water is to be carried. A portion (more or less) of these rails B is arranged so as to tilt on the pivots *c*, and thus allow the water-carriage D to descend with the water-buckets, as shown in Fig. 2.

The water-carriage D has six wheels *e*, four of which run upon the rails, while two others are placed under the rails in such manner as to lock the carriage to the rails, and at the same time serve as friction-rollers to prevent the carriage from being thrown from the track and to facilitate its motion.

The buckets *b* may be of enormous size, as the power of one man will suffice to raise almost any amount of water by my machine.

From the water-carriage a cord *d* is passed over a pulley *r* at the curve of the rail-track, and then over another pulley *t* at the axis of vibration of the tilting portion B of the rail-track, and finally terminates by attachment to a common windlass or crank-shaft H. This windlass is turned by a crank L, thus winding up the cord *d* and elevating the water.

When the buckets are emptied, the portion B of the track is tilted back again, when the water-carriage D descends the railway by its own gravity, carrying the buckets down until they dip and fill with water.

The details of construction may be somewhat varied without departing from my invention.

If desirable, an arrangement may be attached for tripping or automatically emptying the buckets.

I am aware that various water elevators and carriers have been heretofore known. Therefore I do not broadly claim such machines; but,

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. The water-carriage D, in combination with the pendent portion of the rail A, said carriage being provided with wheels, which clasp the sides of the rail for the purpose of guiding the carriage when descending or ascending the well, substantially as set forth.

2. The use of the tilting rails B, in combination therewith, for the purposes set forth.

In testimony whereof I have hereunto signed my name before two subscribing witnesses.

JOHN F. KELLER.

Witnesses:

GEO. PATTEN,

JOHN S. HOLLINGSHEAD.