

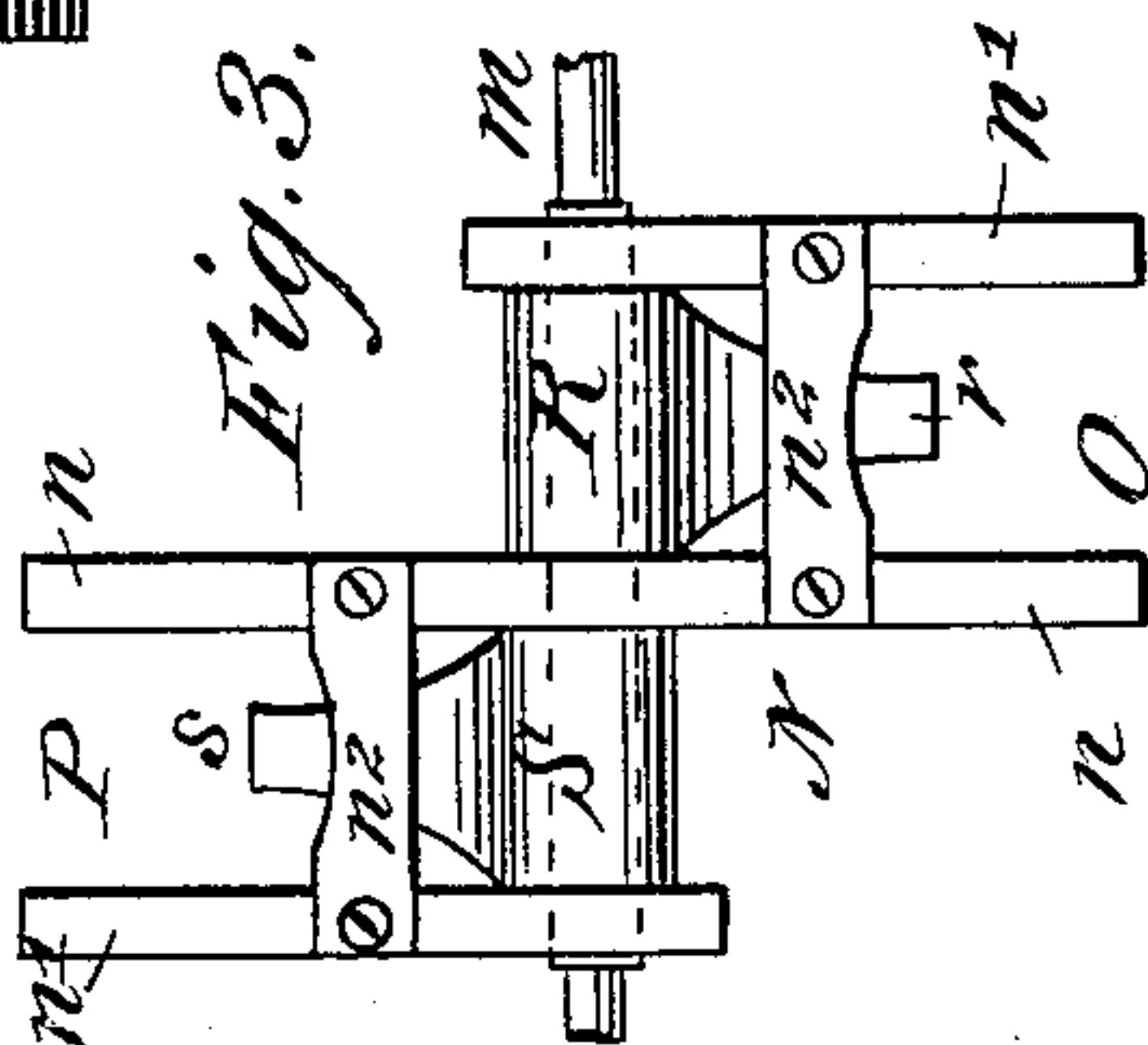
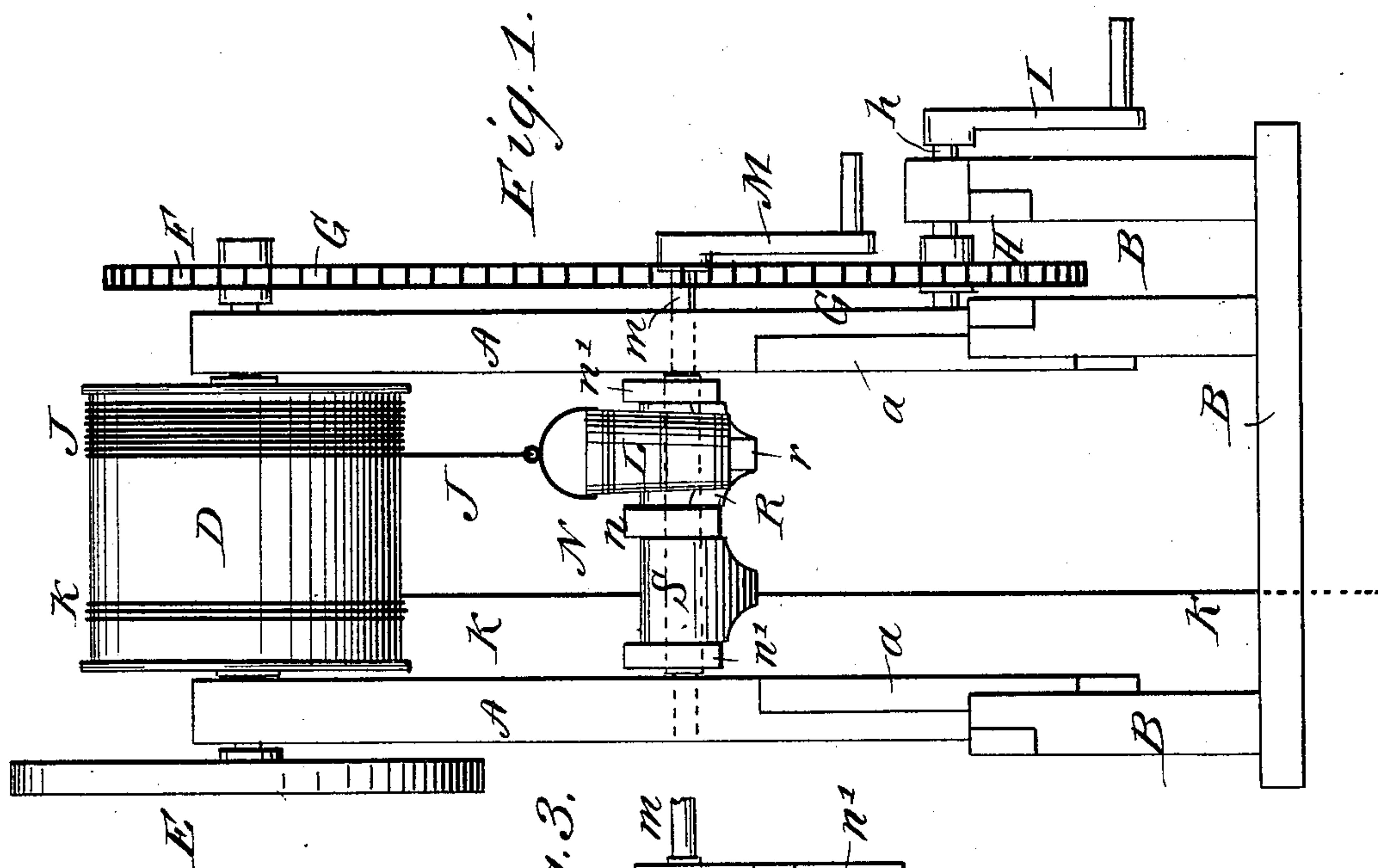
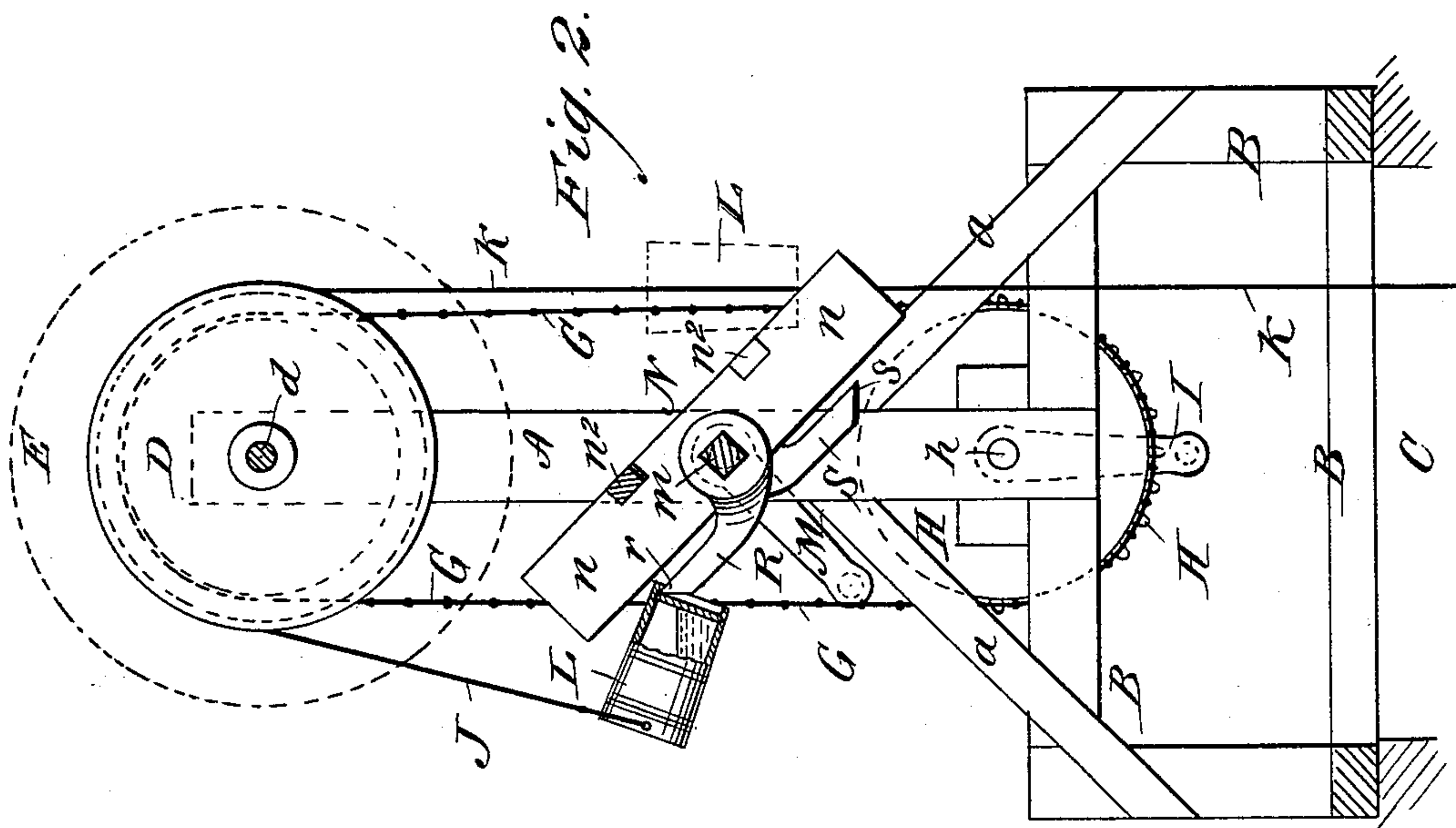
(No Model.)

G. W. MEFFERD.

WATER ELEVATOR.

No. 366,858.

Patented July 19, 1887.



WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE WASHINGTON MEFFERD, OF STEPHENVILLE, TEXAS.

WATER-ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 366,858, dated July 19, 1887.

Application filed November 2, 1886. Serial No. 217,805. (No model.)

To all whom it may concern:

Be it known that I, GEORGE WASHINGTON MEFFERD, of Stephenville, in the county of Erath and State of Texas, have invented a new
5 and Improved Water-Elevator, of which the following is a full, clear, and exact description.

My invention relates to elevators adapted more particularly for lifting water from wells or cisterns by the use of buckets, but appli-
10 cable for use in other situations for bailing out liquids or for other purposes; and the invention has for its object to provide a simple, inexpensive, and effective apparatus of this character which may be operated by a person of
15 ordinary intelligence and will accomplish its work with economy of time and labor.

The invention consists in certain novel features of construction and combinations of parts of the water-elevator, all as hereinafter fully
20 described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

25 Figure 1 is a front elevation of my improved water-elevator. Fig. 2 is a side view thereof, with parts in vertical section, and shows how the raised well-bucket is emptied; and Fig. 3 is a plan view of the bucket-receiving frame.

30 The elevator mechanism is supported on a suitable frame comprising opposite side posts, A A, which are supported on a base or sill frame, B, and stayed thereto by braces *a a*. The frame B, when sheathed, constitutes the
35 curb of the well C, over which it is placed.

A drum, D, is journaled by its shaft *d* at the heads of the frame-posts A A, and at one end the drum-shaft carries a balance-wheel, E, and to its other end is fixed a chain-wheel, F, over
40 which a driving-chain, G, passes to a lower chain-wheel, H, fixed to a shaft, *h*, journaled in the frame and provided with a hand-crank, I, by turning which the drum D may be rotated in either direction.

45 To the drum D are attached the ends of two ropes, J K, to which buckets L will be attached, the bucket on one rope only being shown in full lines in the drawings. The other bucket is supposed to be down in the
50 well. The ropes J K are wound around the drum D in opposite directions, so that a turning of the drum in either direction will cause

one of the two buckets (the filled one) to rise while the empty bucket is being lowered to be filled.

55 In the frame-posts A A, below the shaft *d*, there is journaled a shaft, *m*, to which is fixed between the posts a frame, N, which receives the buckets as they are lifted from the well, and empties the buckets when the shaft *m* is
60 turned by its crank M, as presently described. This frame N is made with a central long arm or bar, *n*, which ranges transversely of the shaft *m* and extends each way from the shaft which passes through its center, and two
65 shorter arms or bars, *n' n'*, which are fixed to the shaft *m* and extend in opposite directions therefrom about parallel with the central bar, *n*. A cross bar or piece, *n²*, connects each of the
70 arms *n'* with the center bar, *n*, thereby forming two pockets or forks, O P, to receive the two well-buckets suspended from the ropes J K, respectively, as the filled buckets rise from the well. Between the arms *n n' n'* there are
75 held fixedly to the shaft *m* a couple of arms, R S, which are bent downward a little and are tapered toward their outer ends, *r s*, respectively, to take hold of the chines of the lifted well-buckets.

The operation of the elevator is as follows: 80
As the filled bucket L on the rope J rises from the well C it will enter the pocket or fork O of the frame N, which frame will have the same position relatively to the bucket as the frame has to the bucket shown on the rope K in
85 dotted lines in Fig. 2 of the drawings, and while the frame N is being swung upward by turning the crank M to the left hand the end or toe *r* of the arm R will catch under the chine of the bucket, and as the frame is swung
90 up farther the bucket will be turned bottom upward to discharge its contents into another bucket or into a trough set on the frame B to receive the water. When the emptied bucket
95 L slips from the fully-lifted arm R, this bucket will be lowered into the well to be filled by turning the crank I, and this same motion of the crank will lift the other now filled bucket L, and as it rises into the pocket or fork P of the frame N, or to the position shown in dotted
100 lines in Fig. 2, the crank M will be turned to the right hand to catch the toe *s* of the arm S under the chine of this bucket and upset it to discharge its contents into a receptacle at the

curb, substantially as above described for the other bucket.

The cranks I M, for operating the bucket lifting and lowering mechanism and the bucket-discharging frame, are at the same side of the elevator; hence they may be reached conveniently by the same person, for elevating the water and discharging it, with economy of time and labor.

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

1. The combination, in a water-elevator, of a suspended bucket and means for raising and lowering it, and a tilting-fork receiving the raised filled bucket and provided with an arm catching under the bucket to tilt it to discharge its contents as the fork is tilted, substantially as shown and described.

20 2. The combination, in a water-elevator, of a supporting-frame, a drum journaled therein, a rope wound on the drum, a bucket attached to the rope, mechanism for turning the drum to lift the bucket, and a fork journaled below the drum and provided with a central arm adapted to catch under the raised bucket resting in the fork to discharge its contents as the fork is tilted, substantially as shown and described.

3. The combination, in a water-elevator, of a frame, A B, a drum, D, journaled therein, ropes J K on the drum and carrying buckets L, mechanism for turning the drum to simultaneously raise one bucket and lower the other, and a frame, N, journaled in the frame A and provided with opposite forks, O P, having central arms, R S, respectively, and means for tilting the frame N, substantially as described, for the purposes set forth.

4. A water-elevator comprising a frame, A B, drum D, ropes J K, suspending buckets from the drum, chain-wheels F H, chain G, crank I, tilting frame N, having opposite forks, O P, and arms R S, and a crank, M, on the shaft of frame N, all arranged for operation substantially as herein set forth.

5. In a water-elevator, a bucket-receiving frame, N, constructed with a shaft, *m*, a center bar, *n*, side bars, *n' n'*, cross-bars *n² n²*, forming forks O P to receive the buckets, and arms R S, adapted to tilt the buckets resting in the forks when the frame is tilted, substantially as shown and described.

GEORGE WASHINGTON MEFFERD.

Witnesses:

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