

(No Model.)

2 Sheets—Sheet 1.

T. K. HANSBERRY.

MOTOR.

No. 316,542.

Patented Apr. 28, 1885.

Fig. 1.

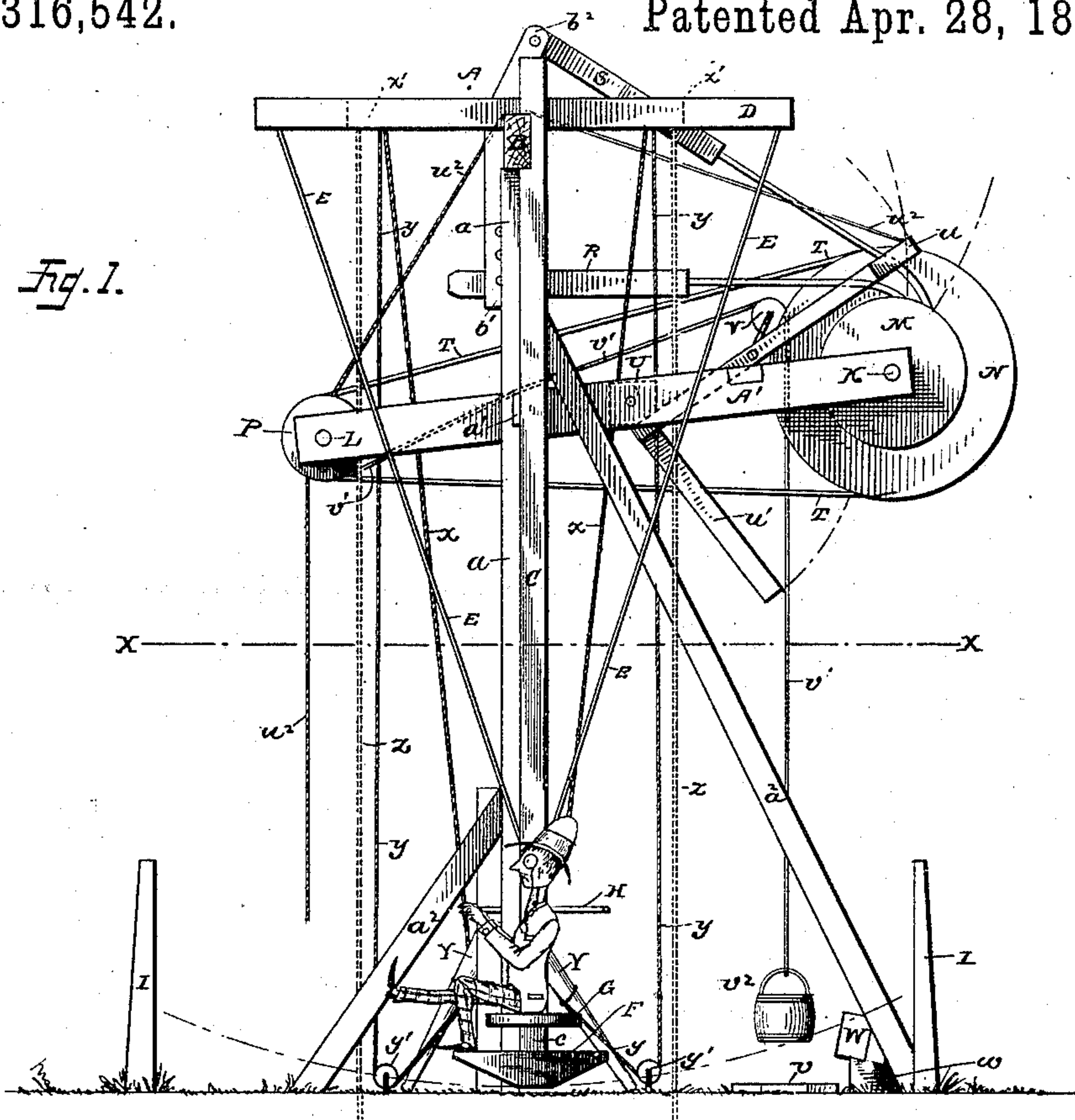
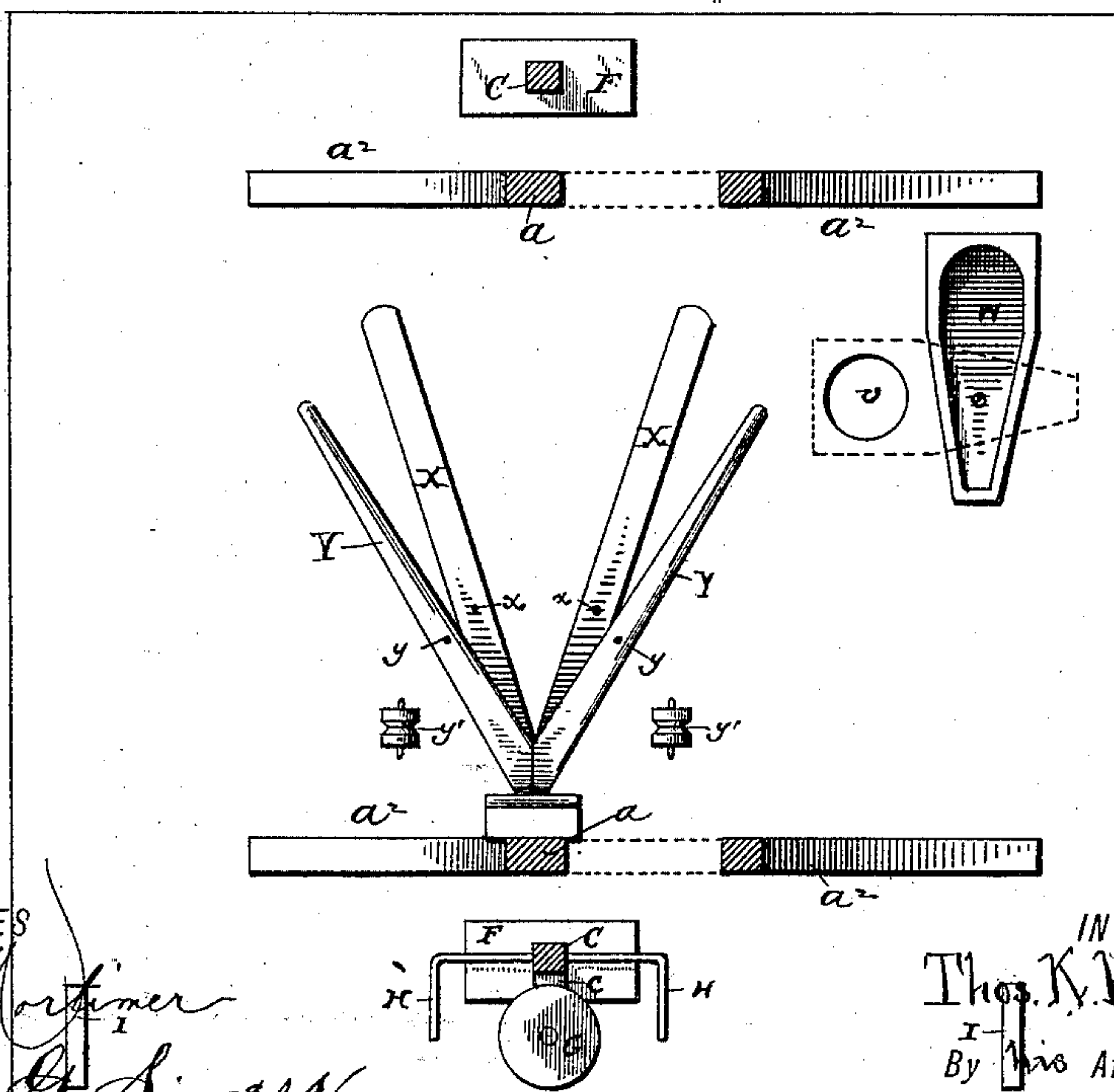


Fig. 3.



WITNESSES
T. K. Mortimer
Edward St. Siggers

INVENTOR
Thos. K. Hansberry,
By His Attorneys
C. A. Snow

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2 Sheets—Sheet 2.

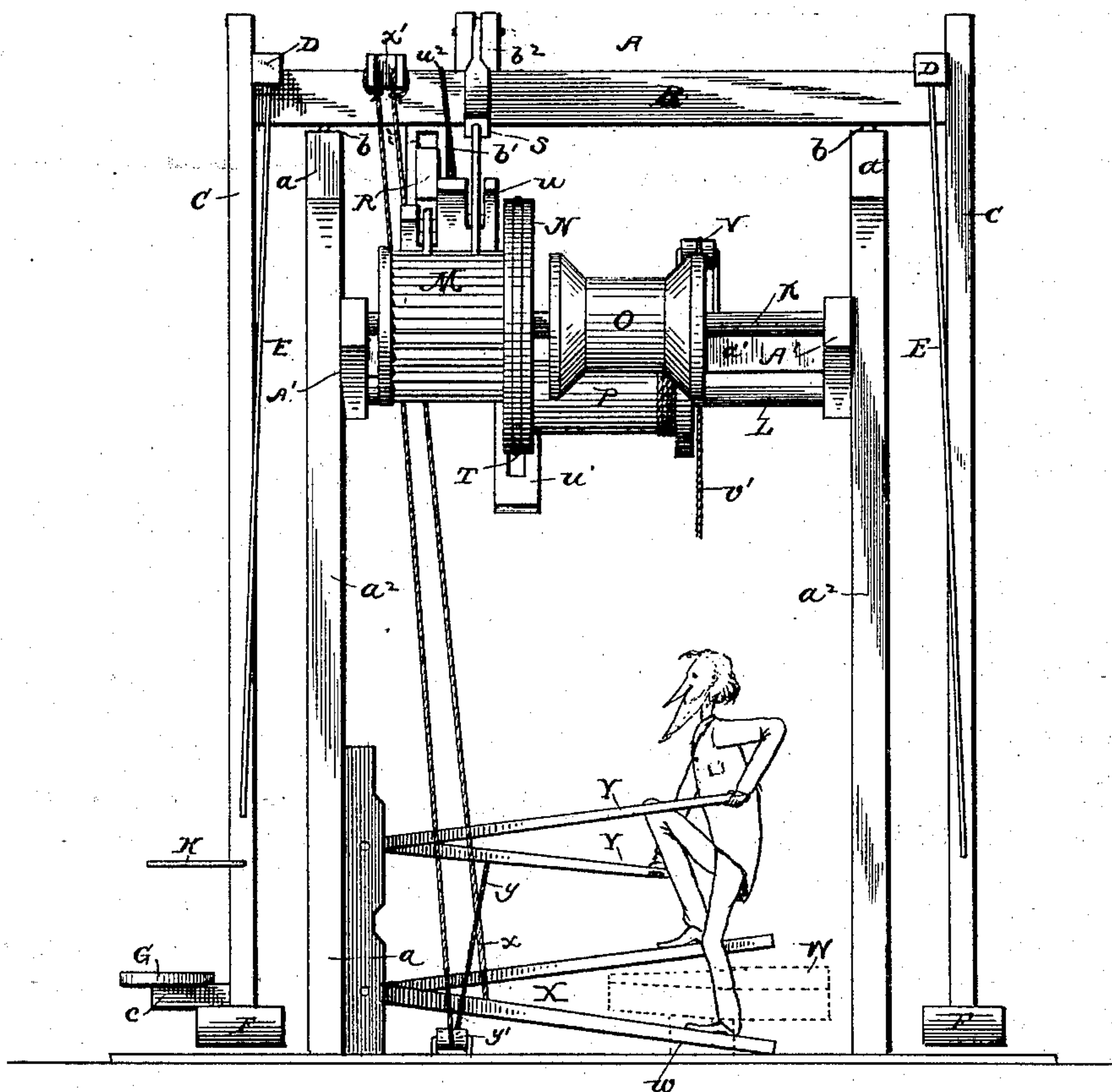
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Fig. 2.



WITNESSES.

W. W. Mortimer.
E. G. Siggers

INVENTOR

Thos. K. Hansberry
By his Attorneys
C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

THOMAS K. HANSBERRY, OF BLOOMINGTON, NEBRASKA.

MOTOR.

SPECIFICATION forming part of Letters Patent No. 316,542, dated April 28, 1885.

Application filed February 17, 1885. (No model.)

To all whom it may concern:

Be it known that I, THOMAS K. HANSBERRY, a citizen of the United States, residing at Bloomington, in the county of Franklin and State of Nebraska, have invented a new and useful Improvement in Motors, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to an improvement in motors; and it consists in the peculiar construction and combination of devices, that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of my invention. Fig. 2 is a front elevation of the same. Fig. 3 is a horizontal section taken on the line xx of Fig. 1.

A represents a vertical frame that is composed of the posts a , cross-beam a' , and braces a'' . This frame rises from a platform that is here represented as being located over a well. On the upper ends of the posts a is pivoted a horizontal beam, B, as at b , and from the projecting ends of this beam depend the vertical swinging levers C. Longitudinally-extending bars D are secured on the beam B, and these bars are connected to the levers C by rods or wires E, which brace and stiffen the said levers. Weights F are secured to the lower ends of the swinging levers, and one of said levers has a bracket, c , projecting from its outer side at a suitable height from the ground, and on the outer end of this bracket is pivoted a circular seat, G, which is free to revolve on its pivot. Arms H are also secured to this lever to be grasped by the person on the seat. Near each end of the path of this swinging lever is placed a vertical spring-board, I. The person seated on the pivoted seat kicks against one of these spring-boards, which causes the lever to swing in the opposite direction, and while making this movement the operator turns about and faces the spring-board in the direction in which he is traveling and kicks against said spring-board, and thus swings the lever in the contrary direction, as will be very readily understood. A horizontal frame, A', is secured to the vertical frame A at a suitable height, and in one

end of this frame is journaled a shaft, K, and in the opposite end is journaled a shaft, L. The shaft K has fixed to it a ratchet-wheel, M, a large pulley, N, and a drum, O, while to the shaft L is fixed a drum, P, that is of less diameter than the drum O. This drum P is grooved at one end, in which groove is placed an endless belt or band, T, that connects the drum P to the pulley N. From the lower side of the beam B depends an arm, b' , and from the upper side of said beam extends the arm b'' . In the arm b' is pivoted a pawl, R, and in the arm b'' is pivoted a pawl, S. These pawls engage with the ratchet-wheel M, and as the swing is oscillated rotate the shaft K, the motion of which is communicated to the shaft L by the band T, as will be very readily understood. A rock-shaft, U, is journaled in the frame A' in rear of the shaft K, and to this rock-shaft are secured the tappet-arm u and the brake-arm u' . The tappet-arm u is adapted to raise up the pawls and release them from engagement with the ratchet-wheel, and the brake-arm u' is adapted to bear against the under side of the pulley N when the tappet-arm is raised and serve as a brake for said pulley. A cord, u'' , is secured to the outer end of the tappet-arm, passes over the beam B and reaches to the platform. By means of this cord the rock-shaft U is operated.

V represents a sheave that is secured in a bracket that is fastened to a cross-bar of the frame A', and directly below this sheave is an opening, v , that is made in the platform. A rope, v' , is attached at one end to the drum P, passes over the sheave V, and is attached to a bucket, v'' . When the motor is operated, the bucket is raised from the well. When the bucket is emptied, the cord u'' is pulled, which causes the pawls to be released from the ratchet-wheel, and the bucket descends into the well by its own gravity, rotating the shafts K and L in a direction reverse to that indicated by the arrows as it descends.

In order to prevent the bucket from descending too fast, the brake previously described is provided, by means of which the descent of the bucket can be controlled at will. If it be desirable to raise the bucket

faster than it would be by the drum P, the hoisting-rope will be attached to the drum O, instead of to the drum P; but when thus attached more power will be required to raise the bucket.

W represents a trough or spout that is pivoted on a stand, *w*, on the platform, and that is adapted to be swung over the opening therein after the bucket has been hoisted, and when the bucket is lowered a proper distance it rests upon the pivoted swinging spout.

If desired, a seat may be attached to both of the swinging levers, and thus adapt the motor to be operated by two persons, which will give an increase of power.

Near the lower end of one of the posts *a* are pivoted the foot-levers X, the free ends of which move vertically. These levers are connected by cords or wires *x* to the cross-beam *x'*, that is secured on the beam B near one end thereof. A person standing on the foot-levers can throw his weight first upon one of said levers and then upon the other, and thus operate the motor.

Above the levers *x* are pivoted the hand-levers Y, which are connected to the cross-beam *x'* by means of cords or ropes *y*, that pass under the sheaves *y'*, that are secured to the platform. The operator, standing upon the foot-levers, grasps one of the hand-levers with each hand and moves these hand-levers up as he bears the foot-levers down, and he is thus enabled to add his strength to his weight in operating the motor, as will be very readily understood.

If it be desired to apply this motor to use for operating a pump, the pump rod or rods can be attached to the cross-bar *x'*, as shown at Z in dotted lines in Fig. 1. This motor may also be employed for operating a churn or a washing-machine, and for various purposes.

A motor thus constructed is cheap and simple, and can be operated by a child seated on the swinging lever.

Having thus described my invention, I claim—

1. The combination of the swinging lever having the seat attached thereto, the shaft K, having the ratchet-wheel, and pawls attached

to the lever for actuating the ratchet-wheel, substantially as described.

2. The combination of the vertical frame, the beam B, pivoted on the upper side thereof, said beam having the arms *b'* *b''*, the swinging levers (one or more) secured to the beam, the shafts K and L, shaft K, having ratchet-wheel M, pulley N, and drum O, shaft L, having drum P, an endless belt connecting pulley N with drum P, and pawls pivoted to arms *b'* and *b''* and engaging with the ratchet-wheel, substantially as described.

3. The combination of the vertical frame and the horizontal frame, the beam B, pivoted on the vertical frame, said beam having arms *b'* *b''*, the swinging levers (one or more) secured to the beam, shafts K and L, journaled in the horizontal frame, shaft K, having ratchet-wheel M, pulley N, and drum O, shaft L, having drum P, belt T, connecting drum P with pulley N, pawls pivoted to arms *b'* *b''* and engaging with the ratchet-wheel, and rock-shaft U, journaled in the horizontal frame and having tappet-arm *u* and brake-arm *u'*, substantially as described.

4. The combination of the frame, the pivoted beam B, the swinging levers (one or more) secured to the beam, a cross-beam, *x'*, secured to beam B, and foot-levers X, pivoted below the beam B and connected to the beam *x'*, substantially as described.

5. The combination of the frame, the pivoted beam B, the swinging levers (one or more) secured to the beam, cross-beam *x'*, secured to beam B, pivoted foot-levers X, connected to beam *x'*, and hand-levers Y, pivoted above the foot-levers and connected to beam *x'*, substantially as described.

6. The combination of the swinging lever, the seat pivoted thereto, and the spring-boards, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

THOMAS K. HANSBERRY.

Witnesses:

J. R. McDONALD,
E. S. CHADWICK.