

No. 709,304.

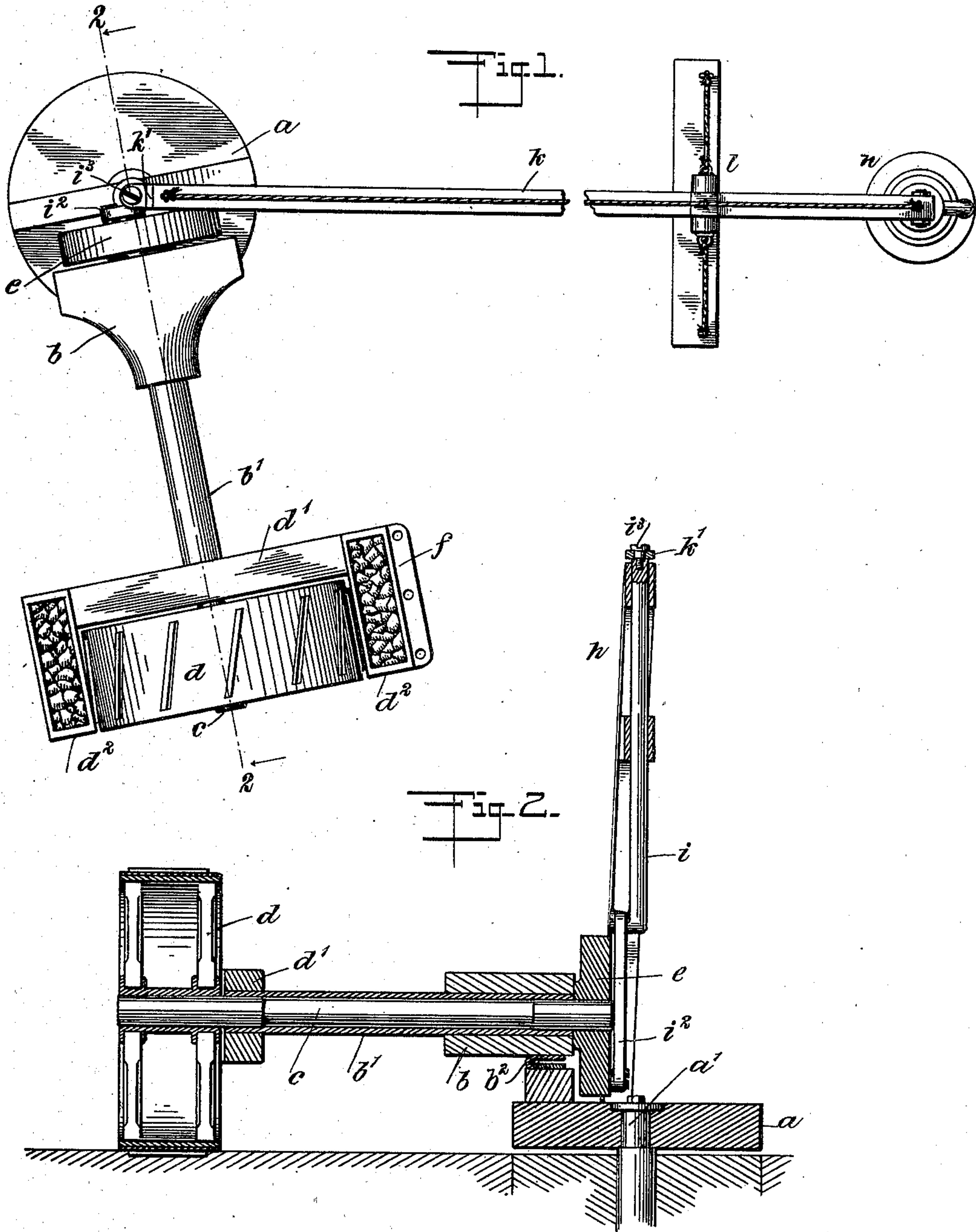
Patented Sept. 16, 1902.

F. CLEMENS, JR.
POWER MECHANISM.

(Application filed Sept. 13, 1901.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

A. Russell Bond.

F. Clemens.

INVENTOR

Ferdinand Clemens, Jr.

BY

Mumford

ATTORNEYS

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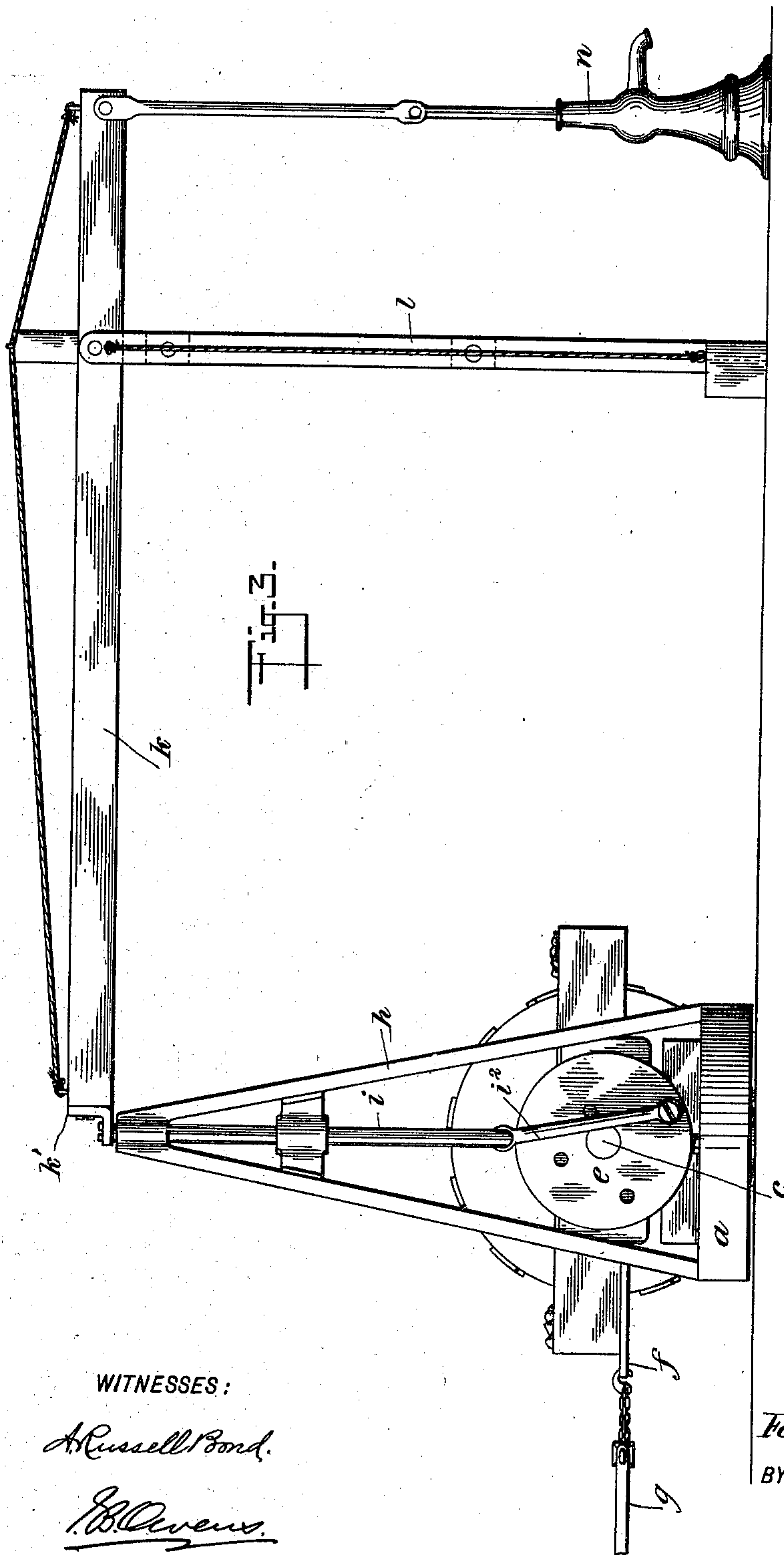
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POWER MECHANISM.

(Application filed Sept. 18, 1901.)

(No Model.)

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A. Russell Bond.

F. B. Clemens.

INVENTOR

Ferdinand Clemens, Jr.

BY

Munn
ATTORNEYS

UNITED STATES PATENT OFFICE.

FERDINAND CLEMENS, JR., OF DELTA, IOWA.

POWER MECHANISM.

SPECIFICATION forming part of Letters Patent No. 709,304, dated September 16, 1902.

Application filed September 13, 1901. Serial No. 75,306. (No model.)

To all whom it may concern:

Be it known that I, FERDINAND CLEMENS, Jr., a citizen of the United States, and a resident of Delta, in the county of Keokuk and State of Iowa, have invented a new and Improved Power Mechanism, of which the following is a full, clear, and exact description.

This invention relates to a mechanism for transforming and transmitting power. It is particularly adapted to be driven by horse or other animal power and may be used with advantageous results for pumping water, sawing wood, and various other domestic purposes.

It comprises certain novel combinations of parts, which will be fully explained hereinafter.

This specification is a specific description of one form of the invention, while the claims are definitions of the actual scope thereof.

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

Figure 1 is a plan view of the invention. Fig. 2 is a section on the line 2-2 of Fig. 1, and Fig. 3 is a side elevation of the invention.

a indicates a turn-table which is carried on a central shaft a' , extending vertically. On the turn-table a is mounted a box b by a hinge b^2 , in which is fastened rigidly a tube b' , extending radially relatively to the shaft a' . In this tube is arranged to turn a shaft c , carrying at its outer end a broad-faced traction-wheel d and at its inner end a crank-disk e .

d' indicates a beam which is attached to the outer end of the tube b' and extends transversely, carrying at each end a box d^2 . These boxes are designed to receive stones or other weight, so as to cause the traction-wheel d to forcibly engage the ground.

f indicates an orificed flange, which is attached to one of the boxes d^2 and extends parallel with the shaft c . This flange f is adapted to have the draft apparatus g (see Fig. 3) attached thereto, and by fastening the draft apparatus at various points along the plate f the speed of the wheel d may be regulated. Owing to the hinge b^2 , whereby the box b is connected to the turn-table a , the wheel d is allowed to bear firmly on the

ground at all times, and unevenness in the track of the wheel will not affect its operation or cramp any part of the machine.

Erected on the turn-table a is a vertically-extending frame h , which carries a slide i , connected by rod i^2 with the disk e . The disk e is provided (see Fig. 3) with a number of openings therein at different distances from its center, and through means of either of the openings the rod i^2 may be connected with the disk. This will regulate the throw of the rod, as will be fully understood. The frame h turns with the table a and the parts b , b' , c , d' , and d^2 , and as the traction-wheel sweeps over the ground a rotary movement is imparted to the shaft c , and this shaft, through the action of the parts e and i^2 , drives the slide i .

k indicates a walking-beam, which may be of any construction desired and which is mounted on a suitable support l . This walking-beam is provided at one end with a fixture k' , which is revolubly engaged with a screw i^3 on the upper end of the slide i . At the other end of the walking-beam is connected the apparatus to be driven, (here shown as a pump n .) Reciprocal movement of the slide i will drive the walking-beam k and operate the pump n or any other appliance which may be connected with the walking-beam.

In the operation of the device the wheel d in moving around its circular path carries with it the parts d^2 , d' , b' , b , a , h , i , i^2 , and e . The slide i in addition to its turning movement around its vertical axis has also an axial movement which drives the walking-beam k . It should be understood that the connection between the parts k' and i^3 should be sufficiently loose to allow of the swinging movement of the walking-beam k .

Various changes in the form, proportions, and minor details of my invention may be resorted to without departing from the spirit and scope of my invention. Hence I consider myself entitled to all such variations as may lie within the scope of my claims.

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

1. The combination of a turning support, a vertically-extending frame erected thereon, a

box mounted on the support, a shaft arranged to turn in the box, a traction-wheel connected to the shaft and running on the ground to rotate the shaft as it swings with the turning support, a crank attached to the inner end of the shaft, a connecting-rod attached to the crank, a slide mounted in the frame and attached to the connecting-rod, and a walking-beam with which the upper end of the slide is revolvably engaged.

2. The combination of a support arranged to turn on a vertical axis, a box hingedly mounted thereon, a shaft revolvably carried in the box, the shaft running radially of the axis of the turning support, a traction-wheel carried by the shaft and running on the ground to rotate the shaft as it swings with the turning support, a vertically-extending frame mounted rigidly on the turning support, a crank in connection with the inner end of the shaft, a connecting-rod attached to the crank, a slide mounted in the frame and attached to the connecting-rod, and a walking-beam with which the upper end of the slide is loosely connected.

3. The combination of a support arranged to turn, a tube carried to swing with the support, a shaft revolvably mounted in the tube, means connected with the inner end of the shaft to transmit the motion thereof, a wheel carried on the outer end of the shaft and running on the ground as the shaft swings with the support, a beam mounted transversely on the tube alongside of the wheel, and weight-boxes attached to the ends of the beam and extending past the face of the wheel, for the purpose specified.

4. The combination of a support arranged to turn, a tube carried to swing with the sup-

port, a shaft revolvably mounted in the tube, means connected with the inner end of the shaft to transmit the motion thereof, a wheel carried on the outer end of the shaft and running on the ground as the shaft swings with the support, a beam mounted transversely on the tube alongside of the wheel, weight-boxes attached to the ends of the beam and extending past the face of the wheel, for the purpose specified, and a flange attached to one of the weight-boxes and adapted to have the draft apparatus engaged therewith.

5. The combination of a support arranged to turn, a tube carried to swing with the support, a shaft revolvably mounted in the tube, means connected to the inner end of the shaft to transmit the movement thereof, a wheel carried on the outer end of the shaft and running on the ground as the shaft swings with the support, and a weight sustained on the outer portion of the tube, for the purpose specified.

6. The combination of a turning support, a shaft revolvably mounted on the support, means connected to the inner end of the shaft to transmit the motion thereof, a wheel carried on the outer end of the shaft and running on the ground as the shaft swings with the support, a weight located immediately adjacent to the wheel, and means engaged with the shaft and with said turning support, whereby to sustain the weight.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FERDINAND CLEMENS, JR.

Witnesses:

W. N. BROWN,
T. J. McNABB.