

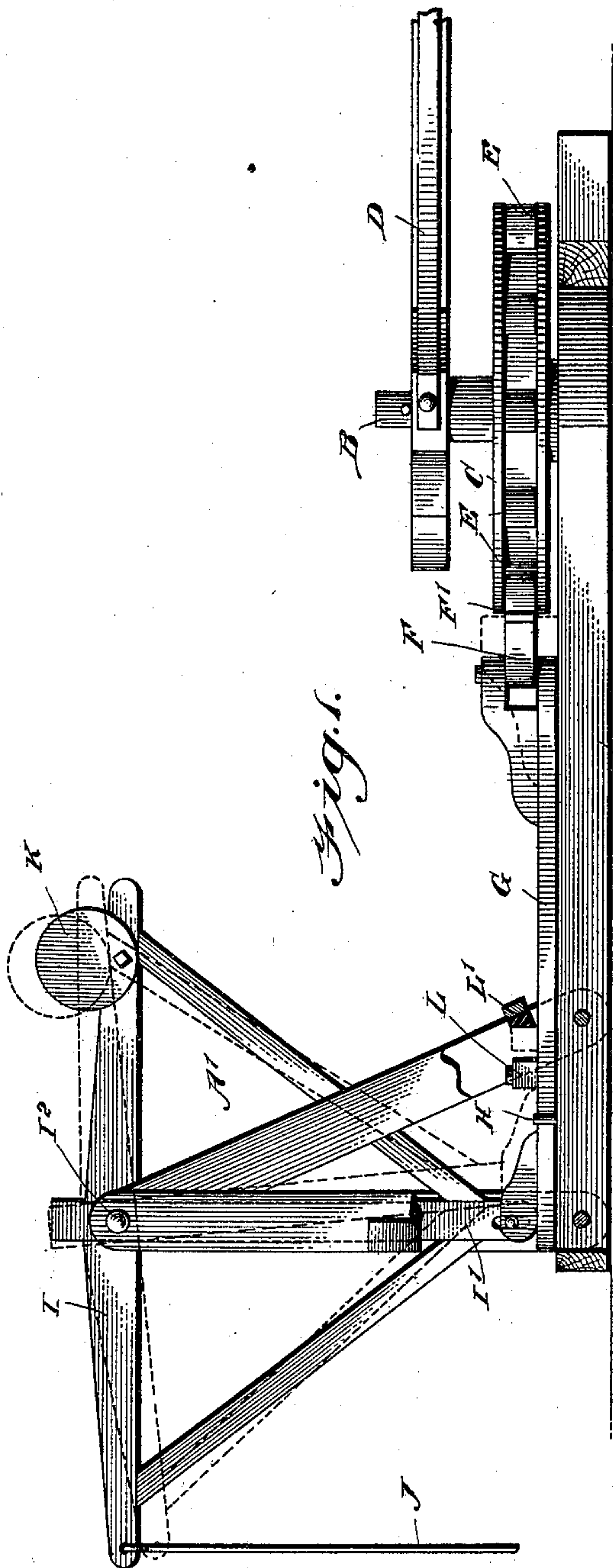
No. 671,331.

Patented Apr. 2, 1901.

F. CLEMENS, JR.
POWER MECHANISM.

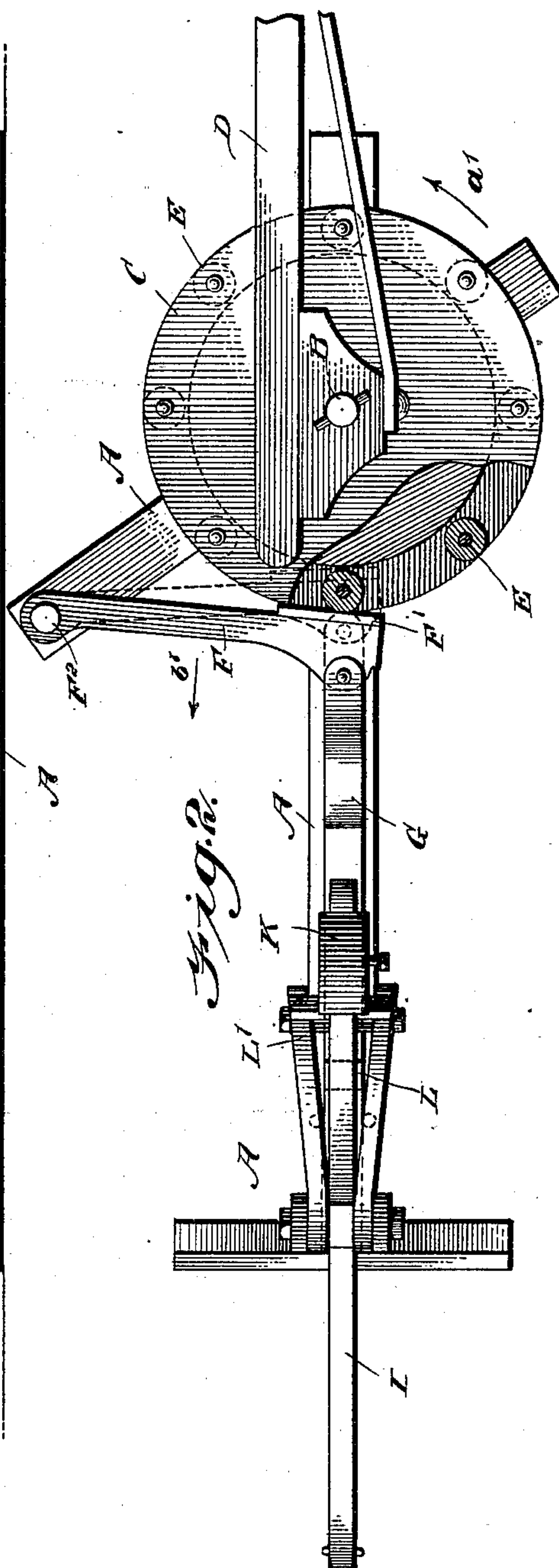
(Application filed Dec. 11, 1900.)

(No Model.)



WITNESSES:

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FERDINAND CLEMENS, JR., OF DELTA, IOWA.

POWER MECHANISM.

SPECIFICATION forming part of Letters Patent No. 671,331, dated April 2, 1901.

Application filed December 11, 1900. Serial No. 39,536. (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.

The invention relates to mechanism for actuating pumps, churns, washing-machines, and the like; and the object is to provide a new and improved power mechanism which is simple and durable in construction, very effective in operation, and arranged to give a large number of strokes for one full turn of the sweep or crank-arm.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both views.

Figure 1 is a side elevation, partly in section; and Fig. 2 is a plan view of the same with a portion removed to expose other details.

The improved power mechanism is mounted on a suitably-constructed base or bed plate A, supporting a vertically-disposed pin B, on which is mounted to turn a wheel C and also carrying a crank-arm or sweep D for imparting a rotary motion to the wheel C in the direction of the arrow a' . On the periphery of the wheel C are journaled spaced friction-rollers E, adapted to successively engage a wear-plate F' on a lever F, fulcrumed at F² on the base or bed plate A. The free end of the lever F is connected opposite the wear-plate F' with a link G, having its outer portion guided between pins H, attached to the base or bed plate A. The extreme outer end of the link G is pivotally connected with a depending arm I' of a walking-beam I, fulcrumed at I² on standards A', erected on the base or bed plate A. The outer end of the walking-beam I is connected with a pump-rod J or other part of the mechanism to be driven, and on the inner end of said walking-beam is adjustably held a weight K for counterbalancing a portion of the mechanism connected

with the outer end of the walking-beam I. On the link G is secured or formed a bumper L, adapted to engage a bumper-block L', of rubber or other suitable material, secured to the standard A'. The bumper L strikes the bumper-block L' at the time the lever F has dropped off a friction-roller E, so as to prevent the wear-plate from striking part of the wheel C, and thereby relieving the wheel C and the lever F of undue wear.

When the device is in use, a rotary motion is given to the wheel C in the direction of the arrow a' , which brings the friction-rollers E successively in engagement with the wear-plate F' of the lever F to impart an outward-swinging motion to said lever in the direction of the arrow b' , and when a friction-roller leaves the outer end of the wear-plate F' then the lever F swings back—that is, in the reverse direction of the arrow b' —to be then engaged by the next following friction-roller to repeat the above-described operation. When the lever F swings outward and outward movement is given to the link G, and consequently a rocking motion is given to the walking-beam I to move the outer end of the walking-beam upward, thus lifting the pump-rod and plunger of the pump, and when the lever F swings inward, then the weight of the pump-rod, pump-plunger, and column of water thereon causes a return movement of the walking-beam, so that the link G swings the lever F back to its former position for the next friction-roller E to again impart an outward stroke to said lever. During the return stroke of the link G the bumper L strikes the bumper-block L' to relieve the wheel C and the lever F of undue wear, as previously mentioned.

For actuating force-pumps the weight K is shifted from the outer end of the walking-beam I to the inner end thereof, so as to insure a heavy stroke of the plunger in the pump.

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

1. A power mechanism, comprising a walking-beam, an arm secured to said walking-beam, a link connected with said arm, a lever pivotally connected with the said link, a wheel having friction-rollers successively engaging

the free end of said lever, a bumper, and a bumper-block for limiting the return stroke of the working parts, as set forth.

2. A power mechanism, comprising a walking-beam weighted at one end and connected
5 at the other end with the device to be actuated, an arm secured to and standing approximately at a right angle to said walking-beam, a link connected with said arm, a lever piv-
10 otally connected with the said link, a wheel having friction-rollers successively engaging

the free end of said lever, and a bumper and bumper-block for limiting the return stroke of the working parts, as set forth.

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

FERDINAND CLEMENS, JR.

Witnesses:

JAMES HAMILTON,
W. N. BROWN.