

(No Model.)

P. FRICHETTE.
MECHANICAL MOTOR.

No. 514,356.

Patented Feb. 6, 1894.

Fig. 1

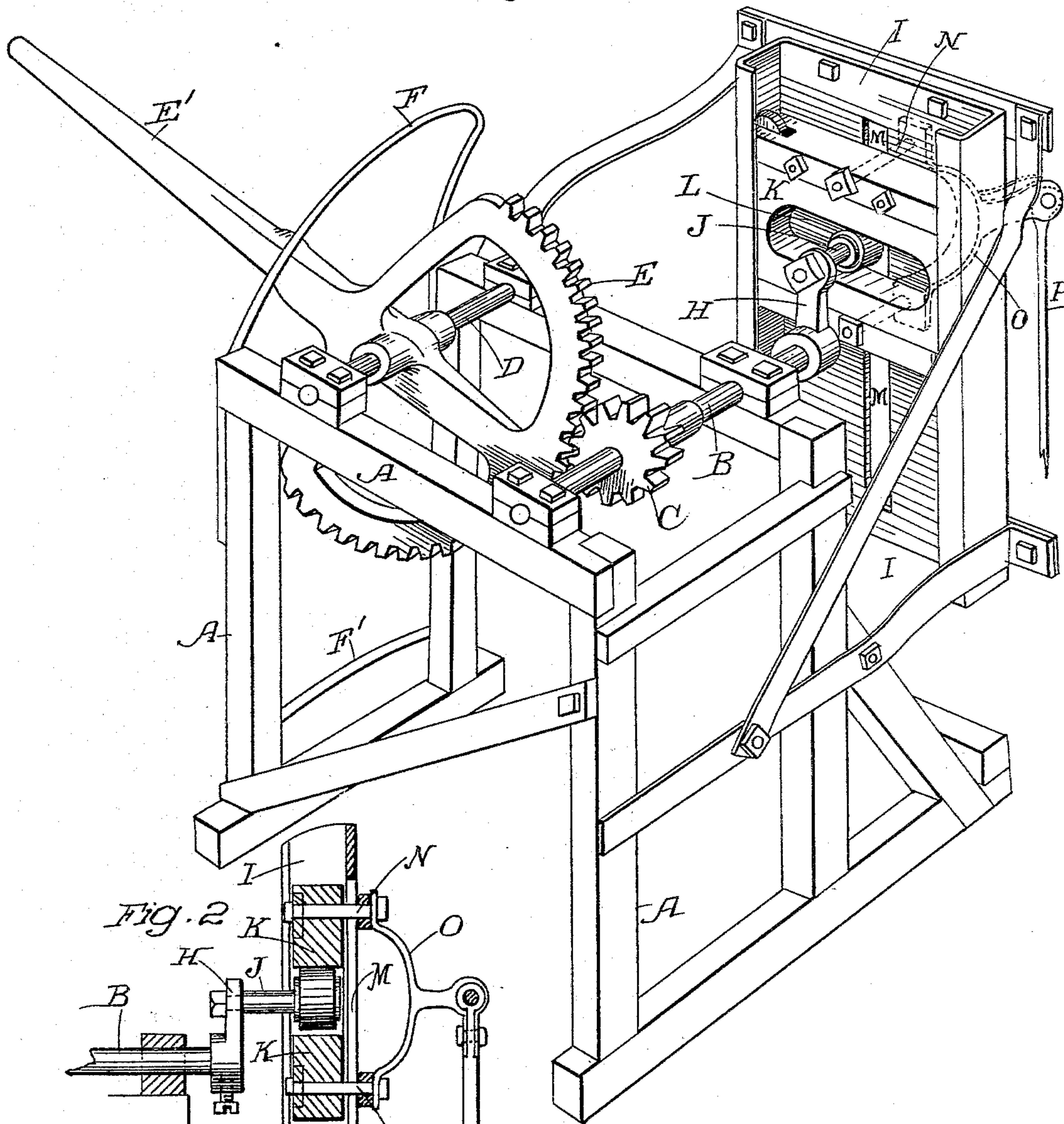
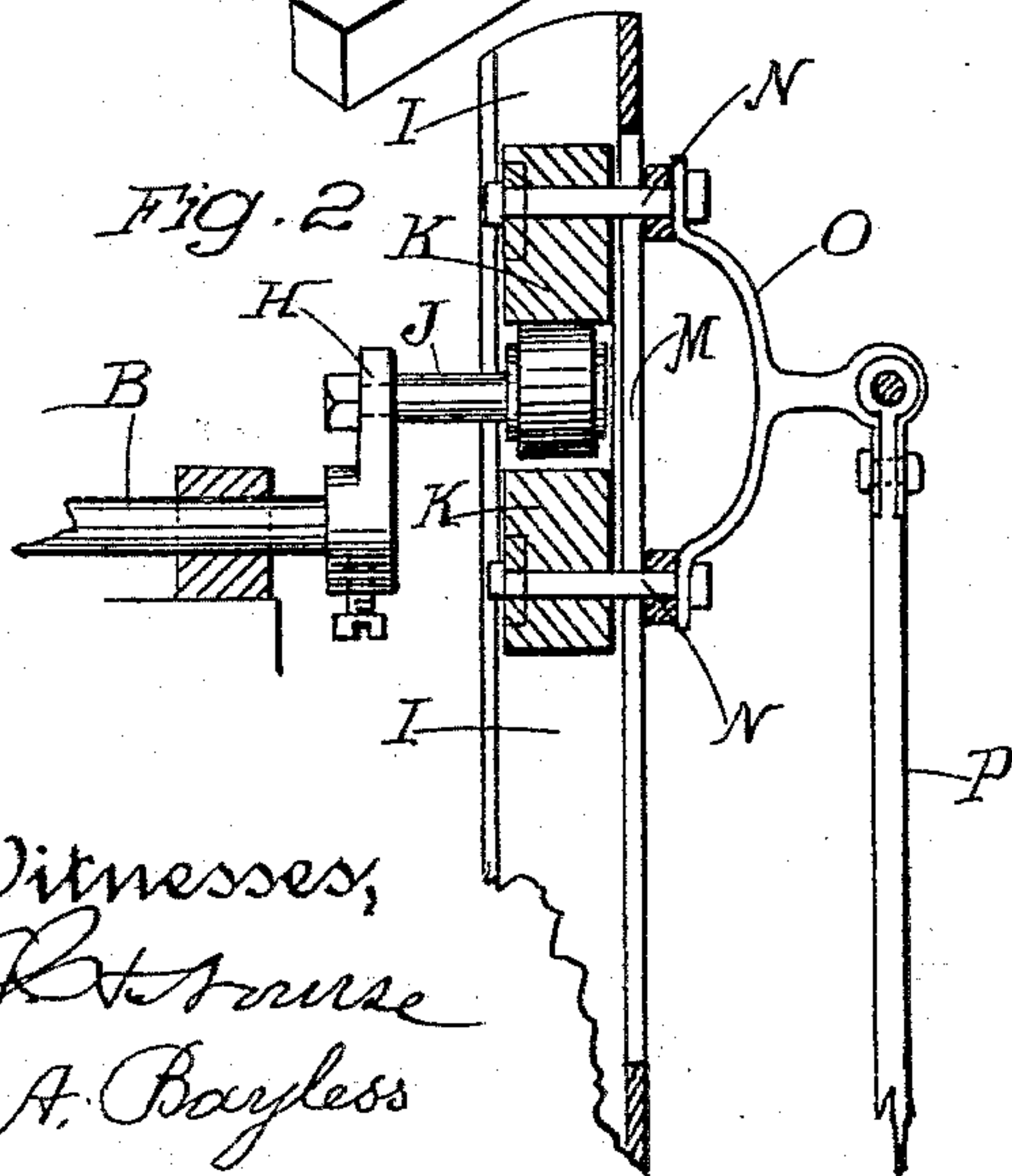


Fig. 2



Witnesses,
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UNITED STATES PATENT OFFICE.

PETAR FRICHETTE, OF SHERIDAN, CALIFORNIA.

MECHANICAL MOTOR.

SPECIFICATION forming part of Letters Patent No. 514,356, dated February 6, 1894.

Application filed November 17, 1893. Serial No. 491,277. (No model.)

To all whom it may concern:

Be it known that I, PETAR FRICHETTE, a citizen of the United States, residing at Sheridan, county of Placer, State of California, have
5 invented an Improvement in Pump-Powers; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to that class of intermediate devices designed to increase the efficiency of a pump by increasing the number of
10 its strokes with relation to the movements of the initial driving mechanism.

It consists in certain details of construction which will be more fully explained by
15 reference to the accompanying drawings, in which—

Figure 1 is a perspective view of my apparatus. Fig. 2 is a vertical section through the guiding frame and movable slide.

20 The object of my invention is to enable the operator to increase the number of strokes made by the pump, or other connected device, with relation to the movements of the mechanism through which the power is applied.
25 In carrying this out I employ any suitable frame-work A upon which the apparatus is mounted.

B is a crank shaft extending across the frame-work and suitably journaled thereon.
30 This shaft has a pinion C fixed to it through which power is transmitted to rotate the shaft in one direction or the other as follows:

D is a second shaft journaled parallel with the first named one, and having upon it a
35 segmental toothed rack E, the teeth of which engage the teeth of the pinion, so that when the segment is moved about its axis it will cause the pinion to rotate. This segment has a handle E' of any desired length to produce
40 the necessary amount of power, and it will be manifest that this handle may be worked up and down, either by hand or other power which will produce a stroke sufficiently long to move the segment through nearly or quite
45 the whole of its toothed circumference.

F is a curved yoke fixed to the frame which serves to limit the motion of the lever in an upward direction, and F' is a bar extending
50 across the frame to limit the motion in the opposite direction.

Upon the end of the shaft B is fixed a crank H. If desired this crank may have a single

connecting rod uniting it with the pump rod or other reciprocating rod which may be made to reciprocate in suitable guides. In the present case, and in order to produce a vertical
55 motion of the rod which is directly connected, I have shown a guide frame I suitably secured with relation to the crank pin J. Within this guiding frame is a slide K having rollers upon
60 its opposite corners which are adapted to travel within the guide so that the slide will move up and down in the guide with little or no friction. Transversely across this slide is a slot L, the length of which is equal to the
65 greatest throw of the crank, and the anti-frictional roller journaled upon the crank pin, fits and travels in this slot so that during a single revolution of the crank, this roller
70 crank pin will traverse the slot from end to end as it passes from its greatest throw on one side to the greatest throw on the other, while in its upward and downward movement it produces a vertically reciprocating motion
75 of the slide as before described. Through the guide frame is made a vertical slot M, and through this slot the lugs N project being fitted to slide up and down loosely in the slot, and having the outer ends formed with enlargements which will keep them in place as
80 they move. Between these lugs a yoke O extends. This yoke is curved outwardly in the center as shown, and has the outwardly projecting arms or forks P adapted to receive a pin by which the connecting or pump rod is
85 united therewith.

The operation will then be as follows:—When the lever arm E' is moved up and down, the segment E will be caused to rotate upon its shaft and as it engages the pinion C, the
90 latter will be caused to rotate with a rapidity depending on its proportionate diameter to that of the segment. Thus by making the segment of large diameter and the pinion of comparatively small diameter, one movement
95 of the segment which would cause it to traverse and engage the pinion from one end of the segment to the other, will cause the pinion and the shaft to rotate two, three or more
100 times as may be desired. This enables me to operate the pump or connecting rod with considerable rapidity while the lever through which power is applied receives a much slower motion.

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

5 The herein described power apparatus consisting in a frame, a shaft mounted thereon and provided at one end with a crank having a crank pin, a pinion on said shaft, a toothed segment meshing with said pinion and provided with an operating lever, a ver-
10 tical guide-way having a vertical slot in its outer side a cross head working in said guide way, and having a transverse slot receiving

said crank pin, a yoke at the outer side of the guide way, bolts extending through the vertical slot and securing said yoke to the
15 cross head, and a rod connected with the yoke for transmitting the power to the device to be operated, substantially as herein described.

In witness whereof I have hereunto set my hand.

PETAR FRICHETTE.

Witnesses:

S. H. NOURSE,

H. F. ASCHECK.