No. 654,930. Patented July 31, 1900.

# G. S. ZENT.

## MECHANICAL MOTOR.

(Application filed Feb. 9, 1899.)

(No Model.)

Fig. 1.

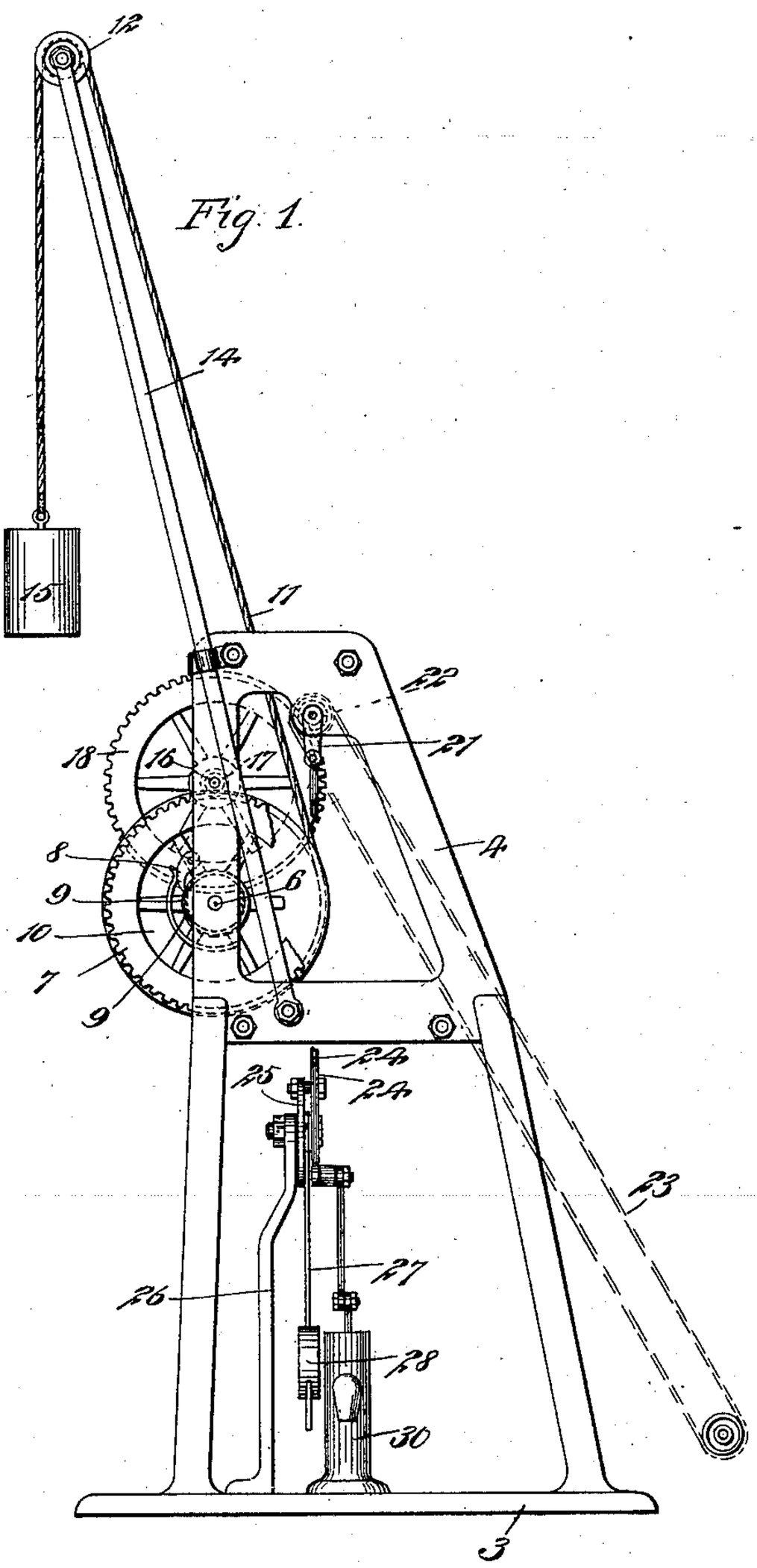
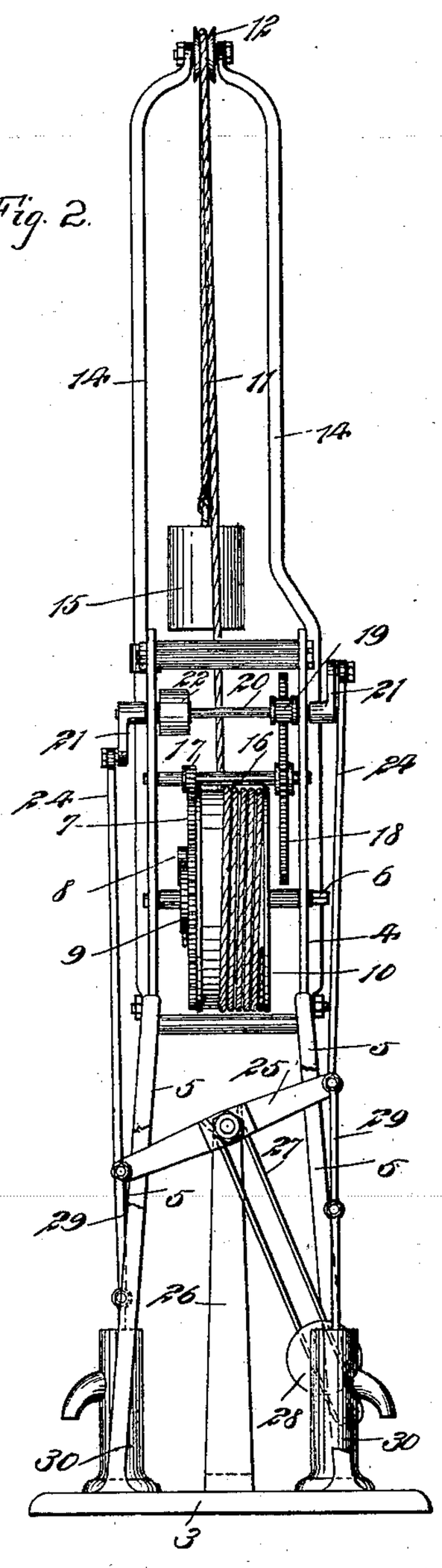



Fig. 2.




WITNESSES:

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# UNITED STATES PATENT OFFICE.

GEORGE STEPHEN ZENT, OF LITTLE RIVER, KANSAS.

## MECHANICAL MOTOR.

SPECIFICATION forming part of Letters Patent No. 654,930, dated July 31, 1900.

Application filed February 9, 1899. Serial No. 705,023. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE STEPHEN ZENT, of Little River, in the county of Rice and State of Kansas, have invented a new and Improved Mechanical Motor, of which the following is a full, clear, and exact description.

The purpose of this invention is to provide a superior mechanical motor of that class in which gearing is connected with a weight in such a manner that upon the descent of the weight the gearing is operated to transmit the movement of the weight, and to this end I provide a frame with multiplying-gear thereon and with means for regulating and transmitting the movement of this gearing, so as to apply the power by means of a walking-beam to two pumps or like apparatus.

This specification is the disclosure of one form of my invention, while the claim defines 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 both views.

Figure 1 is a side elevation of the invention, and Fig. 2 is an end elevation thereof.

On a base 3 I support a gear-framing 4 by means of legs or standards 5. This frame 4 carries a primary-movement shaft 6, on which is mounted loosely a gear-wheel 7. The gear-wheel 7 carries a spring-pressed pawl 8, engaging a ratchet-wheel 9, fast to the shaft 6. Also fast to the shaft 6 is a cable-drum 10, over which drum is rove the cable 11, which passes upwardly over an idler-pulley 12, held on arms 14, supported on the frame 4. The cable 11 carries a weight 15, so that the cable 11 is drawn over the pulley 12 when the drum 10 is turned. The weight may be wound up after having run down by means of a crank applied to the squared end of the shaft 6. (Shown in Fig. 2.)

Mounted in the frame 4 is a counter-shaft 16, whereto is secured a pinion 17, meshing with the gear 7. The shaft 16 also carries a spur-gear 18, meshing with a pinion 19, fast on a shaft 20, the ends of which project beyond the frame 4 and are respectively provided with crank-arms 21. The shaft 20 may also be provided with a belt-pulley 22, over which may be passed a belt 23 (indicated in dotted lines in Fig. 1) for transmitting the movement of the shaft 20.

Respectively connected with the wrist-pins of the cranks 21 are pitman-rods 24, which extend downward and are pivoted to the respective ends of the walking-beam 25. This beam is fulcrumed on a standard 26, rising from the base 3. Secured to the beam, at the point of the fulcrum thereof, is a downwardly-extending pendulum-frame 27, to which is attached a pendulum-weight 28, that may be mounted friction-tight on the frame, so as to render the pendulum adjustable. This pendulum serves to regulate the movement of the walking-beam. The walking-beam is supplied with downwardly-projected rods 29, which are in connection with the pistons of pumps 30, carried on the base 3.

The revolution of the crank-shaft 20 serves to drive the rods 24, and from these rods the walking-beam 25 is driven. This beam in swinging on its horizontal fulcrum moves the rods 29 up and down, and thus drives the pump-pistons. By these means I am enabled to apply to the pumps the greatest possible force that can be derived from the size of the weight 15 that is employed. This weight may of course be increased or diminished in size to adapt the apparatus to the various work to which it is to be put.

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

In a mechanical motor, the combination with a frame, of a driven shaft mounted thereon, a crank attached to each end of the shaft, a connecting-rod attached to each crank, a walking-beam mounted on the frame and having the connecting-rods attached to its respective ends, a pendulum-frame attached to the walking-beam at the pivot thereof and hanging down therefrom, a weight mounted on the pendulum-frame, a link attached to each end of the walking-beam, and devices to be driven by the motor, such devices being respectively connected with the said links.

GEORGE STEPHEN ZENT.

Witnesses:
E. B. PULLIAM,
GEO. G. GUNN.