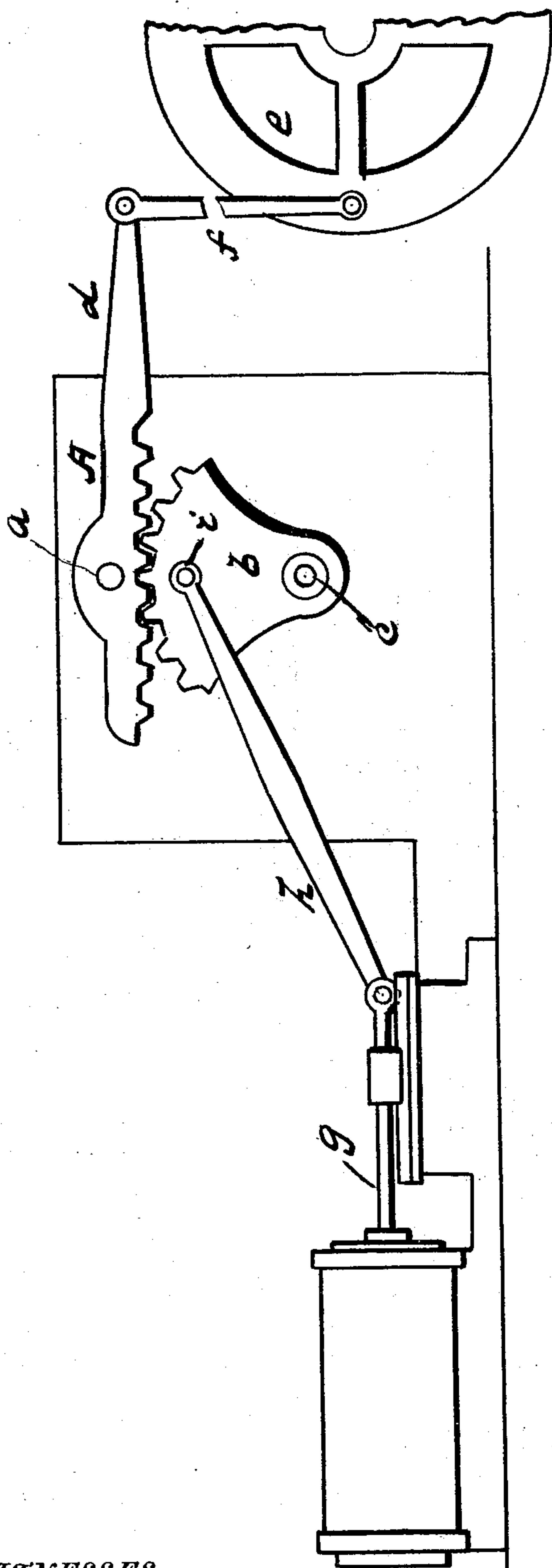


(No Model.)

C. LLOYD.
MECHANICAL MOVEMENT.

No. 507,142.

Patented Oct. 24, 1893.



WITNESSES

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MECHANICAL MOVEMENT.

SPECIFICATION forming part of Letters Patent No. 507,142, dated October 24, 1893.

Application filed May 4, 1893. Serial No. 473,034. (No model.)

To all whom it may concern:

Be it known that I, CHARLES LLOYD, a citizen of the United States, residing at West River, in the county of Anne Arundel and State of Maryland, have invented certain new and useful Improvements in Mechanical Movements; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention has relation to improvements in mechanical movements and is more particularly designed for use in connection with engines; and it consists in the novel construction and combination of parts as will be hereinafter more fully explained and particularly pointed out in the appended claim.

The annexed drawing to which reference is made fully illustrates my invention, in which the figure represents a face view of my device connected to an operating cylinder of an engine.

Referring by letter to the accompanying drawing A, designates a rack or toothed bar which is pivoted at *a* and engages by its teeth a segmental toothed plate *b*, that is pivoted at *c*, to a suitable support. This rack bar has an extended end *d*, which is connected to a fly or other wheel *e* by a pitman *f*, or the lower end of said pitman may be connected to a cranked shaft, if desired. The rack-bar A may if desired be pivoted higher up than herein shown.

The segmental plate *b* is connected to the piston rod *g* of an engine by the pitman *h*, which is pivoted at *i*, to said plate; the pivots *a*, *c*, *i*, being arranged in a vertical line in relation to one another. The rack bar A is pivoted to the base above the sector and the

teeth of the former mesh loosely with those of the sector thus giving sufficient play or movement between the teeth of the rack bar and sector to allow of the oscillating or rocking motion of the rack bar. This construction it will be observed places my device, between the fly wheel and cylinder of an engine and by the horizontal movement of the piston rod of the cylinder the toothed plate is given a rocking movement through the medium of the pitman *h* which plate *b* in turn causes the bar A, to rock upon its pivot *a*, thus through the medium of the pitman *f*, causing the wheel *e*, to revolve, and giving power thereto. Thus it will be seen that my device can be used for various purposes such as lifting weights, running a churn or other devices and it is durable, at the same time cheap to manufacture and put up as well as being simple in its operation.

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

The combination of a toothed sector pivotally mounted on a frame, a rack bar pivoted above the sector, the teeth of said parts being in loose engagement, a pitman connected to the sector above the pivotal point of the latter, an arm extending from one end of the rack-bar, a pitman connected to the latter arm, and means for imparting movement to the toothed sector, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES ^{his} × LLOYD.
mark

Witnesses:

N. CURTIS LAMMOND,
J. J. HARROWER.