

(No Model.)

W. R. BEARDSLEE.  
MECHANICAL POWER.

No. 304,158.

Patented Aug. 26, 1884.

FIG. 1.

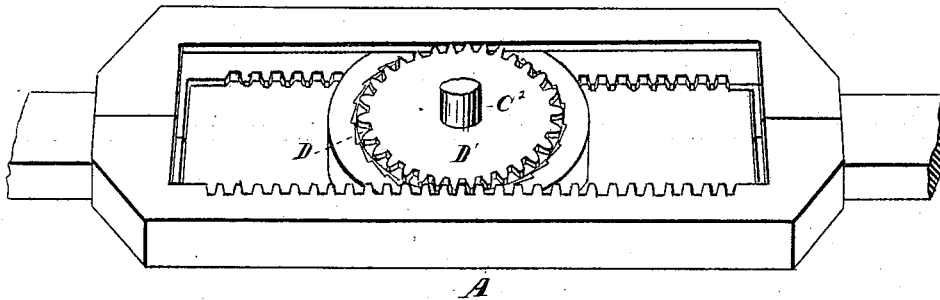


FIG. 2.

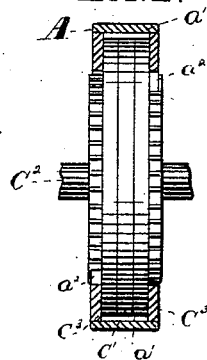


FIG. 3.

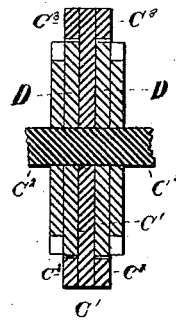


FIG. 4.

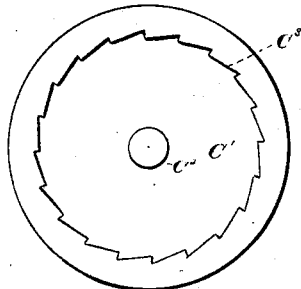
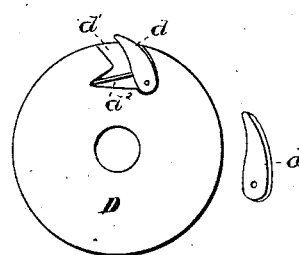


FIG. 5.



Witnesses.

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# UNITED STATES PATENT OFFICE.

WILLIAM R. BEARDSLEE, OF CLIFTON, ILLINOIS.

## MECHANICAL POWER.

SPECIFICATION forming part of Letters Patent No. 304,158, dated August 26, 1884.

Application filed July 19, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM R. BEARDSLEE, a citizen of the United States, residing at Clifton, in the county of Iroquois and State of Illinois, have invented certain new and useful Improvements in Mechanical Powers; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to that class of mechanical movements which have for their object to convert reciprocal into rotary movement; and it consists in the novel features hereinafter described, and specified in the claims.

In the drawings, Figure 1 is a perspective view of my improvement. Fig. 2 is a transverse section of the pitman-head frame, with the wheel, &c., in place. Fig. 3 is a transverse section of the wheels. Fig. 4 is a detail view of the wheel-carrier. Fig. 5 is a detail view of one of the clutch-wheels.

The frame A may be secured on a pitman or other reciprocating part of the machine, and is formed with an opening, *a*, in which the wheels operate. On opposite sides of this opening *a*, I form the sides of the frame A with grooves *a'*, in which the wheel-casing is held and movable. The diagonally-opposite walls *a''* of these slots *a'* are provided on their edges with cog-teeth B, which are meshed with the gears on the clutch-wheels presently described.

The wheel-carrier C is composed of the disk or plate C', fixed on the hub or shaft C<sup>2</sup> and the ratchet-rings C<sup>3</sup>, secured on the opposite sides of and close to the periphery of the disk, as shown. The ratchet-teeth of these rings are formed on their inner edges, as shown in Figs. 1 and 4.

The clutch-wheels D are journaled on the shaft C<sup>2</sup>—one on each side of disk C'—and are provided with spring-actuated pawls arranged and adapted to engage the ratchet-rings C<sup>3</sup>. A gear-wheel, D', is secured or formed on the outer side of each of the clutch-wheels D,

and mesh one with each of the geared edges B, as will be understood from Figs. 1 and 2. The wheel-carrier, it will be noticed, fitting within the slots or grooves *a'*, on opposite sides of the opening, guide said frame and hold it steadily to its work. I therefore prefer the construction as shown, though it is obvious that the frame could be guided in other ways without departing from the broad principles of my invention.

In operation, when the frame A is moved in one direction, it revolves both the gear-wheels in opposite directions, the pawl *d'* of one of which will engage the shoulder of its ratchet and revolve the carrier, and consequently its shaft. When the frame is moved in its reverse direction, the other gear will be properly revolved to cause its pawl to operatively engage its adjacent ratchet and continue the revolution of the carrier. Thus, as the frame is reciprocated, the carrier, and consequently its shaft, will be continuously revolved in the same direction, as is desirable.

In securing the pawl *d* to the wheel D, I mortise the inner side of the latter at *d'*, close to its rim, and pivot the pawl, and arrange its actuating-spring *d''* in such mortise, where they will be securely held between the body of the wheel D and the disk C'. The rear wall of said mortises above the pawl-pivot are conformed to the back edge of the pawl, so that the latter, while operating, will be firmly supported almost its full length, as will be seen most clearly in Fig. 5.

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

1. The combination, with the frame provided with diagonally-opposite geared edges, of the carriers provided with internally-ratcheted rings, and the clutch-wheels arranged one on each side of the carrier and provided each with a pawl engaged with one of the ratchets and a gear meshed with one of the geared edges, substantially as set forth.

2. The combination of the reciprocating head-frame, provided in the inner edges of its side bars with longitudinal grooves having gear-teeth formed on the diagonally-opposite walls of said grooves, the carrier placed in

said frame, with its edges fitted into the said grooves, and provided on each side with rings having their inner edges ratcheted, and the clutch-wheels journaled one on each side of  
5 the carrier-disk, and provided with a pawl adapted to engage the ratchet-ring, and a gear-wheel meshed with the geared edges of the frame, substantially as set forth.

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

WM. R. BEARDSLEE.

Witnesses:

W. C. SMITH,  
J. W. SILL.