

(Model.)

W. PARFREY.
MECHANICAL MOVEMENT.

No. 579,494.

Patented Mar. 23, 1897.

FIG 1.

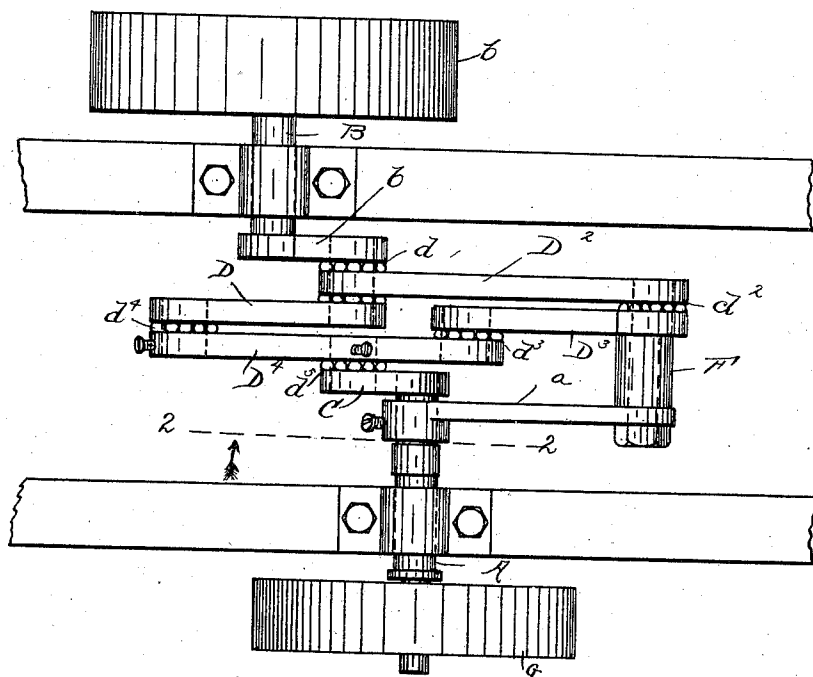
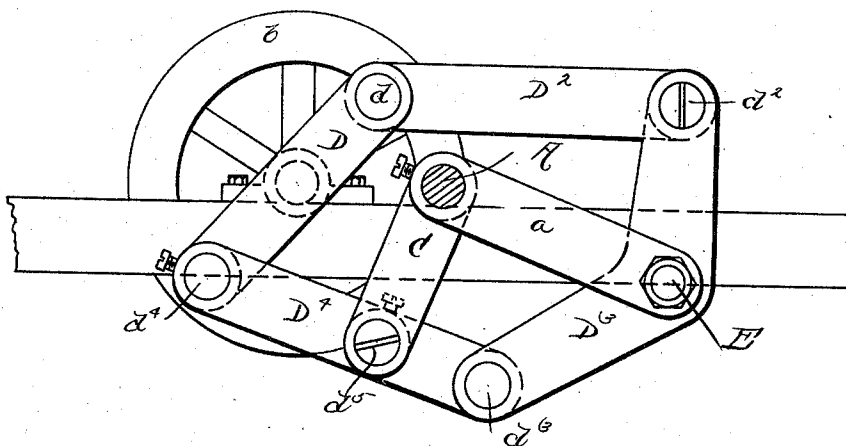


FIG. 2



WITNESS:

WITNESS:
C. B. Larson
C. Gerst

INVENTOR

INVENTOR
William Barbery.
BY
Edgar Tate Ho
ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM PARFREY, OF NEW YORK, N. Y., ASSIGNOR OF ONE-THIRD TO
JOSEPH N. GOLDBACHER, OF SAME PLACE.

MECHANICAL MOVEMENT.

SPECIFICATION forming part of Letters Patent No. 579,494, dated March 23, 1897.

Application filed April 10, 1896. Serial No. 586,975. (Model.)

To all whom it may concern:

Be it known that I, WILLIAM PARFREY, a subject of the Queen of Great Britain, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Mechanical Movements, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts.

This invention relates to means for increasing the speed of a power-transmitting shaft without increasing the speed of the shaft by which the power is supplied; and the invention consists of a new mechanical movement which is adapted to be connected with a power-shaft and with a power-transmitting shaft, whereby the speed of the latter may be increased or doubled without increasing the revolutions of the power-shaft.

The invention is applicable to all kinds and classes of machinery operated by a revolving shaft; and said invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is a plan view of a device, showing the application of my improvement; and Fig. 2, a section on the line 2 2 of Fig. 1.

In the case of machinery or parts of machinery having a rotary motion, or a reciprocating motion derived from a revolving shaft or spindle, I provide a shaft or spindle which is composed of two parts A and B. The first part A or the driving portion, which receives this motion from the power employed, is hereinafter called the "power" shaft or spindle, while the second portion B, or that by which the motion is transmitted to the machine or mechanism, is hereinafter referred to as the "transmitting" shaft or spindle, and these spindles are mounted in any suitable bearings or journals in such manner that while both are in the same plane they are slightly out of line with each other, such deviation being equal to or about equal to the distance from the axial center of the transmitting spindle or shaft to the end of a crank *b*, which is secured to the inner end thereof, and upon the adjacent end of the power-spindle is also secured a crank *a*, which is preferably twice the length or approximately

twice the length of the crank *b* on the power-transmitting spindle, according to the speed required, and pivotally connected with the extreme inner end of the power spindle or shaft A is a link C, and in the practice of my invention I provide a combination movement consisting of links D, D², D³, and D⁴, which are pivotally connected at the points *d*, *d*², *d*³, and *d*⁴ and also provided with ball-bearings at each of these points, and this combination movement is also pivotally connected with the end of the crank *b* at *d*, and the link C is pivotally connected with the link D⁴ at *d*⁵, and the crank *a* on the power spindle or shaft A is pivotally connected with the link D³ and centrally thereof by means of a bolt E, which passes through a tubular head or sleeve F.

The lever D³ is outwardly bent at the center thereof, and a suitable power-wheel G is mounted on the shaft A, and the disposition or arrangement of the links D, D², D³, and D⁴ and the length of the crank *a*, as herein described, are such that by one revolution of the power-spindle A two revolutions are imparted to the transmitting-spindle B, and by means of the ball-bearings between the links and suitable and similar ball-bearings between said links and cranks *b* and the link C the friction is reduced to a minimum.

This device is simple in construction and operation and perfectly adapted to accomplish the result for which it is intended; and,

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

The combination in a power-transmitting apparatus of a driving-shaft, a power-transmitting shaft, a crank on each of said shafts, four separate links which are pivotally connected at their ends, and a supplemental link pivotally connected with one of the said four links centrally thereof, said four links being adapted to be connected with the power-shaft, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 7th day of April, 1896.

WILLIAM PARFREY.

Witnesses:

C. GERST,
J. SAUER.