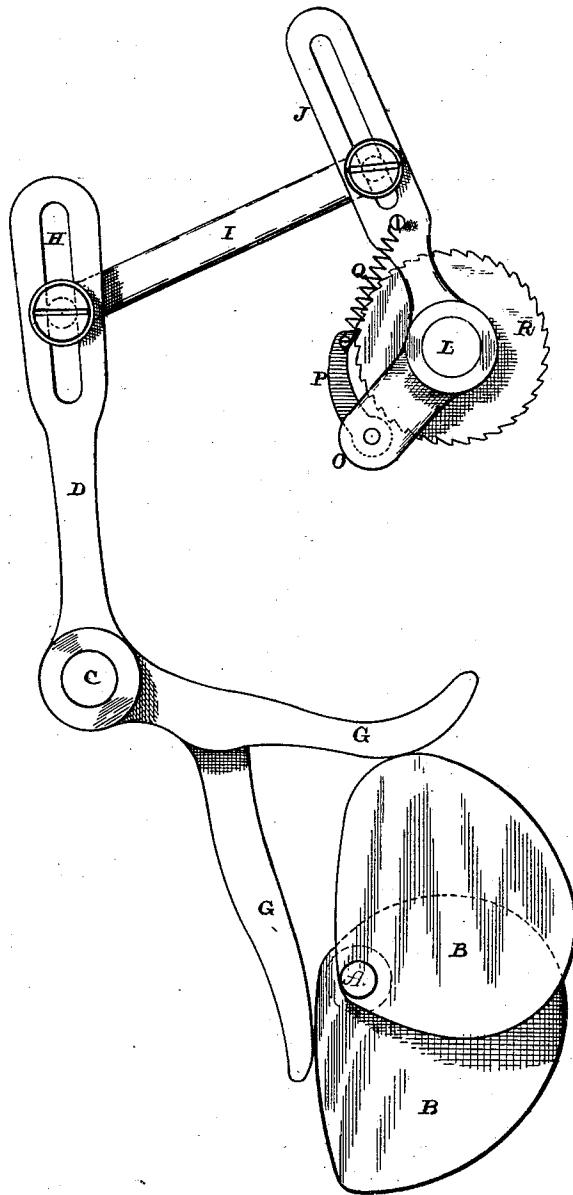


(No Model.)

C. C. EMMONS.  
MECHANICAL MOVEMENT.

No. 432,386.

Patented July 15, 1890.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

CHARLES C. EMMONS, OF PITTSBURG, PENNSYLVANIA.

## MECHANICAL MOVEMENT.

SPECIFICATION forming part of Letters Patent No. 432,386, dated July 15, 1890.

Application filed May 1, 1890. Serial No. 350,161. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES C. EMMONS, of Pittsburg, in the county of Allegheny and State of Pennsylvania, 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 pertains to make and use it, reference being had to the accompanying drawing, which forms part of this specification.

My invention relates to an improvement in mechanical movements; and it consists in the combination of a driving-shaft provided with two separate cams, a rocking lever provided with two prongs at its lower end to engage with the cams, and a slot through its upper end, a connecting-rod, an oscillating lever placed loosely upon the driven shaft and carrying a spring-actuated dog, and a driven shaft provided with a ratchet with which the dog engages, as will be more fully described hereinafter.

The object of my invention is to provide a mechanical movement for converting a rotary motion into an intermittent oscillating movement, whereby the driven shaft is given its regulated movement during one-quarter of the revolution of the driving-shaft, and to provide a movement which, while especially adapted to plaiting-machines, can be used wherever a movement of this nature is necessary.

The accompanying drawing represents a side elevation of a movement which embodies my invention.

A represents the driving-shaft, which is operated from any suitable source, and to which the two cams are rigidly secured out of line with each other. Pivoted at C is the rocking lever D, which is provided with two prongs G at its lower end, and which are out of line with each other, so as to be alternately operated by the two cams B. Through the upper end of the lever D is formed a slot H, to which the lower end of the connecting-rod I is secured; and to the opposite end of this rod I from the lever D is fastened the oscillating lever J, placed loosely upon the driven shaft L, and which lever J is provided with a slot through its upper end and an arm or projec-

tion O at its lower end. This arm O extends at an angle to the lever J, and pivoted to this arm is the pawl P, which has its point held in contact by means of the spring Q with the ratchet-wheel R, which is rigidly secured to the driven shaft L. By means of the slots in the two levers D J the connecting-rod I can be adjusted so as to cause the pawl P to move the ratchet-wheel R from one to nine teeth. The shaft A has a constant rotary motion, and having the two cams B has at all times two points of contact with the lever D through its two prongs G. The shaft A moves the lever D forward at its upper end during the first quarter of the shaft's revolution, then allows the lever D to rest during the second quarter of its revolution, moves the lever D back during the third quarter of its revolution, and then allows the lever D to rest during the fourth quarter of its revolution. Thus it will be seen that at every revolution of the shaft A the shaft L is moved a certain regulated distance, which is determined by the position of the ends of the connecting-rod I in the slots of the two levers D J. As above stated, this movement is adapted for any place where a rotary is to be converted into an intermittent oscillating movement.

Having thus described my invention, I claim—

1. The combination of the driving-shaft provided with two cams, a slotted rocking lever provided with two prongs to engage with the two cams, a connecting-rod, an oscillating lever mounted upon the driven shaft and carrying a dog or pawl, and the driven shaft provided with a ratchet-wheel, substantially as shown and described.

2. The combination of the driving-shaft provided with two cams, a rocking lever provided with two prongs against which the cams operate, the driven shaft, a lever connected therewith, and a rod connecting the rocking lever and the driven-shaft lever, substantially as shown and described.

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

CHAS. C. EMMONS.

Witnesses:

H. C. AVERY,  
S. G. PILLING.