

(No Model.)

F. LENOIR & E. A. SEWARD.
FLY FAN MECHANISM.

No. 526,719.

Patented Oct. 2, 1894.

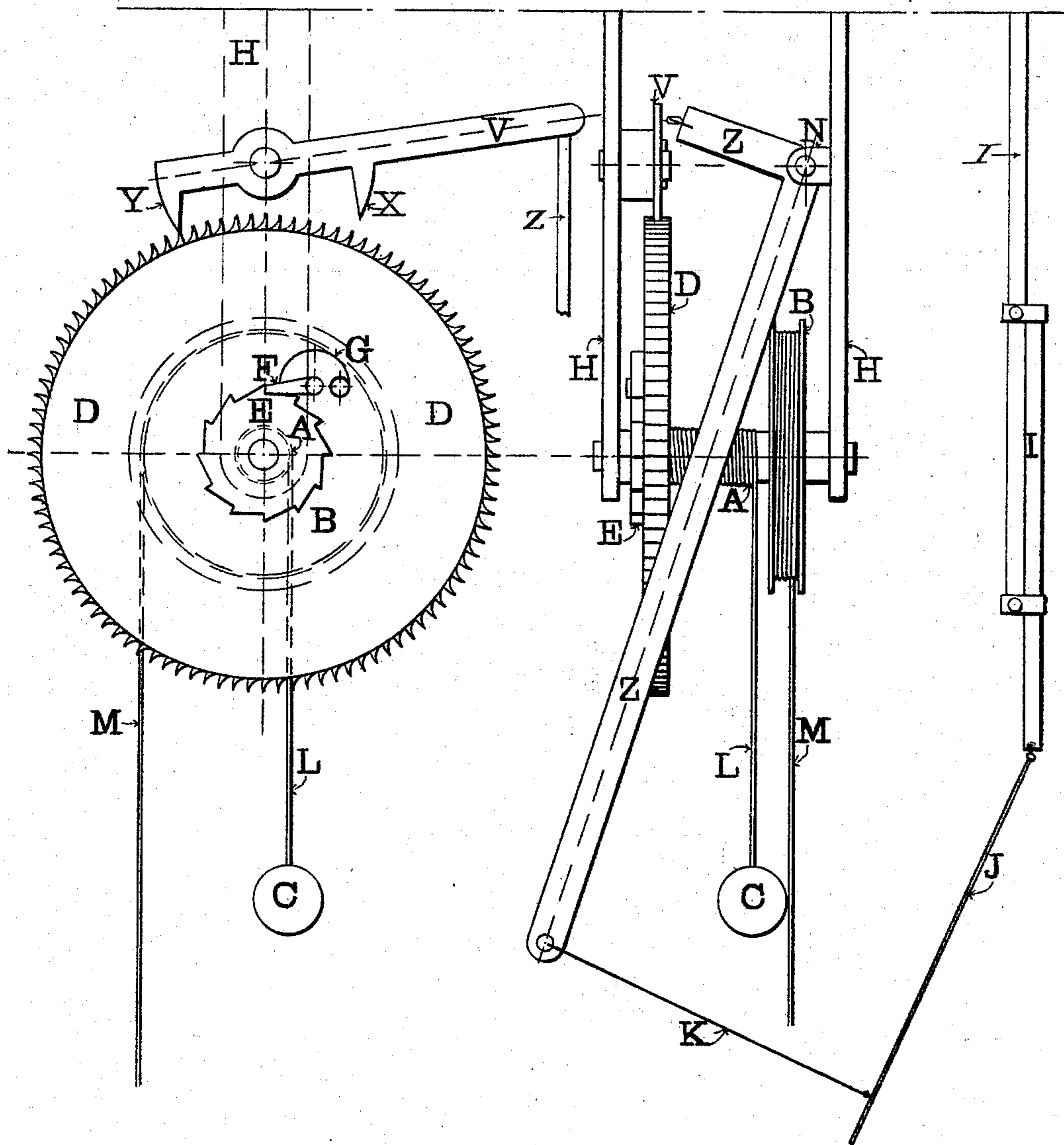


Fig. 1

Fig. 2

Witnesses
Frank A. Downing
J. C. Weir

Inventors.
Francis Lenoir
Edward Arthur Seward

UNITED STATES PATENT OFFICE.

FRANCIS LENOIR AND EDWARD ARTHUR SEWARD, OF COLUMBUS, GEORGIA.

FLY-FAN MECHANISM.

SPECIFICATION forming part of Letters Patent No. 526,719, dated October 2, 1894.

Application filed September 23, 1893. Serial No. 486,334. (No model.)

To all whom it may concern:

Be it known that we, FRANCIS LENOIR, a citizen of France, and EDWARD ARTHUR SEWARD, a subject of the Queen of England, both residing at Columbus, in the county of Muscogee and State of Georgia, have invented a new and useful Fly-Fan Mechanism, of which the following is a specification.

Our invention relates to improvements in that class of fly fan mechanisms in which the fan is flat and is oscillated backward and forward by an arm or bar connected with machinery, and the objects of our invention are, to furnish a mechanism which will be driven by a weight and in which the fan can be adjusted at varying heights as required, without changing the position of the machinery. We attain these objects by means of the apparatus illustrated in the accompanying drawings, in which—

Figure 1 is a partial side elevation, and Fig. 2 is a front elevation of the apparatus.

Similar letters refer to similar parts throughout the two views.

H H are two parallel vertical frame bars or plates, shown in dotted outline in Fig. 1 and in full lines in Fig. 2, and secured in the ceiling of the room or to some other suitable overhead support.

A is a horizontal shaft whose extremities turn in holes in the plates H H. Rigidly secured on this shaft A, and concentric with it, are a pulley wheel B and a ratchet wheel E. Concentric with the shaft A and placed loosely upon it, so as to turn freely around it, is a toothed escapement wheel D D. A pawl F, pressed toward the shaft by a spring G is pivoted on a pin secured in the side of the escapement wheel D D and fits into notches and against teeth around the circumference of the ratchet wheel D. A lever V, oscillating in a vertical plane, is pivoted on a fulcrum pin supported above the escapement wheel D D and has two fingers Y and X adapted to enter between the teeth of said wheel. The short arm of the lever V is connected with the finger Y while the long arm, extending beyond the finger X and counterweighted if necessary, is connected to one arm of a bell crank lever Z Z pivoted on a fulcrum pin placed in a fixed support N and arranged to oscillate in a vertical plane. The

other arm of the lever Z Z is connected at its end to a bar K attached to a flat fan J. This fan J is pivoted at the lower end of a vertical bar I I secured to the ceiling or other suitable support, and there may be one or more of these bars I I attached to and supporting this fan. This bar I I can be adjusted in length as may be required; and any mode of construction suitable for this purpose may be used: the drawings exhibiting a bar made in two strips, one sliding by the other, and secured thereto by clamp collars embracing both strips, which collars may be tightened by set screws as shown; the fan being attached to the moving strip and the other strip being stationary and secured above to the ceiling or other support.

L is a cord wound around and secured to the shaft A while supporting a weight C, while M is another cord secured to and wound around the pulley wheel B in the opposite direction to that in which the cord L is wound around the shaft A.

The cord L, pawl F and ratchet wheel E are so placed that the weight C shall by pulling the cord bring the teeth of the ratchet wheel against the end of the pawl.

The operation of this device is as follows: The lever V having been so placed and held that both its fingers X and Y are clear from the teeth of the escapement wheel D D, the pulley wheel B is then turned so as to wind up the cord M. When this has been done sufficiently, the lever V is released, and its longer arm being the heaviest, brings the finger X down between two teeth of the escapement wheel. Then the cord M is pulled away and unwound from the pulley wheel B, thus causing the shaft A to turn while the escapement wheel is held stationary by the finger Y between two of its teeth; also the cord L is wound up on the shaft, raising the weight C. When the weight C is raised high enough, the cord M is relaxed, and the long arm of the lever V is pressed upward, so as to release the wheel D D. The lever V then oscillates vertically like a pendulum, bringing its fingers Y and X alternately between the teeth of the escapement wheel, and permitting this wheel to turn a short distance at each oscillation of the lever V, by which the lever Z Z is in turn oscillated. The lever Z Z oscillates

the fan J by means of the bar or rod K, and these operations will continue until the weight C has descended the full length of the cord L; the cord M being meanwhile wound up upon the pulley wheel B. Upon pulling and unwinding the cord M from the wheel B the cord L is wound up as before.

What we claim as our invention, and desire to secure by Letters Patent, is—

10 1. The combination embracing an escapement wheel turning freely around a shaft concentric therewith, a pawl secured to the side of said wheel and pressed toward said shaft by a spring, a ratchet wheel rigidly secured upon and concentric with said shaft while adapted to the engagement or locking of its teeth against the end of the pawl, a pulley wheel likewise rigidly secured on said shaft and concentric therewith, a cord secured to said shaft and adapted to be wound around it; a weight attached to and hanging from said cord, the weight and its cord being so placed as to turn the shaft and bring the teeth of the ratchet wheel against the end of the pawl; another cord secured to and wound in the opposite direction around the pulley wheel, a lever with two fingers so placed as to bring these fingers alternately into engagement between the teeth of the escapement wheel, and another lever, having one of its ends connected with one end of the first lever; so that the first lever, being caused to oscillate by the escapement wheel, works or oscillates the second lever, substantially as described.

2. The whole combination, embracing an es-

capement wheel turning freely around a shaft concentric therewith, a pawl secured to the side of said wheel and pressed toward said shaft by a spring; a ratchet wheel rigidly secured upon and concentric with said shaft while adapted to the engagement or locking of its teeth against the end of the pawl, a pulley wheel likewise rigidly secured on said shaft and concentric therewith, a cord secured to said shaft and adapted to be wound around it; a weight attached to and hanging from said cord, the weight and its cord being placed so as to turn the shaft and bring the teeth of the ratchet wheel against the end of the pawl; another cord secured to and wound in the opposite direction around the pulley wheel; a lever with two fingers so placed as to bring these fingers alternately into engagement between the teeth of the escapement wheel, another lever having one of its arms connected with one end of the first lever, a bar connected with the other end of this second lever, a flat fan connected with said bar and one or more supports, adjustable in height and holding up said fan, whereby said fan is caused to oscillate by the second lever which is itself oscillated by the first lever driven by the escapement wheel; the fan and its supports also being raised or lowered at pleasure without disturbing any other part of the apparatus; all substantially as described.

FRANCIS LENOIR.

EDWARD ARTHUR SEWARD.

Witnesses:

FRANK U. DOWNING,
T. WEISIGER.