

J. M. GRAY, dec'd.

S. F. GRAY, Adm'r.

AUTOMATIC FAN.

No. 186,473.

Patented Jan. 23, 1877.

Fig. 1.

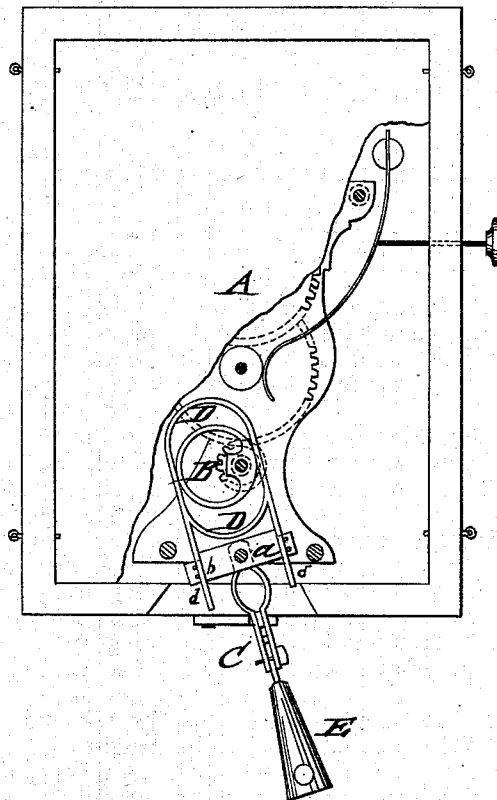
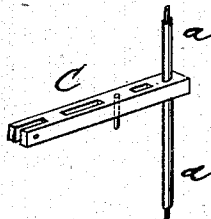


Fig. 2.



WITNESSES:

H. Rydquist.
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S. F. Gray, Administrator
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BY *[Signature]*

ATTORNEYS.

UNITED STATES PATENT OFFICE

SEWARD F. GRAY, OF VALDOSTA, GEORGIA, ADMINISTRATOR OF JAMES M. GRAY, DECEASED.

IMPROVEMENT IN AUTOMATIC FANS.

Specification forming part of Letters Patent No. **186,473**, dated January 23, 1877; application filed July 22, 1876.

To all whom it may concern:

Be it known that JAMES M. GRAY, deceased, late of Valdosta, in the county of Lowndes and State of Georgia, invented a new and Improved Fly-Fan, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a front view of this improved fly-fan, and Fig. 2 a modified form of the lever and pivot.

Similar letters of reference indicate corresponding parts.

The invention relates to an automatic fan for keeping off flies from dinner-tables, sick-beds, sleeping infants, and also for fanning at night to keep off mosquitoes and produce a cooling influence.

The invention will first be described in connection with the drawing, and then pointed out in the claim.

In the drawing, A represents a common clock-train of suitable power, that transmits by an eccentric disk or cam, B, keyed to the driving-shaft, rotary reciprocating motion to the fan-vibrator C.

The latter is rigidly attached to shaft *a*, on which is fixed a cross-bar, *b*. D is a yoke, which has two projecting arms, *d*, that work through guides in the ends of cross-bar, so as to give the necessary play to the yoke and vibrate the cross-bar.

The fan-socket E is applied by a pivot and clamp-screw to the lower end of the lever C, to be adjusted thereon at any suitable angle.

The fan is fastened by a clamp-screw to the

socket, and a fan of any suitable size or shape, or a number of them, placed in connection with the lever, as desired.

The clock-work and transmitting mechanism are incased in a suitable box, that may be attached to the wall, ceiling, bed, or other point, to move the fan horizontally or vertically, as desired, the operating mechanism being simple, and producing a regular and reliable motion of the fan.

The speed of the fan may be regulated, in the customary manner, by a suitable spring-brake and regulating-screw, that acts on a friction-wheel placed on the shaft of one of the transmitting-wheels of the clock-train.

By giving the yoke a sliding motion it is not necessary to make the length fully equal to double the diameter of the eccentric or double the longest distance from its center of motion to its periphery, it being thus rendered possible to arrange the mechanism more compactly.

Having thus described the invention, it is claimed as new and desired to secure by Letters Patent—

The combination, with clock mechanism, of the drive-shaft, having pinion and eccentric, the sliding yoke D, the shaft having cross-bar *b*, and the vibrator C, in order to operate the socket E, in the manner specified.

SEWARD F. GRAY.

Witnesses:

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