(No Model.)

W. H. PITTMAN.

AUTOMATIC FAN.

No. 316,655. Patented Apr. 28, 1885.

Fig. 2.

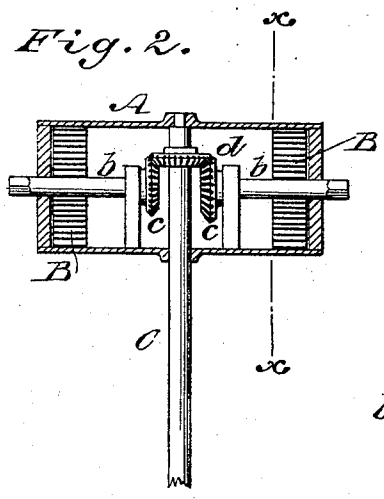


Fig. 3.

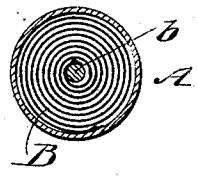


Fig. 1.

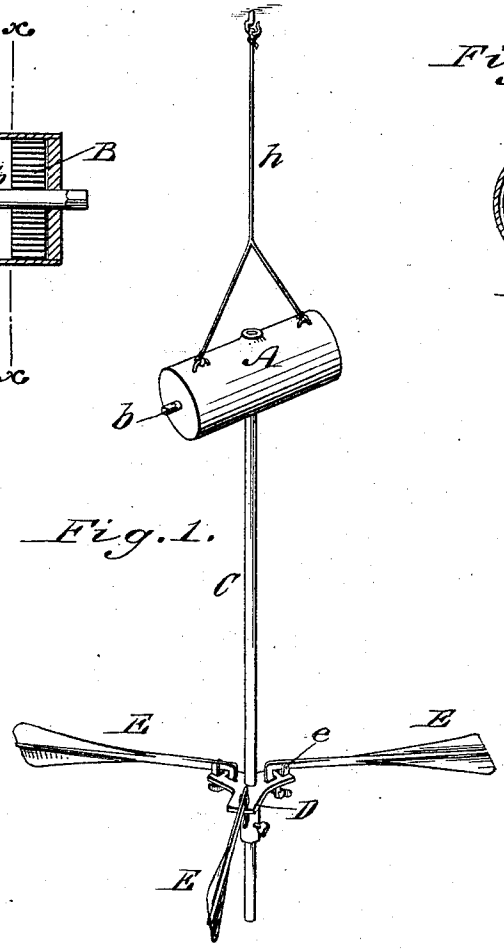
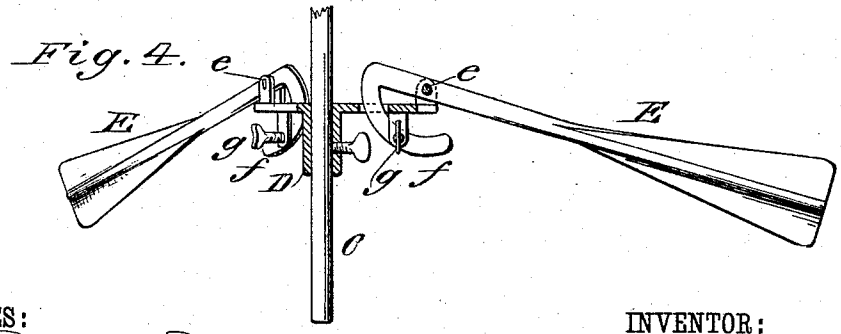


Fig. 4.



WITNESSES:

John A. Deemer

C. Sedgwick

INVENTOR:

W. H. Pittman

BY Munn & Co

ATTORNEYS.

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

WALTER H. PITTMAN, OF JERSEY CITY, NEW JERSEY.

AUTOMATIC FAN.

SPECIFICATION forming part of Letters Patent No. 316,655 dated April 28, 1885.

Application filed November 18, 1884. (No model.)

To all whom it may concern:

Be it known that I, WALTER H. PITTMAN, of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and useful Improvement in Fly-Fans, of which the following is a full, clear, and exact description.

This invention relates to rotating fly-fans driven by spring-power; and it consists in such a fan of novel construction, capable of being suspended from the ceiling or elsewhere, for the purpose of keeping flies or other insects from the head or face of a sleeper or person occupying a sitting or other posture, and from food or other substances or articles arranged beneath the fan; and the invention includes certain novel constructions and combinations of parts, whereby the efficiency of the fan is augmented, substantially as hereinafter described.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents a view in perspective of my improved suspension-fan. Fig. 2 is a vertical longitudinal section of the same, in part, through the box containing the springs and gears by which the fan is operated; Fig. 3, a transverse section on the line *x x* in Fig. 2; and Fig. 4, a partly sectional vertical view in illustration of the means employed for adjusting the fan and its blades.

A indicates a box, which may be of circular form, and has arranged in its opposite ends coiled springs B B, for operating the fan on or from opposite sides of its vertical axis or shaft C, thus doing away with one-sided or lateral pressure on said shaft. These springs are secured at their one end to the box, and at the opposite end to two independent horizontal spindles, *b b*, having their bearings in the box, and each carrying a bevel-pinion, *c*, on its inner end. Said pinions gear with a horizontal bevel-pinion, *d*, on opposite sides of its axis, which pinion is secured on the vertical spindle or shaft C, and is arranged to gear with the pinions *c* from their upper sides.

The shaft C, which has its bearings in the box A and projects below it, is made free to slightly rise and fall in said bearings, whereby the pinion *d* is made to rest and throw its weight, as well as the weight of its shaft and lower attached fanning devices, on the pinions *c*, to give the necessary retarding action on the springs B B, to prevent a too rapid movement of the fan. In some cases the gears *b c*, instead of being toothed, as shown, may be plain or roughened ones, to operate by frictional contact, and spring-pressure or supplementary weights may be used to give them the necessary grip on each other and retarding action on the operating-springs B. The rod or shaft C extends to any desired distance below the box A, and has fitted on it a sliding socket, D, which carries the fan-blades E, and which is adjustable up or down the shaft C to vary the working altitudes of said blades. Any number of fan-blades may be used, and they may be of any desired shape, but oblique ones are preferred. These blades which project laterally from the socket D have their shanks pivoted, as at *e*, to said socket to provide for varying the vertical working-angle of the blades and to increase or diminish the length of their sweep horizontally. To this end the inner ends of the shanks of the blades E are each constructed with a tail-piece, *f*, which may be of arc shape, and which, in varying the angular adjustment of the blade vertically, slides through a slotted projection or jaw-piece attached to the socket D, and provided with a set or locking screw, *g*, for holding the blade when so adjusted.

The whole fan is suspended from the box A, above—as, for instance, by a cord or chain, *h*, or as mosquito-nets are suspended, or in any other suitable manner. It is put in operation by winding up the springs B B through a key applied to either spindle *b*.

By making the fan a suspension one—that is, by suspending it from above—it is applicable where one carried by a fixed lower support or stand would not be suitable, inasmuch as a clear open space below is always secured.

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

1. In a rotary suspension-fan, the combination, with the suspension box or case A and fan-shaft C, of the duplicate springs B B and

the bevel-gears *c c* and *d*, essentially as shown and described.

2. The box A, the rotary shaft C, suspended therein, and the upper gear, *d*, on said shaft, and supporting the weight thereof, in combination with the spindles *b b*, springs B B, and the gears *c c*, meshing with the gear *d* on opposite sides of the vertical shaft C, substantially as set forth.

WALTER H. PITTMAN.

Witnesses:
A. GREGORY,
C. SEDGWICK.