H. B. BAKER.

FLY-FAN.

No. 186,292. Patented Jan. 16, 1877.

Fig 1

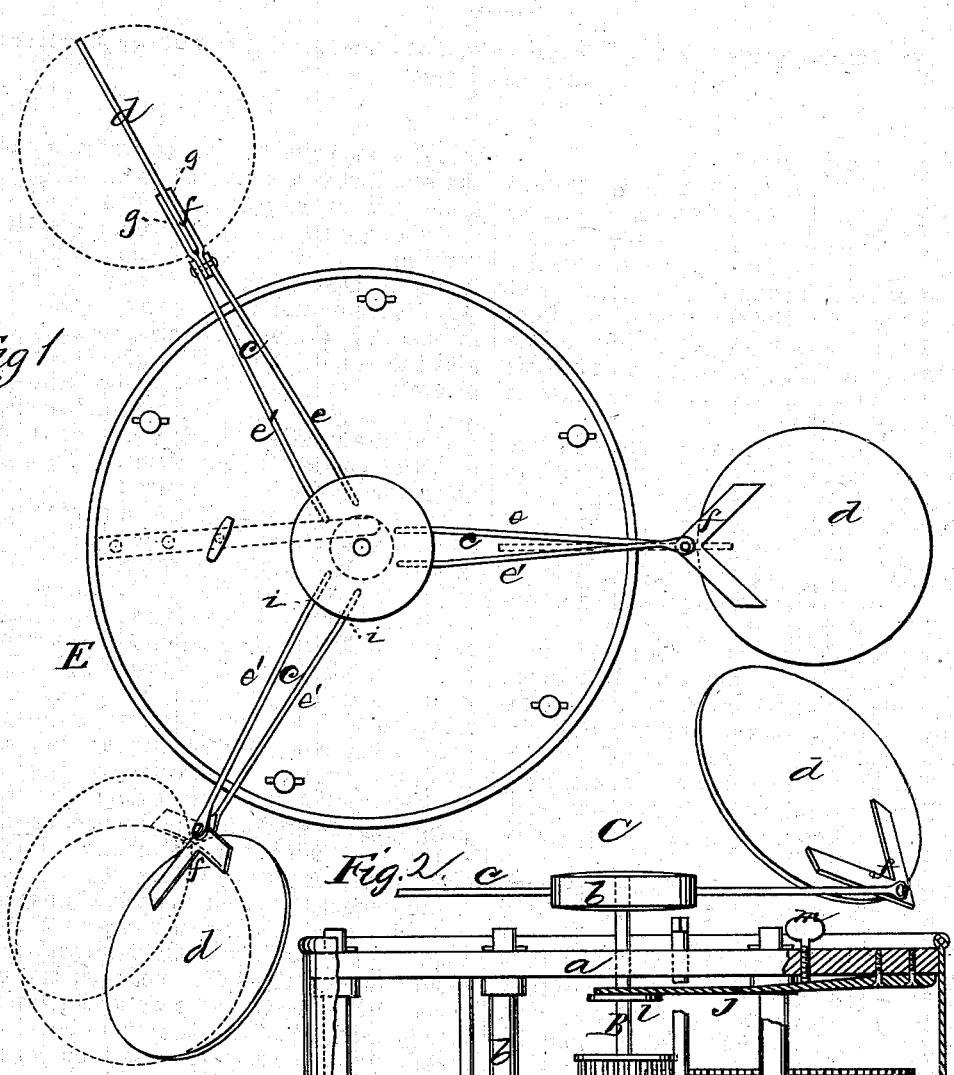
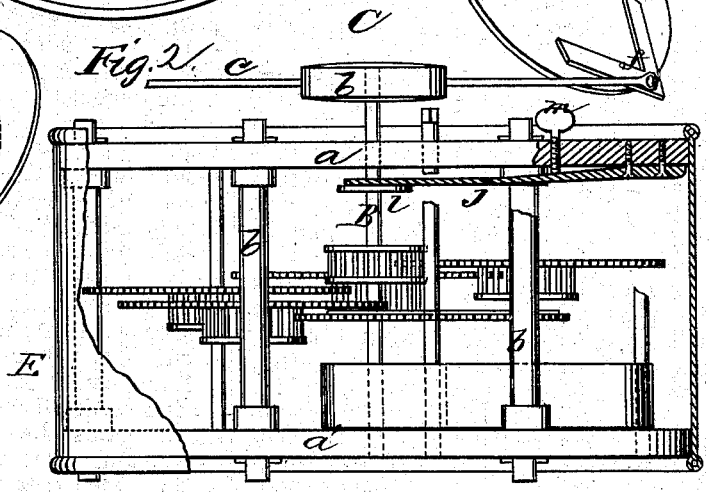


Fig. 2.



WITNESSES

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HENRY B. BAKER, OF NELSONVILLE, OHIO.

IMPROVEMENT IN FLY-FANS.

Specification forming part of Letters Patent No. **186,292**, dated January 16, 1877; application filed December 2, 1876.

To all whom it may concern:

Be it known that I, HENRY B. BAKER, of Nelsonville, in the county of Athens and State of Ohio, have invented a new and valuable Improvement in Fly-Fans; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a plan view of my improved fan; and Fig. 2 is a side view thereof, partly in section.

My invention relates to improvements in fly-fans which are operated by clock-work, and designed to drive flies away from food, to prevent the approach of mosquitos to a sleeper, and for other analogous purposes.

The nature of the invention consists in combining, with the shaft of the fan, a disk keyed thereon, and a friction-brake actuated by a set-screw, whereby means are provided for regulating the speed of rotation of the fan from fast to slow and the reverse, or stopping them altogether, thus retaining the unexpended force of the actuating-spring until a subsequent occasion.

It also consists in certain novel means whereby the fans are jointed to the arms, and the latter secured to the hubs, by which the air produced by the fan may be increased, diminished, or altogether discontinued without arresting the fan or impairing its efficacy as a fly-scarer, all as hereinafter shown and described.

In the annexed drawings, the letters *a a'* designate two spaced (preferably circular) plates, connected by pillars *b*, and affording bearings for the shafts of a suitable clock-work mechanism, which is actuated by a spring, and imparts rotation to a central shaft, B. This shaft extends up a certain distance through plate *a*, and the fan C will be applied thereon above the said plate. The fan is composed of a hub, *b*, radial arms *c*, and a number of blades, *d*, of any sufficiently light and rigid material, as, for instance, wood veneer, tin, or pasteboard. The arms of the fan are of wire, and composed of two branches, *e e'*, which diverge from the fan, and at their inner ends are a certain distance apart. The converging ends of these branches are pivoted to an angular metallic plate, *f*, between the arms *g* of which the blades are rigidly secured, and their diverging ends are inserted each in a perforation, *i*, formed in the periphery of the hub. By this means the blades may be thrown out in line with the arms, raised up at right angles thereto, or arranged in any intermediate position. By seizing the outer end of the arms and giving a turn, the blades may be placed at any angle to the plane of rotation, and the current of air directed upward or downward, as may be required.

The speed of rotation of the fan is regulated as follows: Shaft B is provided with a collar-disk, *l*, just below the upper plate *a*, upon which the free end of a brake-spring, *j*, will be caused to bear by setting up a thumb-screw, *m*. This thumb-screw will pass through the upper plate *a*, and its lower end will bear upon the said spring at a point between its free end and the end secured to the upper plate aforesaid. By setting up the spring hard, the fan will be arrested; but by a less marked application thereof the speed of rotation of the fan may be simply regulated.

The fan-blades may be of any shape, and ornamented or not, as I may elect.

To prevent the accumulation of dust in the operative mechanism of my improved fly-fan, I employ a hoop, E, of sufficient depth to completely inclose the space between the upper surface of the upper plate *a* and the lower surface of plate *a'*. This hoop may be of wood, metal, rubber, or any other suitable material, and may be ornamented upon its outer face. It will also be removable, in order that the clock mechanism may be readily got at in the event of any derangement.

I am aware that is not new to employ a spring actuated by a thumb-screw to bear directly against the main shaft of a fly-fan mechanism and serve as a brake. Hence I make no broad claim to such devices.

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

1. In combination with the main shaft of a rotary fan and a collar-disk secured thereon, a friction-spring, and a set-screw for depress-

ing the free end of the said spring upon the collar-disk, substantially as specified.

2. A fly-fan consisting of a hub, *b*, having spaced perforations *i*, the double-branched arms *c*, and the blades *d*, pivoted to the end of the arms, and vibrating in their length edgewise, substantially as specified.

3. The combination, with the spaced plates *a a'* and a clock mechanism of a fly-fan, of the removable hoop, substantially as specified.

4. The fan-blades *d*, having a universal-joint connection with the arms of the hub, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

HENRY B. BAKER.

Witnesses:

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W. C. HICKMAN.