

(No Model.)

P. MURRAY, Jr.

ROTARY FAN.

No. 347,952.

Patented Aug. 24, 1886.

Fig. 1.

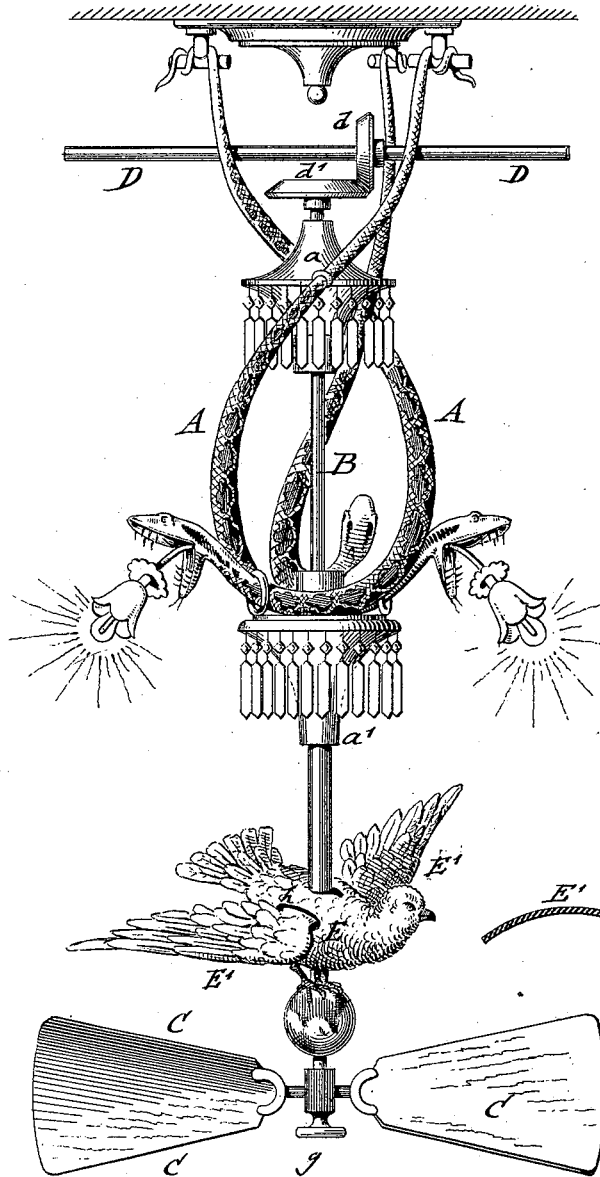


Fig. 2.

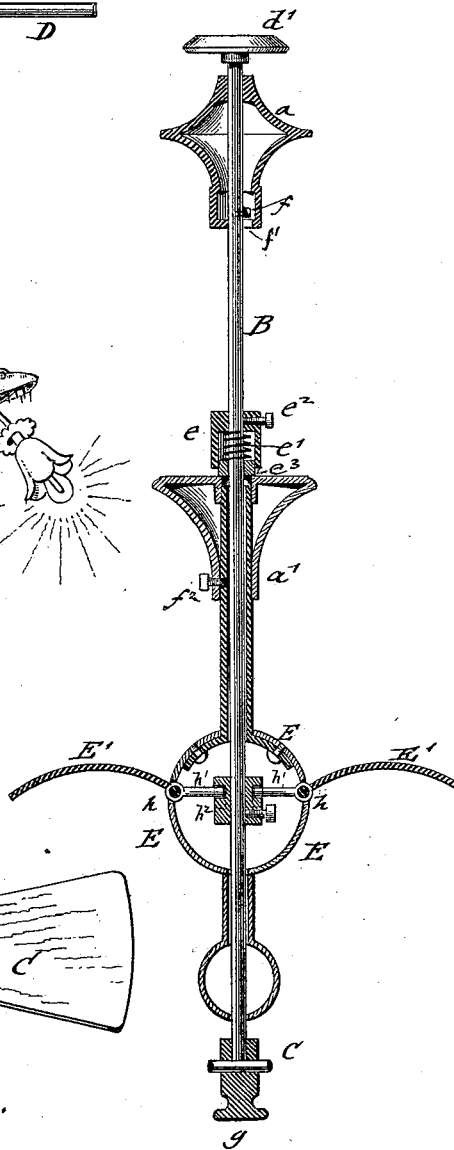
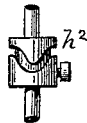


Fig. 3.



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PETER MURRAY, JR., OF NEWARK, NEW JERSEY, ASSIGNOR TO THE
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ROTARY FAN.

SPECIFICATION forming part of Letters Patent No. 347,952, dated August 24, 1886.

Application filed May 12, 1886. Serial No. 201,933. (No model.)

To all whom it may concern:

Be it known that I, PETER MURRAY, Jr., of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Rotary Fans, of which the following is a specification.

This invention has reference to an improved rotary fan of that class which is suspended from the ceiling and used for agitating the air and keeping away the flies, the fan being specially designed for use in nicely-fitted offices, counting-rooms, &c., as the mechanical features are covered up to some extent by ornamental accessories.

The invention consists of the combination of a hanger-frame suspended from the ceiling and provided with bearings, a fan-shaft supported in said bearings, a driving-shaft, a friction-gear for transmitting motion from the driving-shaft to the fan-shaft, a fan applied to the lower end of the fan-shaft, a hollow body supported at the lower part of the hanger-frame, auxiliary wings fulcrumed to bearings of said body and having inwardly-extending arms engaging a wave-wheel on the fan-shaft, a spiral spring interposed between a fixed retaining-sleeve of the fan-shaft and a collar of the supporting hanger-frame for keeping the friction-gear in contact, and means for throwing the friction-gear in or out of contact for starting or stopping the fan.

In the accompanying drawings, Figure 1 represents a side elevation of my improved rotary fan. Fig. 2 is a vertical central section of the same without the ornamental accessories, and Fig. 3 is a detail of the wave-wheel by which motion is imparted to the auxiliary wings above the fan.

Similar letters of reference indicate corresponding parts.

A in the drawings represents an ornamental hanger-frame, which is suspended from the ceiling and provided with bearings *a a* for the fan-shaft B, to the lower end of which the fan C is attached. The driving-shaft D is supported in hangers below the ceiling (not shown in the drawings) and provided with a beveled friction-disk, *d*, which meshes with a beveled friction-disk, *d'*, at the upper end of the fan-shaft B, so as to transmit rotary motion to the latter. The contact of the friction-disks *d*

d' is kept up by a spiral spring, *e'*, which is interposed between a sleeve-shaped socket, *e*, attached by a clamping-screw, *e'*, to the fan-shaft B, as shown in Fig. 2, and a collar, *e'*, of the supporting hanger-frame A.

When it is desired to interrupt the motion of the fan-shaft C, a button, *g*, at the lower end of the fan-shaft, is taken hold of and pulled down against the tension of the spiral spring *e'* until a fixed pin, *f*, at the upper part of the fan-shaft B, passes downwardly to the outside of the upper bearing, *a*, through a bottom recess, *f'*, of the same, and binds against the bottom of the same, in which position the friction-disk *d'* is lowered out of mesh with the friction-disk *d*, so that no motion can be transmitted from the driving-shaft to the fan-shaft.

To set the fan in motion, the button *g* is taken hold of and the fan-shaft turned until the pin arrives at the recess *f'*, when the spiral spring *e'* will lift the fan-shaft and throw the friction-disk *d'* in mesh with the friction-disk *d* on the driving-shaft D. The spiral spring has to be strong enough to overcome the weight of the fan-shaft and fan.

The lower bearing, *a'*, of the fan-shaft is made tubular and attached by a set-screw, *f'*, to the lower part of the hanger-frame A, as shown in Fig. 2. To the lower end of the tubular bearing *a'* a hollow sheet-metal body, E, is attached, which represents a bird or other figure resting on a globe. Through slots *h* of the body E, and at right angles thereto, extend wings E', which are fulcrumed to bearings at the inside of the body E, and provided with inwardly-extending arms *h'*, which are engaged at their inner ends by a grooved cam or wave wheel, *h'*, that is applied by a set-screw or otherwise to the rotary fan-shaft in such a manner that while the shaft is in motion an up-and-down or flapping motion is imparted to the wings whenever the fan-blades are in line with the longitudinal axis of the body E and at right angles to the wings, which are thus an auxiliary to the rotary fan. As the bird is applied to and forms a part of the hanger-frame A, it does not move or flap its wings when the friction-disk *d'* is moved away from the friction-disk *d* and the fan-shaft B stopped in the manner described.

The hanger-frame may be arranged with

electric lights, so as to form an electrolier, as shown in Fig. 1, or with gas-lights, as desired, it being finished in a highly-ornamental manner, so as to adapt the fan for ventilating
5 nicely-furnished offices, &c.

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

The combination of a hanger-frame, a rotary fan-shaft supported in bearings of the
10 same, a fan keyed to the lower end of the shaft, a fixed hollow body attached to the lower part of the hanger-frame, auxiliary wings

fulcrumed to said body and having inwardly-extending arms, and a grooved cam on said fan-shaft engaging said arms so as to flap the
15 wings when the fan is rotated, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

PETER MURRAY, JR.

Witnesses:

PAUL GOEPEL,
SIDNEY MANN.