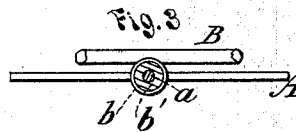
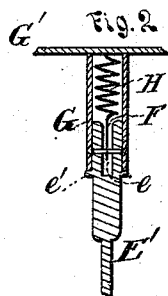
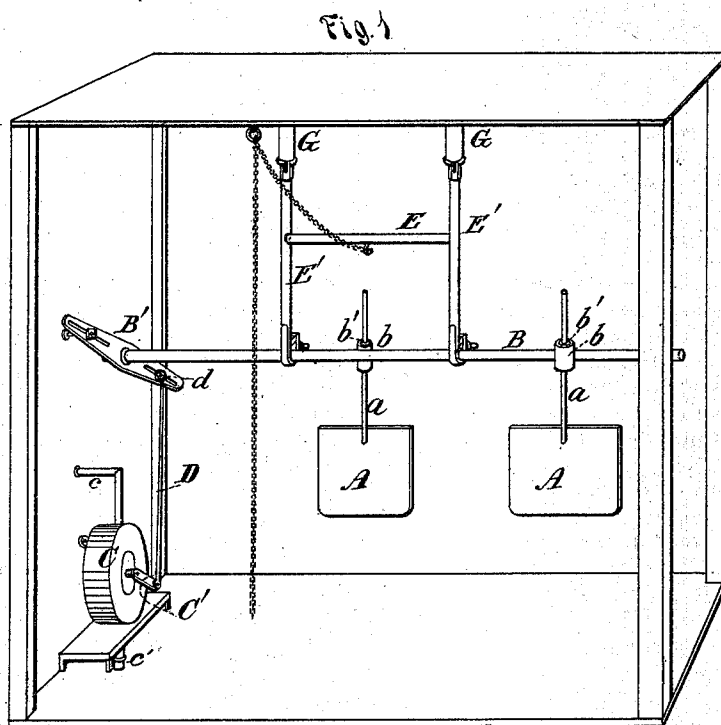


W. B. CAMPBELL.
Automatic Fans.

No. 144,505.

Patented Nov. 11, 1873.



Witnesses.
A. Ruppert
C. L. C. C.

W. B. Campbell
Inventor.
D. R. Holloway & Co
Attys

UNITED STATES PATENT OFFICE.

WILLIAM B. CAMPBELL, OF SELMA, ALABAMA.

IMPROVEMENT IN AUTOMATIC FANS.

Specification forming part of Letters Patent No. **144,505**, dated November 11, 1873; application filed October 7, 1873.

To all whom it may concern:

Be it known that I, WILLIAM B. CAMPBELL, of Selma, in the county of Dallas and State of Alabama, have invented a certain Improvement in Automatic Fans, of which the following is a specification:

This invention relates to that class of fans which are suspended over dining-tables and beds for the twofold purpose of cooling the occupants and driving off winged insects. My improvement consists, first, in suspending the fan-blades from sockets or sleeves provided with a rubber bushing, which, while firmly holding the fan-blade in any position, permits its ready vertical adjustment; secondly, in a certain manner of hanging the frame carrying the fans, which allows its being folded up against the ceiling when not in use, though it is ordinarily held rigidly against lateral motion.

In the annexed drawings, Figure 1 illustrates my improvements in perspective. Fig. 2 is a view in detail, showing the manner of connecting the fan-frame to the ceiling. Fig. 3 shows the means for suspending the fan-blades.

The same letters of reference are used in all the figures in the designation of identical parts.

The drawing shows two fan-blades, A, which are separately suspended, by their stems *a*, from a horizontal shaft, B, to which an oscillating motion is imparted by a water-wheel, C, through a crank, C', pitman D, and a cross-bar, B', fixed on the shaft. The water-wheel is mounted in a tight case, and is supplied from the service-pipe of the house through a branch, *c*, the water being discharged through the pipe *c'*. The arc of oscillation of the shaft B is regulated by adjusting the wrist-pin *d* in

the slot of the cross-bar B'. Two cranks and pitmen, connected to opposite ends of the cross-bar, may be used, if preferred. The stems of the fan-blades pass through fixed sleeves *b* on the shaft B, and are encircled by a rubber bushing, *b'*, therein, which so firmly binds on the stem as to hold the blade suspended by its grasp alone. The blades can be readily adjusted vertically by sliding the stems up or down. The shaft B turns in bearings on the vertical bars E' of the hanger-frame E, which is suspended from short links F, located within sockets G, and connected to the plate G' thereof by spiral springs H. The links F enter between the jaws of the slitted upper ends of the bars E', and are pivoted thereto by a pin, *e*. The extreme ends of the bars E' fit the sockets G, and have shoulders *e'*, which arrest their inward movement. The sockets are, by their plate G', firmly secured to the ceiling.

To fold the hanger-frame, pull it down first until its bars E' are drawn entirely out of the sockets G, when it can be swung on the pivots or joints *e* by means of a cord reeving over a pulley, as shown.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The stems *a* of the fan-blades, in combination with the fixed rubber bushings *b'*, substantially as and for the purpose specified.

2. The combination of the hanger-frame, sockets G, links F, and springs H, substantially as and for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WM. B. CAMPBELL.

Witnesses:

D. P. HOLLOWAY,
A. RUPPERT.