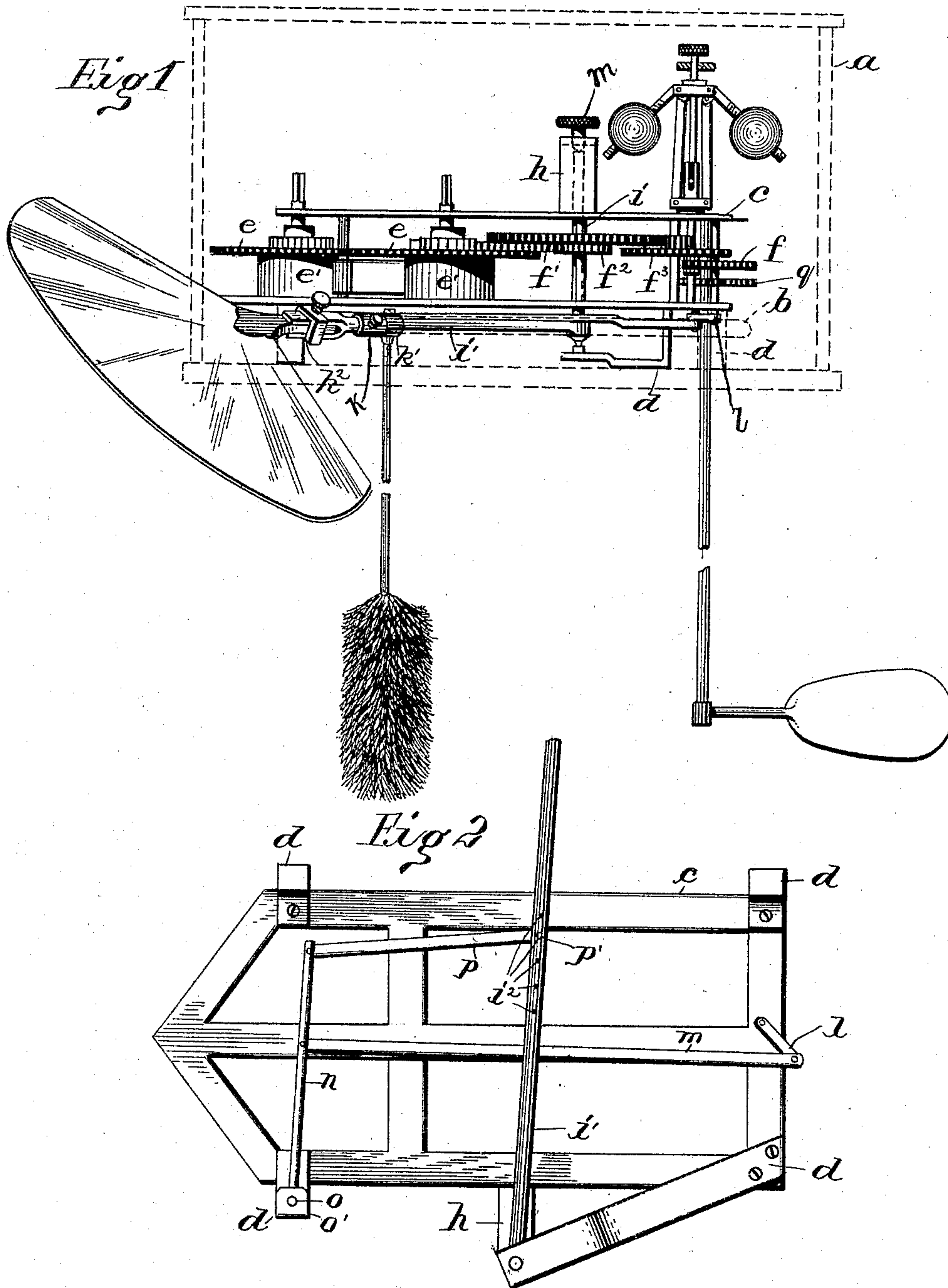


(No Model.)

W. H. YOUNGS.
FAN.

No. 495,619.

Patented Apr. 18, 1893.



Witnesses
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UNITED STATES PATENT OFFICE.

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FAN.

SPECIFICATION forming part of Letters Patent No. 495,619, dated April 18, 1893.

Application filed July 18, 1892. Serial No. 440,350. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. YOUNGS, a citizen of the United States, residing at Randolph, in the county of Fremont and State of Iowa, have invented certain new and useful Improvements in Fans; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to that class of fans which are automatic in their movements; my object being to produce a device which will be less expensive than those heretofore in use.

With this object in view my invention consists in the peculiar arrangement and combinations of parts as will be more fully described hereinafter and pointed out in the claims.

In the accompanying drawings: Figure 1 represents a view in elevation of my complete device, the casing being shown in dotted lines to better disclose the interior mechanism; Fig. 2 a bottom view of the mechanism that directly actuates the fan.

The reference letter *a* represents the exterior casing which surrounds the mechanism for driving the fan, the front face of said casing being provided with a longitudinal slot *b*, the object of which will be described hereinafter.

The letter *c* represents the main supporting frame of my mechanism and it is supported above the bottom of the casing by suitable legs *d*. The frame consists of an upper and lower plate, and between these plates are journaled drive gear-wheels *e*, each provided with driving springs *e'*. These drive wheels mesh with each other, and actuate a gear-wheel *f* through a train of gearing *f'*, *f''*, and *f'''*, all of which form substantially lock mechanism. Projecting above and secured to the upper plate is an inverted U-shaped arch, and journaled in the top of the arch is a shaft carrying a centrifugal governor, the ends of said shaft being provided with cone bearings, whereby friction is lessened between the shaft and its bearings. The governor shaft is provided with a pinion which meshes

with the gear-wheel *f*, whereby the governor shaft is driven. The male member of the top bearing of the governor shaft is vertically adjustable, whereby the bearing is tightened or loosened. One of the legs *d*, at the rear of the frame, branches diagonally from its base, its outer end being directly under an overhanging arm *h* secured to the upper plate of the main frame. The overhanging arm *h* and the leg *d* are each provided with cone sockets, the socket in the arm *h* being adjustable vertically by the means of the thumb screw *m*; and in these sockets is journaled a rock-shaft *i*, to the lower end of which is fixed an oscillating fan shaft *i'*, extending under the plates, and its free end projects through the slot *b* in the front face of the casing. To the free end of the fan shaft and on the outside of the casing is secured a clamp *k*, having downward and lateral clamps *k'* and *k''*. In the lateral clamp a fan may be secured, while the downward clamp receives a suitable fly brush. On the shaft of the gear-wheel *f* is placed a small pinion which meshes with a large gear *q* journaled between the plates; the shaft extending through the bottom of the casing and a suitable fan is attached thereto. The shaft of the gear *f* extends below the lower plate of the frame *b*, and has secured thereto a crank *l*. To the free end of the crank is secured a pitman *m*, extending back under the frame and its opposite end is secured to a lateral arm *n* fixed to a rock-shaft *o* journaled in a downwardly projecting arm *o'* secured to the lower plate of the frame *b*. To the free end of the lateral arm *n* is secured a connecting rod *p*, having at its forward end a pin *p'* which is adapted to enter a series of perforations *i''* in the fan shaft *i'*. Thus it will be seen that the shaft *i'* and the arm *n* move in unison, the arm *n* being driven by the pitman through the medium of the crank on the end of the gear wheel shaft, in turn driven by the springs through the train of gearing. A stop catch is placed on the exterior of the casing over the slot *b* and is adapted to engage the fan shaft. Thus the movement of the fan shaft can be stopped at the will of the operator. If it is desired to move the fan faster or slower, it is only necessary to adjust the pin *p'* in the perforations *i''* of the shaft *i'*.

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

1. The combination with an oscillating fan
5 shaft, of a pitman and secondary jointed arm for moving said shaft, a crank for operating said pitman, speed governed clock mechanism for moving said crank, a series of holes in said fan shaft and a pin on the secondary
10 jointed arm adapted to be placed in one of the series of holes, whereby the fan may be moved a greater or shorter distance, substantially as described.

2. The combination with an oscillating fan
15 shaft having a series of holes therein, a sec-

ondary jointed arm provided with a pin at its end for engaging one of said series of holes in the fan shaft, a pitman for actuating said secondary arm, a crank for moving said pitman, clock mechanism for moving said crank, and one or more clamps on the end of the fan shaft, whereby one or more fans may be operated at one time, substantially as described.

In testimony whereof I affix my signature in
presence of two witnesses.

WM. H. YOUNGS.

Witnesses:

JAMES JOHNSON,

H. J. FAILING.