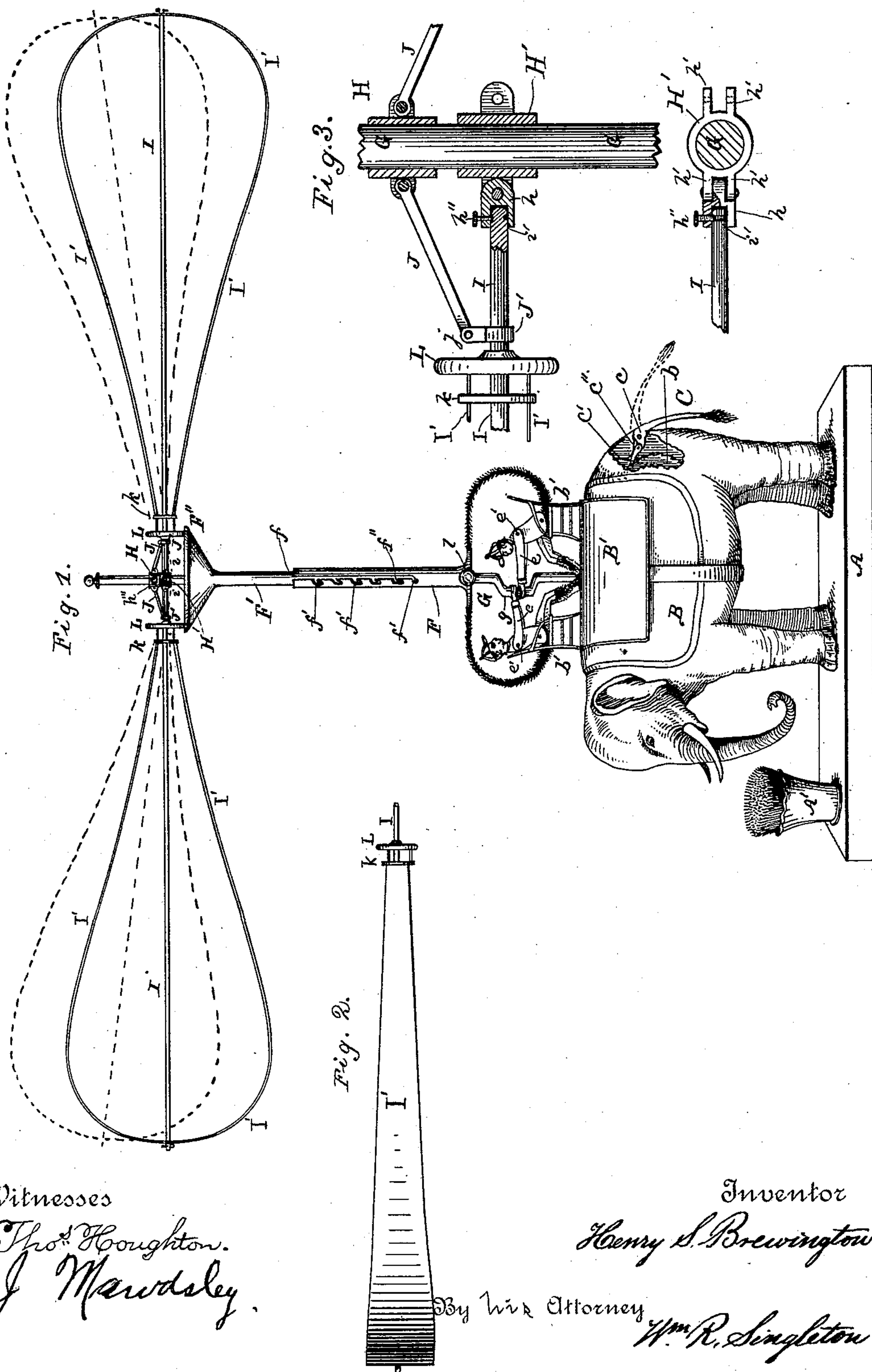


(No Model.)

H. S. BREWINGTON.
FLY FAN.

No. 404,890.

Patented June 11, 1889.



Witnesses

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UNITED STATES PATENT OFFICE.

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FLY-FAN.

SPECIFICATION forming part of Letters Patent No. 404,890, dated June 11, 1889.

Application filed August 4, 1887. Serial No. 246,166. (No model.)

To all whom it may concern:

Be it known that I, HENRY S. BREWINGTON, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented
5 new and useful Improvements in Fly-Fans, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to certain improvements in automatic fans, which will be hereinafter more fully described, and pointed out in the claim.

In the accompanying drawings, forming part of this specification, Figure 1 is an elevation
15 of the fan. Fig. 2 is a side view of the frame of one of the fans; Fig. 3, details, enlarged, of the gearing by which the fan-frames are rotated.

A represents the stand, on which is secured
20 in any suitable manner the figure B of an elephant or any other animal. In the interior is located the proper machinery, operated by a coiled spring, as is usual in most of the automatic fans. A part of the shell of the animal is broken away at the origin of the tail
25 to show the winding-wheel *b* of the coiled spring. The tail C is a lever for winding the spring, and is pivoted at *c*. It has on its inner end a pawl *c'*, which is kept in place by
30 a small flat spring *c''*. Connected with this pawl and ratchet is a device (not shown in the drawings) by which, after the spring is wound up, the pawl will be detached, as in a clock or watch, to permit the spring to operate.
35 This lever, pawl, and winding-wheel are well-known devices used for winding springs operating various machines. The train of wheels communicating motion to the main vertical shaft G are not shown, they being well-known
40 devices.

A' represents a basket in which tooth-picks or other articles can be placed.

On the elephant's back are two chairs *b' b'*. Seated in each chair is a figure representing
45 a monkey having the tail bent over to meet above their heads and form braces to support the tube F. The figures have their arms *e e* jointed to the shoulders at *e'*. The hands clasp the crank *g* of the main shaft G, which
50 is operated by the spring and train of wheels within the body of the elephant heretofore

referred to. The legs of the figures are jointed to the body and are securely fastened to the chairs, and the chairs are also secured to the saddle B', so that there can be no motion except in the arms and bodies, which are vibrated to and fro by the rotation of the crank
55 *g*. The tube F has a slit *f* on one side, having on one edge small notches *f'*. Within tube F is another tube F', on which is a pin *f''*, the purpose of which pin *f''* is to rest in any one of the notches *f'* and thereby sustain the fans at any elevation required. The tube F' at its top has a flat and wide plate F'', acting
60 as a crown-wheel, having on its surface either a sheet of india-rubber or any other frictional substance. The main shaft passes through the inner tube F' and projects above the plate F'', as seen in Fig. 1. On this projection are
65 two sleeves H H'.

I I are fan-shafts, having their inner ends *i i* journaled in sockets *h*, attached to the sleeve H' by means of ears *h'*, as seen in detail, enlarged, Fig. 3. This connection permits a free rotation of the shaft within the
70 socket *h*, and is held therein by means of a screw *h''* in the socket, and the end of which enters a neck *i'* in the end of the shaft I. A ball-and-socket joint can be substituted for this device. A sleeve H is secured on shaft
75 G above H', and has ears on opposite sides, to which are jointed the two rods J J, the other ends of which rods are jointed to ears *j* on sleeves J' J' on shafts I I, through which the shafts are allowed to turn freely.
80

Attached to shafts I I are thin bright metal strips I' I', which are secured at their ends to braces *k k* and the small friction-wheels L L, so that these strips I' I' have the form of long oval fans, as seen in Fig. 1. These strips are
85 much wider at the end of the shafts I I, as seen in Fig. 2, which shafts are secured in holes in the middle of the strips in any suitable manner. These strips alone form the fans, and are not covered with fabric, as other
90 fans are; but, being of bright metal, when they move around in the orbit and are rotated on the shafts I I by means of the small friction-wheels L L, as they are carried around over the crown-wheel F'', the flashing of the
95 light will drive away flies and other insects. In the sleeve H is a set-screw *h''*, by which the
100

shaft is prevented from turning in the sleeve and also by which the sleeve H is secured at any place on the shaft.

Fig. 1 represents in black lines the shafts 5 I I in a straight horizontal line. The dotted lines represent the fans slightly elevated and at an angle to each other. This is done by sliding sleeve H' down on the shaft G and securing it by the set-screw. This does 10 not change the relative position of the plate F'' and the friction-wheels L L, the rims of which wheels are made slightly convex in cross-section, so that at whatever angle they may be placed in, the surfaces will be in con- 15 tact with plate F'', so as to produce rotary motion as they travel in the orbit.

The operation of this fan is as follows: By moving the tail of the elephant up and down as a lever the spring will be wound up. By 20 loosening a catch in the train (not necessary to be shown) the train will be set in motion, the shaft G will be turned, and the figures in the chairs, by being moved, will appear to be revolving the shaft by means of the crank g, 25 which they hold in their hands. The plate F'' being stationary, the shaft G, when revolved, will carry around with it the fan-shafts II and with them the wheels L L, which will cause them to rotate by friction with

plate F'' and turn the rims of the fans around 30 with their shafts I I.

The fans can be arranged at any height by means of the pin *f* and notches *f'*, heretofore described. At the base of the tube F is a 35 thumb-screw *l*, which is to secure the shaft G and prevent it from turning, and when the machine is to be set in motion the screw is to be loosened.

Even date with this application I have filed an application for a patent for a design cov- 40 ering such features in said invention as are applicable thereto.

I claim—

The combination of the revolving shaft G, the tubes F and F', the latter of which is ad- 45 justably supported within the former by the pin *f''* and notches *f' f'*, &c., and has on its upper end a friction-plate F'', the friction-wheels L L, shafts I I, sliding sleeves H H', and connecting-rods J J and sockets *h h*, sub- 50 stantially as described.

In testimony that I claim the foregoing as my own I hereto affix my signature in presence of two witnesses.

HENRY S. BREWINGTON.

Witnesses:

WM. SMYTH,
N. DORSEY NORRIS.