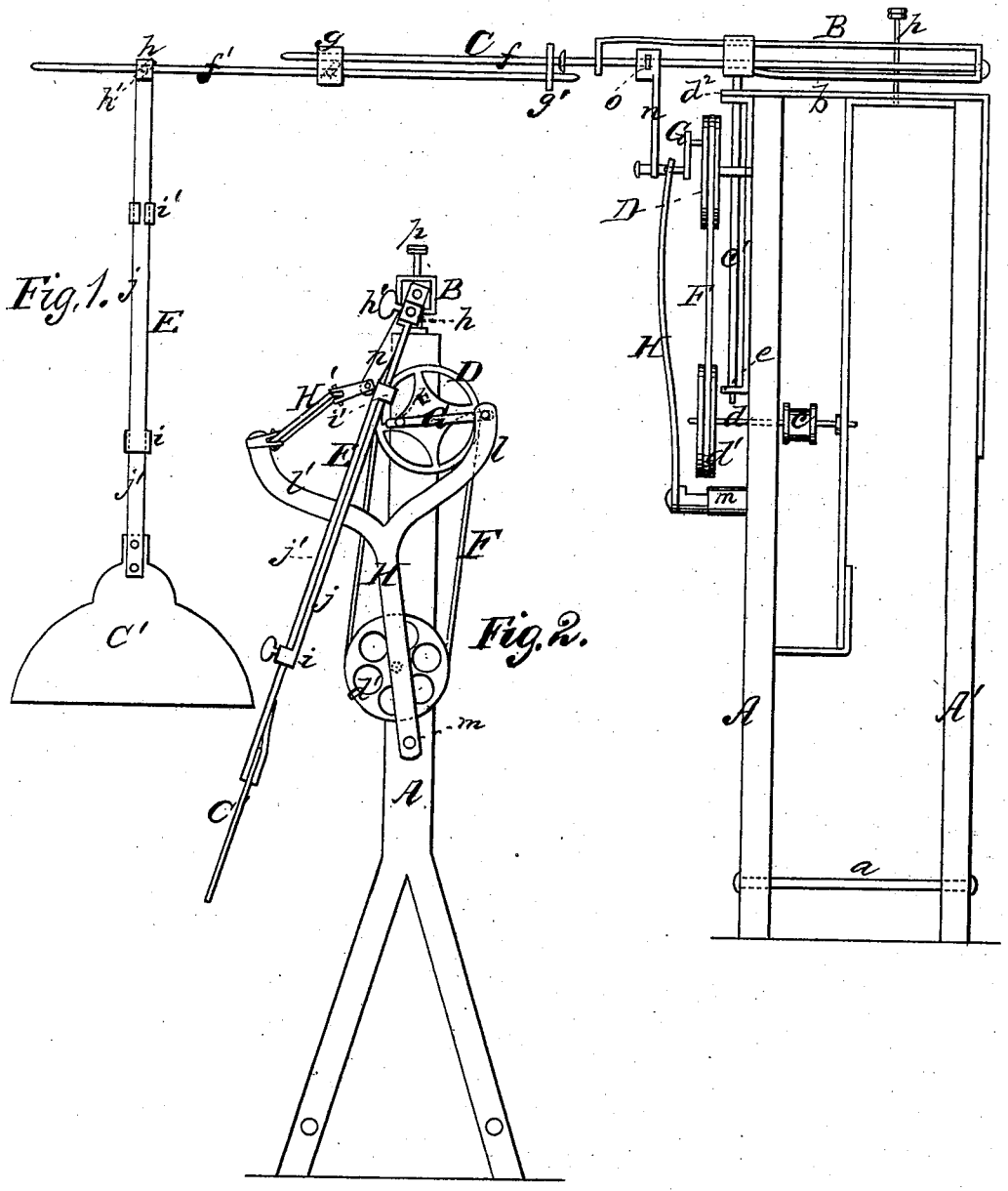
R. C. BRYANT.
Automatic-Fan.

No. 205,046. Patented June 18, 1878.



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ROBERT C. BRYANT, OF SALEM, INDIANA.

IMPROVEMENT IN AUTOMATIC FANS.

Specification forming part of Letters Patent No. **205,046**, dated June 18, 1878; application filed May 14, 1878.

To all whom it may concern:

Be it known that I, ROBERT C. BRYANT, of Salem, in the county of Washington and State of Indiana, 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 side view of my improved fly-fan, and Fig. 2 is an end view of the same.

This invention has relation to improvements in mechanically-actuated fans designed to be used for driving away flies from articles of food, from a sleeping person, and for other purposes.

The nature of the invention consists in combining with a rock-shaft journaled in a suitable frame, and carrying a hanger provided with a fan, a forked lever vibrating on said frame, a crank-wheel driven by a suitable mechanism, a rigid pitman connecting one of the arms of said lever with the crank-wheel, and a jointed pitman connecting the other arm of the said forked lever with an arm on the said rock-shaft, whereby when the said crank-wheel is actuated a rocking motion will be given to the said shaft and an oscillatory movement to the fan, as will be hereinafter more fully set forth and described.

In the accompanying drawings, the letters A A′ designate two spaced uprights, having each a broad base, and braced together at bottom by means of the rods *a*, and at top by a metallic plate, *b*. Between these uprights is arranged a train of wheels driven by a suitable weight. The last wheel of this train meshes with a pinion, *c*, upon a shaft, *d*, having upon its outer end a grooved pulley-wheel, d^1.

B indicates a metallic box, vibrating horizontally upon the top of the stand, and affording bearings in its ends for the rock-shaft C. This box is provided with a pivot-bolt, *c′*, at right angles to it, that extends through an eye, d^2, at the end of plate *b*, and is supported by a step, *e*, at its lower end. By means of this pivot *c′* the box and rock-shaft journaled therein are capable of horizontal adjustment, for purposes hereinafter set forth.

The rock-shaft C is made in two sections, *f f′*, the first of which is journaled in the box B, and is provided near its free end with a clamp, *g*, rigidly secured thereto. The section *f′* extends through this clamp, and is screwed or otherwise secured to a metallic plate, *g′*, that slides freely on the section *f*. By this means the shaft C is rendered extensible, and may be prolonged or contracted at pleasure, and the fan located at any desired position without moving the stand. The fan C′ is upon the lower end of a rod, E, depending from the shaft C. This rod has at its upper end an eye, *h*, through which the section *f′* passes, and is secured thereon adjustably by a set-screw, *h′*. It is also made in two sections, *j j′*, which are extensible, and allow the fan to be raised or lowered, according to the necessities of the case. The section *j* has at its lower end a loop, *i*, through which the section *j* is passed, fitting snugly therein, and is then secured to a slide, *i′*, upon the section *j′* of rod E.

The adjustment of the fan higher or lower may be maintained, if requisite, by a set-screw passing through the loop *i* and clamping the sections *j j′* together.

Above the pulley d^1, directly under the shaft C, is a second pulley, D, rotating upon a spindle, and connected by an endless belt, F, with the said pulley. Pulley D has a wrist-pin, *k*, and is connected by means of a pitman, G, to one of the arms *l* of a Y-shaped or forked rod, H, vibrating vertically upon a pivot, *m*, projecting out horizontally from the upright A of the frame below the pulley d^1. The remaining arm *l′* of the forked rod H is connected by means of a jointed pitman, H′, to an arm or lever, *n*, adjustably secured to the rock-shaft section *f* by means of a set-screw, *o*.

Motion being communicated to pulley D by means of the train and weight aforesaid, or other equivalent means, an oscillating movement is imparted to the rod H through the pitman G, pulley D, and band F, and a rocking movement is given to the shaft C through the jointed pitman H′ and arm *n*. This rocking movement causes the fan to swing to and fro, and creates a current of air, which not

only deters flies from settling upon articles of food, but, when used in connection with a bed, is very grateful to an invalid.

The box B is adjusted on the top brace *b* by means of a pin, *p*, extending through registering-perforations in the said box and brace.

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

1. In a fly-fan, the combination, with the rock-shaft C, having arm *n* and hanger E, carrying a fan, C′, of the vibrating forked rod H, rigid pitman G, jointed pitman H′, and the crank-wheel D, operated by a suitable mechanism, substantially as specified.

2. In a fly-fan, the rock-shaft C, formed of the sections *f f′*, the former having the slide *g′* and the adjustable screw-clamp *g*, and the latter extending through said clamp and secured to the slide, constructed and arranged to operate substantially as shown and described.

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

ROBERT CARY BRYANT.

Witnesses:

CHARLES MCCLINTOCK,

BENJAMIN T. NIXON.