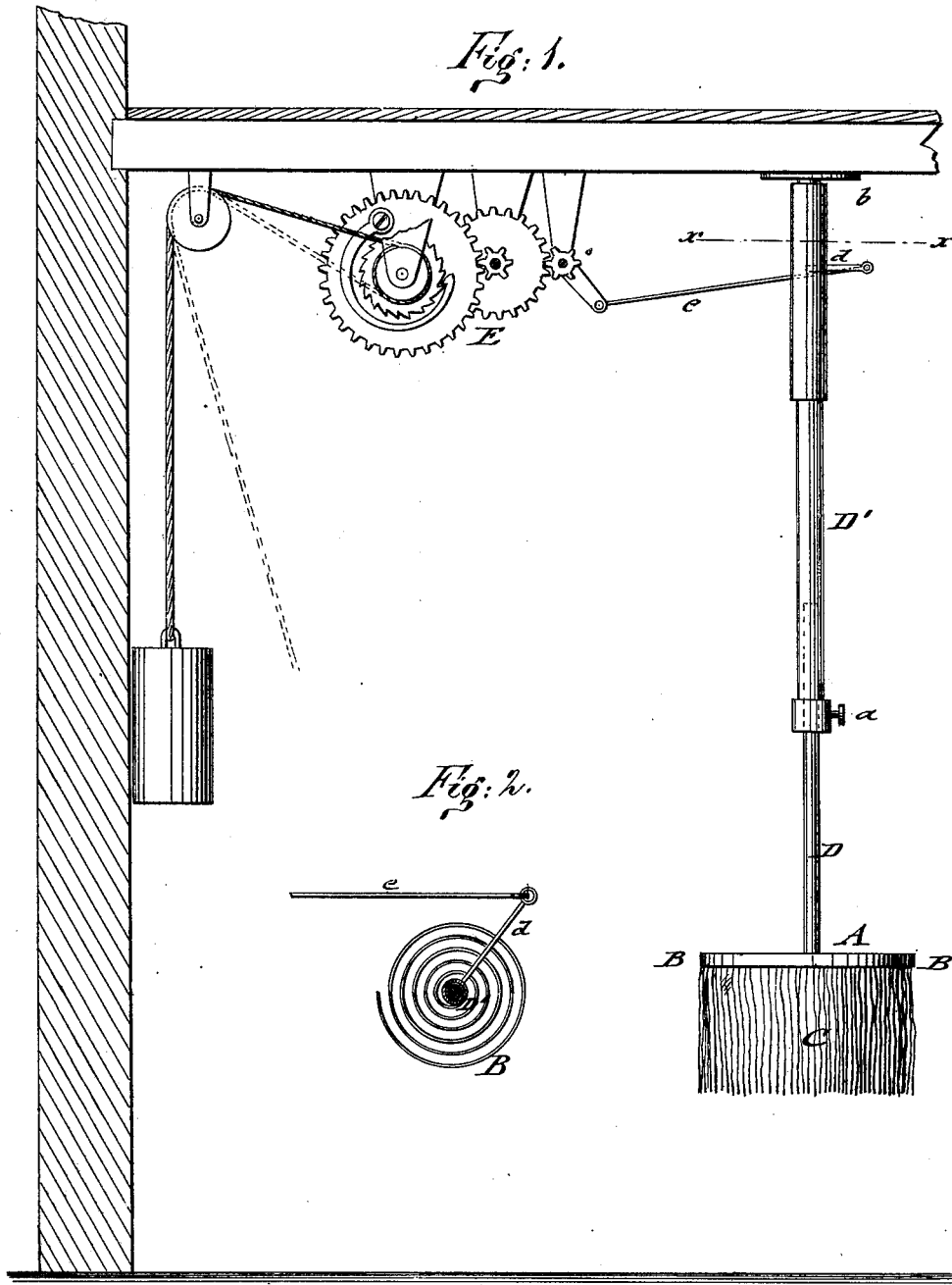


J. B. BOONE.
Automatic Fan.

No. 197,012.

Patented Nov. 13, 1877.



WITNESSES:

Cras. Nida
J. H. Scarborough.

INVENTOR:

J. B. Boone,
BY *Mumford*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN B. BOONE, OF GALVESTON, TEXAS.

IMPROVEMENT IN AUTOMATIC FANS.

Specification forming part of Letters Patent No. **197,012**, dated November 13, 1877; application filed August 24, 1877.

To all whom it may concern:

Be it known that I, JOHN BAXTER BOONE, of Galveston, in the county of Galveston and State of Texas, have invented a new and Improved Fly-Brush and Fan, of which the following is a specification:

In the accompanying drawings, Figure 1 represents a side elevation of my improved fly-brush and fan, and operating mechanism; and Fig. 2, a top view of the brush, partly in section, on line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The invention relates to an improved device for keeping the flies off the table, bed, or other place; and it consists of a fly-brush constructed of a spiral spring attached to a shaft with rotary reciprocating motion, and provided along the convolutions of the spring with suitable wings.

In the drawings, A represents my improved fly-brush, which is made of a band-spring, B, of suitable strength, to which wings or strips C of paper or other material are attached throughout the whole length of the same. The spiral spring B is attached at the inner end to a rod, D, and adjusted at any desired height in a socket-tube, D', by a fastening thumb-screw, *a*. The socket-tube D' is supported loosely in a plate or collar, *b*, which is screwed to the ceiling. The tube and fly-brush are set

into rotary reciprocating motion by a fixed arm, *d*, of the tube, connected by a crank-rod, *e*, with a clock-train, E, operated by springs or weights, and wound up from time to time in suitable manner.

The jerky reciprocating motion of the tube imparts to the spiral spring and to the wings or strips attached thereto a vibrating motion, by which the air is agitated, and the flies kept off in effective and reliable manner.

In connection with the brush a number of fans may be used, which are attached by a tube and set-screw to the rod D, and which increase the agitation of the air.

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

1. The combination of a rotary reciprocating socket-tube, the supporting-plate attached to the ceiling, and a vertically-adjustable fly-brush, substantially as set forth.

2. A fly-brush and fan, constructed of a spiral band-spring attached at the inner end to a point of support, and provided with wings or strips along the convolutions of the spring, substantially as specified.

JOHN BAXTER BOONE.

Witnesses:

Q. P. COLE,
N. B. BENDY.