J. MILLER.

AUTOMATIC-FANS.

No. 193,379. Patented July 24, 1877.

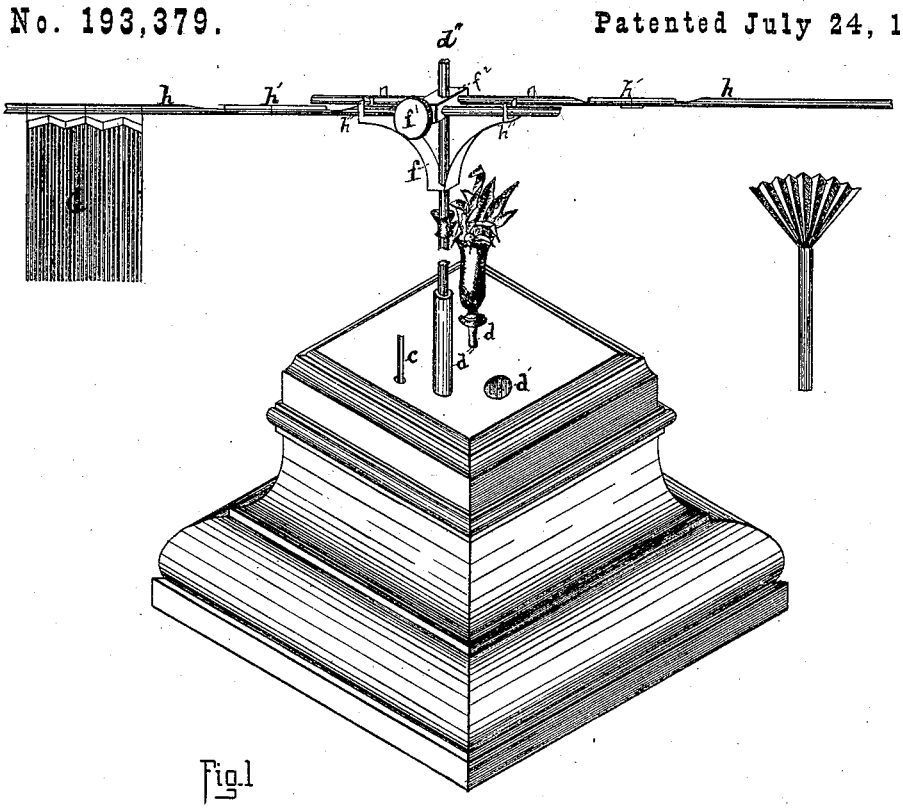

Fig. 1

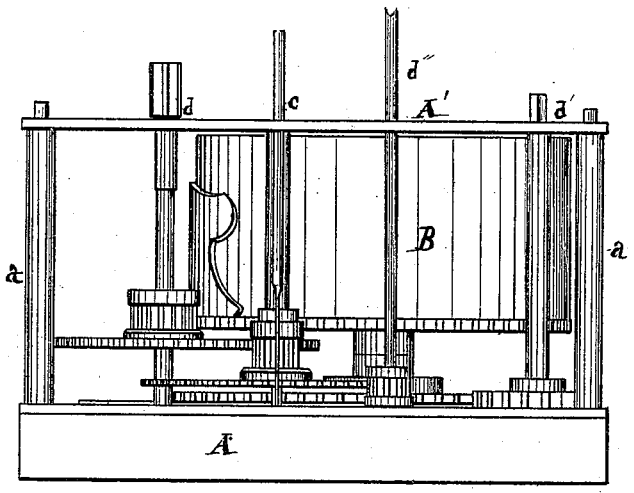

Fig. 2

Witnesses

J. H. Stevenson

T. J. Moore

Inventor

John Miller

UNITED STATES PATENT OFFICE.

JOHN MILLER, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN AUTOMATIC FANS.

Specification forming part of Letters Patent No. **193,379**, dated July 24, 1877; application filed October 2, 1876.

To all whom it may concern:

Be it known that I, JOHN MILLER, of Pittsburg, Pennsylvania, have invented a new and useful Improvement in Fly-Brushes and Fans, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing.

Similar letters of reference indicate corresponding parts.

Figure 1 is a perspective view of my fly-brush, with the works inclosed in a suitable box or covering, Fig. 2 being a sectional view of the motor-power of the same.

A is the bottom plate, made partly of wood, with a metallic covering. *a a* are posts at either end or corner of the plate A, and are used to support the top plate A′, which latter is made of brass, though other materials may be used, such as copper, steel, iron, &c.

B is the spring or power of the works, made of the ordinary steel used for similar purposes.

d is a vertical revolving shaft, terminating at the top in a circular or other shaped bore of size adequate to admit of holding an ordinary bouquet of flowers. The end of this shaft extends above the top of the covering of the works.

d′ is the winding-shaft of the works, and when revolved winds up the spring B.

d″ is the centrally-revolving shaft, to which at the top, above the frame of the works, is the cross-brace *f*, having lugs *h″* as supporters of the arms *h h*.

h′ h′ are hinged joints of the arms *h*, and are used to shorten the circle of the brush G, thereby giving momentum to the same.

f^1 is a set-screw, to tighten to the center shaft *d″*, at any point desired, the center-bit f^2, or to lengthen or shorten the arms *h*.

c is a lever for locking and arresting the motion of the works of the brush. Its lower end works in a slide, and by a movement of the lever laterally the lower end will enter the cog of the wheel which operates the shaft *d″*.

All the parts herein described are made of brass, steel, or other suitable material. The shaft *d″* is made of tubular form at its upper end, and may be elongated by another piece being placed in the bore of the same, to any height desired. In the bore of the shaft *d″* may also be inserted a fan of the size required, which, in its revolutions, will create a current of air outward from its center.

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

In an automatic fan and fly-brush, the combination of the arms *h*, shaft *d″*, brace *f*, center-bit f^2, set-screw f^1, with a clock-work motor, substantially as described and shown.

In testimony that I claim the above I hereunto set my hand, at Pittsburg, Pennsylvania, this 26th day of September, 1876.

JOHN MILLER.

Witnesses:
J. H. STEVENSON,
JOHN HARVEY.