

S. B. OPDYKE.
Fly-Fan.

No. 225,413.

Patented Mar. 9, 1880.

Fig. 1.

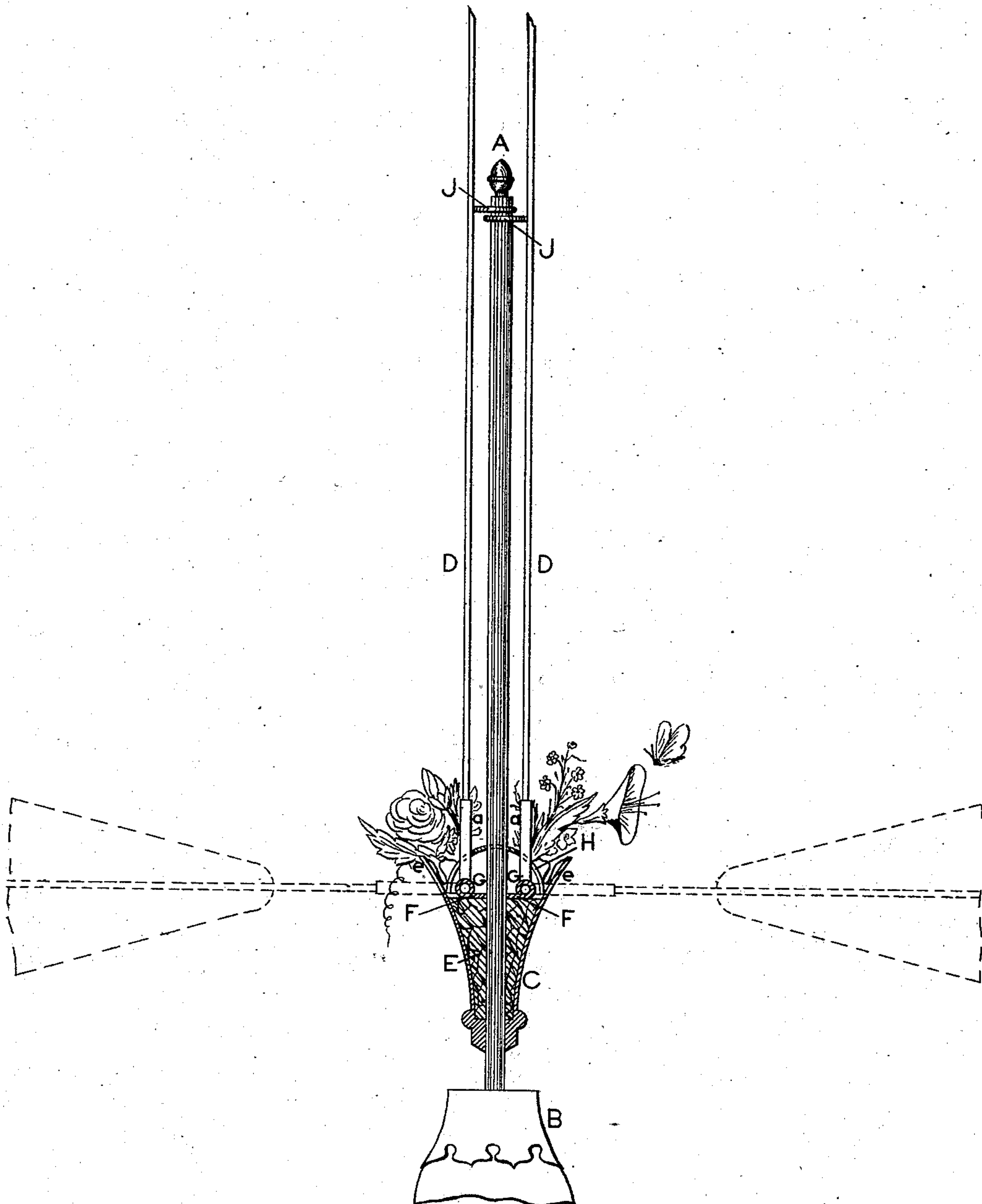
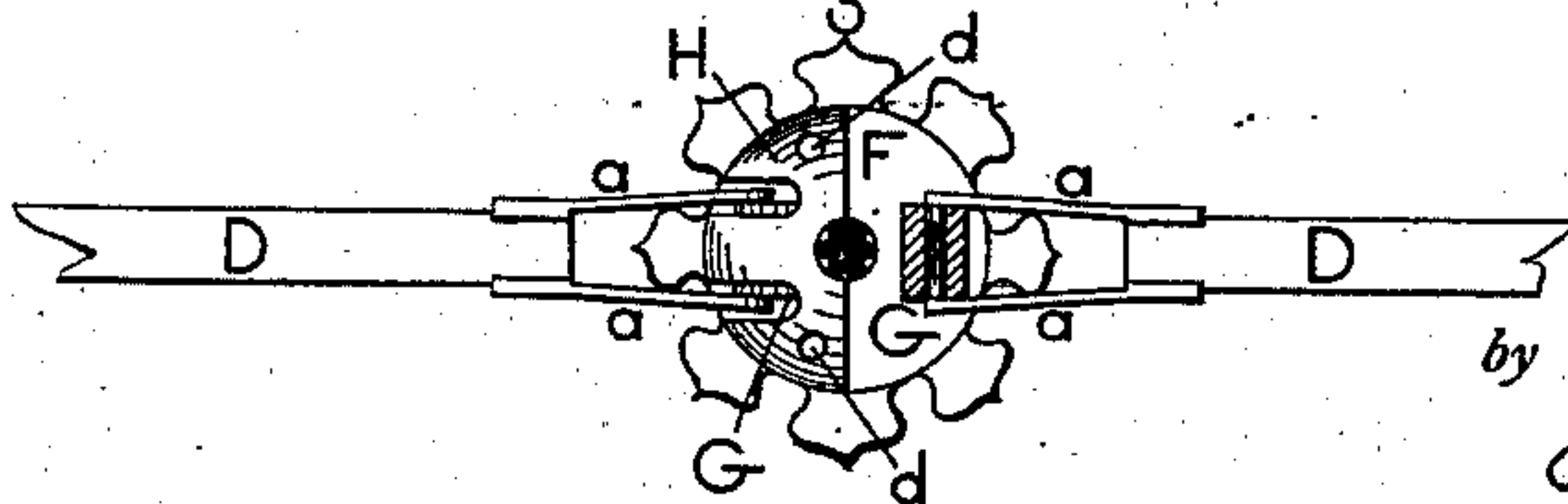


Fig. 2.

Witnesses:

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UNITED STATES PATENT OFFICE.

STACY B. OPDYKE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
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FLY-FAN.

SPECIFICATION forming part of Letters Patent No. 225,413, dated March 9, 1880.

Application filed October 23, 1879.

To all whom it may concern:

Be it known that I, STACY B. OPDYKE, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Fly-Fans, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a side elevation, partly sectional, of a portion of a fly-fan embodying my invention, the same being folded. Fig. 2 is a horizontal section thereof, the arms being extended for service.

Similar letters of reference indicate corresponding parts in the two figures.

My invention relates to improvements in fans which have arms connected to a rotary staff, the motion whereof is derived from a train of gearing after the manner of clock-work, the approach and shadow of the arms serving to frighten flies and other insects in proximity thereto.

The invention consists in passing the staff through frictional packing, which serves to hold the collar, to which the arms are hinged, at any desired or adjusted height without clamps, screws, or other fastenings, or injuring or scratching the staff.

It also consists in providing the fan blades or arms with rings so disposed one above the other that when the fan is folded the staff thereof enters both rings, and conveniently, securely, and neatly holds the blades in an upright or folded condition.

It also consists in providing the collar with ears turned up from a plate of metal, forming strong and reliable axial connections for the arms of the fan-blades to the collar, said plate covering the top of the frictional packing.

It also consists in forming the inner ends of the arms with bifurcations, which straddle the top of the collar and increase the strength of the arms at said ends.

It further consists of the collar and a dishing and perforated plate or cap, constructed to form a flower-holder, as will be hereinafter set forth.

Referring to the drawings, A represents a staff or shaft rising from a stand or base, B, containing a mechanical power, such as clock-

work, for rotating said staff, as is well known in the class of fly-fans.

C represents the collar, to which the arms D of the fan-blades are hinged, and which is fitted to the staff A by a sliding joint, so as to be shifted or raised and lowered relatively to the desired height of the blades.

Interposed between the staff and collar is a packing, E, consisting of a piece or pieces of cork, which embraces the staff A, and produces such friction that when the collar is at its adjusted height it remains in position due to the friction of the packing or cork E without other means of fastening or securing.

Near the top of the collar is secured a metallic plate, F, portions of which on opposite sides are cut and turned up to form ears G, to which the arms D are hinged, said ears being strong and durable and not liable to be torn out or broken. The inner ends of each arm D are bifurcated, as at *a a*, and said ends are connected by a transverse piece, which enters the respective ear G as the axis of the arm.

The bifurcations rest on or straddle the top edge of the collar, forming double supports for the arms, and increase the strength of the same at the place of greatest strain.

H represents a dishing plate or cap, which is secured to the collar C and overhangs the plate F, and has slots for the passage of the bifurcated ends *a a* of the fan-arms. In said cap are openings *dd* for the reception of stems of flowers, and the collar C projects above the base of the cap, forming a rim, *e*, which serves to confine and support the flowers, thus providing a flower or bouquet holder, which adds to the beauty of the fan.

It will be noticed that the staff A passes freely through the plate F and cap H.

On the upper side of the fan blades or arms are rings J, which are so disposed one above the other that when the arms are in folded condition, which is upright, the staff A may be passed through them, whereby the blades may be conveniently and securely held in said folded condition.

By elevating the collar or lowering the staff the latter emerges from the eyes J, and the fan-blades unfold or open for operation.

Owing to the nature of the packing E, the staff A is preserved from injury or scratching when the collar is shifted.

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

1. The fan-blades, shiftable collar C, and staff A, in combination with the frictional packing E in said collar, substantially as and for the purpose set forth.

2. The staff A, in combination with the fan arms or blades provided with rings J, projecting one above the other, substantially as and for the purpose set forth.

3. The hinged fan-arms D and shiftable col-

lar C, in combination with the covering-plate F, with turned-up ears G, substantially as and for the purpose set forth.

4. The shiftable collar C and plate F, in combination with the arms D, having bifurcations *a* on their inner ends, substantially as and for the purpose set forth.

5. The combination, with the rotary staff of a fan, of the shiftable collar C, with projecting rim *e*, and the dishing and perforated cap H, substantially as and for the purpose set forth.

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Witnesses:

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