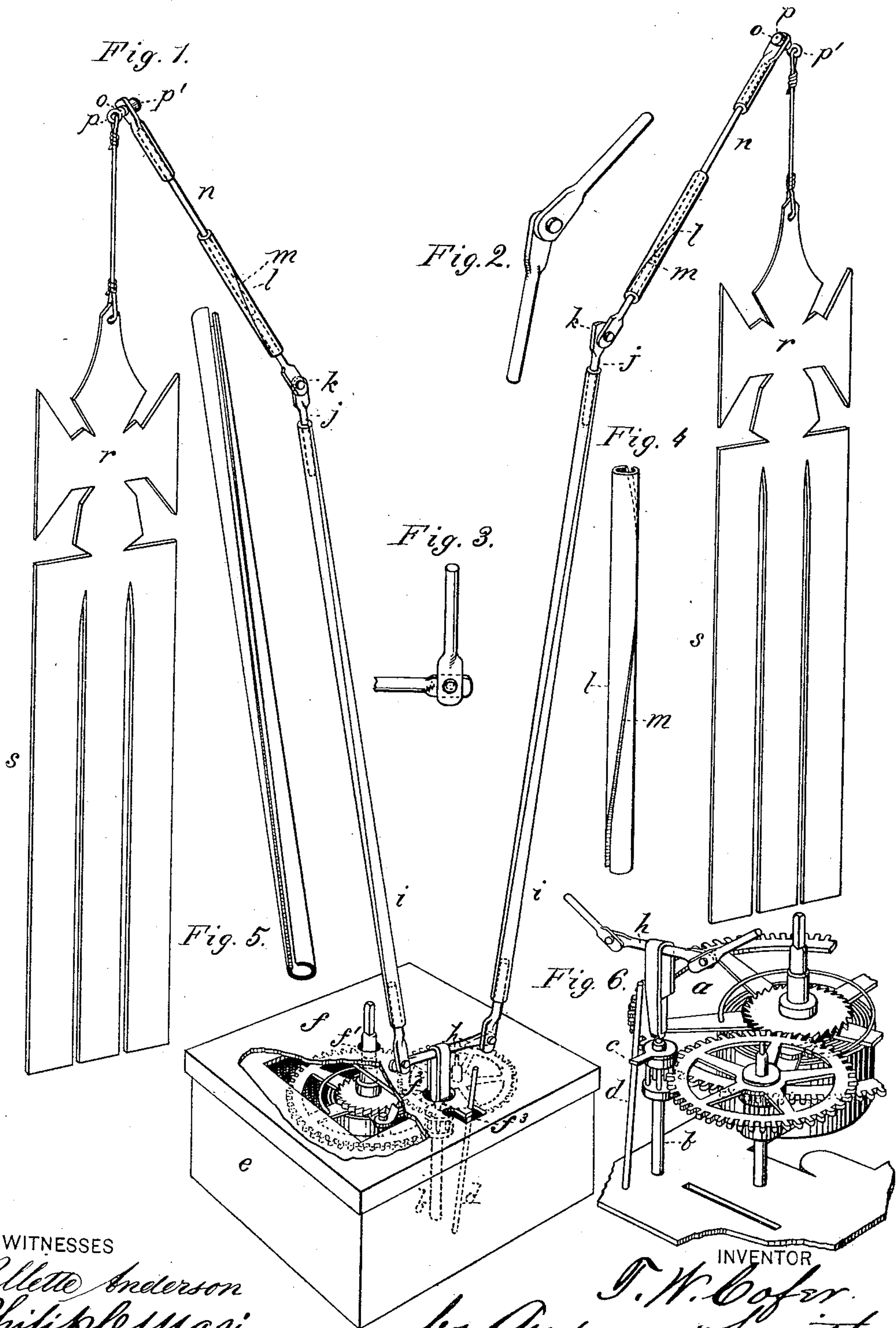


(No Model.)

T. W. COFER.
AUTOMATIC FLY FAN.

No. 266,774.

Patented Oct. 31, 1882.



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THOMAS W. COFER, OF PORTSMOUTH, VIRGINIA.

AUTOMATIC FLY-FAN.

SPECIFICATION forming part of Letters Patent No. 266,774, dated October 31, 1882.

Application filed September 9, 1882. (No model.)

To all whom it may concern:

Be it known that I, THOMAS W. COFER, a citizen of the United States, and a resident of Portsmouth, in the county of Norfolk and State of Virginia, 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 this invention in a perspective view. Figs. 2, 3, 4, 5, and 6 are details.

This invention has relation to fly-fans; and it consists in the construction and novel arrangement, in connection with a clock mechanism adapted to be wound and started by shifting a lever which engages a stop on the post to which the fan-arms are connected, of a pair of hinged tubular sectional arms pivoted at their lower ends to a cross-bar at the top of the rotary post, and provided at their upper ends with eyes for swivel-bolts or connections, from which the fans are suspended by cords to give the fans a whirling as well as an oscillating motion, as will be hereinafter fully described and claimed.

Referring to the accompanying drawings, *a* designates a clock mechanism of any suitable construction, having a rotating shaft, *b*, provided with a stop, *c*, which engages a shifting lever, *d*, when the latter is moved into the path of the stop, and prevents the rotary motion of the shaft *b*, thereby stopping the operation of the fans.

e designates the incasement for the clock mechanism. This case *e* is provided with a removable lid, *f*, which is slotted at *f'* *f*² and at *f*³ for the passage of the upper ends of the winding-post *g*, the rotary shaft and the shifting lever *d*, as shown. The slot *f*³ is L-shaped in order that the shifting lever *d* may be locked in place in either branch of the slot. The clock mechanism may be lifted from the case by removing the lid for the purposes of inspection or repair. To the upper end of the rotary shaft a cross-arm or cross-head, *h*, is secured after the lid has been put in place on the case-body, and to each of the ends of said cross-arm *h* is pivoted a tubular fan-arm, *i*, they being so pivoted that they may be worked in a vertical direction to open or close them.

In the open end of each fan-arm *i* is placed the shank *j* of a hinged section, *k*, of the fan-arm, and the upper portions, *l*, of these sections are also tubular. The portions *l* are preferably formed with spiral open seams *m* to give the portions *l* spring enough to hold the extensions *n* in place when inserted. The extensions *n* are adjustable in the portions *l*, in order to lengthen or shorten the fan-arms according to necessity when using the fan. The upper ends of the extensions *n* are provided with eyes *o*, in which swivel-pins *p* having loops *p'*, are placed. To the loops of the swivel-pins cords *q* are attached; and to the lower ends of the cords the fans *r* are connected. These fans may be of any ordinary design. I prefer, however, to use the paper fan herein shown, the furcations *s* causing it to flutter and whirl, rendering it more effective in operation. The object of the eyes and swivel-pins is to prevent the cords from becoming twisted while the fans are in operation. This construction renders the fans very serviceable, as they are not likely to get out of order. The utility of this construction is obvious. The fan-arms may be folded, opened, extended, and the sections adjusted to suit the circumstances under which the fan is to be used.

Having thus described my invention, what I claim is—

1. In a fly-fan operated by clock mechanism, the combination, with the rotary shaft provided with the stop and the cross-arm, of the shifting lever and the pivoted and hinged sectional fan-arms, substantially as specified.

2. In a fly-fan, the extensions *n*, having the eyes and swivel-pins at their outer ends, in combination with the tubular fan-arms, the cords, and fans, substantially as specified.

3. A fan-arm having a swivel-connection at its outer end, in combination with the cord and fan and mechanism for rotating the fan-arm in a horizontal plane, substantially as shown and described.

4. The combination of a furcated fan, a cord, and a fan-arm having a swivel-pin at its outer end, to which the cord is attached, as set forth.

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

THOS. W. COFER.

Witnesses:

THEO. MUNGEN,
JAMES J. SHEEHY.