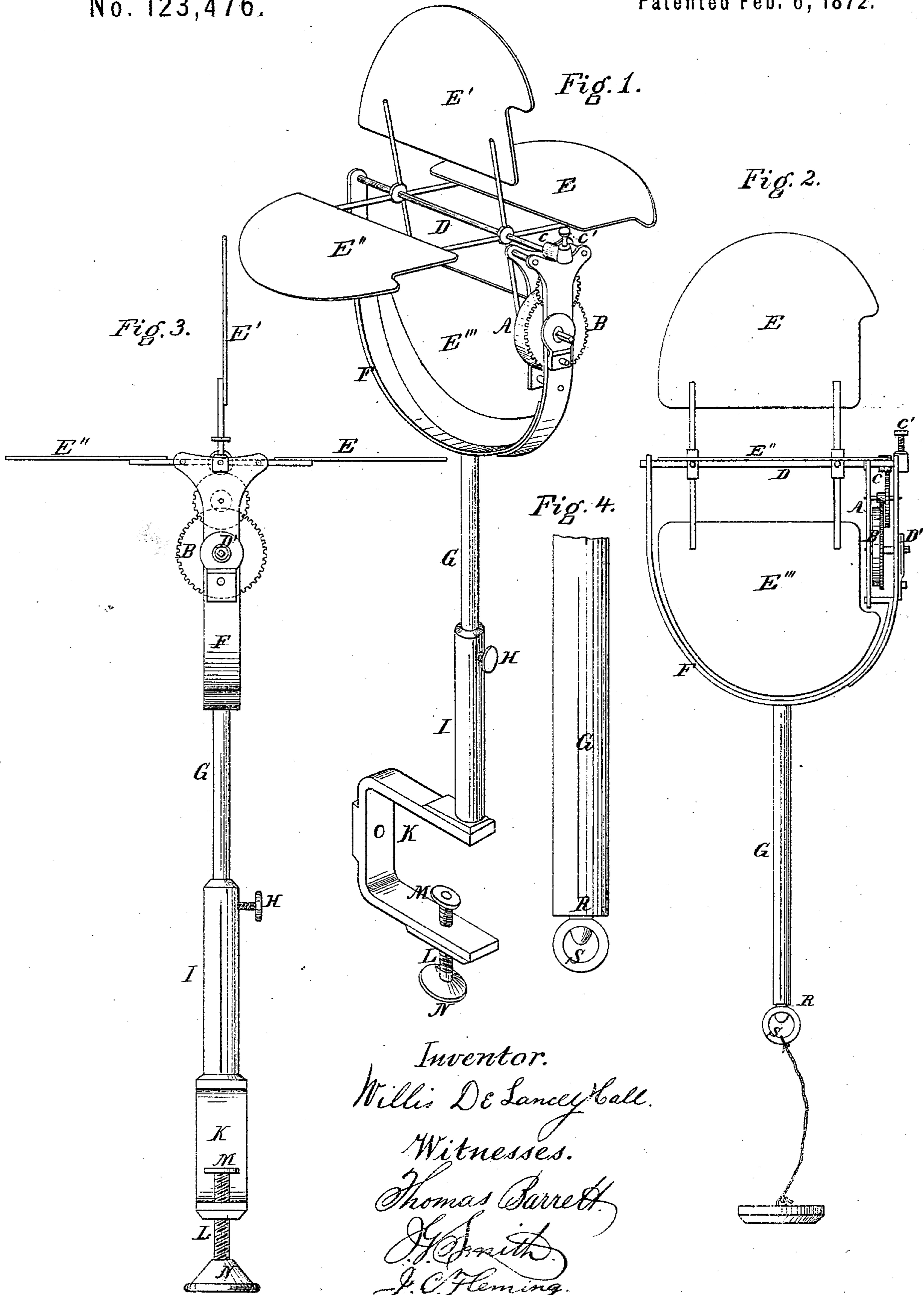


W. DeL. HALL.

Improvement in Automatic Fans.

No. 123,476.

Patented Feb. 6, 1872.



Inventor.
Willis De Lancey Hall.
Witnesses.
Thomas Barrett.
J. C. Fleming.

UNITED STATES PATENT OFFICE.

WILLIS DE LANCEY HALL, OF MEMPHIS, TENNESSEE.

IMPROVEMENT IN AUTOMATIC FANS.

Specification forming part of Letters Patent No. 123,476, dated February 6, 1872.

SPECIFICATION.

I, WILLIS DE LANCEY HALL, of Memphis, county of Shelby, State of Tennessee, have invented certain Improvements in Automatic Fans, of which the following is a specification:

My invention relates to an improvement upon an automatic fan, patented by me September 26, 1871; and consists in attaching a swivel-ring to the end of standard G, or rod supporting the frame, the clockwork, and fan, reference being had to the accompanying drawing and to the letters marked thereon, in which—

Figure 1 is a perspective view of the automatic fan with the adjustable standard of my former patent. Fig. 2 is a side elevation of the fan with my improvement attached. Fig. 3 is an end elevation of the fan with the adjustable standard. Fig. 4 is an enlarged view of the standard or rod with my improvement.

The purpose of this swivel-end ring is to suspend the machine over a bed, table, or any place where a current of air may be desired, so that when in operation a rotary motion is given by reason of the indented shape of the fan-leaves E E' E'' E'''.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I construct a semicircular frame, F, in accordance with the desired dimensions of the fan-leaves. This frame is attached to a round standard or rod, G, and to the end R of rod G

is attached a swivel-ring, S, of not larger dimension than the rod G, so that the rod or standard G can be used in connection with the standard I K of my former patent. Attached to one side of the frame F is the train of clockwork A, with the pinion C, attached to which is the axle D, running through the diameter of frame F. Attached to this axle D are arms, and attached to these arms are the fan-leaves E E' E'' E'''. At one end of arm of frame F is a screw, C', binding on one end of axle D. By tightening or loosening the same the motion of the fan-leaves can be increased or diminished.

The machine is operated, after first suspending it by the swivel-ring over a bed, table, or wherever desired, by winding up the spring of clockwork; the axle with the fan-leaves is thereby made to revolve, causing the desired agitation of the air.

Claim.

The automatic fan, combining the standard G, having the swivel-joint and ring S, with the frame F, supporting the clockwork A, pinion C, and axle D with the arms or wings E E' E'' E''', and set-screw C', all constructed and arranged substantially as described.

WILLIS DE LANCEY HALL.

Witnesses:

J. G. SMITH,
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