[51.]

2 Sheets--Sheet 1.

WILLIAM H. DOWNS.

Improvement in Bed and Table Fans.

No. 119,128. Patented Sep. 19, 1871.

Fig. 1.

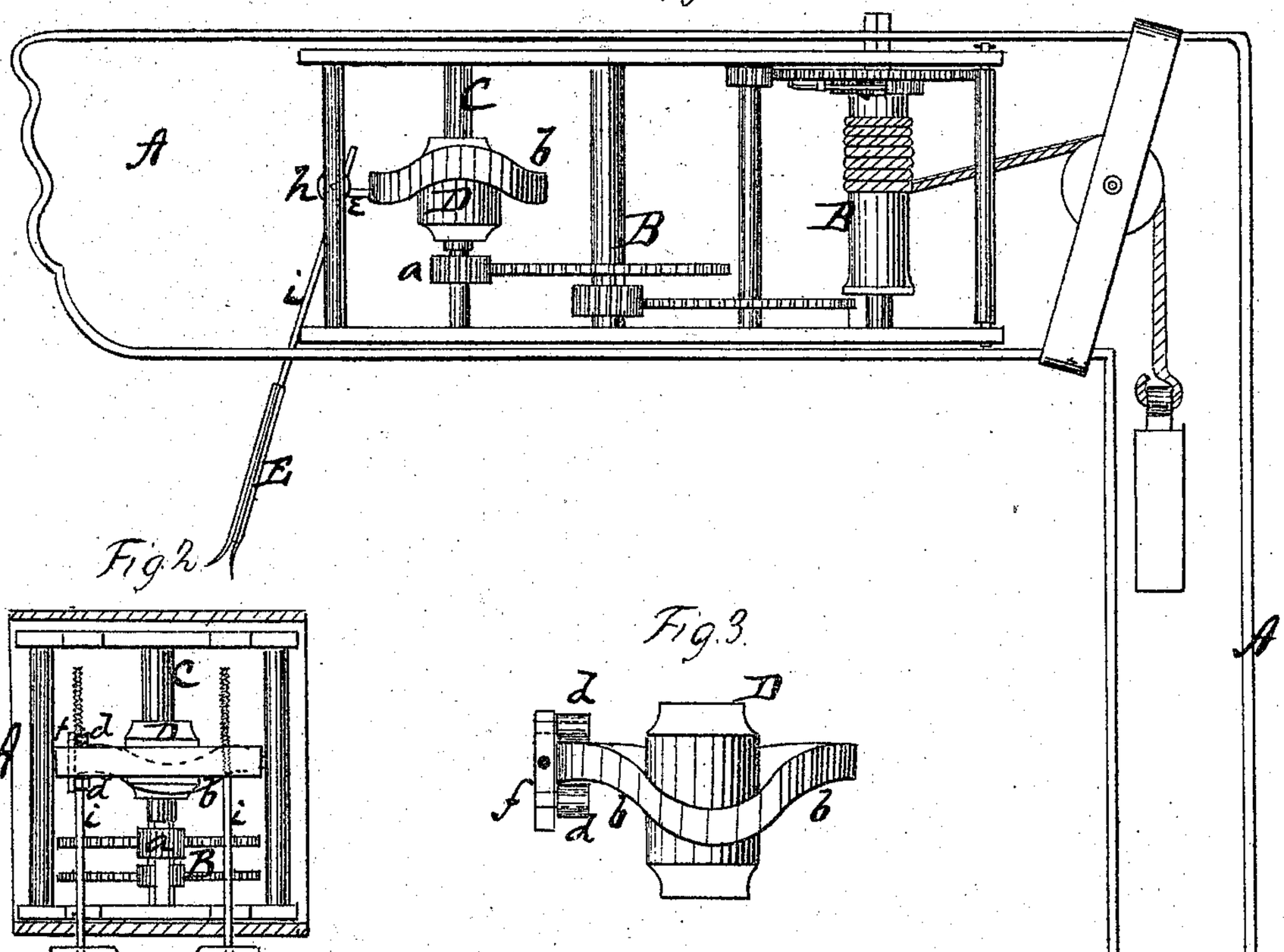


Fig. 2.

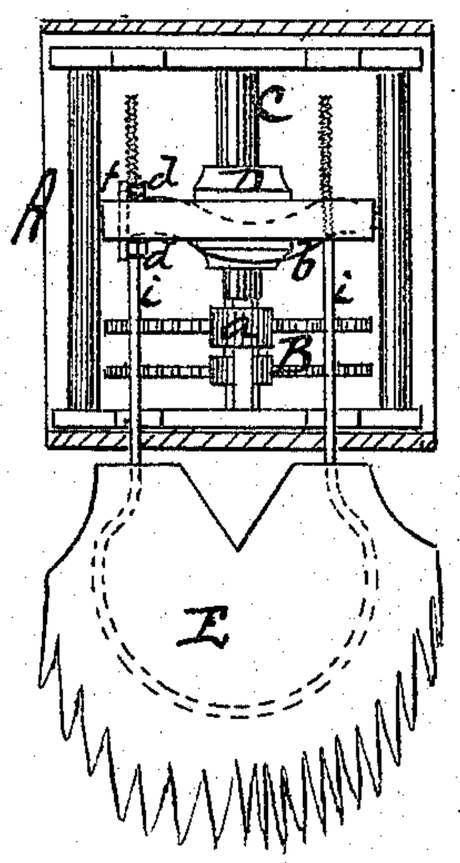
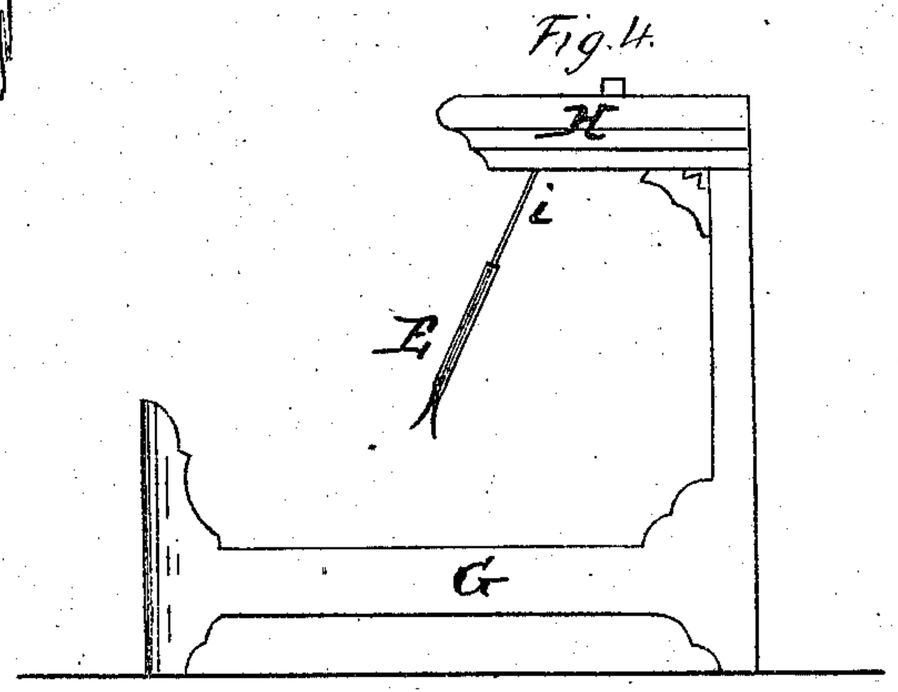


Fig. 3.

Fig. 4.



Witnesses:

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[51.]

2 Sheets--Sheet 2.

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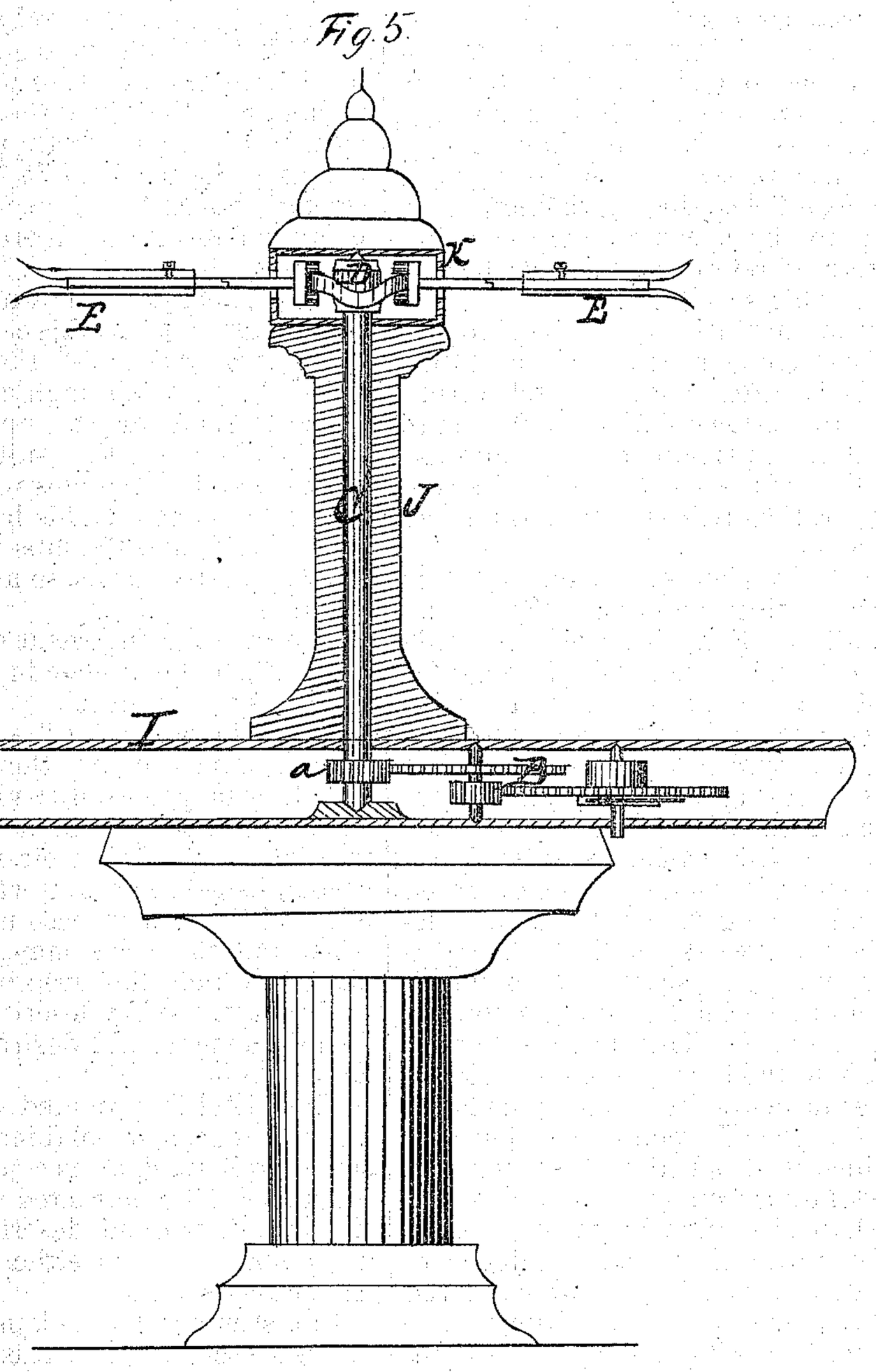
Fig. 5.



Witnesses:

Jas. E. Hutchinson

L. L. Ewert.

Inventor

Wm H. Downs

per Alexander Mason

Attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM H. DOWNS, OF JEFFERSONVILLE, INDIANA.

IMPROVEMENT IN BED AND TABLE-FANS.

Specification forming part of Letters Patent No. 119,128, dated September 19, 1871.

To all whom it may concern:

Be it known that I, WILLIAM H. DOWNS, of Jeffersonville, in the county of Clark and in the State of Indiana, have invented certain new and useful Improvements in Bed and Table-Fans; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the construction and arrangement of a bed and table-fan, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side view of my fan with the mechanism for operating the same. Fig. 2 is an end view of the same. Fig. 3 is an enlarged side view of the wheel which immediately operates the fan. Fig. 4 shows a bedstead with my fan adapted to the same, and Fig. 5 is a section of a table with my fan applied to the same.

A represents a casing of any suitable construction to contain the entire mechanism for vibrating the fan. In this casing is suitably arranged a cog-gearing, B, which may be operated either by a spring or weight, as may be most desirable. The last cog-wheel of the gearing B gears with a pinion, *a*, on a shaft, C, upon which shaft is also placed a wheel, D, having a circumferential zigzag flange, *b*. This flange is not angular, but curved up and down, as shown in Figs. 1 and 3. Above and below the flange *b* are placed friction-rollers *d d*, placed upon pins or journals in a yoke, *f*, which is attached to the outer end of an arm, *e*, extending from one side of a shaft, *h*. From this shaft also extend two other arms, *i i*, which pass downward through elongated slots in the bottom of the casing A, and have the fan E attached to them below said casing.

The cog-gearing B, being wound up, will revolve the wheel D, which causes the fan to vibrate rapidly back and forth.

In Fig. 4 I have shown a bedstead, G, provided with a canopy, H, and having my vibrating fan attached to or in said canopy. It will be noticed that nothing is seen except the fan and a portion of the arms to which the same is attached, and that from the position of the fan its motion back and forth will sweep the entire length of the bed, and, in addition to creating as strong a current of air as necessary, will keep off flies and mosquitoes, thus obviating the necessity of a net.

In Fig. 5 I have shown my vibrating fan applied to a table. In this case the operating mechanism is placed under the table-leaf I, and the shaft C passes through a central post, J, the wheel D being on the upper end of said shaft within a box or other suitable cavity, K, inside of the post J. Any desired number of fans E E may be arranged in this box, all operated by the same wheel, and the fans made adjustable upon their respective arms, so as to sweep any desired distance.

The same arrangement of one or more vibrating fans may be applied in any other place where a fan may be desirable.

The adjustability of the fans, whether applied to beds, tables, or any other place, should be such that they may not only be lengthened to increase the stroke, but also spread sidewise so as to take in a larger area in their motion. This may be accomplished in various ways. The fans may be adjustable on their arms up and down and sidewise, and the arms may be adjustable on the shaft to which they are attached.

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

The wheel D, provided with a circumferential zigzag flange, *b*, in combination with one or more sets of rollers, *d*, arms *e*, shafts *h*, and adjustable fans E, all constructed and arranged substantially as shown and described, and operated by a cog-gearing, B, run either by a spring or weight, as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 29th day of August, 1871.

W. H. DOWNS.

Witnesses:
C. L. EVERT,
A. N. MARR.

(51.)