

(No Model.)

J. GEIER.

FANNING MACHINERY.

No. 273,719.

Patented Mar. 13, 1883.

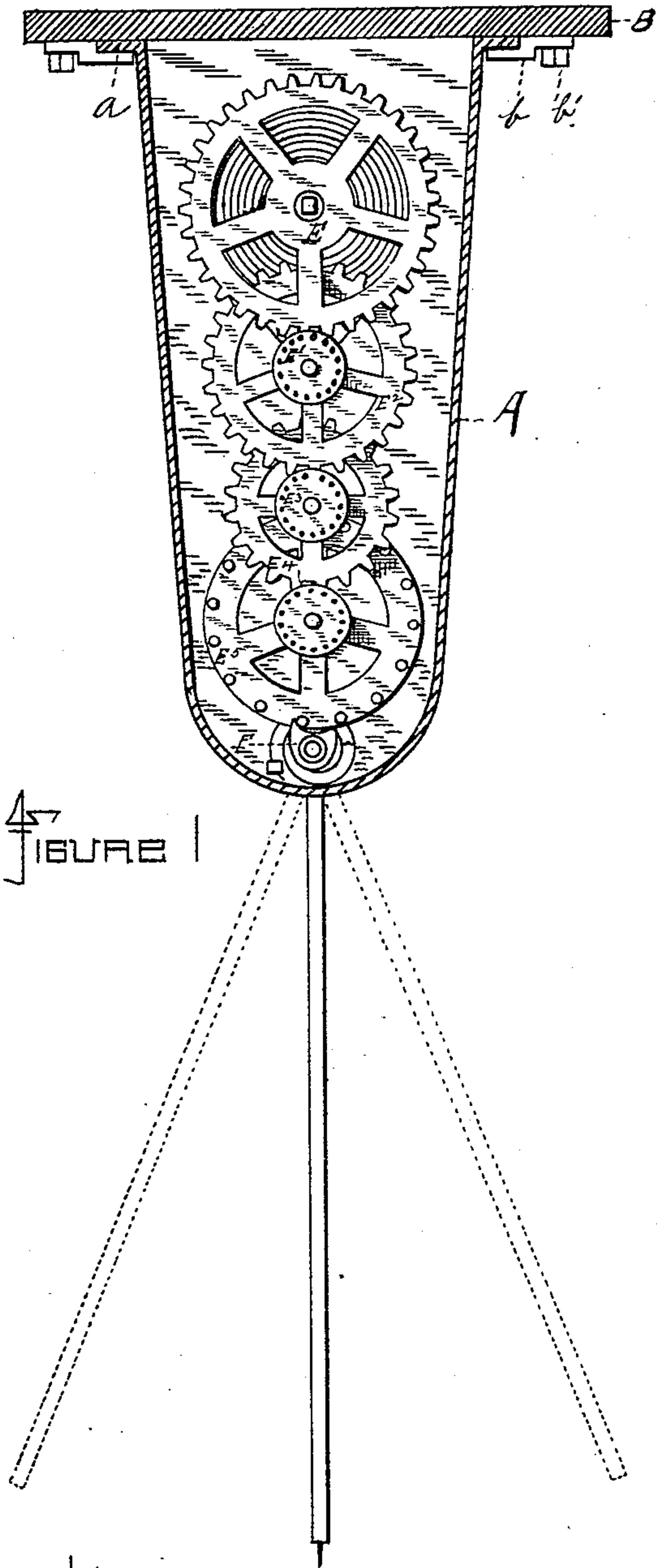


FIGURE 1

Witnesses—  
Hector Reese.  
J. M. Reese.

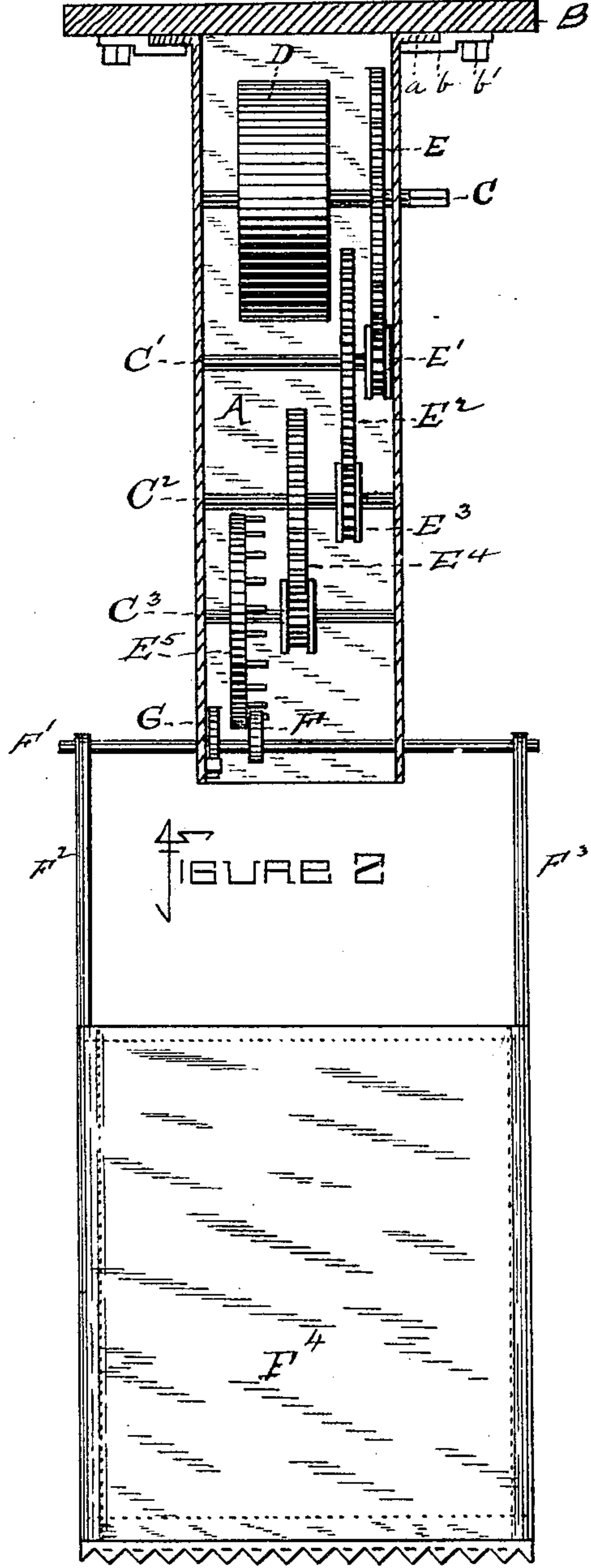


FIGURE 2

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# UNITED STATES PATENT OFFICE.

JOSEPH GEIER, OF ALLEGHENY, PENNSYLVANIA.

## FANNING MACHINERY.

SPECIFICATION forming part of Letters Patent No. 273,719, dated March 13, 1883.

Application filed September 4, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH GEIER, a citizen of the United States, residing at the city of Allegheny, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Fanning Machinery; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming a part thereof, in which—

Figure 1 indicates a side elevation of my improved fanning mechanism, the side of the case which contains the operating mechanism being removed to illustrate the construction, arrangement, and position of the working parts which supply the motive power to the fan. Fig. 2 indicates a front elevation of the apparatus, with the front of the case removed to show a front view of the same.

Like letters of reference indicate like parts wherever they occur.

The object of my invention is to produce a cheap, durable, and efficient fanning-machine, which may be readily adjusted to and removed from position, and which will be adapted to general use for causing a uniform and effective circulation of air through large halls, stores, rooms, offices, &c., during hot and sultry weather; and this object I have fully obtained by the use of the improvement which I shall now more fully describe.

In the drawings, A indicates a case which contains the mechanism for actuating the fan, and is provided with outwardly-projecting flanges *a a* at its upper end, which are adapted to engage in and be securely held up against the ceiling B by the brackets *b b*, which are secured in position by means of the bolts *b' b'*.

C indicates the main shaft of the mechanism which actuates the fan. This shaft C is suitably journaled in the sides of the case, and its outwardly-projecting end is formed of a suitable shape to enable it to be turned by means of a suitable key or wrench to wind up the main-spring D, one end of which is attached to the main shaft.

E indicates a gear-wheel mounted on the main shaft and meshing into a small gear-wheel, *E'*, mounted on the shaft *C'*, which shaft *C'* is also provided with a larger gear-wheel, *E''*, which in its turn meshes into and communi-

cates an accelerated rotary motion to a small gear-wheel, *E'''*, mounted on the shaft *C''*, which is also provided with a large gear-wheel, *E''''*, which in its turn meshes into and communicates a still faster motion to a small gear-wheel mounted on the shaft *C'''*.

*E''''* indicates a plain wheel or face-plate, which is mounted on the shaft *C'''*, and is provided with a series of pins, which are arranged at regular distances from each other around the wheel, near its periphery, and project out laterally from one of its sides.

*F* indicates the escapement.

*G* indicates a small spiral spring, which is attached at one end to a small lug projecting from the inner surface of the lower portion of one side of the case, and its other end is attached to the shaft *F'*, upon which the escapement is mounted.

*F''* and *F'''* indicate the swinging arms of the frame, upon which the fan *F''''* is mounted.

In the operation of the device, the main-spring being wound up by turning the main shaft by a suitable key or wrench, motion is transmitted from the main wheel to the shaft *C* and the wheel *E*, and as the escapement is so arranged that one of the pallets intersects the line of motion through which the pins on the side of the wheel *E* travel, as shown in Fig. 1, it is forced out of the path, imparting a forward swinging movement to the fan. As soon as this forward movement commences, the movement of the shaft *F'* commences to wind up the small spiral spring *G*, and as the other pallet of the escapement by this time commences to swing up to intersect the path through which the pins travel the action of the spring materially assists it in causing the backward movement of the fan.

One of the main advantages of my improvement is the portable nature of the device and the ease with which it can be adjusted to and removed from position without the aid of skilled labor. Another advantage is, that over tables in dining-rooms small fanning-machines may be suspended, and after being wound up may be run at any and at only such times as may be desired, as the movement of the mechanism may be readily stopped by arresting the motion of the fan by hand. Small machines may also be suspended up above beds in bed-rooms, and

may be wound up just previous to the persons retiring to rest, in which case they will continue to operate until the next morning, causing refreshing currents of air to fall upon the sleeper, and preventing annoyance from flies, gnats, mosquitoes, &c.

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

1. In mechanism for actuating fans, the combination, with a pendent fan, of the pendent case, an oscillating fan-shaft provided with an escapement and journaled in the pendent case, and clock mechanism arranged within the case for actuating the oscillating shaft, substantially as and for the purpose specified.

2. In a fanning-machine, the combination of the flanged case, the brackets, the mainspring and its gearing for transmitting motion, the wheel E, and the escapement, with a suitable fan, constructed and arranged substantially as specified.

3. In a fanning-machine, the combination of the mainspring and its gearing for the transmission of motion, the escapement, and the spring G, with a fan, constructed and arranged substantially as specified.

JOSEPH GEIER.

Witnesses:

FRANK M. REESE,  
WALTER REESE.