

(No Model.)

C. P. ELIESON.
FAN MOTOR.

No. 506,481.

Patented Oct. 10, 1893.

Fig. 1.

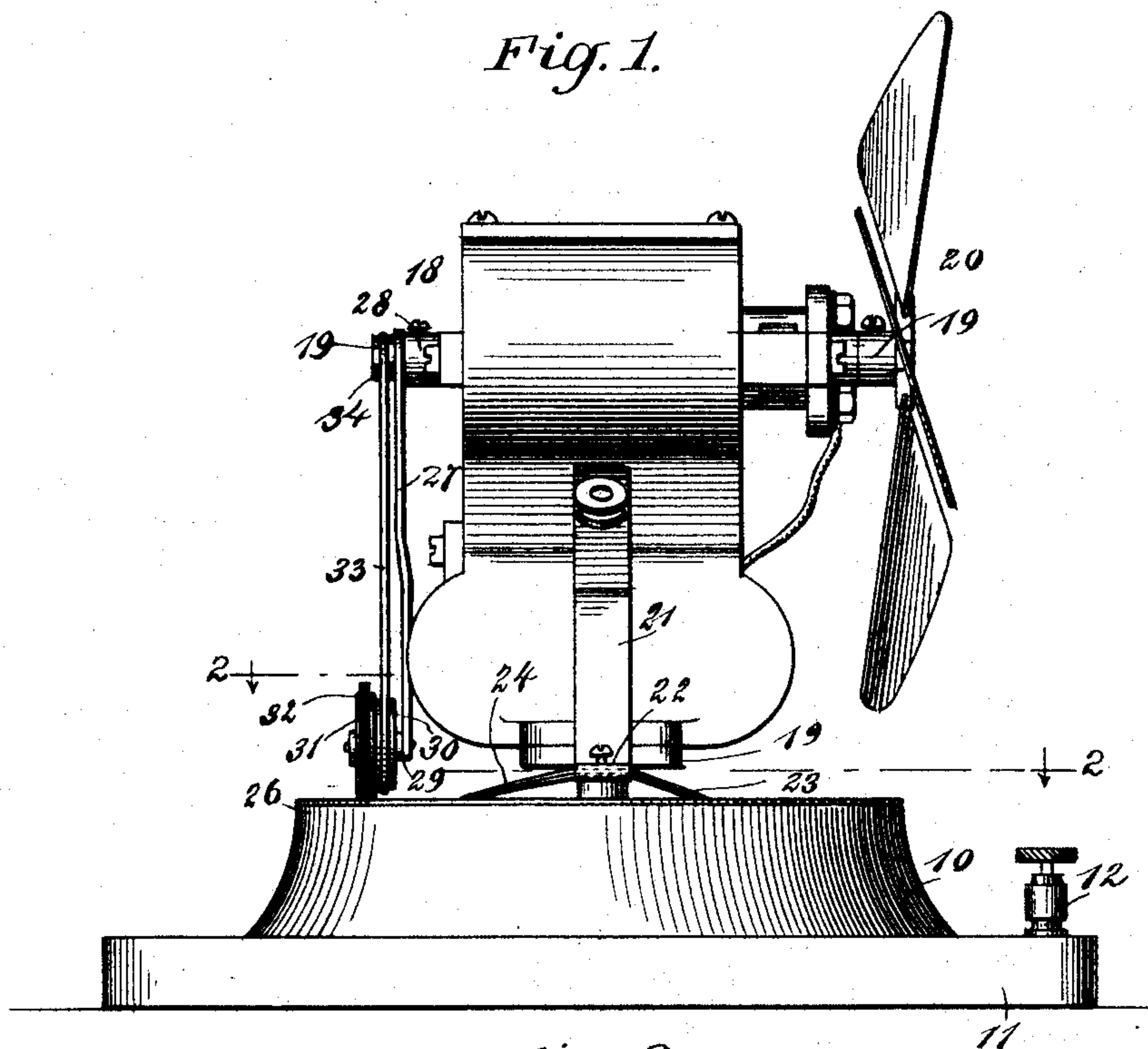


Fig. 2.

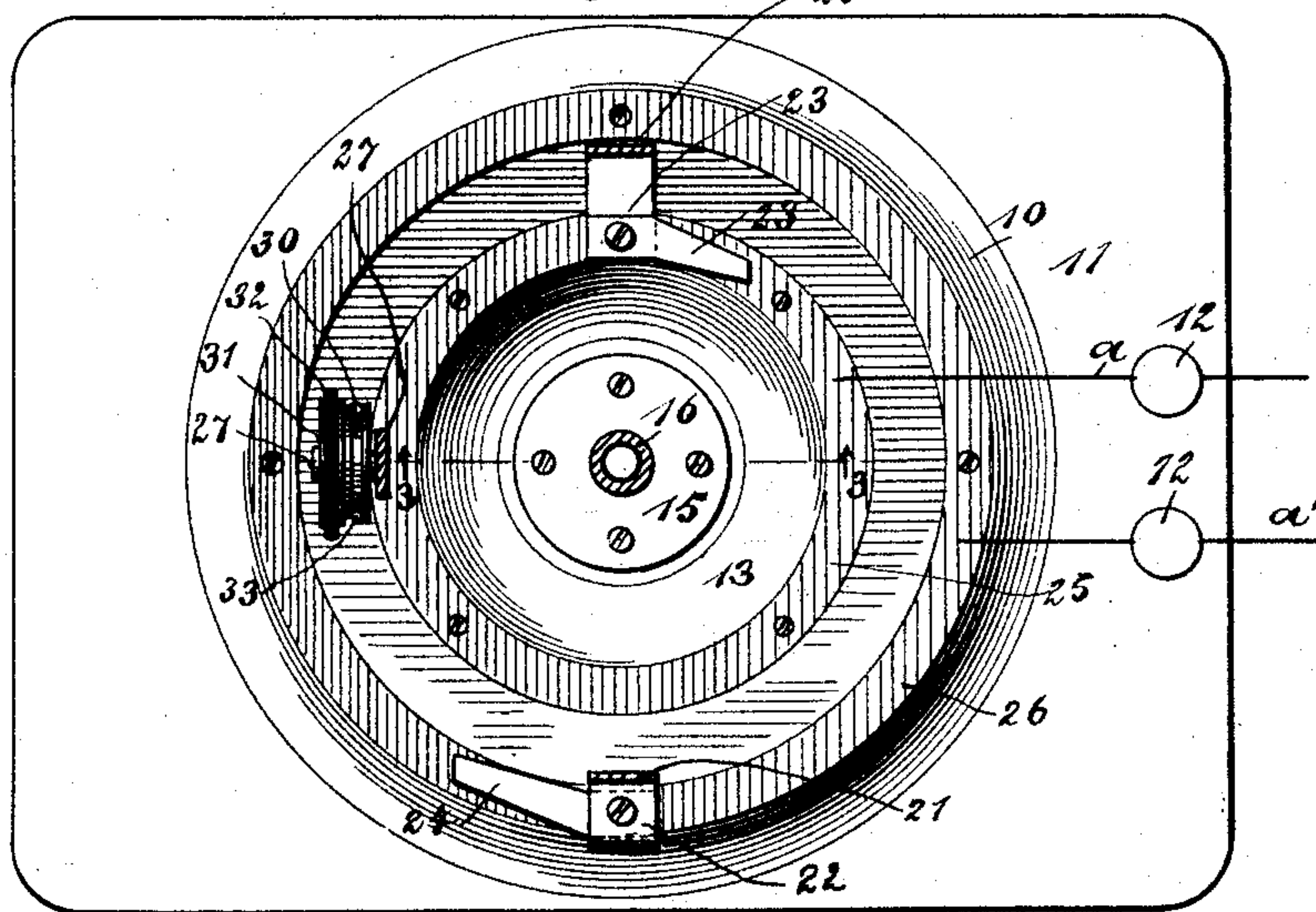
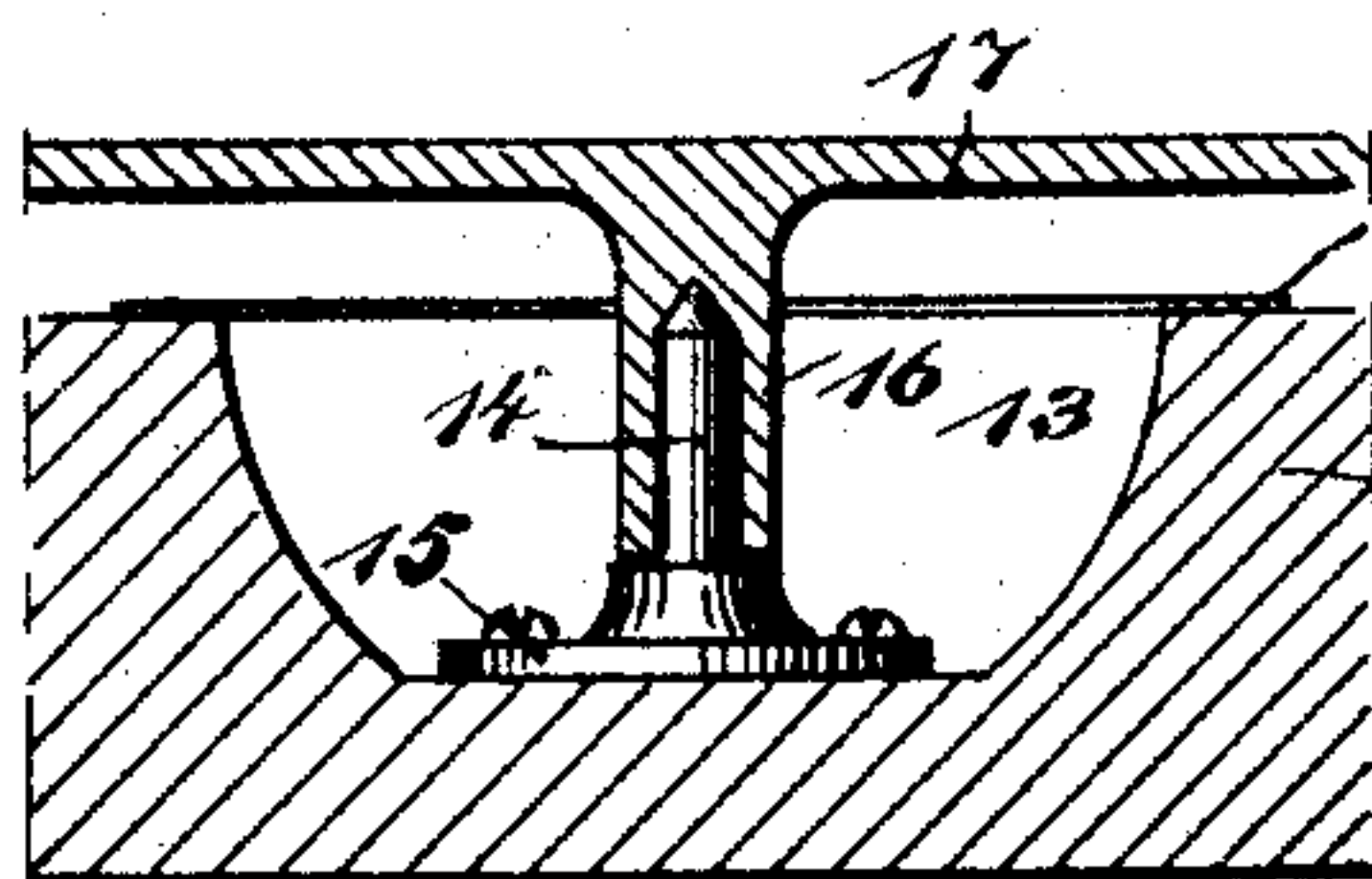


Fig. 3.

WITNESSES:
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CHAIMSONOVITZ P. ELIESON, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF
TO FRANCIS A. PELLAS, OF OGEBBIO, ITALY.

FAN-MOTOR.

SPECIFICATION forming part of Letters Patent No. 506,481, dated October 10, 1893.

Application filed July 16, 1892. Serial No. 440,192. (No model.)

To all whom it may concern:

Be it known that I, CHAIMSONOVITZ P. ELIESON, of New York city, in the county and State of New York, have invented a new and
5 Improved Electrically-Operated Fan, of which the following is a full, clear, and exact description.

My invention relates to improvements in that class of revolving fans which are used to
10 produce a circulation of air in rooms, and are usually attached to the armature of a small electric motor so as to be driven directly by the motor. The objection to fans of this sort
15 and by which they are driven is held in a stationary position, and consequently the revolving fan produces an air current which is driven in a column and in a constant direction, so that a person sitting directly in the
20 trajectory of the air column will receive more wind than is desirable and all movable light articles will be displaced, while a person sitting slightly to one side of the air current will receive practically no benefit from the
25 same.

The object of my invention is to obviate this difficulty, which I do by causing the motor and fan to revolve slowly and constantly while the fan is being rapidly rotated on its
30 own axis, thus preventing the air from being projected from the fan in a solid column but causing an even distribution and circulation through the surrounding atmosphere. This arrangement enables a small fan and motor
35 to be placed in a central position such as upon a table surrounded by people, and in such a case each individual will receive as much benefit from the air draft as any other, and none will receive an unpleasantly forcible
40 blast of air.

To this end my invention consists of an electrically operated fan, the construction and arrangement of which will be hereinafter described and claimed.

45 Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

50 Figure 1 is a side elevation of the apparatus

embodying my invention. Fig. 2 is a sectional plan of the same on the line 2—2 in Fig. 1; and Fig. 3 is a detail section on the line 3—3 in Fig. 2, showing the construction of the pedestal and the manner of pivoting
55 the motor.

The motor and fan are mounted upon a pedestal 10, which is preferably secured to a flat base plate 11, so that it may rest upon
60 any convenient support, and this base plate is provided with binding posts 12, of the usual construction.

In the center of the pedestal is a basin-like depression or recess 13, in the center of which is secured a pivot post 14, having preferably
65 a conical top and a base flange 15, which facilitates its attachment to the pedestal. The pivot post 14 enters a socket 16, which is held to turn on the post, and which is produced in a boss on the under side of a cross
70 plate 17, which is fastened to the bottom of an electric motor 18, which may be of any approved construction.

The motor shaft 19, carries a revoluble fan
75 20, which is adapted to produce a current of air and which also may be of the usual kind.

The pole pieces of the motor have depending arms 21, secured to them, which arms extend downward below the bottom of the motor and terminate in right angle sockets 22, to
80 which are secured trailers or brushes 23 and 24, these being adapted to move over concentric conducting tracks 25 and 26, which are produced on the top of the pedestal and suitably insulated, and connect by the wires *a* and *a'*
85 with the binding posts 12.

On one end of the motor is a depending arm 27, which at its upper end has a collar 28, which is secured to and journaled on one
90 end of the armature shaft 19 and this arm, at its lower end, carries a transverse shaft 29, on which is journaled a grooved pulley 30, which is formed integral with a small wheel 31, having a tire 32 which is adapted to contact with the top face of the pedestal 10, and
95 which is made of rubber or some other suitable substance adapted to press with sufficient friction upon the pedestal. The pulley 30 connects a belt 33, with a small pulley 34, on the armature shaft.
100

The operation of the fan is as follows:—
The binding posts are connected with a suitable source of electricity, and when the current is turned on it is carried through the
5 tracks 25 and 26 by the wires *a* and *a'*. The circuit is also closed through the motor, being picked up by the trailers or brushes 23 and 24, and the motor is put immediately in operation. When the armature shaft begins to
10 revolve, it turns the fan 20, thus creating an air current and at the same time, the belt 33, pulley 30, and wheel 31 are moved and the friction of the wheel causes the arm 27 and motor 18 to travel round and round, the motor spinning on the pivot post 14. It will be
15 seen then that the air current cannot be projected in a column and in a constant direction, for as soon as it is started the motor will begin to turn, thus changing the direction of the current, the result being that instead of a strong outwardly projecting current a gentle and equal disturbance of the surrounding air is produced and the desired cooling effect is had, without any of
20 the disadvantages of a strong blast of wind.

It will be understood that other means may be provided for transmitting an electric current to the motor, and that a gear mechanism or other suitable means may be employed for
30 revolving the motor, without departing from the principle of my invention, as I claim broadly the revolving motor having its armature provided with a fan.

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

1. An electrically operated fan, comprising a suitable base or support, an electric motor held to turn on the support a fan carried by
40 the armature of the motor, and propelling

mechanism driven by the armature of the motor and adapted to engage its support so as to revolve the motor, substantially as described.

2. An electrically operated fan, comprising 45 a base or pedestal, a motor held to turn thereon, a fan carried by the motor, a friction wheel carried by the motor and held to run on the base or pedestal, and an operative driving connection between the friction wheel 50 and the armature of the motor, substantially as described.

3. An electrically operated fan, comprising a base or pedestal having concentric conducting tracks thereon which are adapted to connect with a source of electricity, a motor held to turn upon the base or pedestal, trailers or brushes carried by the motor and adapted to contact with the tracks, a fan carried by the armature shaft of the motor, a friction wheel 60 secured to the motor and held to run on the base or pedestal, and an operative gear connection between the armature shaft of the motor and the friction wheel, substantially as described. 65

4. An electrically operated fan, comprising a base or pedestal having concentric conducting tracks thereon adapted to connect with a source of electricity, and a central depression or recess therein, a pivot post secured in the 70 recess, a motor held to turn on the pivot post and having trailers or brushes to connect with the tracks, a fan carried by the armature of the motor, and mechanism driven by the armature and adapted to revolve the motor, 75 substantially as described.

CHAIMSONOVITZ P. ELIESON.

Witnesses:

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