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Patented Apr. 16, 1901.

L. N. D. WILLIAMS.
SUPPORTING DEVICE FOR ELECTRIC FANS, &c.

(Application filed July 26, 1899.)

(No Model.)

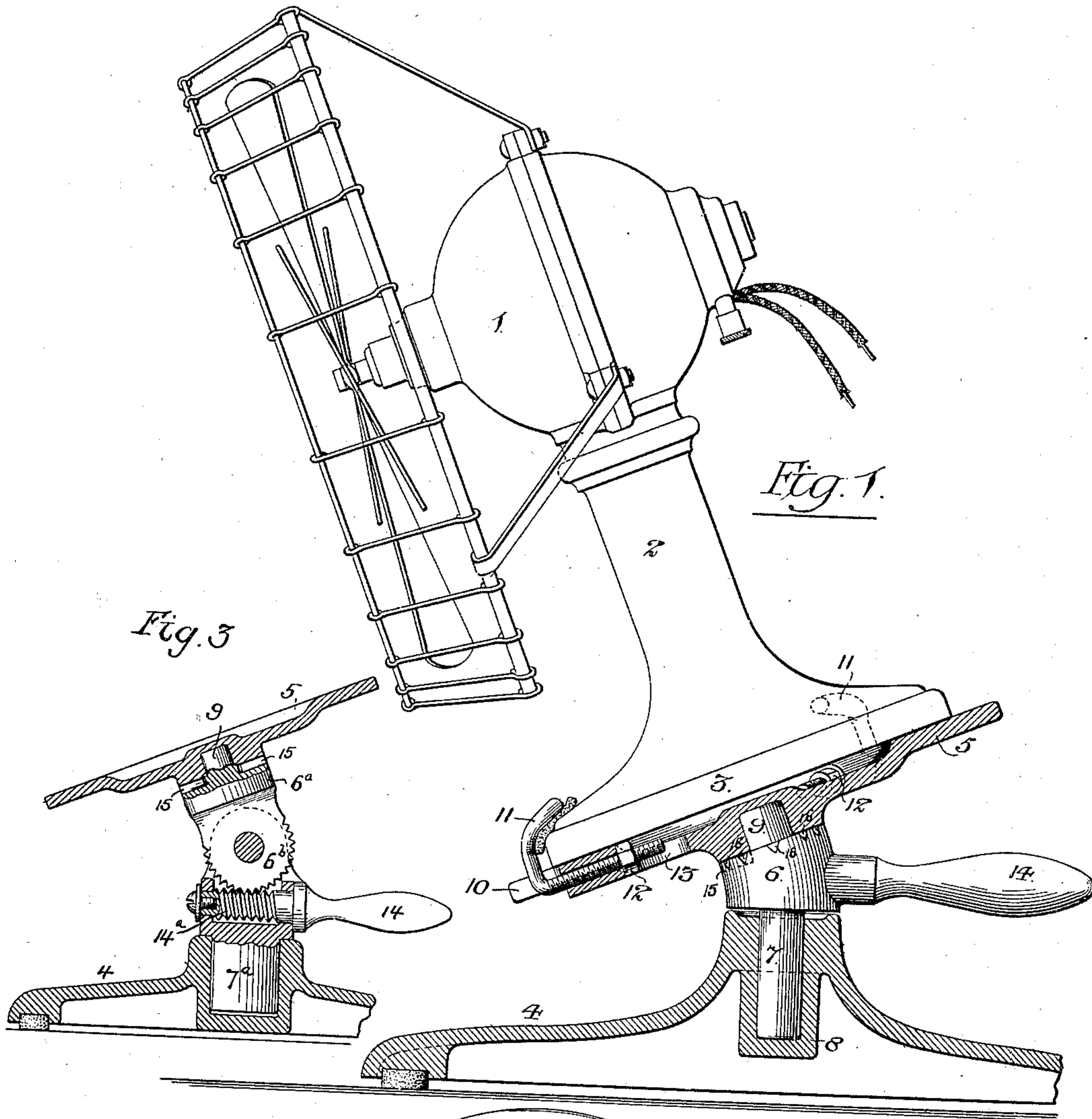
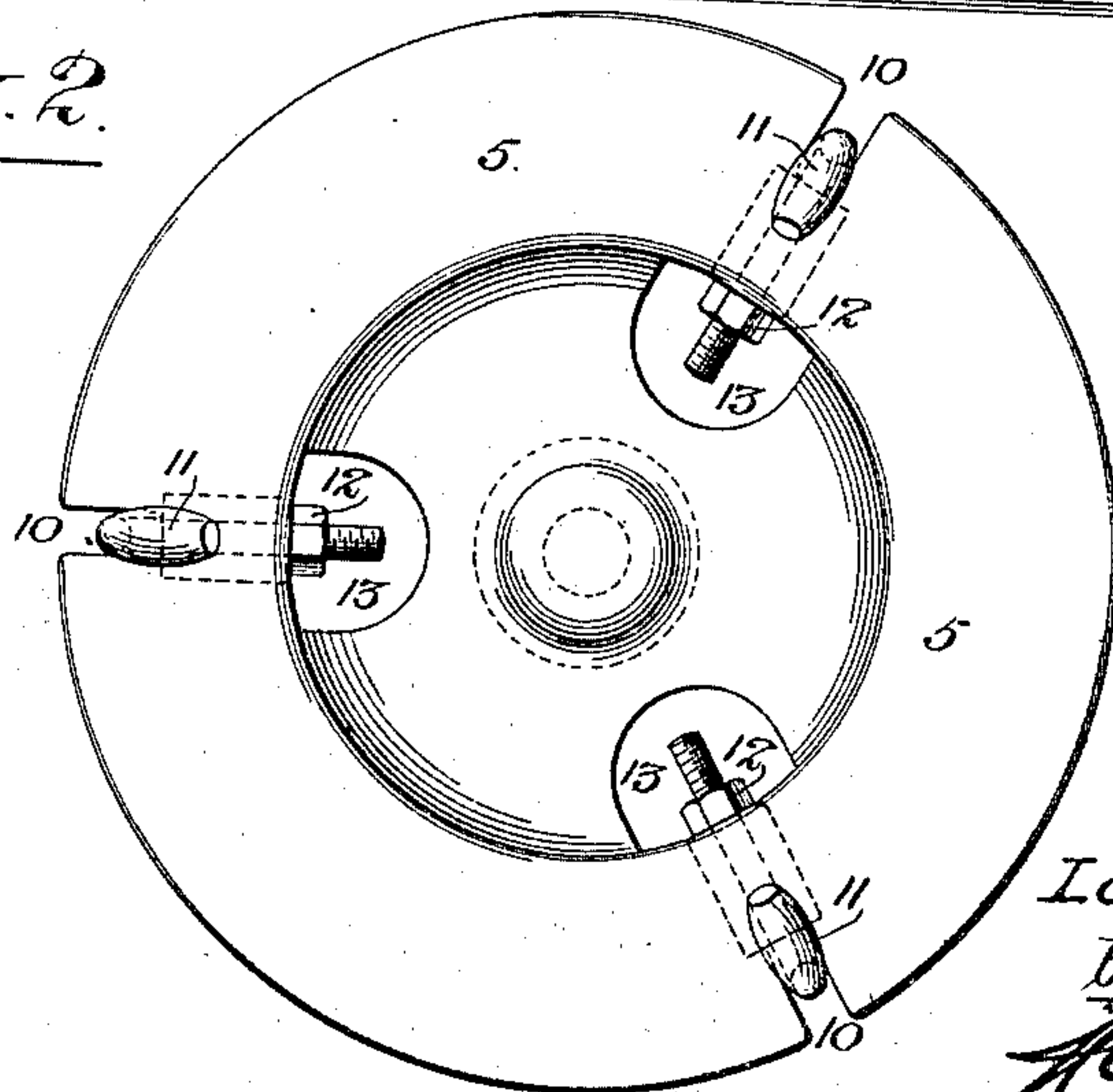


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

LOUIS N. D. WILLIAMS, OF ASHBOURNE, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO ROBERT W. SCOTT, OF PHILADELPHIA, PENNSYLVANIA.

SUPPORTING DEVICE FOR ELECTRIC FANS, &c.

SPECIFICATION forming part of Letters Patent No. 672,303, dated April 16, 1901.

Application filed July 26, 1899. Serial No. 725,190. (No model.)

To all whom it may concern:

Be it known that I, LOUIS N. D. WILLIAMS, a citizen of the United States, and a resident of Ashbourne, Montgomery county, Pennsylvania, have invented certain Improvements in Supporting Devices for Electric Fans, of which the following is a specification.

One object of my invention is to provide a cheap and simple form of support for electric fans whereby said fan can be caused to face in any desired direction and can be inclined at different angles in respect to the vertical, so as to project a current of air at different angles in respect to the horizontal, a further object of the invention being to so construct the device that it can be used as an attachment for application to existing fan structures. These objects I attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a side view, partly in section, showing my improved supporting device as used in connection with an ordinary form of electric fan. Fig 2 is a plan view of one of the elements of the supporting device, and Fig. 3 is a view illustrating a form of support embodying a special feature of my invention.

In Fig. 1 is represented an ordinary form of electric fan, of which 1 is the motor-casing, with stem 2 and base 3. That form of my improved supporting device shown in Fig. 1 comprises a base 4, a clamping-plate 5 for the base of the fan structure, and an interposed block 6, the latter having a vertically-depending stud or pin 7, which is fitted so as to turn freely in a socket 8 on the base 4, the pin being preferably of such length that the bottom of the block 6 is supported clear of the top of the base, so as to overcome the friction which would arise from the contact of these parts. The top of the block 6 is inclined in respect to the horizontal, and projecting at right angles from said top surface of the block is a pin or stud 9, which serves as a pivot for the clamp-plate 5 of the supporting device. The block 6 has at one side a projecting handle 14, whereby it can be conveniently manipulated. The fan structure has therefore two pivotal axes, one vertical and one inclined at other than a right angle in respect to the ver-

tical. Hence said fan structure can be turned so as to face in any direction, and in whatever position of circumferential adjustment can be tilted or inclined in either direction from the vertical within limits determined by the angle of the pivot-pin 9. If desired, this angle may be changeable. Thus as shown in Fig. 3 the pivot-pin 9 projects from a block 6^a, which has a lug or ear 6^b pivoted to the upper end of the vertical pin or stud 7^a, said lug 6^b being toothed around a portion of its edge for engagement with a screw or worm 14^a, which forms a continuation of the handle 14 and is free to turn in bearings on said pin or stud 7^a, so that the block 6^a can be caused to swing on its pivot, and thus vary the angle of the pin 9.

The clamping-plate 5 of the supporting device has radial slots 10, within which are guided the hooked ends of a series of clamping-bolts 11, the stems of these bolts passing through radial openings in the clamping-plate 5 and engaging nuts 12, contained in openings 13 in said plate, so that by manipulating these nuts the clamping-bolts can be moved outward or inward, thereby providing for considerable variation in the diameter of the bases of the fans or other structures to be supported.

The use of the clamping-plate 5 adapts the supporting device to existing forms of fan structures; but when said structure is constructed for being directly pivoted upon the block 6 the use of the clamping-plate will not be necessary. The element 4 of the support may also constitute a bracket or ceiling plate instead of a stand, if the stud 7 is retained longitudinally in the socket, and in order to prevent accidental displacement of the plate 5 after it has been adjusted said plate may have a lug or lugs 15, which may engage with any of a series of notches 16, formed in the inclined face of the block 6.

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

1. The combination of a standard carrying a motor, a fan driven by said motor and disposed so as to project a current of air in a direction substantially at right angles to the axial line of said standard, a base, and a block interposed between the base and the motor-

standard and providing pivotal bearings one on the base and the other for the motor-standard, one of said pivotal bearings being inclined in respect to the other, whereby turning of the block upon its pivotal bearing on the base will change the direction, in respect to the horizontal, of the current of air delivered by the fan, substantially as specified.

2. The combination of a standard carrying a motor, a fan driven by said motor and disposed so as to project a current of air in a direction substantially at right angles to the axial line of said standard, a base or holder, a bearing therein, a block having a depending vertical pivot-stud adapted to said bearing, and a beveled upper surface with pivotal bearing for the motor-standard at right angles to said beveled surface, whereby turning of the block upon its vertical pivotal axis will change the direction in respect to the

horizontal of the blast of air delivered by the fan, substantially as specified.

3. The combination of the motor-carrying standard, and a fan driven by said motor, a base, a plate having radially guided and hooked clamp-arms adapted to engage with the motor-standard, provision for radially contracting said hooked clamp-arms, and a block interposed between the base and said plate and providing pivotal bearings, one on the base and the other for the plate, said bearings being at an angle in respect to each other, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LOUIS N. D. WILLIAMS.

Witnesses:

F. E. BECHTOLD,
JOS. H. KLEIN.