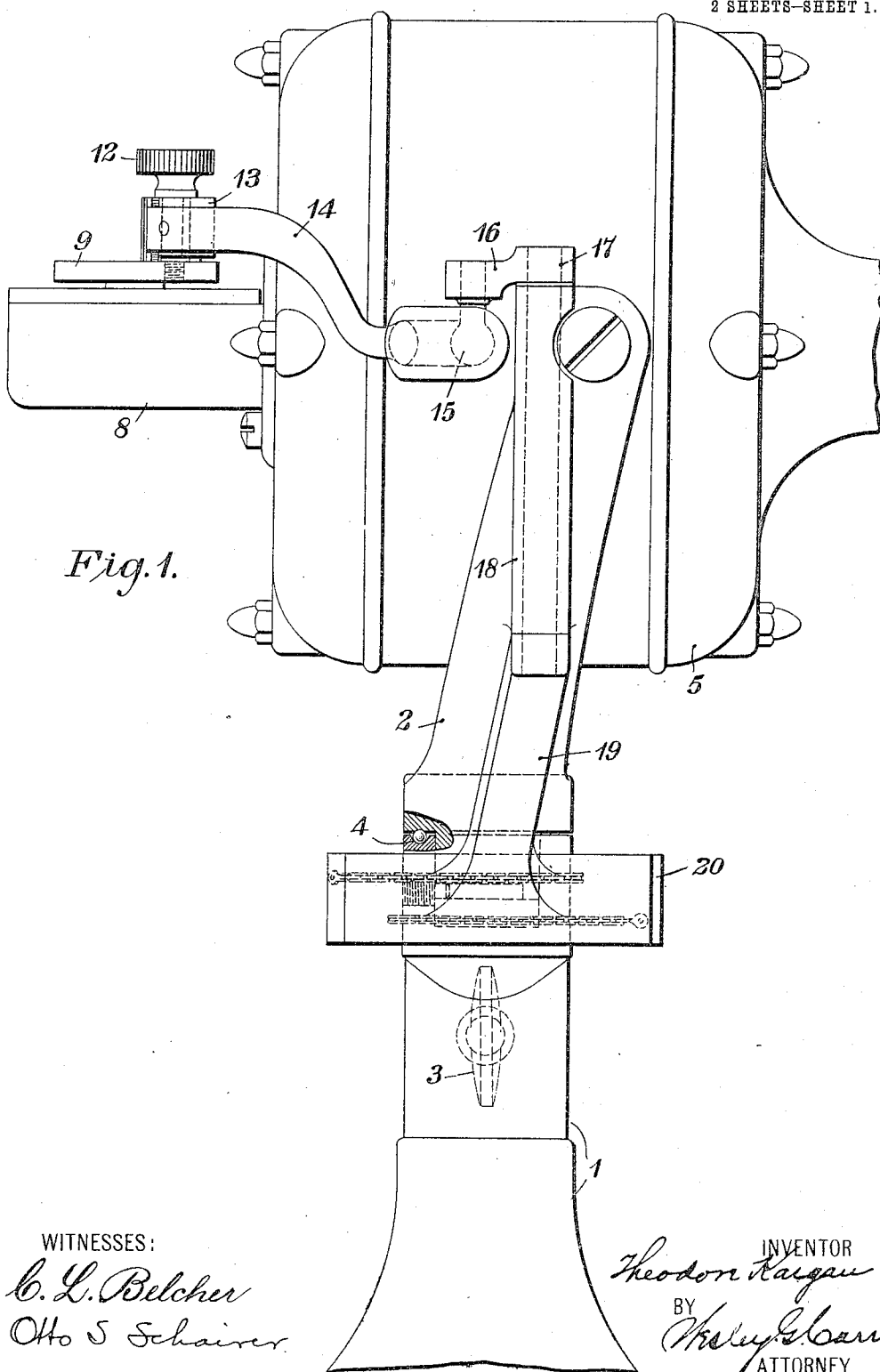


T. KARGAU.
OSCILLATING FAN.
APPLICATION FILED SEPT. 26, 1910.

1,031,853.

Patented July 9, 1912.

2 SHEETS—SHEET 1.



WITNESSES:

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Otto S. Schairer

INVENTOR

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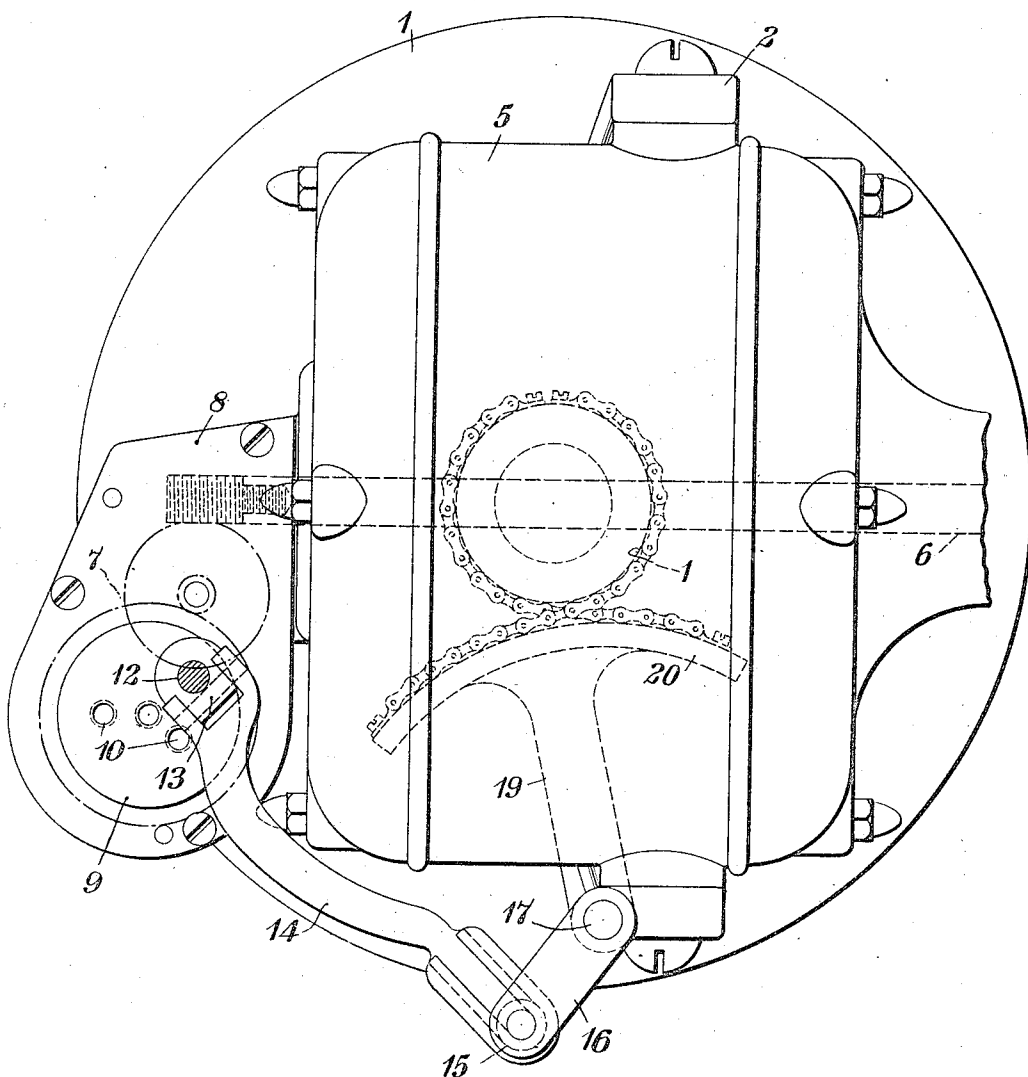
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2 SHEETS-SHEET 2.

Fig. 2.



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THEODORE KARGAU, OF ST. LOUIS, MISSOURI, ASSIGNOR TO WESTINGHOUSE ELECTRIC AND MANUFACTURING COMPANY, A CORPORATION OF PENNSYLVANIA.

OSCILLATING FAN.

1,031,853.

Specification of Letters Patent.

Patented July 9, 1912.

Application filed September 26, 1910. Serial No. 583,901.

To all whom it may concern:

Be it known that I, THEODORE KARGAU, a citizen of the United States, and a resident of St. Louis, in the State of Missouri, have invented a new and useful Improvement in Oscillating Fans, of which the following is a specification.

My invention relates to electrically driven oscillating fans, and it has for its object to provide extremely simple and effective means for causing oscillation of a fan that is directly driven by an electric motor, which means permits of pivotally mounting the motor so that its axis may be adjusted to occupy a variety of positions with respect to a horizontal plane.

Figure 1 of the accompanying drawings is a side view of a fan motor embodying the present invention, some of the parts being shown in section for the sake of clearness of illustration, and Fig. 2 is a plan view of the motor of Fig. 1.

Rotatably mounted in the upper end of a base 1 is a forked member 2, one end of which is secured in the base by means of a set screw 3, a ball bearing 4 being interposed between the base and the forked member to provide for greater freedom of movement of the latter. Pivotally secured to and supported between the prongs or arms of the member 2 is a motor 5 that is primarily adapted to drive a fan (not shown), the axis of the pivotal connection preferably passing through the center of gravity of the motor and the parts carried thereby.

One end of the motor shaft 6 is connected, through suitable reduction gearing 7 that is mounted within and inclosed by a casing 8, to a disk 9 that is provided with a plurality of screw threaded apertures 10 located at different distances from its center. The apertures 10 are provided for the reception of a crank pin 12 having a knurled head which permits of its being readily inserted into and removed from the said apertures. The crank pin is surrounded by a block 13 to which one end of a connecting rod 14 is pivotally connected, its other end being connected by means of a ball and socket or another suitable universal joint 15 to one end of an arm 16. The arm 16 is mounted upon the upper end of a vertical shaft or rod 17 for which a bearing 18 is provided upon the side of one of the prongs or arms of the member 2. To the lower end of the shaft

17 is secured a downwardly and inwardly extending arm 19 having a sector shaped end 20 that is disposed adjacent to the upper rounded end of the base 1. A suitable operative connection is provided between the sector 20 and the base 1, such as two crossed chains that are respectively secured at their ends to opposite ends of the sector 20 and to the base 1, substantially as shown in Fig. 2. Of course, any other operative connection may be employed which will cause rotation of the member 2 and the parts carried thereby with respect to the base 1 when the sector 20 is revolved about the axis of the shaft or rod 17.

Rotation of the motor shaft not only causes rotation of the fan but also rotation of the crank pin 12, which, through the connecting rod 14, reciprocates the arm 16 and the sector 20 about the axis of the shaft 17. As the sector 20 is operatively connected to the base 1, its rotation causes a reaction, through the arm 19 and the shaft 17, upon the member 2 and the parts carried thereby so as to cause rotation and oscillation thereof with respect to the base 1. By reason of the universal joint connection between the parts 14 and 16, and of what amounts to a similar connection between the parts 12 and 14, the motor 1 may be adjusted in its supports so that its axis may be horizontal, or may occupy many different angular positions with respect to the horizontal position, while the oscillation of the member 2 and the parts carried thereby will take place as described.

I claim as my invention:

1. The combination with a base, a forked member rotatably mounted upon the base, and a motor pivotally supported by the said member, of a lever fulcrumed to one of the arms of the forked member and having a sector shaped end operatively connected to the base, and an operative universal-joint connection between the other end of the said lever and the motor.

2. The combination with a base, a forked member rotatably mounted upon the base, and a motor pivotally supported by the said member, of a lever fulcrumed to one of the arms of the forked member and having a sector at one end of one of its arms disposed adjacent to the base, crossed flexible members secured at their respective extremities to the base and to opposite ends of the said

sector, and an operative universal-joint connection between the other arm of the said lever and the motor.

3. The combination with a base, a forked member rotatably mounted upon the base, and a motor pivotally supported by the said member, of a lever fulcrumed to one of the arms of the forked member and having a sector shaped end adjacent and operatively connected to the base, a crank driven by the motor, a connecting rod, and universal connections between the connecting rod and both the crank pin and the lever.

4. The combination with a base, and a motor rotatably and tiltingly mounted thereon, of a lever having a sector shaped end operatively connected to the base, and an operative universal-joint connection between the other end of the lever and the motor.

5. The combination with a base, a forked member rotatably mounted upon the base, and a motor pivotally supported between the arms of said member, of a rock shaft journaled in one of the arms of the forked member, arms mounted upon the rock shaft one of which carries a sector that is operatively connected to the base, a crank operated by the motor, and a connecting rod having universal connections with the crank and the other arm that is mounted on the rock shaft.

In testimony whereof, I have hereunto subscribed my name this 13th day of September, 1910.

THEODORE KARGAU.

Witnesses:

F. C. NICHOLSON,
B. B. HINES.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."