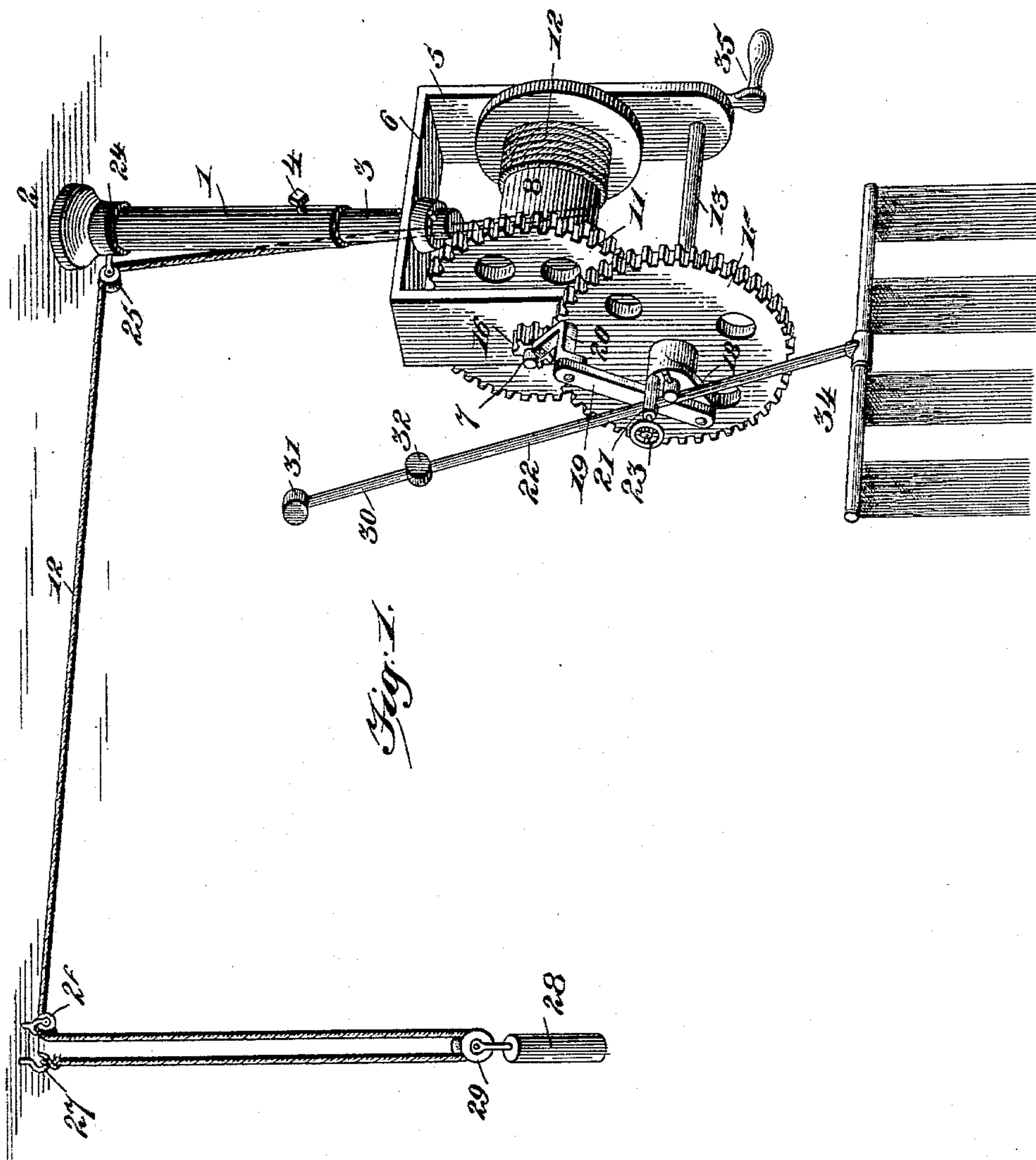


2 Sheets—Sheet 1.

No. 5.96,915.

Patented Jan. 4, 1898.



W. J. S.

Witnesses

H. G. Dieterich
Edwin Kruse

By *their* Attorneys,

Inventore

Edward A. Seward
James T. Joines

Cashnow & Co.

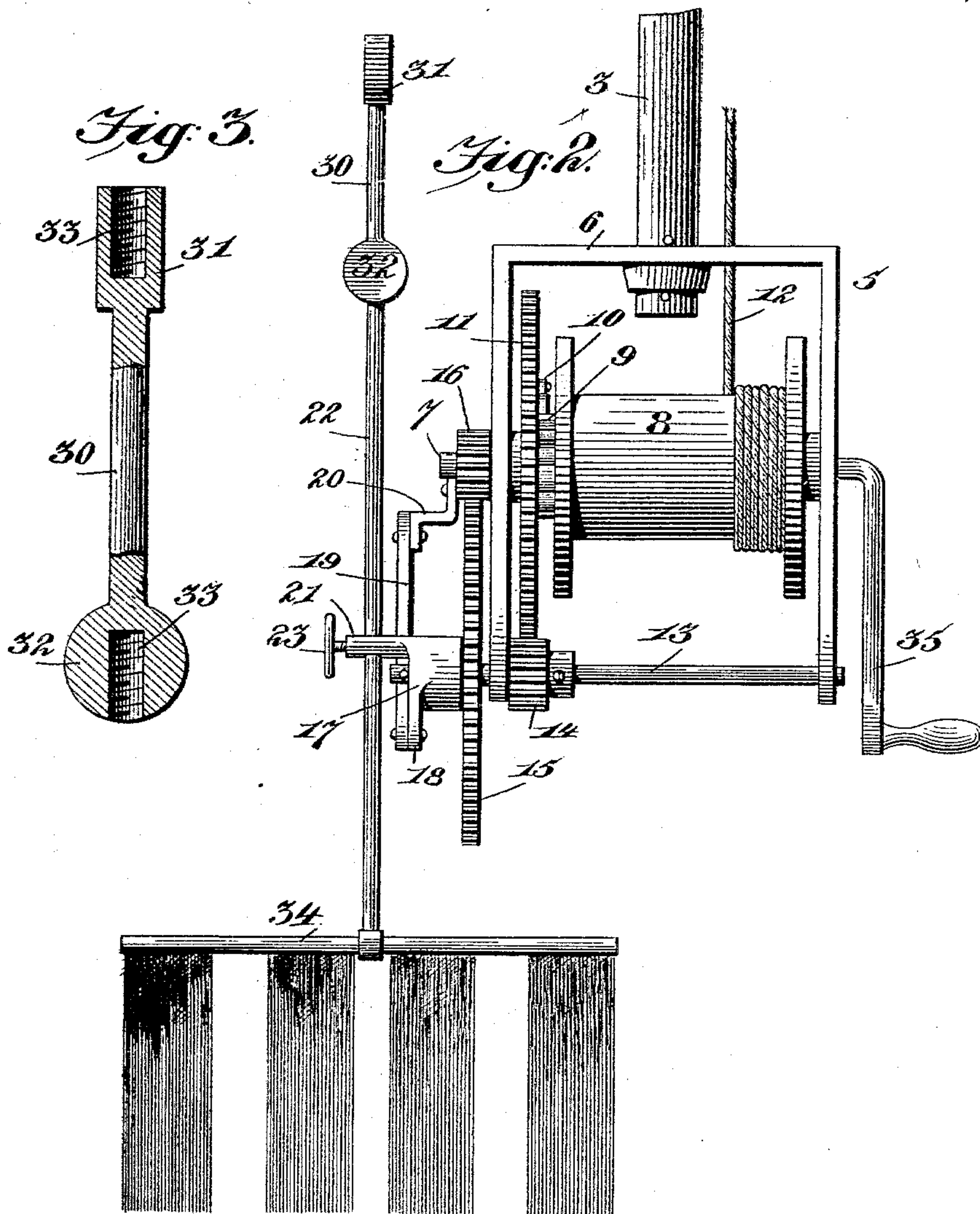
(No Model.)

2 Sheets—Sheet 2.

E. A. SEWARD & J. J. JOINES.
MECHANICAL MOTOR.

No. 596,915.

Patented Jan. 4, 1898.



Inventors

Edward A. Seward
James J. Joines

Witnesses

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C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

EDWARD ARTHUR SEWARD AND JAMES JACKSON JOINES, OF COLUMBUS,
GEORGIA.

MECHANICAL MOTOR.

SPECIFICATION forming part of Letters Patent No. 596,915, dated January 4, 1898.

Application filed April 30, 1897. Serial No. 634,600. (No model.)

To all whom it may concern:

Be it known that we, EDWARD ARTHUR SEWARD, a subject of the Queen of Great Britain, and JAMES JACKSON JOINES, a citizen of the United States, residing at Columbus, in the county of Muscogee and State of Georgia, have invented a new and useful Mechanical Motor, of which the following is a specification.

10 This invention relates to mechanical motors, its object being to provide a motor of cheap and simple construction adapted for driving various classes of light machinery, and more especially for use in connection
15 with fans such as are commonly used for creating currents of air in rooms.

The invention consists of the several details of construction and combination of parts, as will be herein fully described, and particularly pointed out in the claims.

20 In the drawings, Figure 1 is a perspective view showing our improved motor when used to drive a fan. Fig. 2 is a side elevation of the motor and the fan. Fig. 3 is a view, partly
25 in section, of a detached detail.

Similar reference-numerals indicate similar parts in the several figures.

1 indicates a tube which is firmly secured at its upper end to the ceiling 2 in any suitable manner.

3 is a rod fitting within the tube 1 and vertically adjustable therein, and the rod is held in its adjusted position by means of a set-screw 4, which works in the lower end of the
35 tube 1.

5 indicates a frame for supporting the several parts of the motor. This frame is of inverted-U shape, and its horizontal bar 6 is swiveled on the lower end of the rod 3 to permit the frame and the mechanism which it supports to be turned on the bar.

7 indicates a shaft which is journaled in suitable bearings about midway the length of the two vertical arms of the frame 5, and on
45 this shaft a winding-drum 8 is mounted to turn with the shaft. To one end of the drum a ratchet-disk 9 is rigidly secured, and a spring-actuated dog 10, which is pivoted on the face of a gear-wheel 11, engages the teeth
50 of the ratchet-disk 9. The gear-wheel 11 is loosely mounted on the shaft 7, and the dog

is so arranged that the gear-wheel 11 will be turned when the drum is revolved by the unwinding of the rope 12. A shaft 13 is journaled in suitable bearings in the lower ends
55 of the vertical arms of the frame, and this shaft carries a pinion 14, which meshes with the gear 11. The shaft 13 extends beyond its bearings at one end and carries a gear-wheel 15, which meshes with a pinion 16, loosely
60 mounted on the shaft 7 outside of the frame 5. The pinion 14 and the gear-wheel 15 are firmly secured on the shaft 13 to turn with it.

17 indicates a sleeve which is loosely mounted on the end of the shaft 13 outside of the gear-wheel 15. This sleeve has an arm 18 projecting laterally from it, and to the outer end of the arm 18 the lower end of a link 19 is pivoted. The upper end of the link 19 is pivotally connected to the end of a crank 20, carried
70 by the pinion 16. Extending forwardly from the front end of the sleeve 17 is a stud 21, which is provided with an opening at a right angle to the axis of the sleeve to receive the rod 22. This rod can be vertically ad-
75 justed in the stud 21 and clamped in position by means of a set-screw 23.

On the upper end of the tube 1 a collar 24 is loosely fitted, and to this collar is attached a pulley 25, over which the rope 12 passes.
80 26 represents another pulley, which may be secured to any part of the ceiling, and 27 represents a hook arranged adjacent to the pulley 26. The rope 12 passes from the pulley 25 over the pulley 26, and is then looped and
85 its end attached to the hook 27. A weight 28 is provided with a pulley 29, which is supported in the loop formed in the rope 12. This weight 28 will serve to unwind the drum and thereby operate the gearing connected
90 with it.

30 indicates a short rod having at one end a knob 31, which is interiorly threaded, and at its other end a weight 32. The weight 32 is provided with a threaded opening 33 op-
95 posite to the rod 30, which is of the same diameter as the threaded opening in the end of the knob 31. The upper end of the rod 22 is threaded, and on this threaded end either the weight 32 or the knob 31 is adapted to be
100 screwed, and by changing the position of the weight relative to the rod 22 and adjusting

the rod 22 vertically in the stud 21 the speed and extent of the throw of the lower end of the rod 22 can be varied, as circumstances may require.

34 indicates a fan which is secured to the lower end of the rod 22 in any suitable manner so as to move with it.

The shaft 7 is provided with a crank 35, which will preferably be detachable from the shaft and is for the purpose of winding the rope 12 on the drum 8.

The operation of the device is as follows: The rope 12 having been wound on the drum, the weight 28 will tend to unwind the rope from the drum, and as the drum is revolved it will turn the gear-wheel 11 by means of the ratchet-and-pawl connection between the drum and the gear-wheel, and this gear-wheel 11 will turn the pinion 14 and the gear 15, and the latter will turn the pinion 16. As the crank 20 on the pinion 16 revolves it will cause the arm 18 to oscillate to and fro and thereby impart a rocking movement to the rod 22. If it is desired to give the rod 22 a slow movement, the knob 31 will be secured on the end of the rod 22, and thereby bring the weight 32 at its greatest distance from the pivot on which the rod 22 rocks, and it will therefore require more power to rock the rod 22 and as the force exerted by the unwinding of the rope is uniform at all times the speed will necessarily be decreased. By securing the weight 32 on the end of the rod 22 the speed of the fan will be increased, as will be readily understood, and it is also evident that by adjusting the rod 22 vertically in the stud 21 the throw of the lower portion of the rod, as well as its speed, may be regulated. It is also evident that by having the frame 5, which supports the several parts of the motor, swiveled on the rod 3 the motor may be turned to face in any direction and consequently the direction in which the fan will swing may be adjusted to suit the convenience of the user, and as the collar 24 is free to turn on the tube 1 the pulley 25 will automatically adjust itself to the lead of the rope from the drum.

It will be understood that changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what we claim is—

1. In a mechanical motor, the combination with a drum and a weighted rope adapted to be wound on said drum, of a train of gearing driven by the unwinding of said weighted rope, a crank on the last wheel in said train, a sleeve mounted to turn on its support, an

arm extending from the sleeve, a link connecting the said arm and crank, a rod slidably supported in said sleeve at a right angle to the axis of the sleeve, and a weight adjustable on said rod, substantially as described.

2. In a mechanical motor, the combination of a depending rod, a frame swiveled on said rod, a drum supported in said frame, a weighted rope adapted to be wound on the drum, a train of gearing supported by said frame and operated by the unwinding of the said rope, a sleeve mounted to turn on its support, a rod secured intermediate its ends to the said sleeve at a right angle to the axis of the sleeve, suitable connections between the gearing and the sleeve to rock the latter on its support, and a weight adjustable on said rod to regulate the speed of the gearing, substantially as described.

3. In a mechanical motor, the combination with a drum and a weighted rope adapted to be wound on said drum, of a train of gearing driven by the unwinding of said weighted rope, a crank on the last wheel in said train, a sleeve mounted to turn on its support, an arm extending from the sleeve, a link connecting the said arms and crank, a stud on the sleeve provided with an opening at a right angle to the axis of the sleeve, a rod extending through said opening, a set-screw working in the stud to clamp the rod in position, and a weight adjustable on the rod, substantially as described.

4. In a mechanical motor, the combination of a depending tube, a frame having a swivel connection to the lower end of said rod, a drum and a train of gearing supported in said frame, a collar loosely mounted on the upper end of said tube, a pulley supported by said collar, and a weighted rope passing over said pulley and adapted to be wound on the said drum, substantially as described.

5. In a mechanical motor, the combination of a tube depending from a fixed support, a rod vertically adjustable within said tube, a frame swiveled on the lower end of said rod, a drum and a train of gearing supported in said frame, a collar loosely mounted on the upper end of said tube, a pulley supported by said collar, and a weighted rope passing over said pulley and adapted to be wound on the said drum, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

EDWARD ARTHUR SEWARD.
JAMES JACKSON JOINES.

Witnesses:

BEN. T. BROOKS,
E. M. ARNETT.