

J. RECKTENWALD.

SPRING MOTOR.

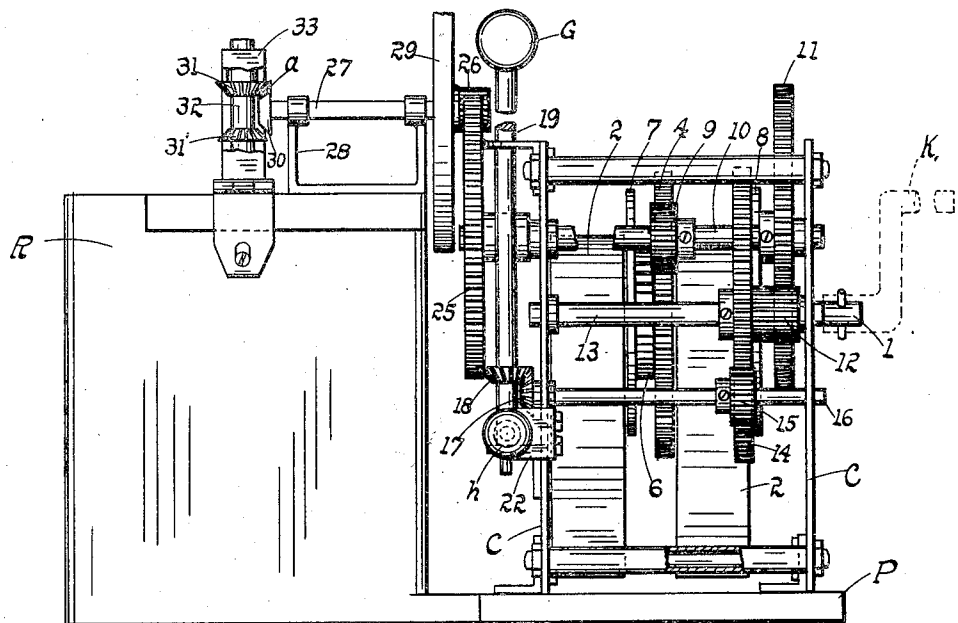
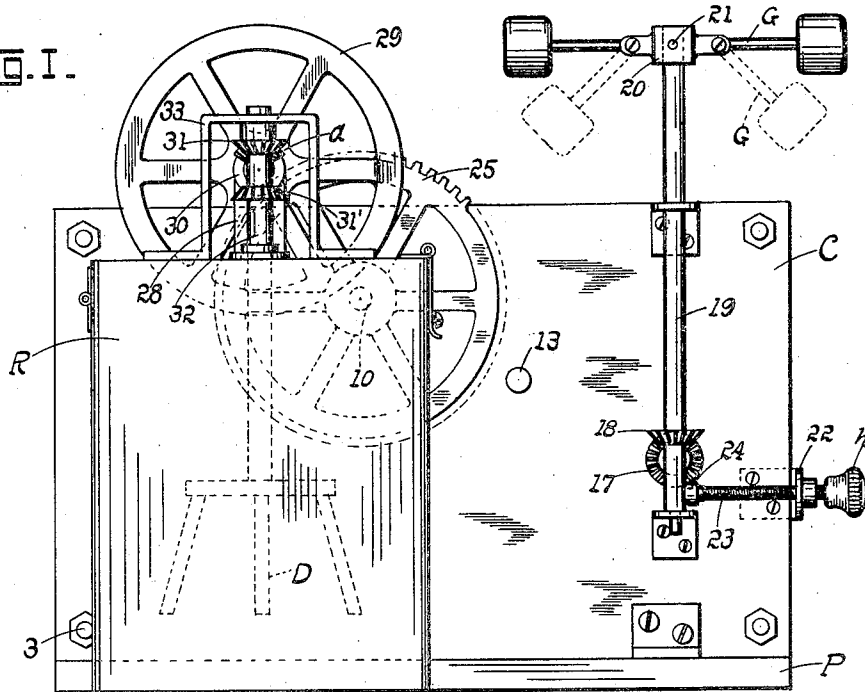
APPLICATION FILED MAY 17, 1912.

Patented Sept. 3, 1912.

2 SHEETS—SHEET 1.

1,037,316.

FIG. 1.



WITNESSES:

Harry A. Beimes

Fannie C. Hefer

FIG. 2.

INVENTOR.

John Recktenwald.

BY

Ernst Karon

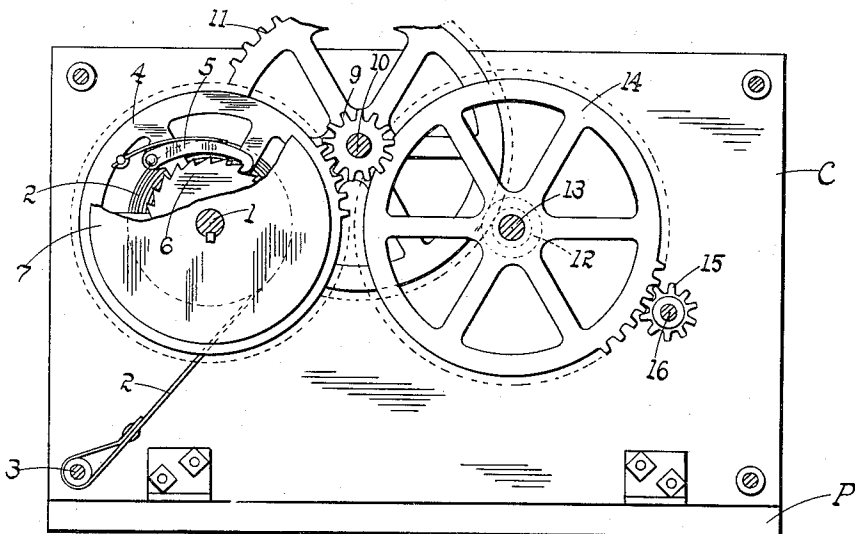
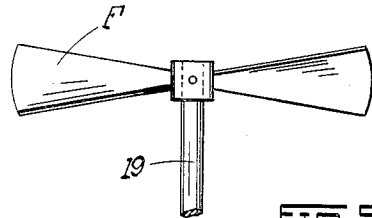
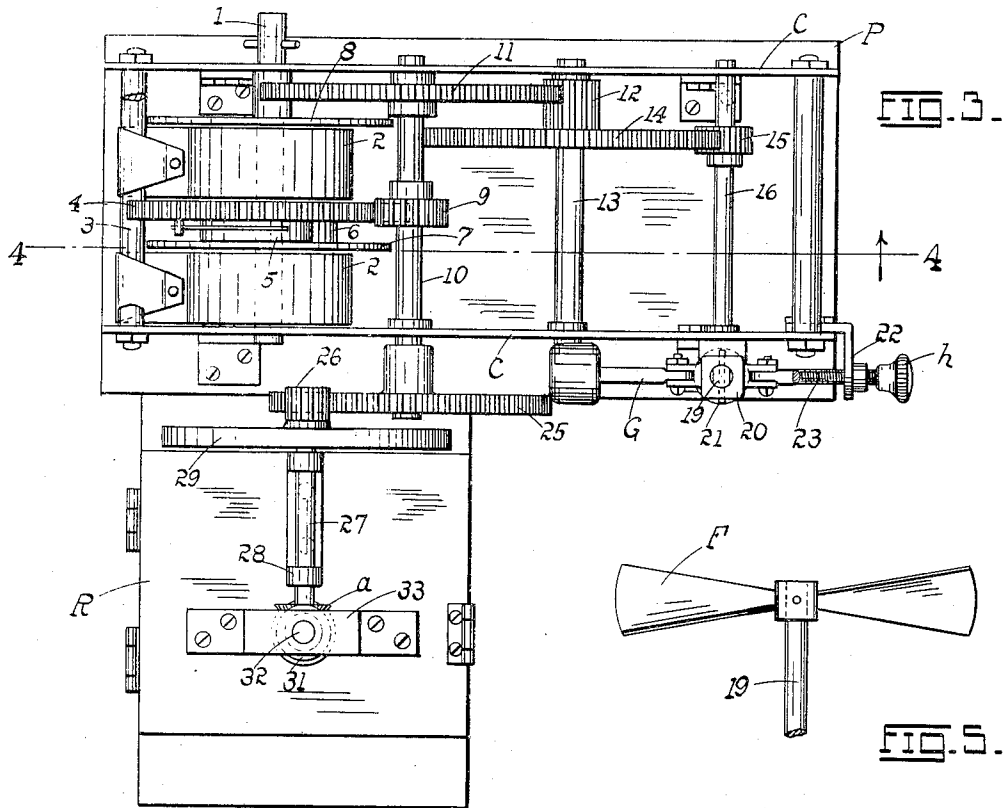
ATTORNEY.

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2 SHEETS—SHEET 2.



WITNESSES:

Harry A. Beines.
 Fannie E. Weber.

FIG. 4.

INVENTOR.

John Recktenwald.

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Attorney.
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UNITED STATES PATENT OFFICE.

JOHN RECKTENWALD, OF NASHVILLE, ILLINOIS, ASSIGNOR OF ONE-HALF TO EDWARD
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SPRING-MOTOR.

1,037,316.

Specification of Letters Patent.

Patented Sept. 3, 1912.

Application filed May 17, 1912. Serial No. 698,037.

To all whom it may concern:

Be it known that I, JOHN RECKTENWALD, citizen of the United States, residing at Nashville, in the county of Washington and State of Illinois, have invented certain new and useful Improvements in Spring-Motors, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements in spring-motors for washing-machines; and it consists in the novel details of construction more fully set forth in the specification and pointed out in the claim.

In the drawings, Figure 1 is a side elevation of my invention; Fig. 2 is an end view thereof; Fig. 3 is a top plan; Fig. 4 is a longitudinal vertical section on the line 4-4 of Fig. 3; and Fig. 5 is a detached view of a fan adapted to take the place of the governor of the motor.

The present invention is directed to improvements in spring-motors for driving washing-machines, churns, and the like, and has for its object to construct a motor which will develop sufficient power to subserve its purpose; one which will run a considerable length of time without rewinding; one which is provided with a detachable governor for which a fan may be substituted; one under perfect control of the operator, and one possessing further and other advantages better apparent from a detailed description of the invention which is as follows:—

Referring to the drawings, C represents a casing resting on a suitable base plate P, in which casing is mounted the train of gear mechanism composing the motor. The latter comprises a horizontal winding shaft or arbor 1 on each side of the center of which is wrapped a driving spring 2, 2, the outer ends being secured to a bottom anchor member or bar 3, the inner ends being secured to the shaft, as well understood in the art. Two independent (but simultaneously propelling) springs distributed as here shown maintain a more even draft on the shaft than would a single large spring disposed at one end of the shaft. Between the springs is interposed a gear wheel 4 (mounted loose on the shaft), to one face of which is pivoted a spring controlled driving pawl 5 which co-operates with a ratchet 6 keyed or otherwise secured to the shaft or arbor 1, a disk 7 sep-

arating the ratchet from the adjacent spring 2. A second spacing disk 8 is interposed between the outer face of the second spring and the adjacent wall of the casing C. Meshing with the gear 4 is a pinion 9 on a transverse shaft 10, the outer end of the latter carrying adjacent to the casing wall, a gear wheel 11 which in turn meshes with a pinion 12 on a second transverse shaft 13, the latter carrying a gear wheel 14 as shown. The gear 14 meshes with a pinion 15 on a third transverse shaft 16 (the several transverse shafts being parallel to one another) one of whose terminals carries adjacent the outer face of the casing wall, a bevel pinion 17 which engages a corresponding pinion 18 on a vertical governor-shaft 19 mounted in any suitable mechanical manner to the outside of the casing. To the upper free end of the shaft 19 is secured a detachable governor G, the central hub portion 20 thereof being passed over the shaft and a pin 21 passed through the parts, though it may be secured in any other mechanical manner. Mounted in a bracket 22 secured to the casing wall is a brake stem 23 in the shape of a screw-stem provided with a milled head *h* at its outer end whereby the screw may be readily manipulated, and with a brake-head 24 adapted to be forced against the governor shaft 19 and the rotation of the latter arrested. In warm weather the governor may be detached from the shaft 19 and a fan F secured thereto, so as to generate the necessary breeze for purposes of fanning as shown in Fig. 5.

One end of the first transverse shaft 10 has secured thereto outside the casing a gear wheel 25 which engages the terminal pinion 26 of a horizontal shaft 27 mounted in a bracket 28 on top of the receptacle R of a washing machine, said shaft 27 being provided with a balance or fly-wheel 29 adjacent the pinion 26. The opposite end of the shaft 27 terminates in a bevel pinion 30 having a toothed section *a* extending only partially around its periphery, said toothed section engaging first the pinion 31 and then the pinion 31' disposed on opposite sides of said pinion 30 on a vertical shaft 32 mounted in a bracket 33 on top of the clothes receptacle R, the shaft 32 extending into the receptacle and having secured thereto the usual dasher D by which the clothes are rubbed. A rotation of the shaft 27 (and

hence of the pinion 30) in a given direction will obviously impart a rocking motion to the vertical shaft 32 and hence a reciprocating rotary motion to the dasher or beater D, because the toothed section *a* of the pinion 30 first engaging the pinion 31 and then 31' will have the effect of rotating the shaft 32 through a given arc first in one direction and then the other. The rotation to the shaft 27 is obviously imparted through the train of gears interposed between the winding arbor 1 and the gear 25, and is too obvious to require detailed description. The shaft 1 is wound by any suitable key K. Should it be desired to arrest the motion of the parts at any time, the same may be accomplished by setting the brake, that is to say by driving the brake head 24 against the governor-shaft 19.

Features shown but not alluded to are well understood in the art and require no detailed description in the present connection.

Having described my invention, what I claim is:—

In combination with a casing, a winding shaft or arbor, a driving spring disposed on each side of the center thereof and having one end secured to an anchor and the other to the shaft, a gear-wheel mounted loosely on the shaft between the springs, and provided with a spring-controlled driving pawl on one face thereof, a ratchet on the shaft engaged by said pawl, a disk separating the ratchet from the adjacent spring, a spacing disk interposed between the casing wall and the second spring, a vertical governor shaft mounted on the outside of the casing, a train of gear mechanism interposed between said governor shaft and the gear on the winding arbor, a friction brake for the governor shaft, and means for connecting the gearing to suitable operating mechanism located outside the casing.

In testimony whereof I affix my signature, in presence of two witnesses.

JOHN RECKTENWALD.

Witnesses:

EMIL STAREK,
FANNIE E. WEBER.