(No Model.)

F. W. CLARK.

MOTOR.

No. 503,829. Patented Aug. 22, 1893.

Fig. 1

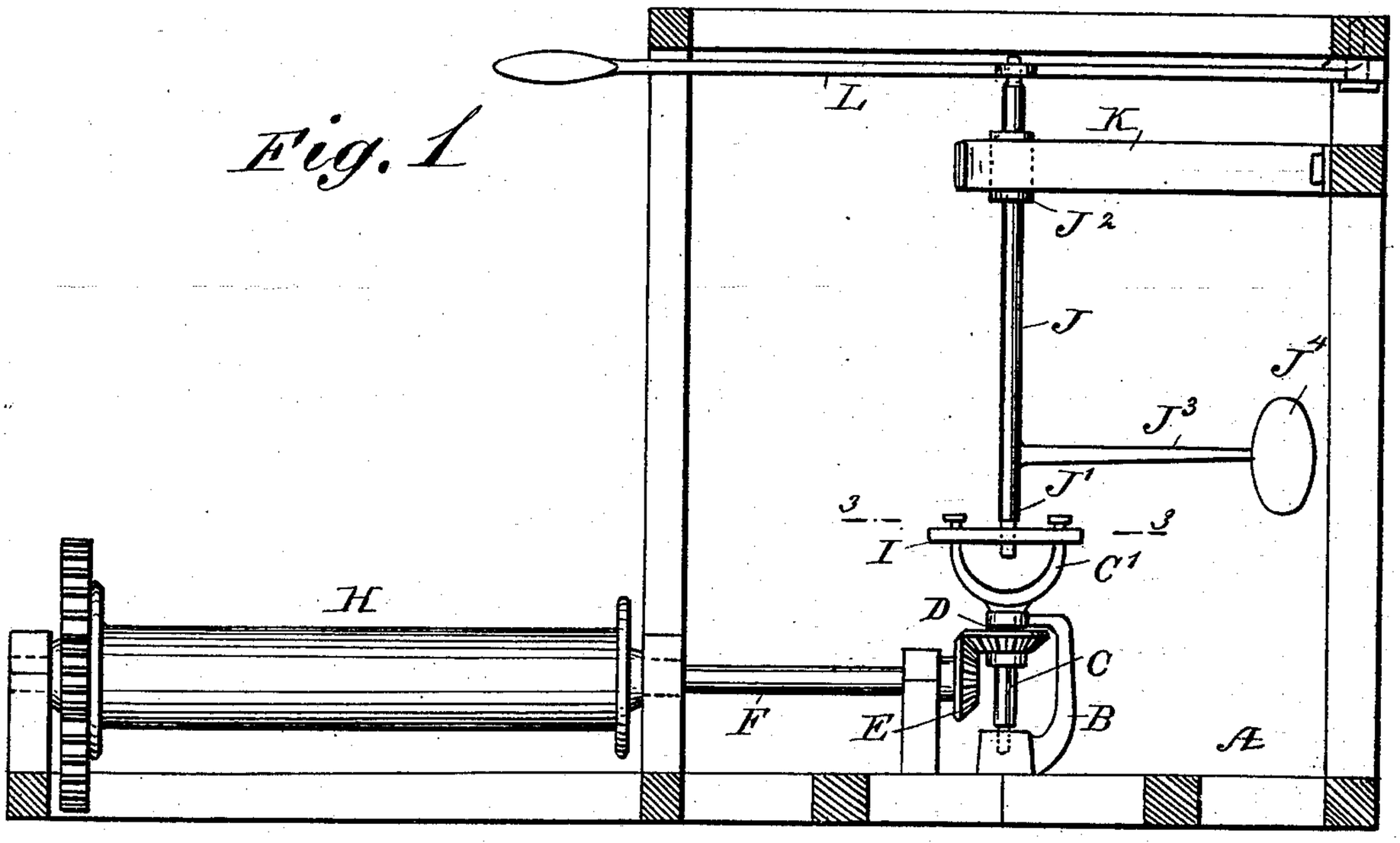


Fig. 2

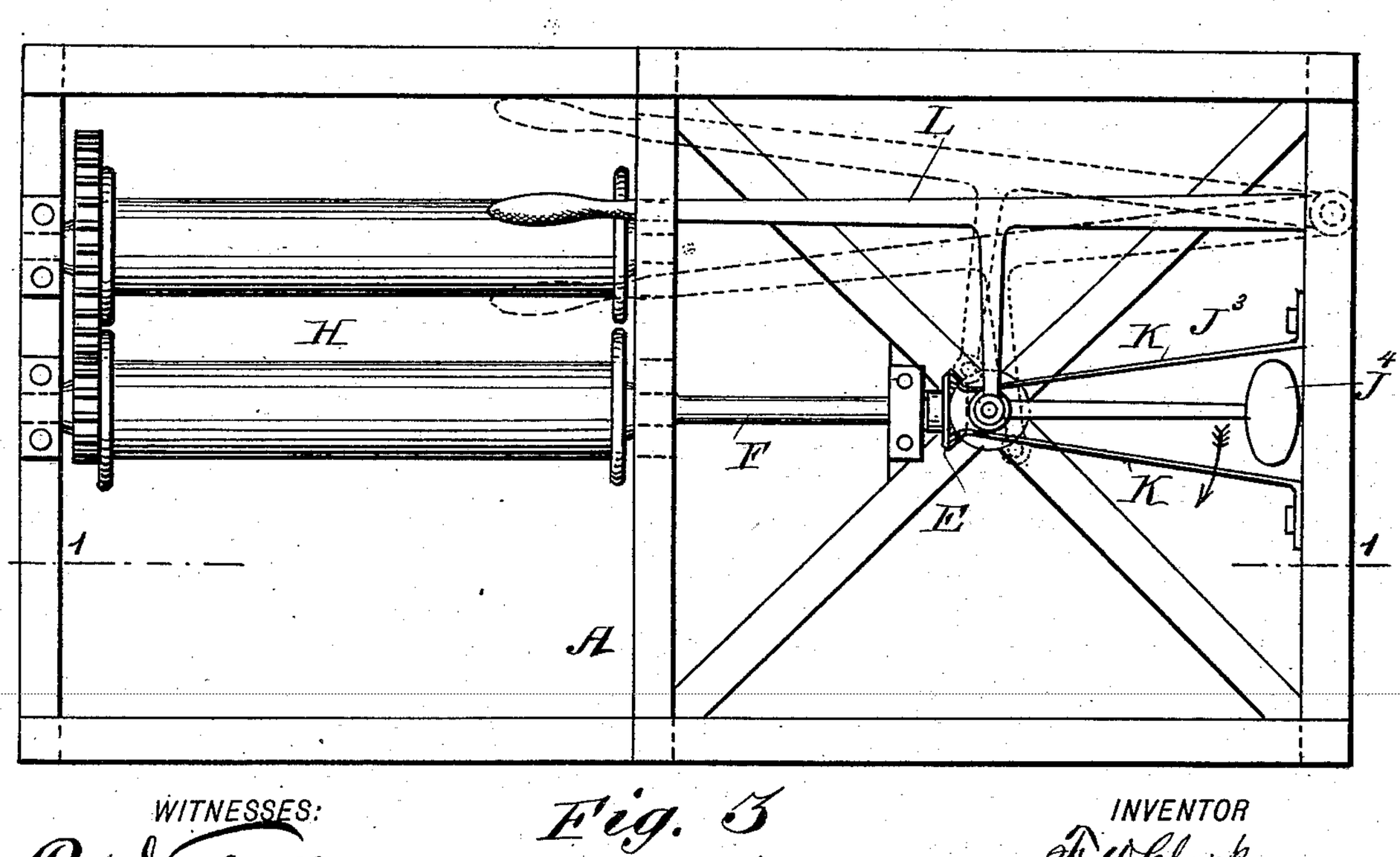
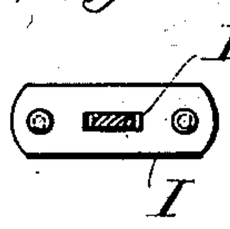


Fig. 3



WITNESSES:

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UNITED STATES PATENT OFFICE.

FRANK. W. CLARK, OF MOUNT DESERT, MAINE.

MOTOR.

SPECIFICATION forming part of Letters Patent No. 503,829, dated August 22, 1893.

Application filed November 30, 1892. Serial No. 453,594. (No model.)

To all whom it may concern:

Be it known that I, FRANK. W. CLARK, of Mount Desert, in the county of Hancock and State of Maine, have invented a new and Improved Motor, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved motor, which is simple and durable in construction, very effective in operation, and arranged to uniformly transmit the motive power derived from the driving machinery to machines to be driven.

The invention consists of certain parts and details, and combinations of the same, as will be hereinafter described and then pointed out in the claims.

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

Figure 1 is a sectional side elevation of the improvement on the line 1—1 of Fig. 2. Fig. 2 is a plan view of the same; and Fig. 3 is a sectional plan view of the joint on the line 3—3 of Fig. 1.

The improved motor is provided with a suitably constructed frame A, carrying a bracket B, in which is journaled a vertically-disposed shaft C, on which is fastened a bevel gear wheel D, in mesh with a like gear wheel E, secured on a shaft F, journaled in suitable bearings on the main frame A and carrying a hoisting drum H, or other machinery to be actuated by the motor.

The upper end of the shaft C is formed with a fork C′ supporting a plate I, formed in its center with an aperture I′ engaged by the square end J′ of a shaft J, standing normally in alignment with the shaft C, but adapted to be swung sidewise out of alignment with the said shaft C, the reduced or square end J′ being sufficiently loose in the aperture I′ to permit such movement of the shaft J. Near the upper end of the latter is formed a collar J^2 pressed on on opposite sides by the free ends of springs K attached to the main frame A. The extreme upper end of the shaft J is engaged by a lever L fulcrumed on the main frame A, and adapted to be actuated by hand or by suitable machinery such as the crank arm of an engine, to impart a swinging motion to the said lever L. From the shaft J extends, at or nearly at right angles, an arm J^3 carrying at its outer end, a weight J^4.

The operation is as follows: When the lever L is caused to swing, then the weighted arm J^3, in trying to move to its lower position according to the inclination of the shaft J, causes the latter to turn, so that finally the arm J^3 continuously swings round on the continuous oscillation of the shaft J, whereby a continuous rotary movement is given to the said shaft J, and the shaft C, which latter, by the gear wheels D and E and the shaft F, transmits the rotary motion to the machinery to be driven. It is understood that the springs K tend to return the shaft J always to a normal vertical position.

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

1. A motor comprising a vertical drive shaft, a second shaft having a loose driving connection at its lower end with the upper end of the drive shaft, and provided with a transverse weighted arm, and a horizontally swinging lever in which the upper end of said second shaft is journaled, substantially as set forth.

2. A motor comprising a vertically-disposed shaft connected with the machinery to be driven and provided with a forked upper end, a plate supported on the said fork, a shaft engaging the said plate and provided with a weighted arm and adapted to swing, and springs pressing with their free ends on the said second shaft, substantially as shown and described.

3. A motor comprising a vertically-disposed shaft connected with the machinery to be driven and provided with a forked upper end, a plate supported on the said fork, a shaft engaging the said plate and provided with a weighted arm and adapted to swing, and a lever adapted to receive a swinging motion and in which the upper end of the said second shaft is journaled, substantially as shown and described.

FRANK. W. CLARK.

Witnesses:
JONATHAN HARNOR,
A. Q. WHITING.