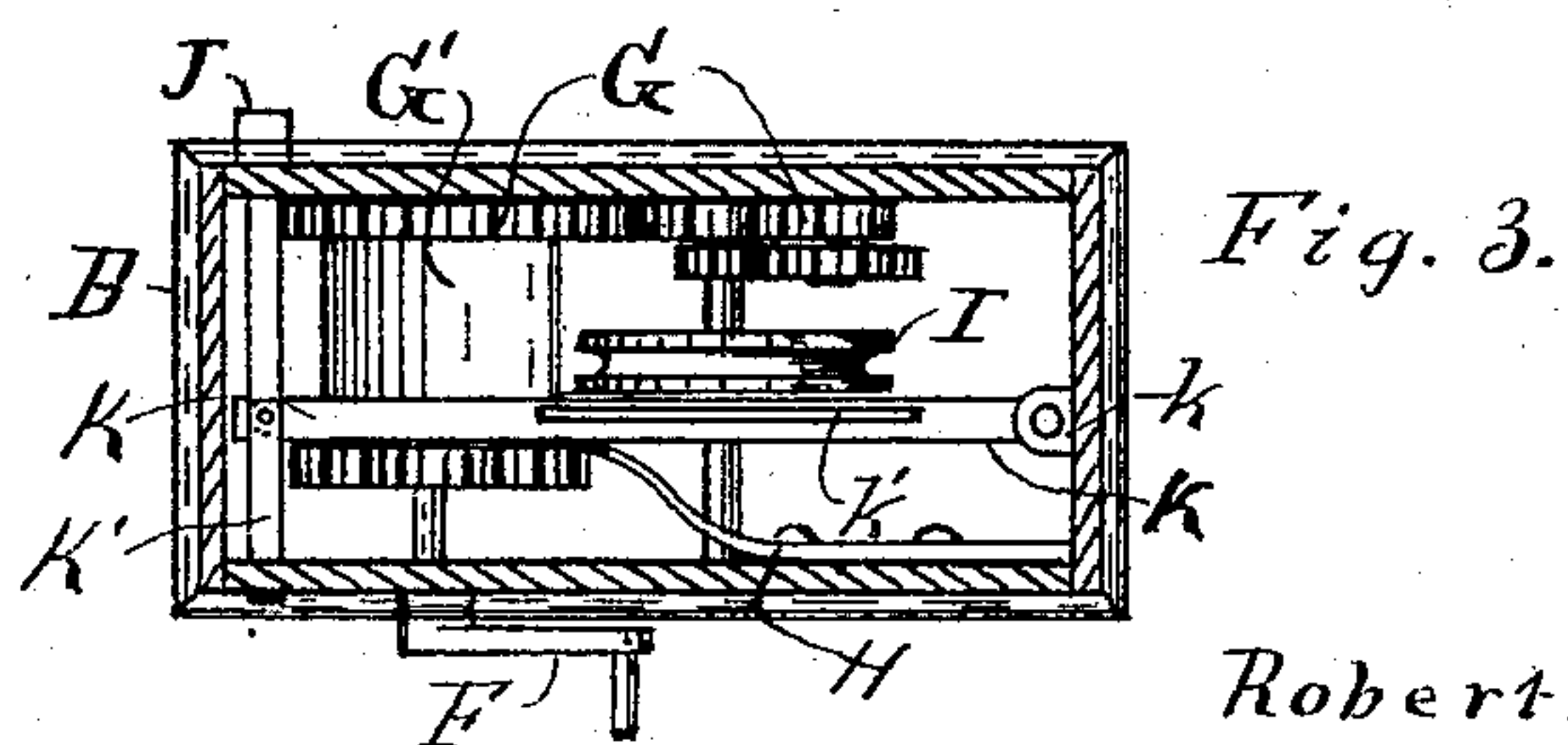
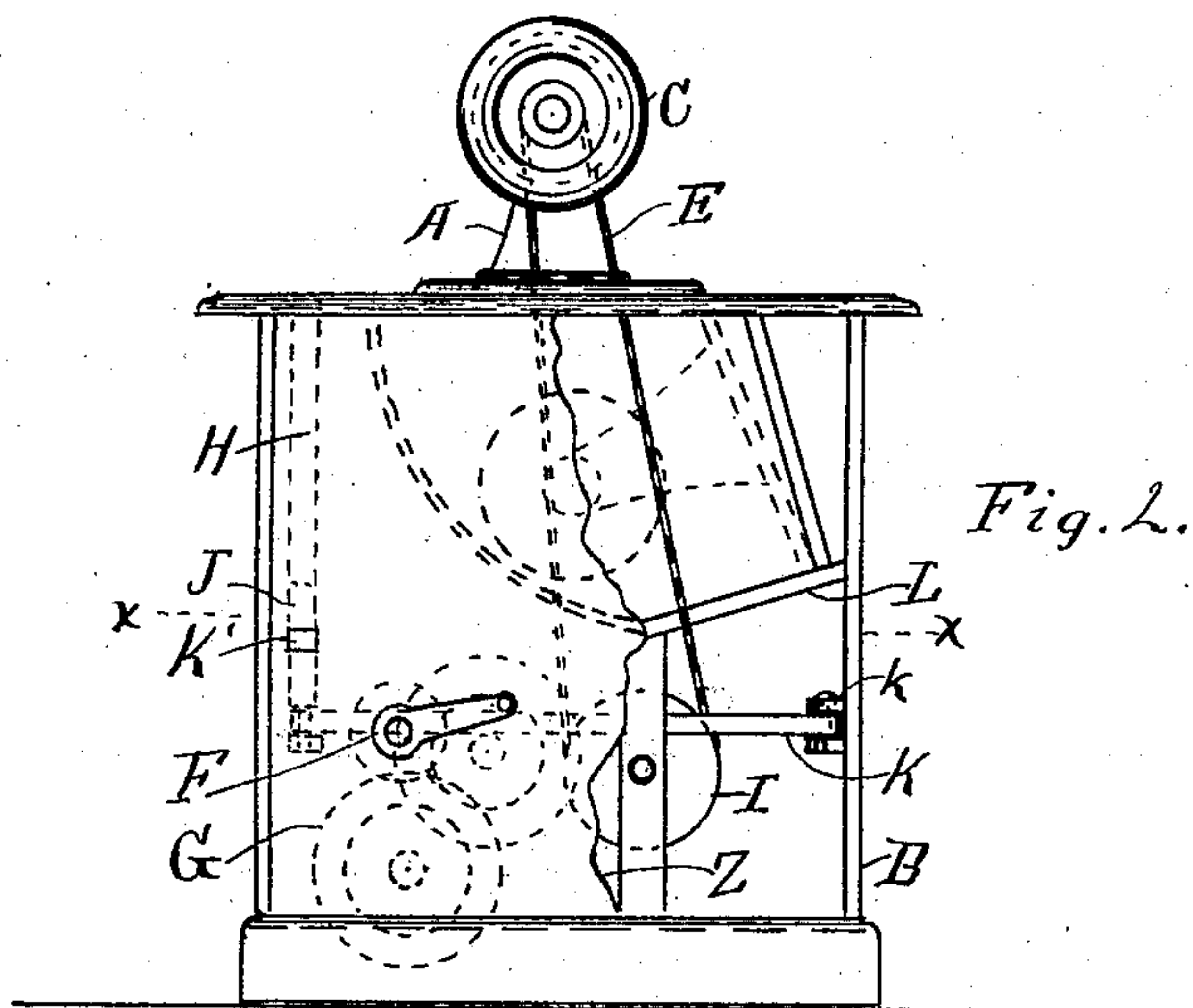
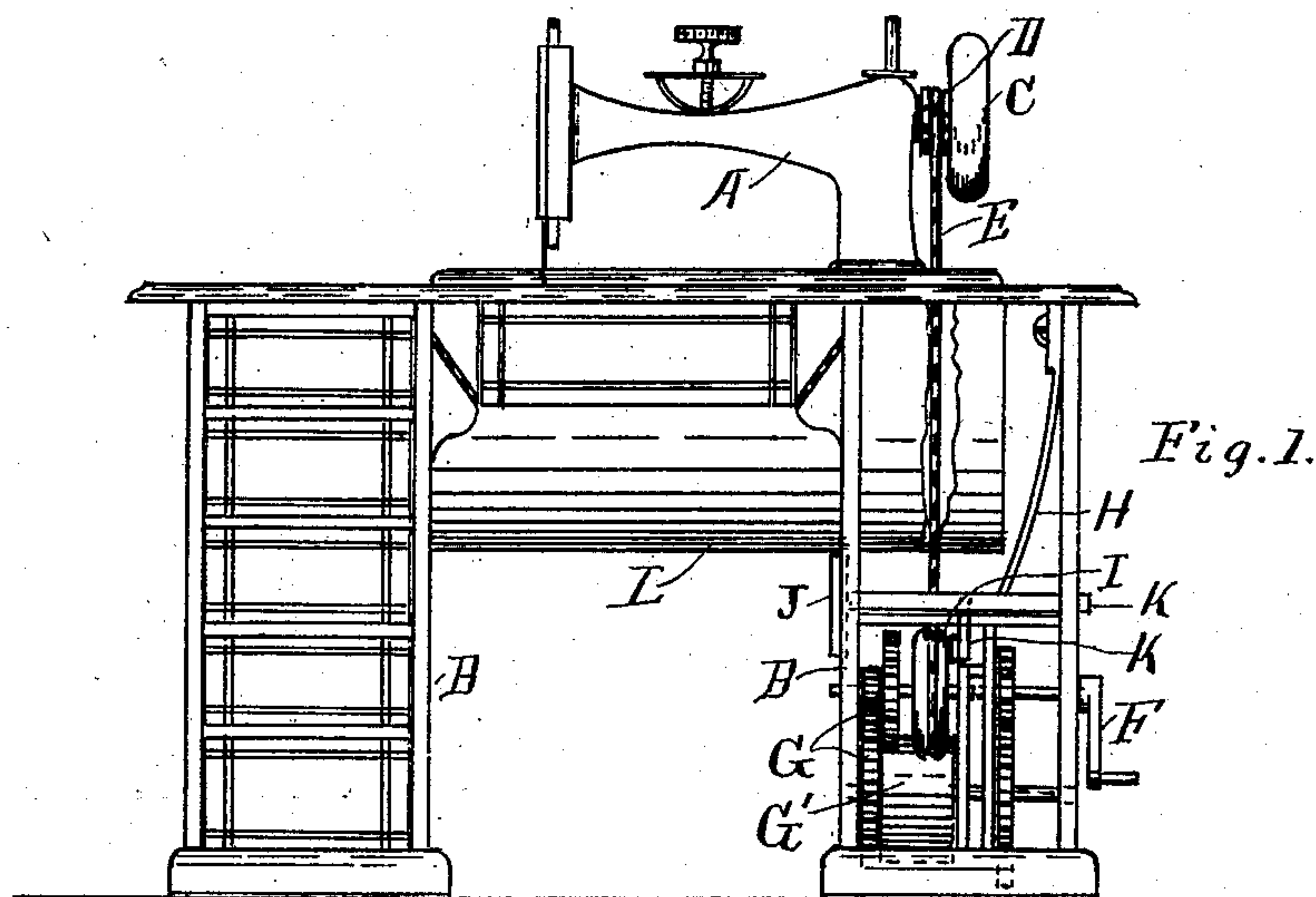


No. 842,832.

PATENTED JAN. 29, 1907.

R. E. GRANT.
SEWING MACHINE MOTOR.

APPLICATION FILED JUNE 4, 1904. RENEWED DEC. 10, 1906.



Witnesses

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SEWING-MACHINE MOTOR.

No. 842,832.

Specification of Letters Patent.

Patented Jan. 29, 1907.

Application filed June 4, 1904. Renewed December 10, 1906. Serial No. 347,215.

To all whom it may concern:

Be it known that I, ROBERT E. GRANT, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Sewing-Machine Motors, of which the following is a specification.

My invention relates to improvements in the power mechanism shown and described in Letters Patent No. 611,928, issued to William Naab and myself October 4, 1898, for sewing-machines, and its object is to so arrange the brake mechanism that the machine-head may be swung down below the frame. I attain this object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of a sewing-machine, showing my driving mechanism in place. Fig. 2 is an end elevation of the same, and Fig. 3 is a sectional plan of the cabinet that contains the power upon the line X X of Fig. 2.

Similar letters refer to similar parts throughout the several views.

A represents the head of the machine.

B represents the frame, and C is the balance-wheel.

G is a train of gear-wheels; G', the drum or cylinder in which the actuating-spring is contained and attached to drive the train of gear-wheels G much the same as a clock-spring drives the gear-wheels in a clock.

E is the driving-belt from the driving-pulley I to the driven pulley D, and F is a crank for winding the spring up when it has "run down" or expended its strength in running the machine, all of which are shown in the patent hereinbefore referred to.

In my present invention I place the train of gear-wheels G and the drive-wheel I to the frame B low enough so that the head A and fly-wheel C may be dropped down under the frame without interfering with them, as indicated by the dotted lines in Fig. 2, and pivot one end of the arm K to the frame, as at *k*, so that it will lie normally in contact with the side of the drive-wheel I to hold the drive-wheel from turning. At the opposite end of this arm, as at *j*, I pivot the slide K', which passes through the frame and terminates in an arm J in position to be actuated by the knee of the operator to regulate the

pressure of the arm K against the drive-wheel I and regulate the motion of the machine as driven by the spring and train of gear-wheels hereinbefore referred to. The arm K is held normally in contact with the wheel I by the spring H, which may be screwed to the frame in a vertical position, as in Figs. 1 and 2, or in a horizontal position, as in Fig. 3.

I do not deem it necessary to go into a detailed description of the operation of the spring-actuated train of gear-wheels G for the reasons, first, that this action is well known in mechanics and really does not form an element in the invention herein claimed, and, second, this feature with all its connections is fully described in the patent of October 4th, 1898, hereinbefore referred to.

For the purpose of protecting the gear-wheels and the sewing-machine head A from dust when the head is lowered to the position indicated by its dotted lines in Fig. 2, I place an inclosing-wall L in the frame of the machine between the head and the gear, with no openings through it except for the passage of the belt E, so that it is next to impossible for dust to enter into either the chamber for the head or the chamber for the gear.

In Fig. 1 the front is removed from one side of the frame to show the position of the driving mechanism G G', &c., and Fig. 2 is cut away at Z to disclose the position of the brake-arm K.

For the purpose of averting the danger of throwing the brake K suddenly from the wheel I, I place any suitable form of spring, as K'', upon the brake-arm K in position to bear against the side of the wheel I, and so adjust it that as the brake-arm is pressed from the wheel by the action of the knee against the arm J the tension of the spring K'' against the wheel I will be gradually lessened, so that the motion of the machine will be absolutely under the control of the operator at all times.

Having thus fully-described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

In combination with a supporting-frame, a fly-wheel and a spring-actuated train of gear, a brake-arm pivoted at one end to the frame and extending parallel with the face of the fly-wheel, a slide pivoted to the free end of the brake and extending at right angles to

position to be actuated by the knee of the operator, an actuating-arm at the free end of the slide, a spring upon the brake bearing upon the face of the fly-wheel and a spring
5 holding the brake-arm and spring normally against the fly-wheel, substantially as and for the purpose set forth.

Signed at Grand Rapids, Michigan, April 30, 1904.

ROBERT E. GRANT.

In presence of—

ITHIEL J. CILLEY,
FRED R. JEAN