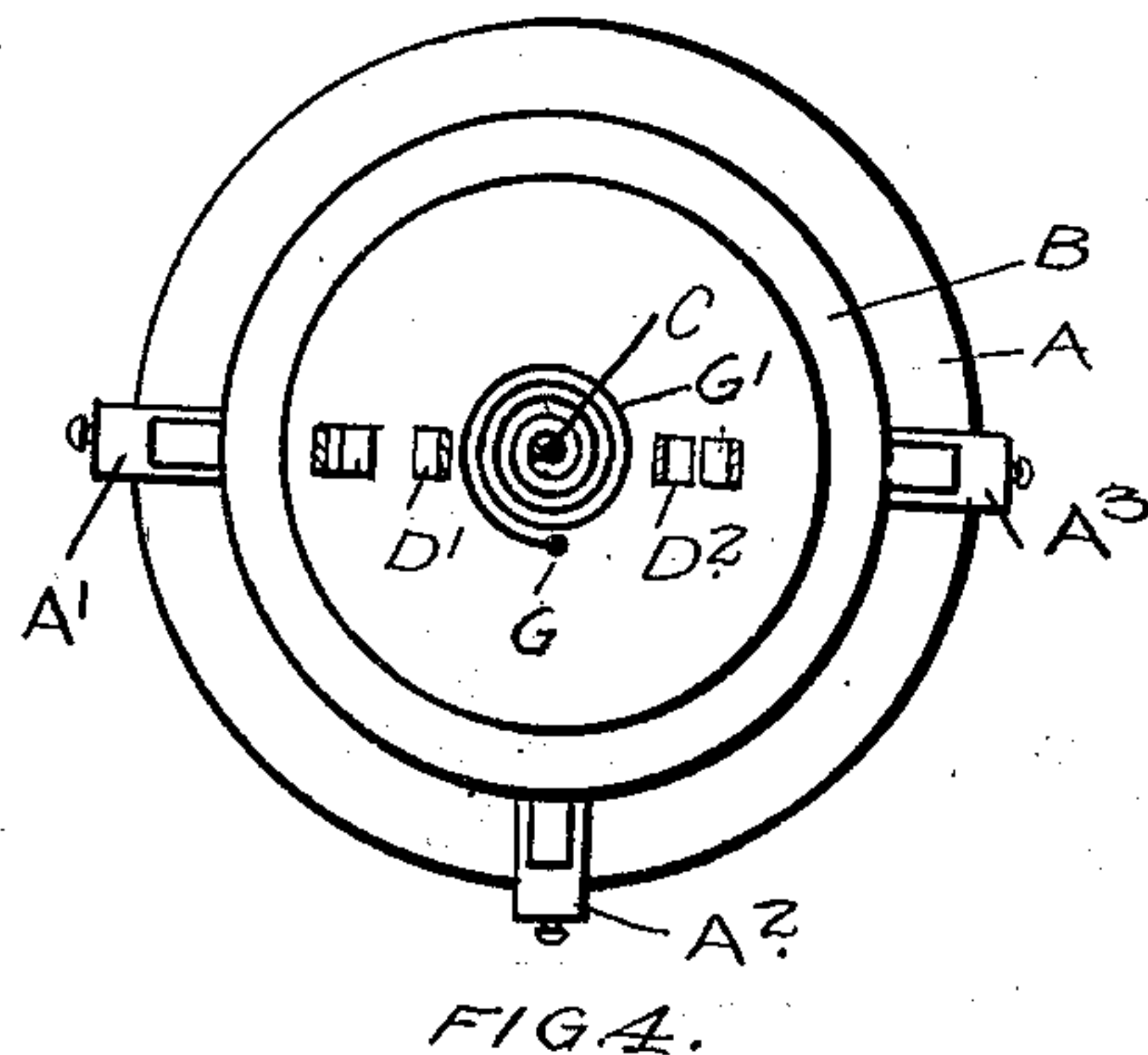
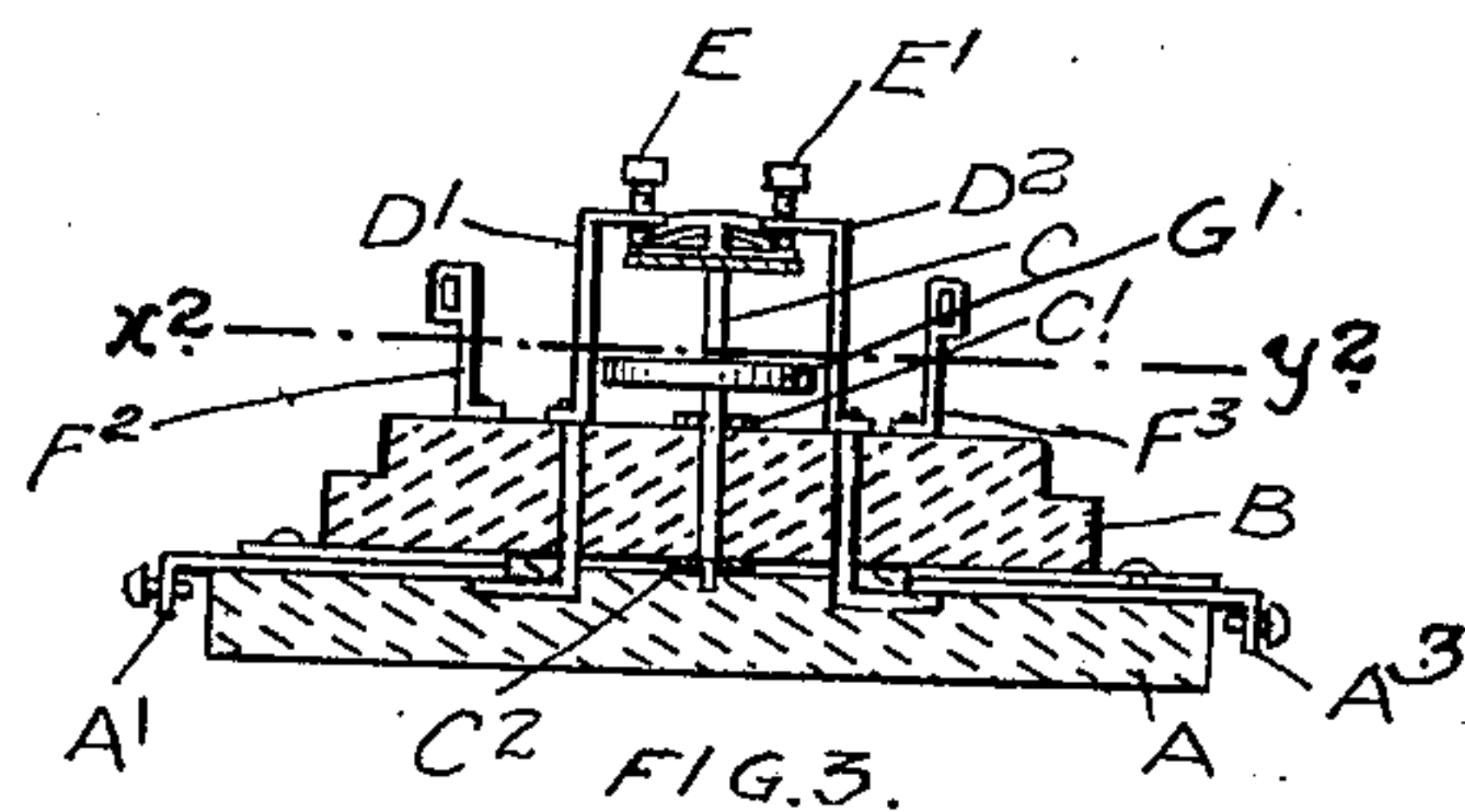
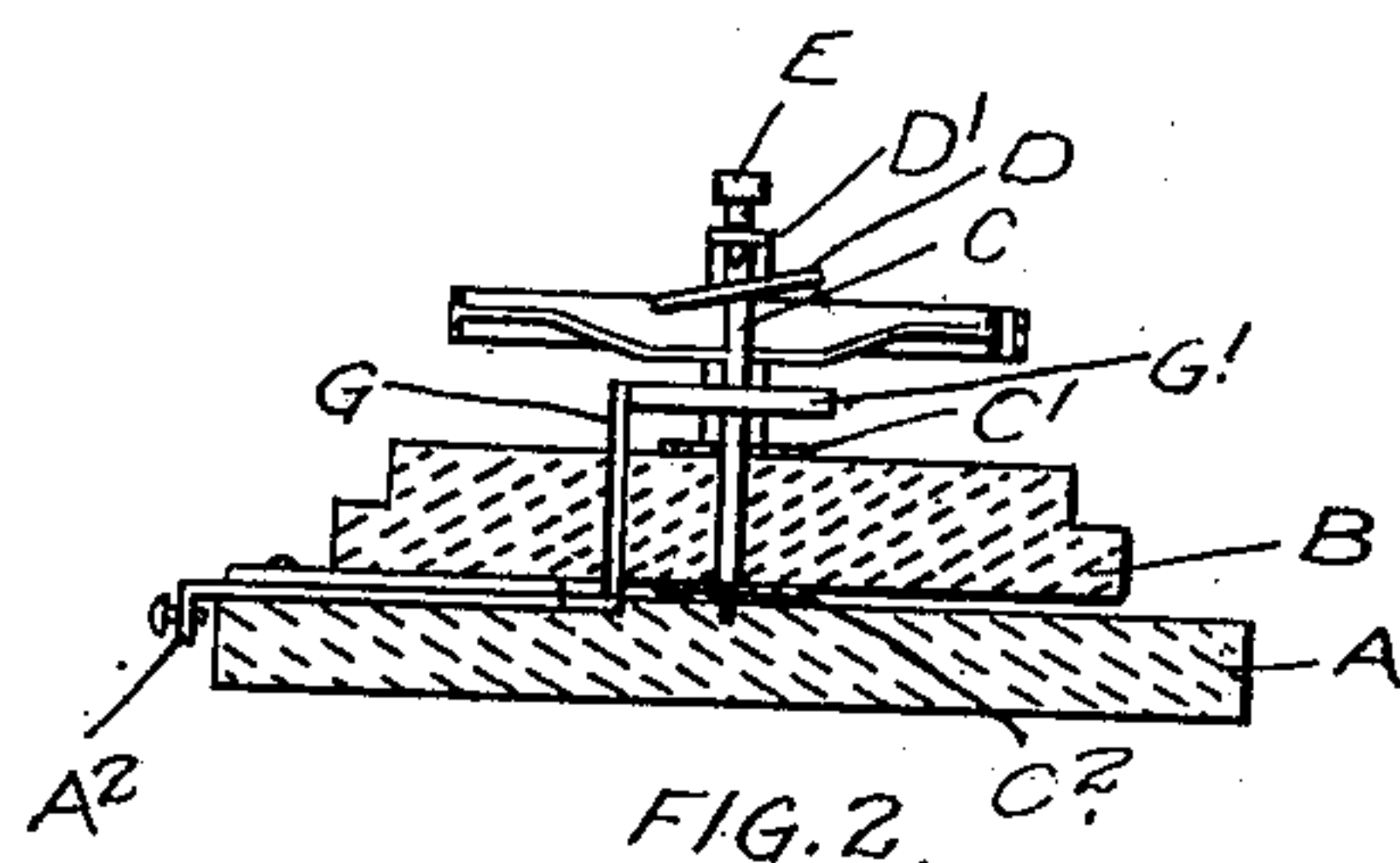
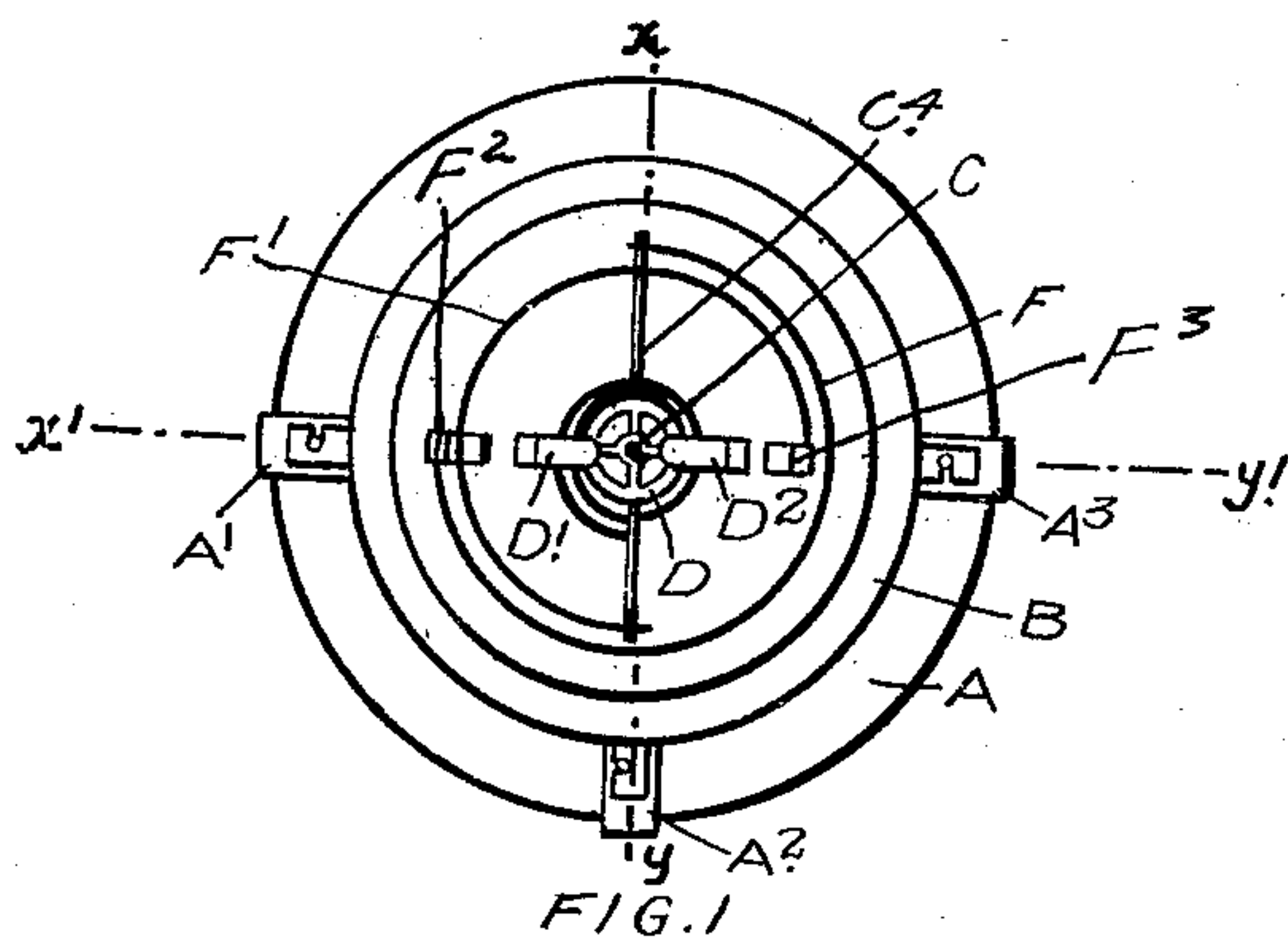


J. W. MOWBRAY.
THERMAL ELECTRIC FIRE ALARM.
APPLICATION FILED JULY 18, 1910.

994,026.

Patented May 30, 1911.



WITNESSES.
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UNITED STATES PATENT OFFICE.

JAMES WILLIAM MOWBRAY, OF GLEICHEN, ALBERTA, CANADA, ASSIGNOR OF ONE-HALF TO WILLIAM R. MCKIE.

THERMAL ELECTRIC FIRE-ALARM.

994,026.

Specification of Letters Patent.

Patented May 30, 1911.

Application filed July 18, 1910. Serial No. 572,492.

To all whom it may concern:

Be it known that I, JAMES WILLIAM MOWBRAY, of the village of Gleichen, in the Province of Alberta, in the Dominion of Canada, have invented certain new and useful Improvements in Thermal Electric Fire-Alarms, of which the following is a specification.

My invention relates to improvements in thermal electric fire alarms, patented to me in Canada March 1st, 1910, No. 150,502, and applied for in the United States under Serial No. 529,753 Nov. 24, 1909, and the object of the present invention is to devise a positive electric connection between the turnable center post supporting the inclined member and the terminal plate connected to the base as employed in my former construction and it consists essentially of a helical coil of wire or other suitable material connected at one end to the center post and at the other end to a supplemental post supported in the base of the apparatus and extending therethrough into contact with the contact plate secured to the base and forming one of the terminals to which the electric circuit is connected as hereinafter more particularly explained by the following specification.

Figure 1, is a plan view of my device. Fig. 2, is a cross sectional view on line $x-y$ Fig. 1. Fig. 3, is a cross sectional view on line $x'-y'$ Fig. 1. Fig. 4, is a sectional plan view on line x^2-y^2 Fig. 3.

In the drawings like letters of reference indicate corresponding parts in each figure.

A is a base provided with the usual terminal contact plates A' and A^2 and A^3 .

B is a supplemental base suitably secured to the base A.

C is a vertical shaft journaled in bearing plates C' and C^2 secured above and below the supplemental base B.

D is an inclined member or wheel secured to the shaft C.

D' and D^2 are brackets secured to the base B at each side of the inclined member and diametrically opposite each other. The brackets D' and D^2 are provided with adjustable contact screws E and E' . The brackets D' and D^2 are electrically connected to the contact plates A' and A^3 .

F and F' are composite metal strips rigidly secured at one end to the brackets F^2 and F^3 .

C^4 is a cross arm forming part of the turnable shaft C. It has been found that the contact between the turnable shaft C and the bearing plate C^2 is gradually destroyed through constant wear between the shaft and the plate. To obviate this I have provided the following arrangements of parts.

G is a supplemental post extending through the base E into contact with the plate A^2 .

G' is a helical coil of wire of any suitable conducting material secured at one end to the post G and at the opposite end the turnable shaft C.

It will, of course, be understood that the terminal A^2 is connected by wire to a suitable battery and that the terminals A' and A^3 each extend through a suitable alarm bell to the other terminals of the battery as described in my former patent and application. It will, therefore, also be understood that when one of the composite strips F and F' are expanded or contracted by higher or lower temperature that the cross arms C^4 and consequently the turnable shaft C on the inclined member D are turned so as to bring the inclined member D into contact with one of the screws E and E' thereby completing the circuit through one of the screw brackets, and contact plate A' or A^3 through the bell and battery to the contact plate A^2 on the supplemental post G through which and the helical coil G' the circuit passes to the turnable shaft C.

From this description it will be seen that I have provided a positive connection between the turnable shaft and the contact plate leading to the battery which will not be detrimentally effected by wear and at the same time will not add any extra resistance to the mechanism of the thermostat, thereby making the instrument more reliable in its action.

What I claim as my invention is:

1. In a thermostat of the class described, the combination with the base, a turnable shaft supported in the base, of a conducting post supported in the base, and a flexible connection between the turnable shaft and the post, electric contacts and means on the shaft adapted to engage therewith, as and for the purpose specified.

2. In a thermostat of the class described, the combination with the base, a turnable

shaft supported in the base, of a conducting post secured in the base, a helical coil of suitable conducting material secured at one end to the post and at the opposite end to the turnable shaft, electric contacts and means on the shaft adapted to engage therewith, as and for the purpose specified.

3. In a thermostat, the combination with the base provided with suitable contact plates, a turnable shaft supported in the base provided with a member inclined to the shaft and a cross arm, composite metal strips secured to the base at one end and to the ends of the cross arm at their opposite ends,

adjustable contact screws supported in proximity to the inclined member, and suitable electric connections between the adjustable screws and a pair of the contact plates secured in the base, of a supplemental conducting post secured in the base in contact with one of the contact plates thereof and a helical coil of conducting material connecting the supplemental post with the turnable shaft, as and for the purpose specified.

JAMES WILLIAM MOWBRAY.

Witnesses:

W. H. JAMES,

BERTON S. COREY.

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