

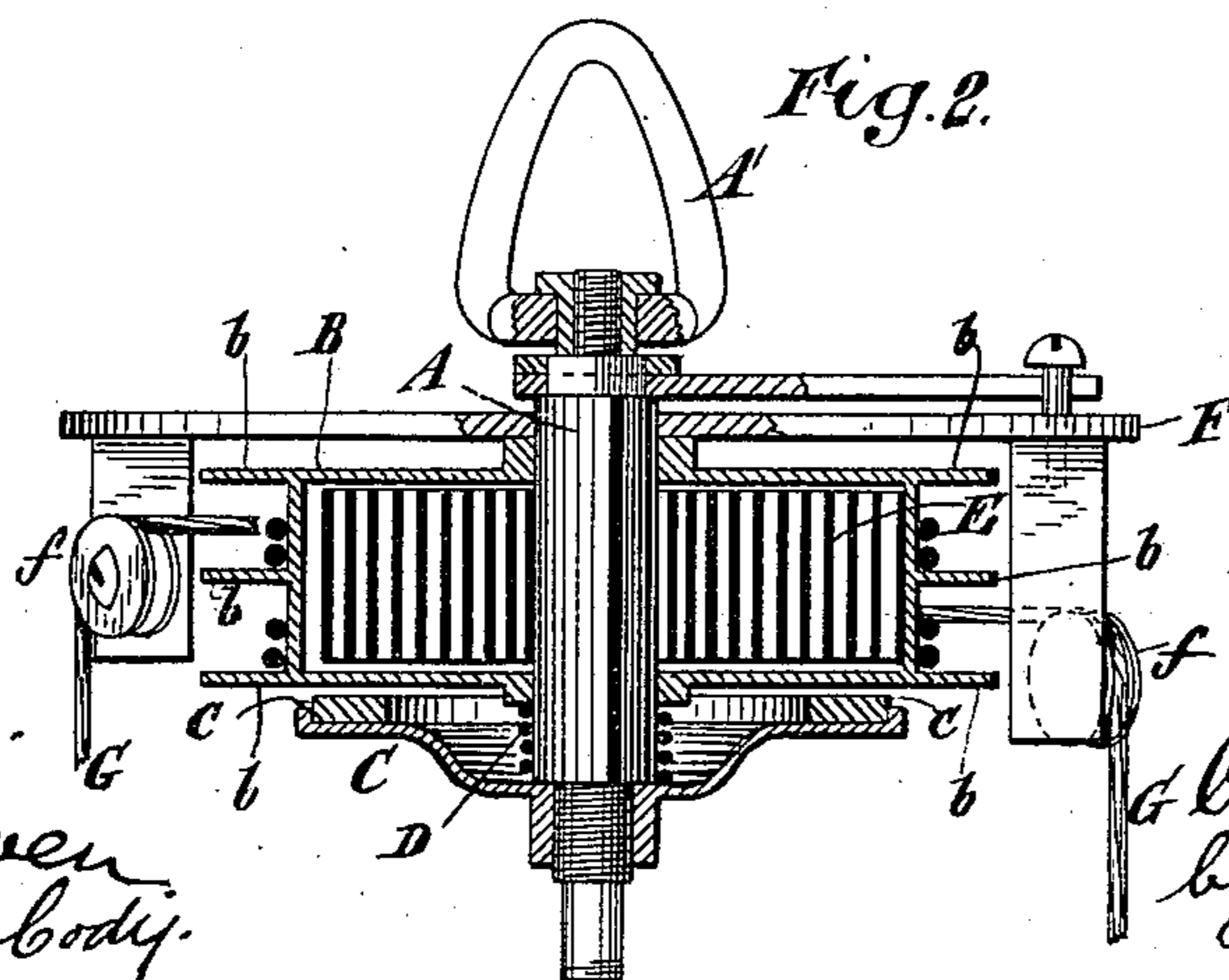
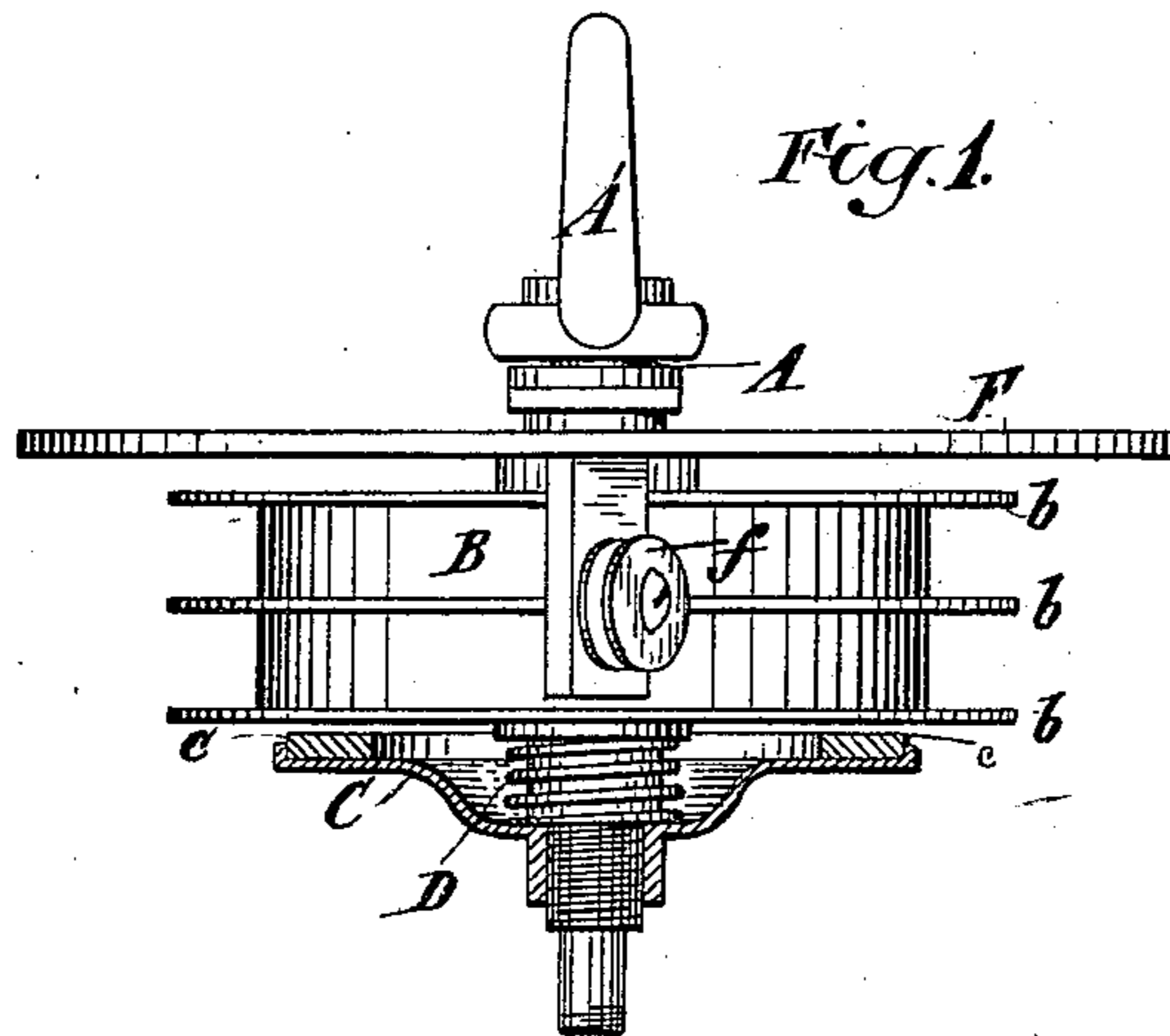
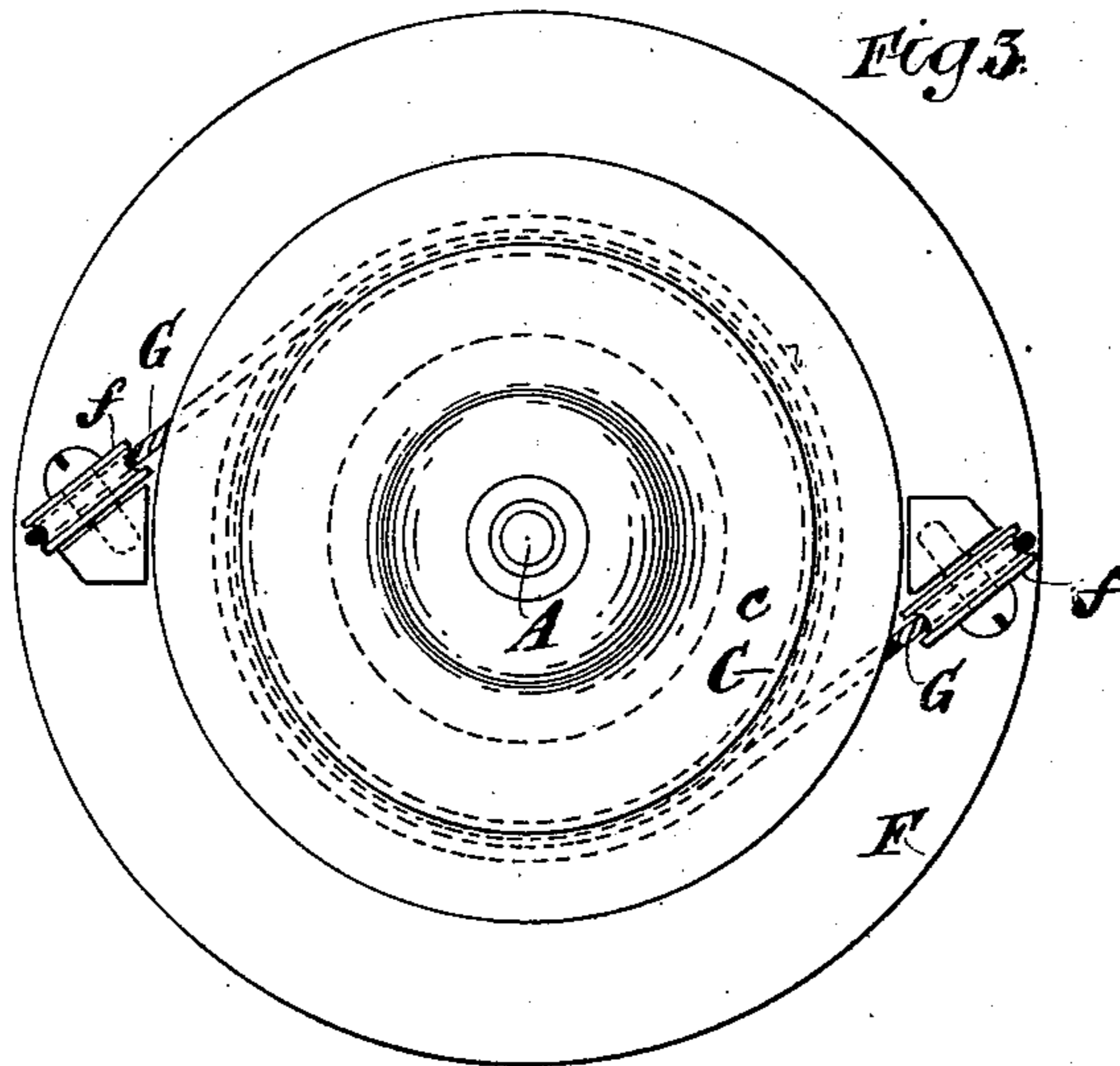
(No Model.)

C. H. LYMAN.

SUSPENDING DEVICE FOR LAMPS, &c.

No. 350,495.

Patented Oct. 12, 1886.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES H. LYMAN, OF ANSONIA, CONNECTICUT, ASSIGNOR TO THE ANSONIA BRASS AND COPPER COMPANY AND WOLCOTT A. HULL, BOTH OF NEW YORK, N. Y.

SUSPENDING DEVICE FOR LAMPS, &c.

SPECIFICATION forming part of Letters Patent No. 350,495, dated October 12, 1886.

Application filed December 28, 1885. Serial No. 186,942. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. LYMAN, of Ansonia, in the county of New Haven and State of Connecticut, have invented a certain
5 new and useful Improvement in Suspending Devices for Lamps and other Articles, of which the following is a specification.

My improvement relates to the class of suspending devices which consist, essentially, of
10 an arbor or shaft, a drum mounted loosely to rotate upon such arbor, a spring-coil around the arbor within the drum and connected at the ends to the arbor, a spring for the purpose of counterbalancing more or less the weight of
15 the lamp or other article supported by the suspending devices. Cords or chains wound upon the drum and passing thence over guides upon the frame, fitted to the arbor, and a brake which will aid the spring in counterbalancing the lamp or other article support-
20 ed, but which will not interfere with the rotation of the drum in the direction to wind up the cords or chains, and consequently will allow the spring to aid in elevating the lamp or other article supported.

I have already obtained for suspending devices of the general character above described Letters Patent No. 318,431, granted May 19, 1885, No. 323,051, granted July 25, 1885, and
30 No. 324,332, granted August 11, 1885. I have also pending an application for Letters Patent filed by me on the 30th day of October, 1884, No. 146,832, for a suspending device of the same general class.

35 I will describe in detail a suspension device embodying my improvement, and then point out the novel features in claims.

In the accompanying drawings, Figure 1 is a partly-sectional side view of a suspending device embodying my improvement. Fig. 2
40 is a partial vertical section of the same, and Fig. 3 is a bottom view thereof.

Similar letters of reference designate corresponding parts in all the figures.

45 A designates an arbor or shaft, which at the upper end is provided with a loop, A', whereby it may be connected to a hook in the ceiling of a room or other support. Preferably this loop has a swiveling connection with the
50 arbor.

B designates a drum mounted upon the arbor A, so that it may rotate thereon. It may be retarded in its rotation by a brake, C, which is supported by the arbor. As here shown, the brake consists of a circular plate provided
55 with a ring or facing, c, upon which the under surface of the lower end of the drum rests when being retarded in its rotation, as stated. The circular plate is shown as slipped over a portion of the arbor which is of less diameter
60 than the main portion, and as clamped between a shoulder formed at the lower end of the main portion and a nut which is screwed onto the reduced lower portion below the plate. A spring, D, may be arranged upon
65 the arbor between the plate C and the drum, or an appurtenance of the latter, to aid in supporting the drum and to prevent the latter from bearing heavily upon the brake C when it is undesirable for the drum to be acted upon
70 by the brake.

E is a convolute spring coiled around the main portion of the arbor within the drum, and fastened at the ends to the arbor and drum.

F designates a frame, which is fitted to the
75 arbor above the drum, and is supported by the drum.

I have shown a finger, S, constituting a projection rigidly mounted upon the arbor in contact with a guide consisting of a pin or
80 screw, S', upon the frame, whereby the rotation of the frame may be prevented. Any suitable guide and projection may, however, be used to prevent the rotation of the frame, or a feather or spline may be interposed be-
85 tween the arbor and frame for that purpose.

G designates cords or chains, which are wound around the drum between flanges b, with which the latter is provided. Leaving the drum, these cords or chains pass over
90 guides preferably consisting of pulleys on the frame F adjacent to the drum.

The lamp or other article to be supported is connected with the ends of the cords or chains that depend from the guides f. The
95 weight of the articles suspended will therefore tend to pull the frame F downwardly along the arbor, and, as said frame is supported by resting upon the drum, the drum will be pulled down upon the brake with a force
100

corresponding to the weight of the suspended article.

The spring E is combined with the arbor and drum in such manner that it will resist the rotation of the drum in the direction to unwind the cords or chains. It therefore more or less perfectly counterbalances the weight of the suspended article. The brake aids the spring E in supporting the suspended article, because whenever the weight of the suspended article acts upon the cords or chains it renders the brake operative to resist the rotation of the drum in a direction to unwind the cords or chains by drawing the drum down with pressure upon the brake.

Whenever the force with which the weight of the suspended article acts upon the cords or chains is neutralized to any material extent—as, for instance, by sustaining more or less of the weight of the suspended article with the hand—the action of the cords or chains in drawing the drum down upon the brake is relaxed. In this way the brake may be rendered practically inoperative, so that it will render the spring E free to aid in drawing up the suspended article or permitting it to rotate the drum in the direction to wind up the cords or chains.

I do not intend to claim in my present application anything which forms the subject-matter of the aforesaid patents and application.

I do not in my present application claim the combination, in a suspending device, of a drum, an arbor to which the drum is fitted, a friction brake and frame movable in the direction of the length of the arbor, and provided with guides for cords or chains wound upon the drum. I reserve the right to claim this combination of parts, and to make cognate claims in my application above referred to.

The distinctive feature of the suspending device which I desire to claim in my present

application is one in which the arbor supports a brake, the drum rests upon the brake when the brake is retarding the rotation of the drum, and a frame provided with guides for cords or chains, wound upon the drum is supported by the drum.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a suspension device, the combination of an arbor, a rotary drum mounted on the arbor, a counterbalance-spring, a brake supported by the arbor beneath an end of the drum, a frame loosely mounted upon the arbor and supported by the drum, and provided with guides over which pass cords or chains from the drum to an article which they suspend, the said arbor and frame being provided the one with a guide and the other a projection engaging the same, whereby the rotation of the frame is prevented, substantially as specified.

2. In a suspending device, the combination of an arbor, a rotary drum mounted on the arbor, a counterbalance-spring, a brake supported by the arbor beneath an end of the drum, a spring arranged between the brake and the adjacent end of the drum, a frame loosely mounted upon the arbor and supported by the drum, and provided with guides over which pass cords or chains from the drum to an article to be suspended, the said arbor and frame being provided the one with a guide and the other a projection engaging the same, whereby the rotation of the frame is prevented, substantially as specified.

3. In a suspending device, the combination of the arbor A, drum B, brake C, spring E, frame F, provided with guides f, and the cords or chains G, substantially as specified.

CHARLES H. LYMAN.

Witnesses:

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A. S. TERRY.