

(No Model.)

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RHEOSTAT FOR INCANDESCENT ELECTRIC LIGHTS.

No. 336,716.

Patented Feb. 23, 1886.

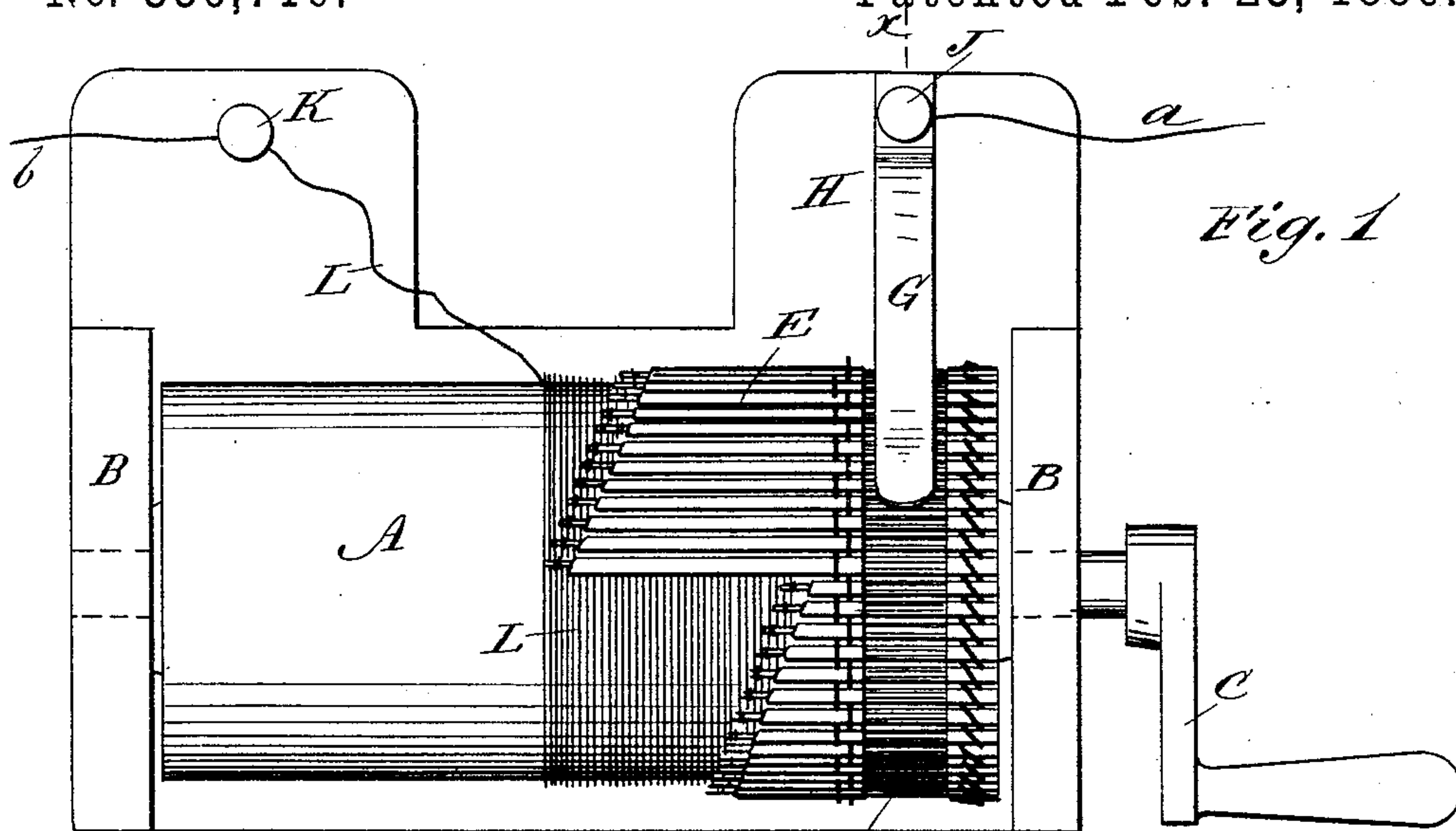


Fig. 1

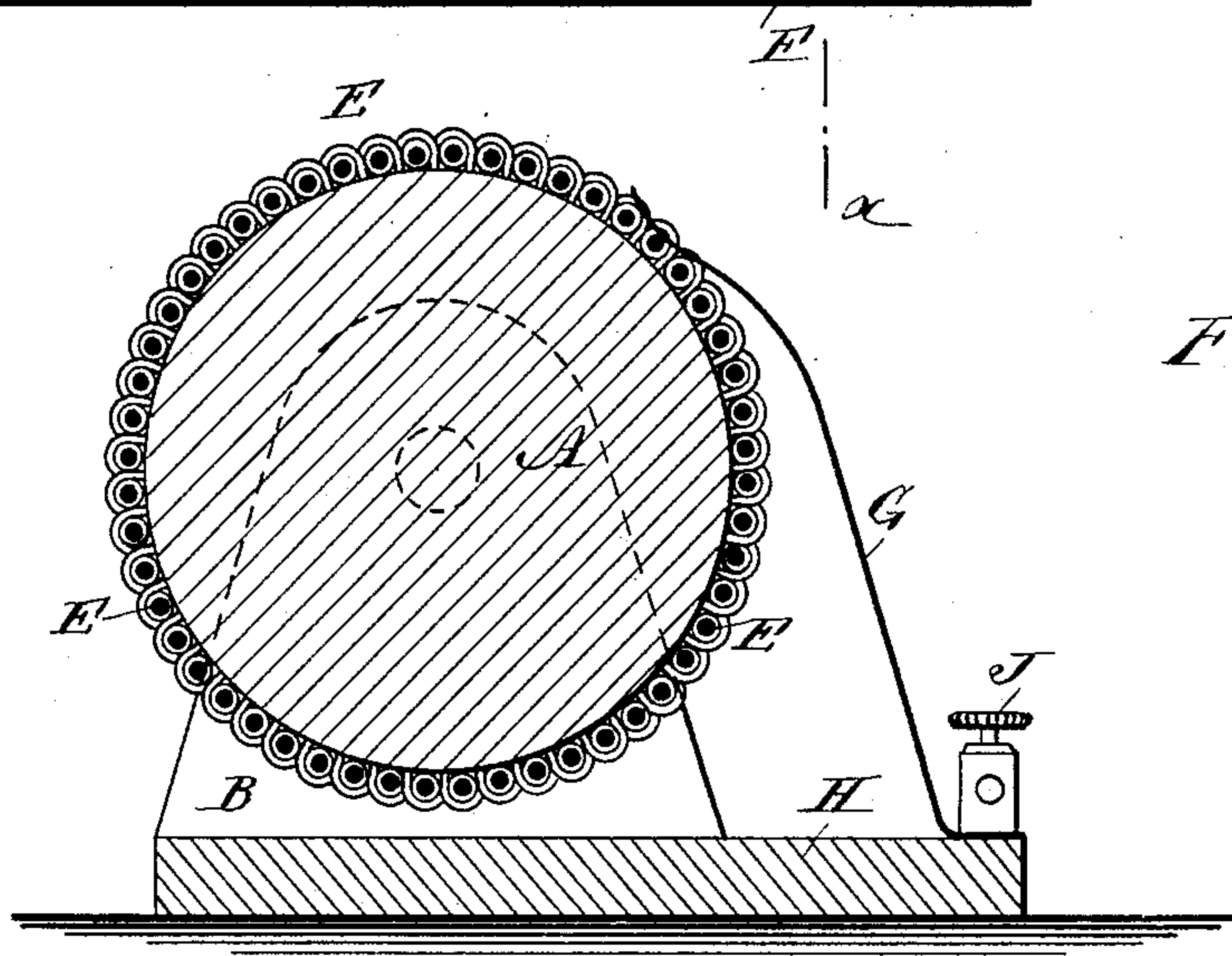


Fig. 2

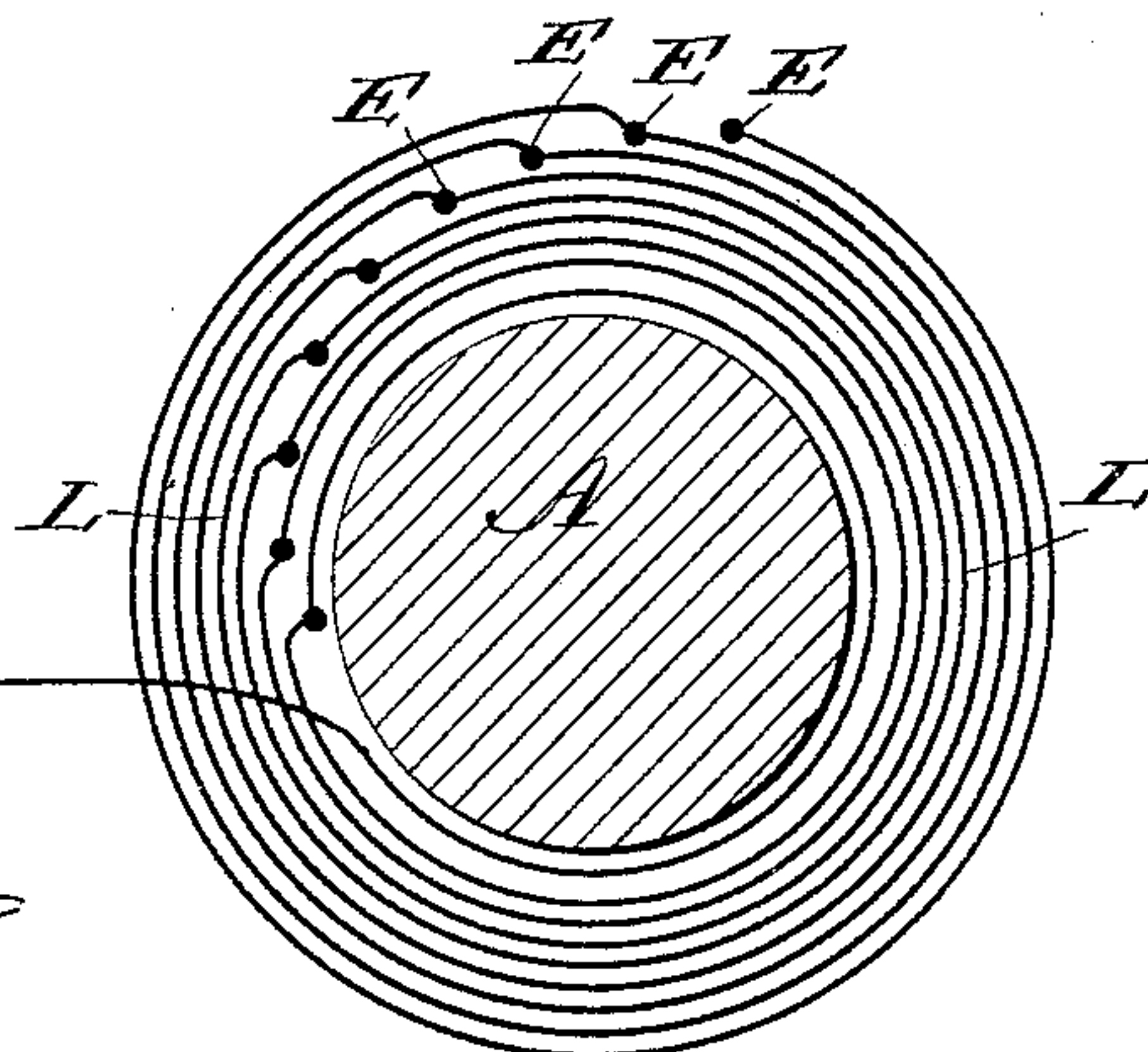


Fig. 3

WITNESSES:

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RHEOSTAT FOR INCANDESCENT ELECTRIC LIGHTS.

SPECIFICATION forming part of Letters Patent No. 336,716, dated February 23, 1886.

Application filed November 26, 1883. Renewed January 6, 1886. Serial No. 187,823. (No model.)

To all whom it may concern:

Be it known that I, S. AMBROSE HILL, of Sunbury, Northumberland county, Pennsylvania, have invented a new and Improved Rheostat for Incandescent Electric Lights, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved regulator for regulating incandescent electric lights to burn with more or less brightness.

The invention consists in the construction of the said rheostat, which consists of a series of insulated wires secured on a drum or cylinder, which wires have bare parts, and have their ends connected by fine insulated wires, one of the said wires being connected with a binding-post. A contact-spring connected with another binding-post rests on the bare parts of the wires.

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

Figure 1 is a longitudinal elevation of my improved regulator for electric lights. Fig. 2 is a cross-sectional elevation of the same on the line *x x*, Fig. 1. Fig. 3 is a diagram of the cross-section of the same, showing the arrangement of the wires.

A drum or cylinder, A, journaled in the standards B, is provided with a handle or knob, C, for turning it. Around one end of the cylindrical surface of the drum a series of insulated wires, E, are fastened parallel with the drum, which wires gradually increase in length, and each piece of wire E having a bare or naked part, F, which is not in contact with the drum nor with the adjoining wires. A spring-strip, G, secured on the base H, has its free end resting on the bare parts F of the wires E, and at the base of the spring a binding-post, J, is provided for connecting one of the circuit-wires, *a*, with the said strip. The other circuit wire, *b*, is held in a binding-post, K, from which a fine covered wire, L, extends to the cylinder-drum, around which it is wound one or more times, and is then united with the inner end of the longest wire

E—that is, the end nearest the middle of the cylinder. From the same end of the wire E a covered wire, L, extends one or more times around the cylinder, and is then connected with the inner end of the next wire E, which is connected by another wire L with the next wire E, and so on until, finally, the last wire E is connected in this manner, as is shown in the diagram, Fig. 3.

The wires E are to be designated as first, second, third, &c., wire E, the first wire E being the longest one, with which the wire L from the binding-post K is connected.

The regulator is used in the following manner: Ordinarily the spring G rests upon the first wire E, and the current will pass from the binding-post G through the first wire E, through the first wire L, and to the binding-post K, and also through the lamp-wires *a b*. The light then burns with its full brightness. If the light is to burn with less brightness, the drum or cylinder is turned so that the spring G rests on the second, third, fourth, fifth, &c., wires E, whereby the current will pass through several wires L, and whereby the resistance will be increased and the brightness decreased. The resistance can thus be decreased or increased, as may be necessary to obtain the desired brightness.

My device consists of a resistance-coil with adjustable resistance. Any number of resistance-wires L or E can be arranged on the drum or cylinder. One or more lights can be arranged in the circuit, all the lights being regulated simultaneously. The wire L, connecting the binding-post K with the first wire E, is preferably made thicker than the resistance-wire, so that no resistance will be offered to the full brilliancy of the light, and, if desired, the first wire E and the binding-post K can be connected by a spring.

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

1. In a regulator for incandescent electric lights, the combination, with a drum or cylinder, of a series of insulated parallel wires having bare parts, a series of wires connecting the insulated wires, and a contact-spring resting on the bare parts of the insulated

wires, substantially as herein shown and described.

2. In a regulator for incandescent electric lights, the combination, with the drum A, the
5 insulated parallel wires E of unequal length, and having bare parts F, and the contact-spring G, of the wires L, wound around the

cylinder and connecting the ends of the insulated wires together, substantially as herein shown and described.

S. AMBROSE HILL.

Witnesses:

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