

(No Model.)

T. M. FOOTE.
AUTOMATIC ELECTRIC SWITCH.

No. 435,490.

Patented Sept. 2, 1890.

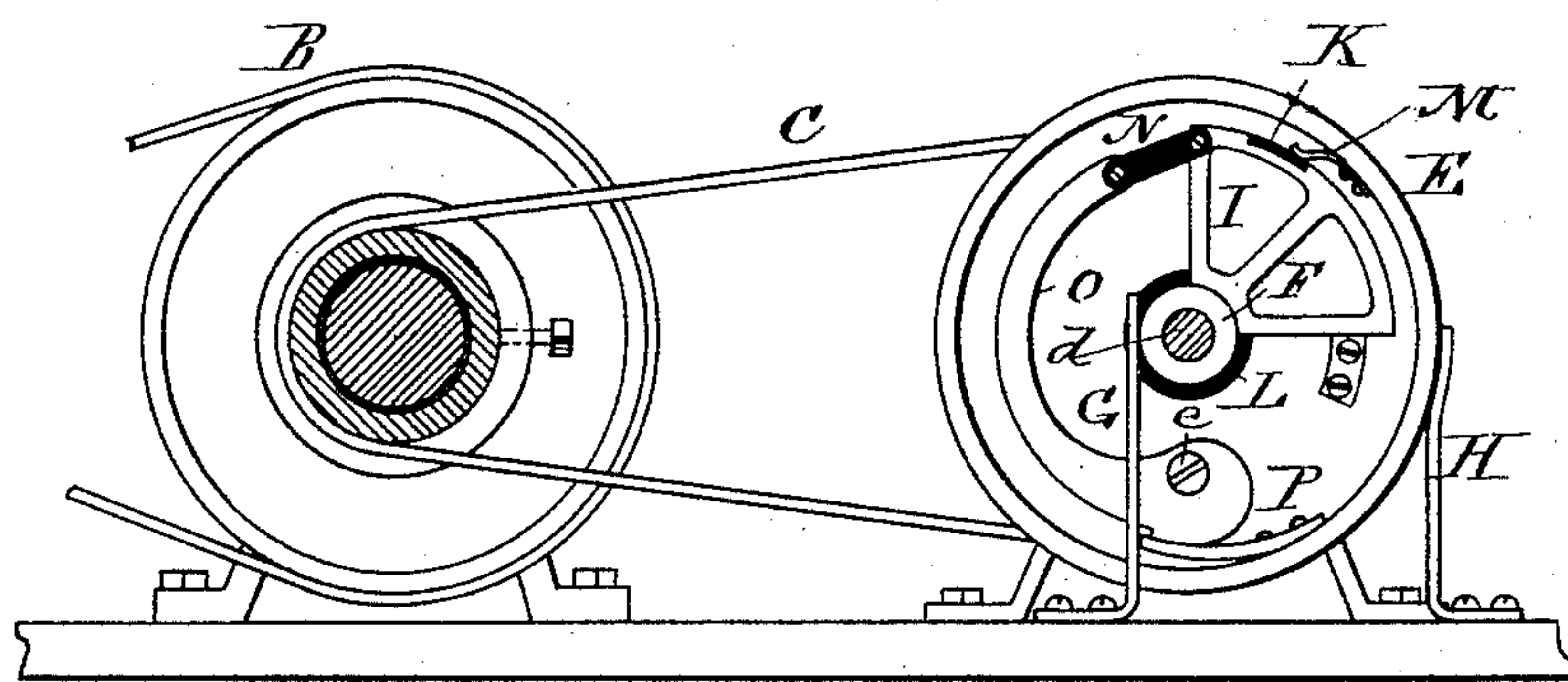


Fig. 1.

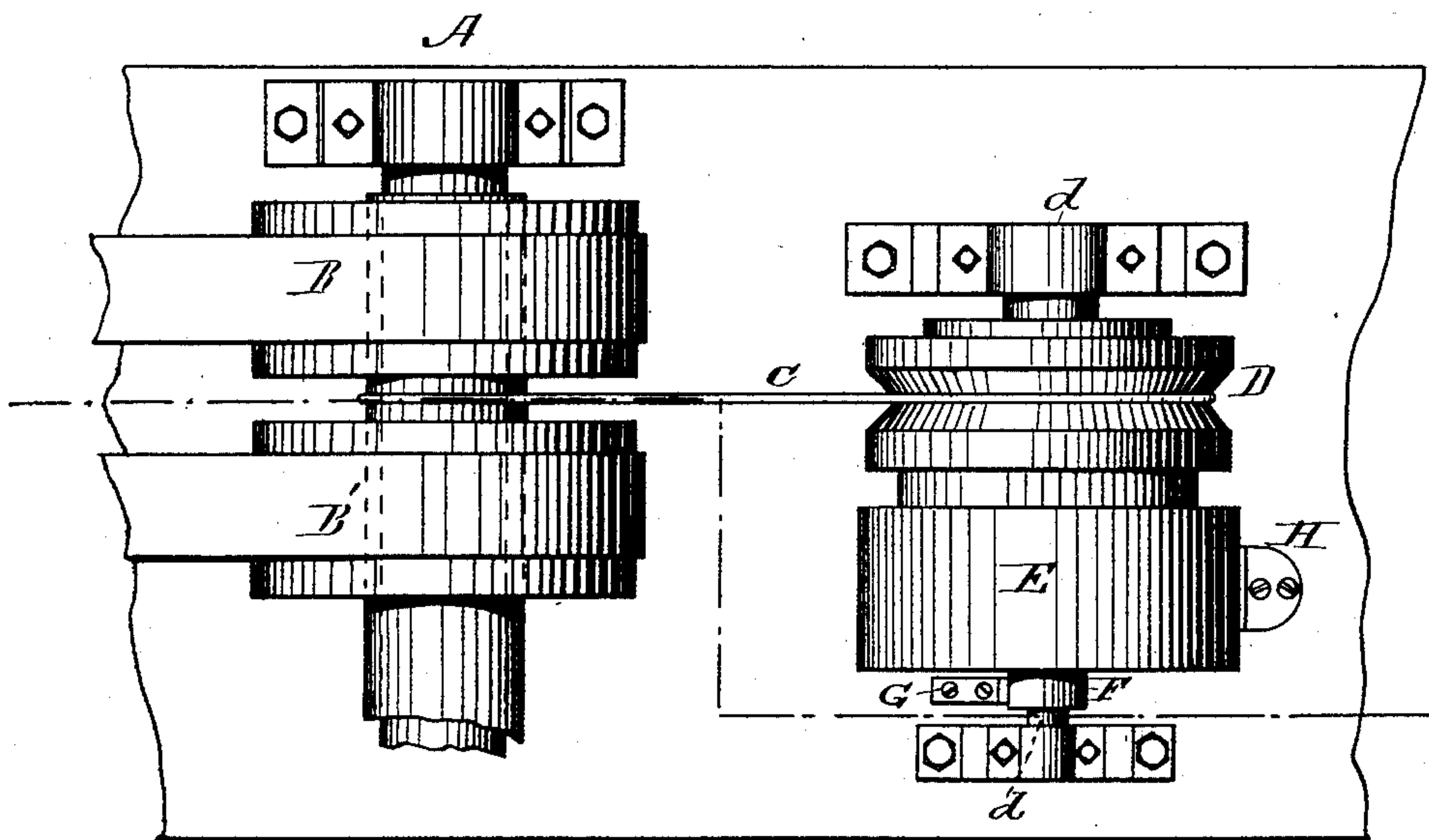


Fig. 2.

WITNESSES.

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THEODORE M. FOOTE, OF BOSTON, MASSACHUSETTS.

AUTOMATIC ELECTRIC SWITCH.

SPECIFICATION forming part of Letters Patent No. 435,490, dated September 2, 1890.

Application filed April 25, 1888. Renewed July 23, 1890. Serial No. 359,576. (No model.)

To all whom it may concern:

Be it known that I, THEODORE MARSHALL FOOTE, of Boston, in the county of Suffolk and Commonwealth of Massachusetts, have
5 invented a new and useful Improvement in Automatic Electric Switches, of which the following is a specification, reference being had to the accompanying drawings, forming a part hereof.

10 It often happens in working with dynamos that it is not desirable to close the circuit until the dynamo is running at a given rate of speed, and it is obvious that it would be advantageous to have this closing of the circuit made automatic. The apparatus herein
15 described is intended for that purpose.

In the drawings, A represents the counter-shaft which runs the dynamo, or it may be the shaft of the dynamo itself. B B' are belts
20 running over pulleys on said shaft A and actuating it. C is the small belt which is run from the said shaft A. It takes hold of a pulley D upon a small shaft *d*, as shown in plan, Fig. 2, and in section, Fig. 1. This shaft *d*
25 not only carries the pulley D, but it also carries a drum E. This drum is, however, insulated from the shaft *d*, as shown in the section, Fig. 1, at L.

Upon the shaft *d* is mounted the hub F,
30 upon which hub is carried the segment I, which segment rests against a stop *e* on the transverse face of the drum E. To this same transverse face of the drum E is pivoted between its center and periphery a bent arm O,
35 which bent arm O is free to move around its pivot *e*. This arm O is linked by the insulating-link N to the extremity of the segment I. On the periphery of this segment I is embedded an insulating-band K, which insulating-
40 band is pressed by a metallic spring M, which metallic spring is fastened to the periphery of the drum E. The drum E is an electric conductor, and the spring H presses against its exterior and is connected with one of the
45 line-wires leading from the dynamo. An-

other spring G is connected with the other line-wire and presses against the hub F of the segment I. This segment I is free to move on the shaft *d*. The arm O is pressed inward by the spring P, which is fast to the periphery of the drum E.

It will now be seen that if the parts are in the position shown in Fig. 1 the springs G and H will be insulated from each other; but
55 if the segment I be shifted a short distance to the left the spring M will come in contact with the metallic portion of the segment I, and there will be a closed circuit between the spring H and the spring G. The arm O, being fast to the transverse face of the drum E
60 and revolved with it, will, if sufficient velocity of revolution be given to the said drum, be thrown outward at its upper end and draw upon the insulating-link N and cause the segment I to revolve to the left for a short
65 distance. This therefore is an automatic switch or circuit closer, which only closes the circuit when a sufficient speed of revolution has been given to the drum E, or, in other words, when the shaft A, which runs the dy-
70 namo, has reached a predetermined speed.

Having thus described my invention, I claim and desire to secure by Letters Patent--

The combination of an electric conducting
75 revolving drum E and an electric conducting-segment I upon the same shaft, but insulated from each other with the contact-springs G H, and with the arm O, adapted to be moved by centrifugal force when a given
80 rate of speed has been reached toward the periphery of the drum E, in combination with the driving-shaft of a dynamo, whereby an electric circuit is automatically closed at
85 such speed, substantially as and for the purpose described.

THEODORE M. FOOTE.

Witnesses:

GEORGE W. WISWELL,
THOS. WM. CLARKE.