

No. 696,169.

Patented Mar. 25, 1902.

S. GLEIZES.

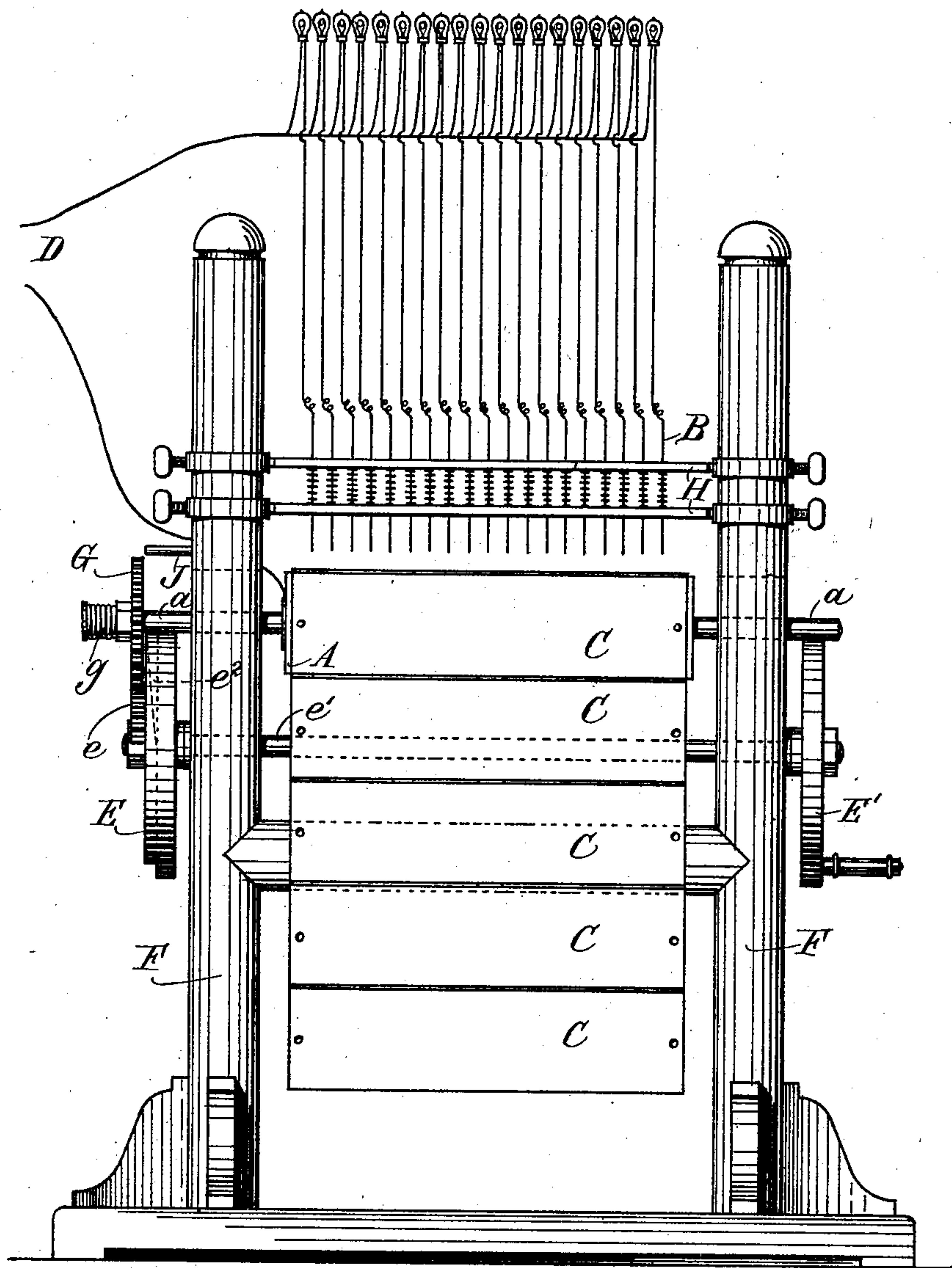
DEVICE FOR CLOSING AND INTERRUPTING ELECTRICAL CIRCUITS.

(Application filed Aug. 1, 1900.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1



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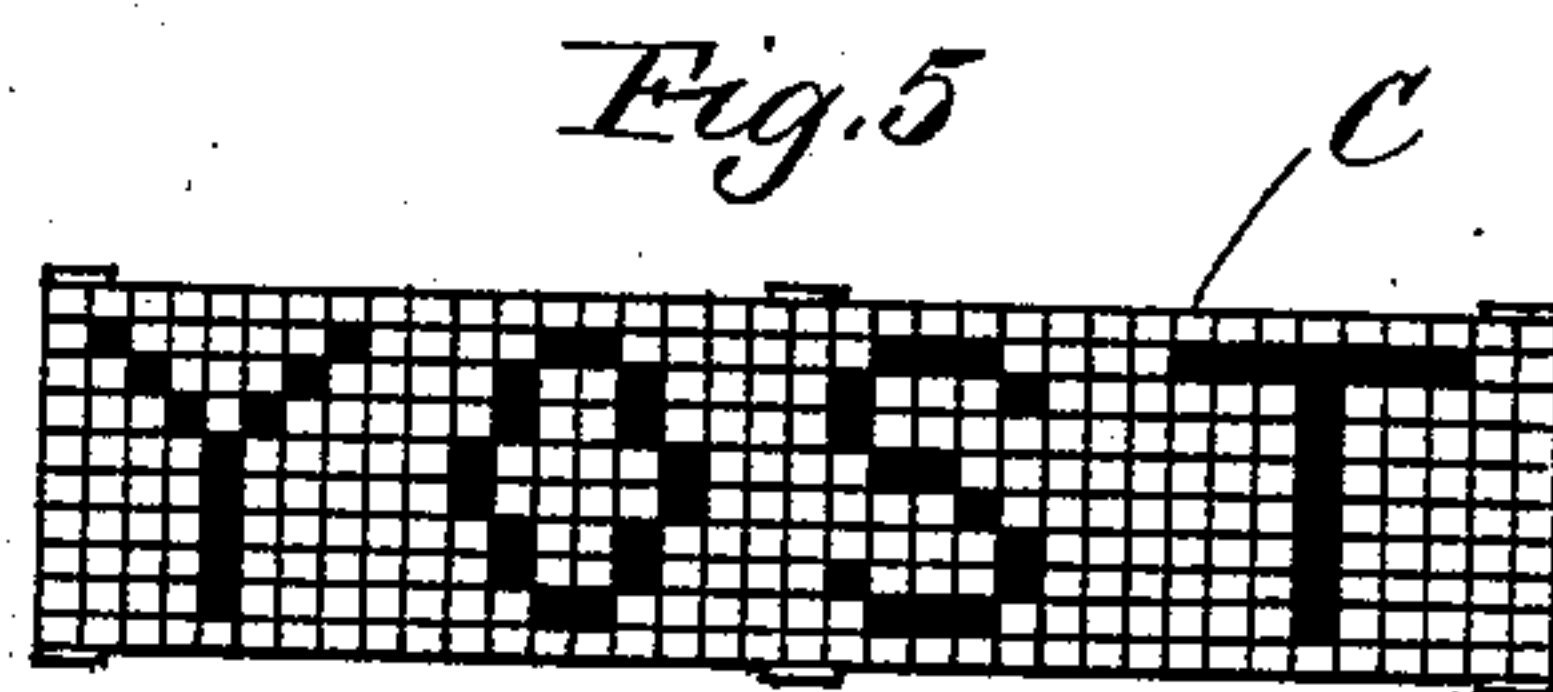
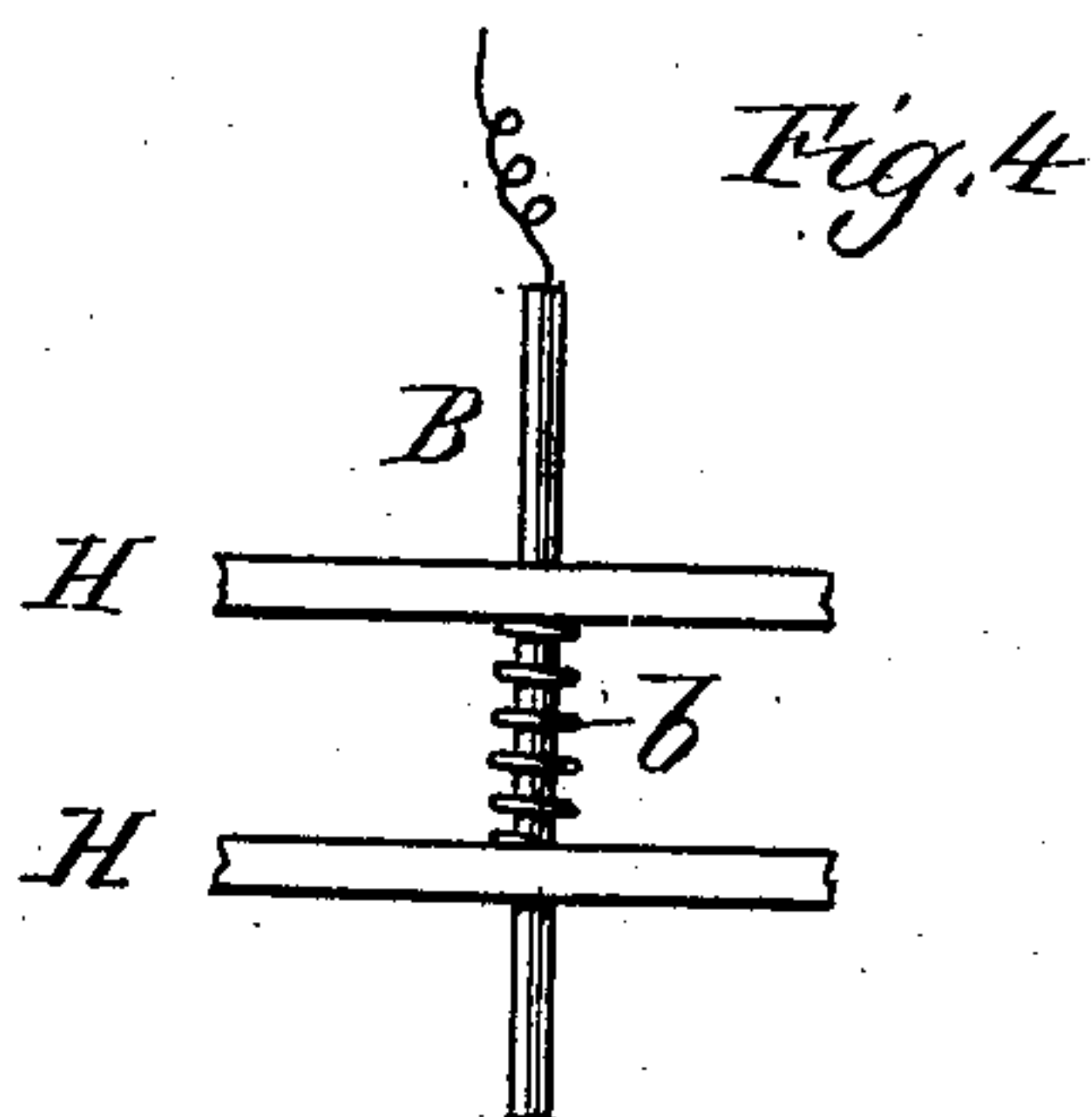
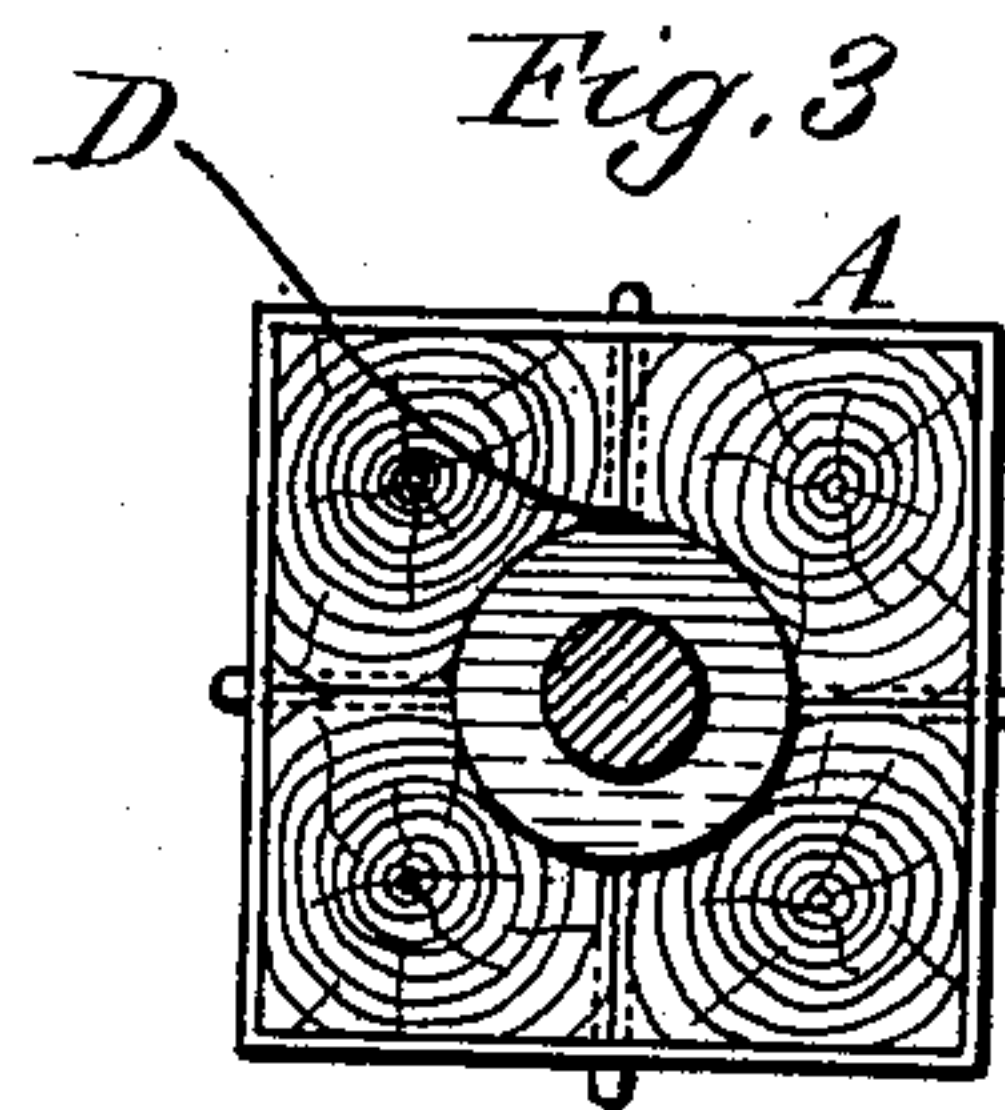
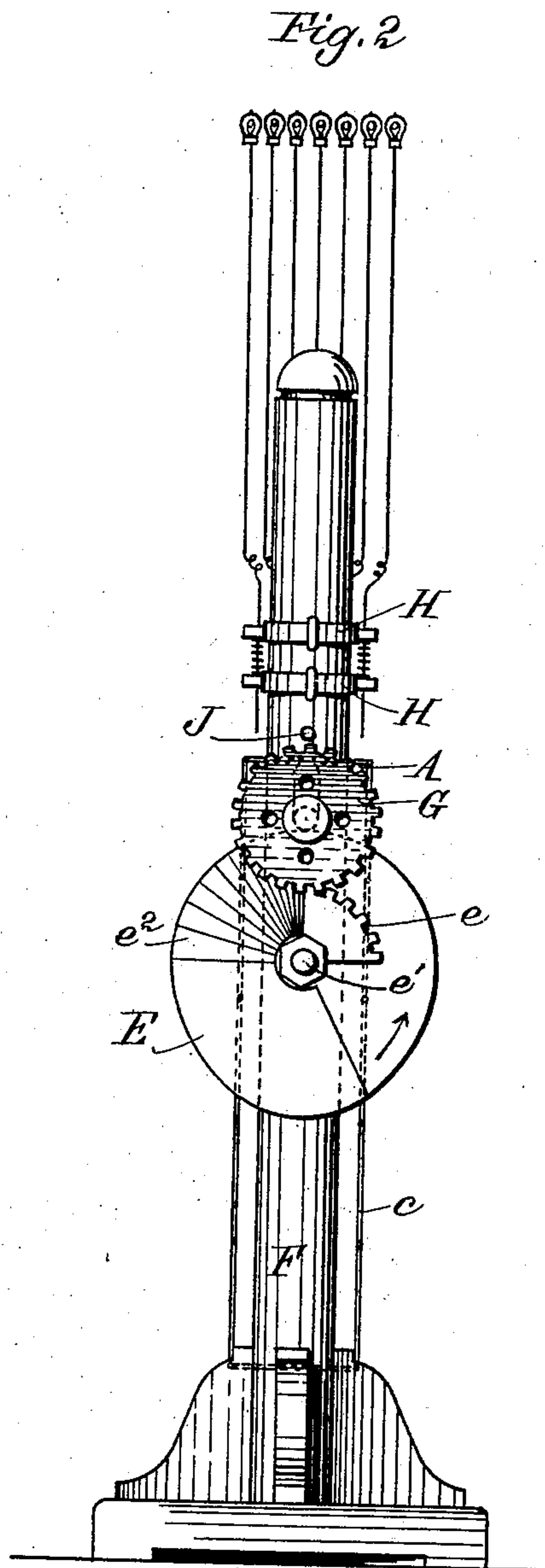
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DEVICE FOR CLOSING AND INTERRUPTING ELECTRICAL CIRCUITS.

(Application filed Aug. 1, 1900.)

(No Model.)

2 Sheets—Sheet 2.



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# UNITED STATES PATENT OFFICE.

SYLVAIN GLEIZES, OF PARIS, FRANCE.

DEVICE FOR CLOSING AND INTERRUPTING ELECTRICAL CIRCUITS.

SPECIFICATION forming part of Letters Patent No. 696,169, dated March 25, 1902.

Application filed August 1, 1900. Serial No. 25,574. (No model.)

*To all whom it may concern:*

Be it known that I, SYLVAIN GLEIZES, a citizen of the Republic of France, and a resident of 2 Rue d'Uzès, Paris, in the Republic of France, have invented a new and useful Device for Closing and Interrupting Electrical Circuits, of which the following is an exact specification.

The present invention relates to a device for closing and interrupting electrical circuits in a predetermined aggroupment and succession. This device can be used for different purposes—as, for instance, to light a certain group of glowing lamps in order to obtain letters or any other designs.

The device principally consists of a prism of conducting material, which prism is connected to one pole of the electric source. Said prism is adapted to turn in bearings, so as to be brought in contact with circuit-closers pressed by means of a spring or a weight to the prism and which in their turn are connected to the electric source. The prism carries pattern-cards of non-conducting material provided with metallic pins, buttons, or the like. Said pins or the like are, on one hand, in contact with the prism and, on the other hand, with the circuit-closers arranged in proximity to the prism.

It is obvious that by suitably arranging the pins a certain group of the same can be brought in contact with the electric source, so that one has it in one's power by the choice of a pattern-card to predetermine the group of circuit-closers to be connected. When now different pattern-cards answering to the purpose of the desired lighting effect are combined to one card, it is possible successively to obtain the desired lighting effects by simply turning the prism carrying said card. The prism is adapted also to be lowered from said circuit-closers before being rotated and to be raised so as to touch the circuit-closers after a part of the rotation has been carried out.

In order to make my invention more clear, I refer to the accompanying drawings, in which similar letters denote similar parts throughout the different views, and in which—

Figure 1 shows a front view of the invention. Fig. 2 is a side form of the same. Figs. 3, 4, and 5 are detail views.

A is the prism, carrying the pattern-cards

C C. Said prism consists of a conducting material and is connected by means of a wire D to one pole of the electric source. This prism is arranged upon an axle *a*, adapted to be vertically moved within recesses of the standards F F'. The axle *a* rests with its extremities projecting through the standards on cams E E'.

The cam E' is provided with a handle, by which means it is rotated for the purpose alternatively to raise or lower the prism A. The cams E E' have the shape of an eccentric, Fig. 2, or a like shape, so that during one revolution of the same the prism is only once raised and lowered. The cam E is provided with a tothing *e* in a part having the smallest distance from the center of said cam, which tothing gears with a pinion G, arranged upon the axle of the prism. Owing to the location of the tothing upon the cam E, the prism will only then be rotated when it is in its lowest position—that is to say, when it is out of engagement with the circuit-closers. The length of the tothing *e* of the cam E is such as to correspond with the angle around which the prism is to be rotated in order to bring the next side of the prism or the next pattern-card in contact with the circuit-closers. The pattern-cards C C, Fig. 5, consists, as already mentioned, of a non-conducting material, through which metallic pins are projected. In order to fix the pins into the cards, the latter are suitably divided in small squares, which correspond to the circuit-closers and which allow easily to fix the pins into such places as to obtain the desired lighting effect. The circuit-closers have the form of needles B and are guided in plates H H, attached to the standards F F' above the prism. Said needles B are influenced by helical springs *b*, Fig. 4, so as to be pressed against the prism.

For fixing the prism into its highest position—that is to say, into the position in which it is in contact with the circuit-closers—a pin J is attached to one of the standards F, which pin enters into holes provided within the pinion G. For this purpose the pinion is adapted to be horizontally moved upon the shaft *a* and is influenced by a spring *g*, which constantly presses the pinion inward. When now the prism is to be turned, the catch is released by a sloped surface *e*<sup>2</sup>, arranged upon



the cam E. By means of this sloped surface the pinion G is removed from the pin J before the rotation of the prism starts and is placed back by the spring *g* after the rotation 5 has been carried out, so that the pin enters the next hole and engages the pinion.

The described arrangement is only an example, and evidently different constructional forms can be employed. For instance, instead of arranging the prism so as to be horizontally moved the same might be adapted to move in any other way and be pressed against the circuit-closers by means of springs or in a similar way. The number of the sides of 10 the prism is also optional, as well as the number and form of the circuit-closers.

The connection of the prism to the circuit-closers can also be obtained in such a manner that the pattern-cards instead of being 20 projected by needles are provided with holes opposite the circuit-closers, so that the latter can directly touch the metallic prism, and thus establish the contact.

Having thus fully described the nature of 25 this invention, what I desire to secure by Letters Patent of the United States is—

1. A device for closing and interrupting the electric circuits in a predetermined aggroupment and succession, consisting of a prism A 30 connected to one pole of the electric source and vertically movable and rotatable, cams E E' arranged upon an axle *e'* being of a suitable shape so as to support the axle *a* of the prism A, a tothing *e* provided upon the cam

E in the shortest distance from the center of 35 said cam, a pinion G arranged upon the shaft *a* and gearing with the tothing *e* of the cam E, the length of the tothing corresponding to the angle around which the prism is to be turned until a new side of it is brought in 40 contact with the circuit-closer, the whole for the purpose as set forth.

2. A device for closing and interrupting the electric circuits in a predetermined aggroupment and succession, consisting of a prism A 45 connected to one pole of the electric source and vertically movable and rotatable, cams E E' arranged upon an axle *e'*, said cams being of a suitable shape and supporting the axle *a* of the prism A, a tothing *e* provided 50 upon the cam E in the shortest distance from the center of said cam, a pinion G arranged upon the axle *a* and gearing with the tothing of the cam E, said pinion being movable upon the axle of the prism and provided with 55 holes into which engages a pin J attached to one of the standards F for keeping the prism in position, a sloped surface *e<sup>2</sup>* arranged upon the cam, for the purpose to remove the pinion G from said pin J, the whole for the pur- 60 pose as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SYLVAIN GLEIZES.

Witnesses:

THEODORE BALDENSPERM,  
EDWARD P. MACLEAN.