

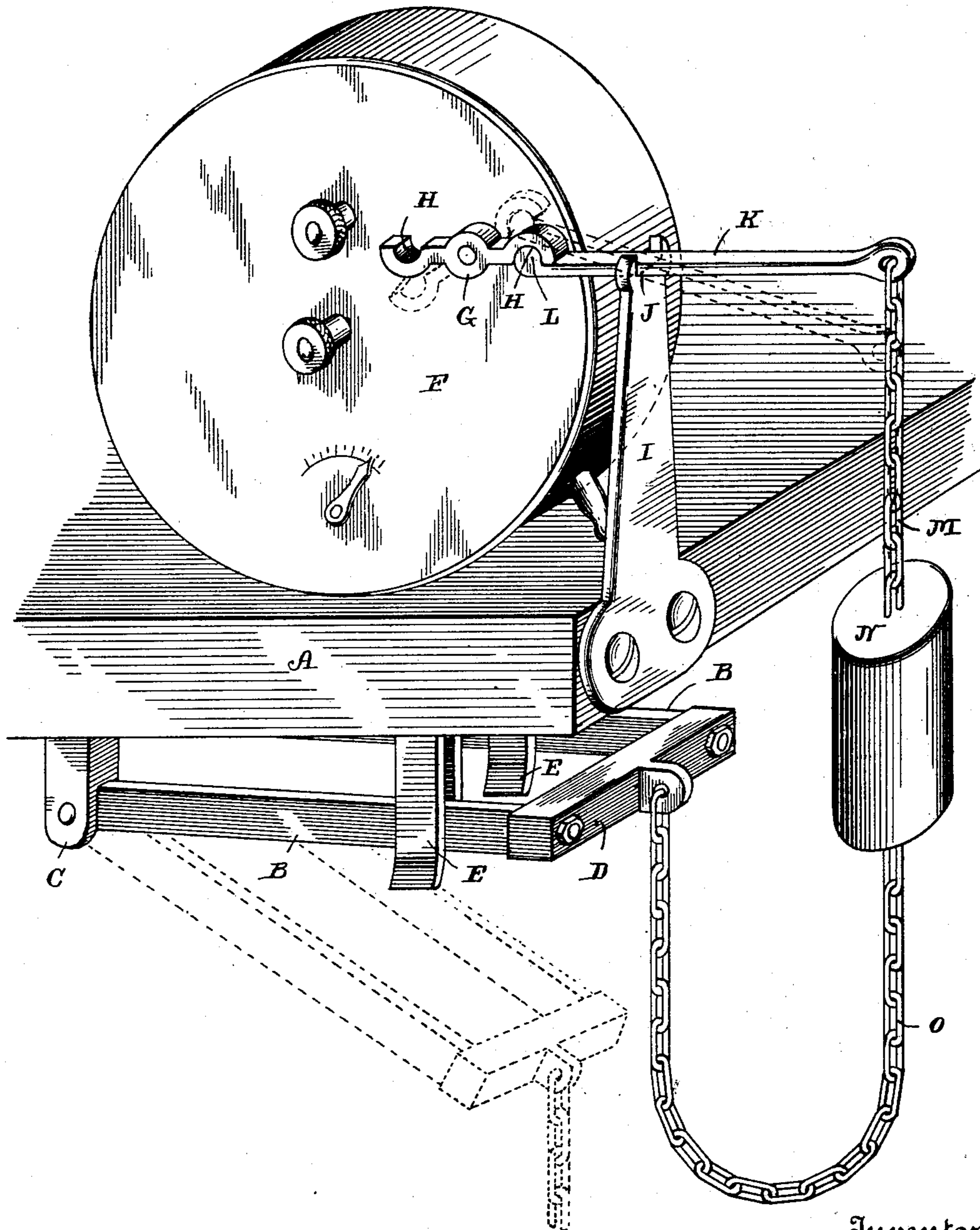
No. 716,869.

Patented Dec. 30, 1902.

W. B. COULTER.
ELECTRIC TIME SWITCH.

(Application filed Feb. 24, 1902.)

(No Model.)



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM B. COULTER, OF WATERBURY, CONNECTICUT.

ELECTRIC TIME-SWITCH.

SPECIFICATION forming part of Letters Patent No. 716,869, dated December 30, 1902.

Application filed February 24, 1902. Serial No. 95,246. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. COULTER, a citizen of the United States, and a resident of Waterbury, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Time-Switches for Electric Lights, of which the following is a specification.

This invention relates to new and useful improvements in time-switches for electric lights, and comprises mechanism for automatically operating such switches to cut off a current, and thus extinguish electric lights.

The device is particularly adapted for use in connection with the lighting of store-windows and analogous places that it is desired to illuminate each evening, and especially Sunday nights, when the room is not occupied, and where said lights are to be extinguished at a certain predetermined time without the presence and assistance of an attendant.

It is the purpose of the invention to produce a simple, reliable, and inexpensive mechanism, which may be attached to the ordinary forms of switches used in electric-light circuits or which may be attached to gas-burners and water and steam supplies, whereby the same may be cut off at any desired time.

In connection with my device I employ a common form of alarm-clock mechanism, which can be set to operate and release the manipulating device at any desired time, as will be later more fully described.

With the above and other minor objects in view my invention resides and consists in the novel construction and arrangement of parts shown upon the accompanying sheet of drawings, forming a part of this specification, and wherein my invention is illustrated in perspective view, properly set and ready for operation.

Referring in detail to the characters of reference marked upon the drawings, A indicates a suitable base, to which my improved automatic device is attached and which in practice may comprise a shelf that can be attached in any convenient part of the store. If preferred, however, my appliance can be mounted upon any permanent shelving that may already be located in the room. To the under side of this shelf is connected a switch, which may be of any of the swinging-lever types,

the one illustrated being commonly known as a "two-way" switch. The contact-levers B of this switch are pivoted to studs C and provided with an insulated connecting-bar D, which in turn contains an eye for the attachment of the operative connections. E indicates sockets into which the contact-levers B, before referred to, are thrown to form the contact.

As before stated, the medium for tripping my mechanism consists of an ordinary cheap style of an alarm-clock F, that is suitably secured to the base A. My connections are made with the winding-stem of this movement, as will later be described. This stem differs from the ordinary stem only in that I secure thereon a special form of winding knob or key G, which contains transverse concave sockets H. The construction of this clock is such that when it is wound up the key becomes rigid against any backward movement, but unwinds with the releasement of the alarm mechanism. To the shelf A, I attach a post I, having a fork or socket J in its upper end to adjustably receive a detachable lever K, as shown. One end of this lever is provided with a transverse rib L to engage the socket H, before mentioned, and the other end contains an eye for the attachment of a chain M. A weight N is attached to this chain and in practice serves first to draw down upon the lever and hold its rib in close contact with the key and in the second place to throw open the switch through a second chain O, which is interposed between the weight N and the lug on the cross-bar D of the switch. It will be obvious that in winding this class of clocks the key will not always fetch up in a true transverse position, as would be preferred, but might be left at an angle thereto—as, for instance, that indicated in dotted lines. In consequence of this difficulty I have provided the special form of detachable socket connection between the lever and the key and likewise an adjustable bearing between the lever and its post, both of which serve to accommodate the varying positions which the key might assume and at the same time insure the working of my invention.

Having described the construction of my invention, I will briefly refer to its method

of operation, which is as follows: The clock is wound and the pointer set to the time desired for extinguishing the lights, whereupon the lever is placed upon the post and hooked under the key with the weight suspended from the outer end of the lever. The switch is next closed into the position indicated in full lines of the drawings, whereupon the device is properly set. With the parts in this position and the arrival of the time for the extinguishing of the lights the alarm mechanism of the clock releases the key, causing the same to unwind. This in turn frees the lever, permitting it and its weight to drop from the post and by reason of the gravity force of such movement draws the switch out of its socket and cuts out the light.

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

1. In a device of the class described, the combination with a shelf, a clock mechanism supported on the upper side thereof and having a winding-stem and a key carried by the latter, and a switch supported on the bottom of the shelf, of a supporting-post, a lever supported by said post and adapted to be engaged by the key of said winding-stem, whereby said lever is held upon said post, said lever being loosely mounted upon said post and bodily movable thereover to permit its lat-

eral adjustment relatively to said key, whereby said lever may be engaged with said key in varying positions of the latter, and means interposed between said lever and the switch for operating the latter when said lever is released by said key. 35

2. In a device of the class described, the combination with a switch, and a clock mechanism having a winding-stem and a key carried by the latter, said key being provided in its ends with transversely-extending sockets, of a supporting-post, a lever supported by said post but freely movable thereon and provided with a transversely-extending rib adapted to be received by the sockets of said key, whereby said lever is held upon said post, said lever being bodily movable over said post to permit its lateral adjustment relatively to said key, whereby said lever may be engaged with said key in varying positions of the latter, and means interposed between said lever and the switch for operating the latter when said lever is released by said key. 40 45 50

Signed at Waterbury, in the county of New Haven and State of Connecticut, this 13th day of February, A. D. 1902. 55

WILLIAM B. COULTER.

Witnesses:

GEO. C. MINOR,
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