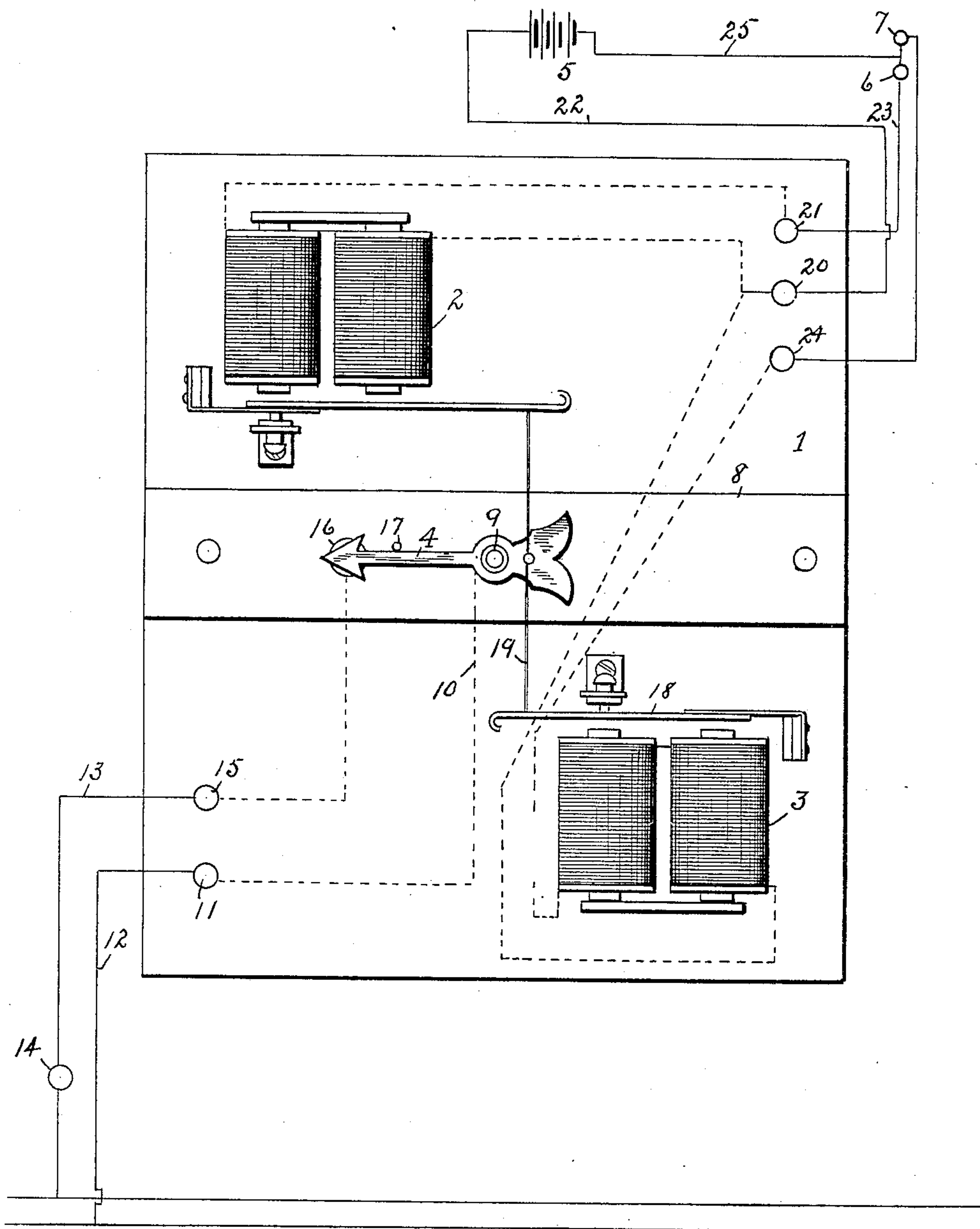


(No Model.)

E. M. FRENCH.
ELECTRIC SWITCH.

No. 597,642.

Patented Jan. 18, 1898.



Witnesses
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EVERETT MASON FRENCH, OF STOUGHTON, MASSACHUSETTS.

ELECTRIC SWITCH.

SPECIFICATION forming part of Letters Patent No. 597,642, dated January 18, 1898.

Application filed September 16, 1897. Serial No. 651,885. (No model.)

To all whom it may concern:

Be it known that I, EVERETT MASON FRENCH, a citizen of the United States, residing at Stoughton, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Electric Switches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in electric switches, and has more particular relation to switches used in connection with electric-lighting systems.

The invention consists of certain novel constructions, combinations, and arrangements of parts, all of which will be hereinafter more particularly set forth and claimed.

The accompanying drawing represents a plan view of the switch embodying my invention, showing the circuit connections.

1 in the drawing represents the base; 2 and 3, the respective operating-magnets; 4, a pivoted switch; 5, a battery; 6, a push-button for turning on the lights, and 7 a push-button for extinguishing the lights. The base 1 is of any desired construction and material, with the exception that it is provided on its upper surface with a raised portion or ridge 8, upon which the pivoted switch-arm 4 is mounted by means of a pivot-pin 9. Said pivot-pin 9 extends through the ridge 8 and base 1 and is connected under said base to a wire 10, which is connected in turn to a binding-post 11, which latter is adapted to receive one of the wires 12 of the main lighting-circuit. The other wire 13 of said lighting-circuit, which includes the lights 14, is connected to a binding-post 15, which is mounted on said base 1 and communicates with a contact-stud 16, which projects upward through the base 1 and the ridge 8, so as to form a contact for the movable end of the switch-arm 4, a suitable pin 17 being mounted on said ridge to limit the movement of said switch-arm in one direction.

The magnets 2 are of any desired structure and are provided with a spring-pressed pivoted armature 18, the far end of which is connected to a cord 19, which is in turn connected to the switch-arm 4 to the rear of its pivot-point,

so that when said armature is operated the forward end of said switch-arm will contact with the upper end of the stud 16, and thus complete the main lighting-circuit. The wires from said magnets 2 are connected, respectively, to binding-posts 20 and 21, mounted upon the base 1. The post 21 is connected to one wire of the button 6, while the post 20 is connected to one pole of the battery 5 by a wire 22, the remaining wire of said button 6 being connected to the opposite pole of the battery 5 by a wire 23.

The magnets 3 are practically the same as the magnets 2 and are mounted in a similar manner and provided with a similar armature connected to the opposite side of the switch-arm 4. When these magnets are energized, their armature draws the operating end of the switch-arm out of contact with the upper end of the stud 16, and thus breaks the electric circuit in the main-circuit wire. One of the wires of said magnets 3 is connected to the binding-post 20, while the remaining wire is connected to a binding-post 24, which latter is in turn connected to one wire of the button 7, the opposite wire of said button being connected to one pole of the battery 5 by a wire 25.

It will be observed from the foregoing description that the buttons operating the lights may be placed in any part of the house and the lights turned on and off from any desired location without running the main-circuit wires to such location. By this means the dangerous and expensive practice of running the main-circuit wires to the several points from which it is desired to operate the lights is altogether avoided and the lights automatically started or extinguished by buttons connected to small independent wires operated by a very mild current. When the button 6 is operated, the current of the battery 5 is thrown into the magnets 2, thereby drawing on the cord 19 and causing the switch-arm 4 to move and complete the circuit of the main line. When it is desired to extinguish the lights, the button 7 is operated, which causes the electrical impulse to take place in the magnets 3, thus operating the switch-arm in an opposite direction and causing it to pass out of contact with the head of the stud 16. The switch is thus positively operated from

a distance to either open or close the main lighting-circuit.

Any desired number of buttons may be connected to the respective magnets and extend
5 to different parts of the house, so that the lights may be turned on at will from any desired point.

By the employment of my invention all danger of fires resulting from the extension
10 of the heavy main-line wires through the different parts of the house to the operating-buttons is avoided and the main line operated by a simple arrangement of wires through which passes a current incapable of doing
15 any injury.

If so desired, a suitable protective casing may be placed over the top of the base 1, so as to inclose all of the working parts and prevent any unauthorized tampering with the
20 switch-lever or its operating devices.

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

In an electric switch, the combination with
25 a suitable base, of opposite sets of electromagnets included in a local-battery circuit,

comprising a pair of push-buttons, each set of electromagnets having an armature independent from that of the other, a pivoted switch-lever between and at a distance from 30 said electromagnets coacting with a conducting-contact, and a main-line circuit including illuminating devices connected to the said pivoted switch-lever and the conducting-contact, and a cord extending in opposite direc- 35 tions from the end of the switch-lever farthest from the conducting-contact and attached to the free ends of the opposite armatures, whereby the illuminating devices in the main-line circuit may be controlled by the push- 40 buttons in the local-battery circuit for illuminating and extinguishing purposes without carrying the heavy main-line wires into a building, substantially as described.

In testimony whereof I have signed this 45 specification in the presence of two subscribing witnesses.

EVERETT MASON FRENCH.

Witnesses:

H. F. BUSWELL,
JAMES J. PYE.