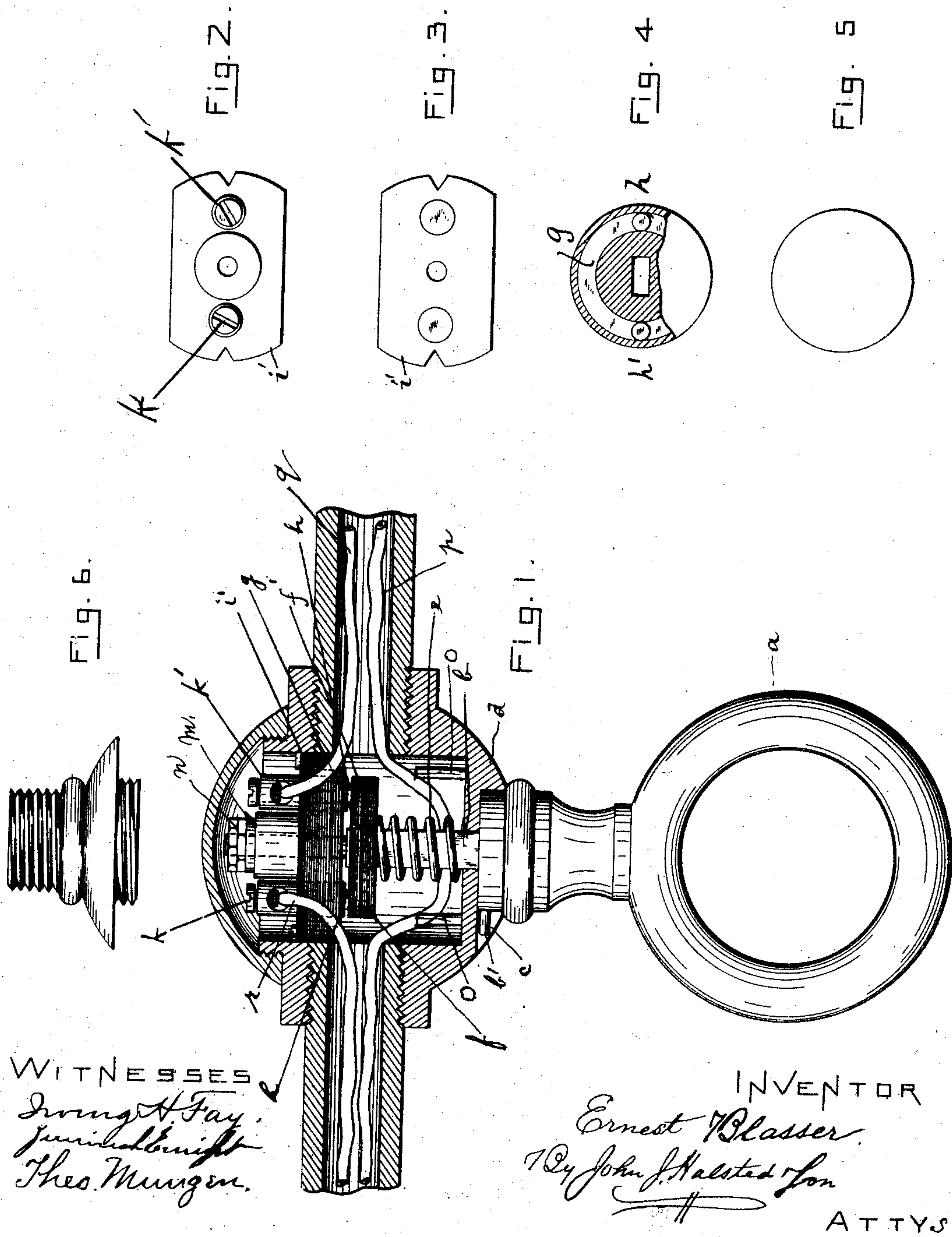


(No Model.)

E. BLASSER.
SWITCH FOR ELECTRIC LIGHTS.

No. 503,693.

Patented Aug. 22, 1893.



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ERNEST BLASSER, OF BOSTON, MASSACHUSETTS.

SWITCH FOR ELECTRIC LIGHTS.

SPECIFICATION forming part of Letters Patent No. 503,693, dated August 22, 1893.

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To all whom it may concern:

Be it known that I, ERNEST BLASSER, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Switches for Electric Lights, of which the following is a specification.

The object of my invention is a switch for making and breaking the electric circuit so as to light or extinguish an electric lamp, as may be desired, and in substantially the same way, so far as respects the operation of it, and its effect upon the light, as illuminating gas is turned on and off; that is, when the lamp is not lighted, and it is desired to light it, by a quarter turn of a suitable key, and without click or noise such as accompanies the lighting of an electric lamp as it is now done, the circuit is made and the lamp lighted; and in the same way, by a quarter turn in the opposite direction the circuit is broken and the light extinguished, the key being capable only of a quarter-turn forward to light and backward to extinguish.

My object is accomplished in the following manner: I first provide a solid shell—that is, a shell made of one piece. On the upper surface is an opening, having a diameter nearly equal to the diameter of the shell. On the under side, a small hole is provided through which passes the spindle to which the key is attached, and stops are provided so as to enable the key to be turned only one-quarter of a complete revolution. On one side is an opening into which is to be screwed the pipe through which the electric conductors are to pass. On the lower part of the spindle is a helical spring bearing against an insulated plate having attached to its upper side a small plate of brass or other suitable electrical conducting material, with a small post or protuberance of similar material at each end. Next above that is a plate of insulating material having in each end a post of electrical conducting material passing entirely through the plate, and above that another plate of insulating material with two posts of electrical conducting material passing entirely through the plate, and, having attached to their upper ends, means for connecting with the posts the electric conductors or wires over which the current passes. Above this is a spring, attached to the upper

end of the spindle and bearing at each end on the upper surface of the last mentioned plate. By means of the helical spring coiled around the lower plate, and pressing up the lower plate, and the spring pressing down the upper plate the posts on the lower plate are kept pressed against the upper plate.

Figure 1. is a longitudinal view, the case and tubes being in central section and the other parts in elevation; Fig. 2. a detail showing in plan view, one of the insulating plates, with its posts; Fig. 3. the same without the posts; Fig. 4. a plan of one of the plates; Fig. 5. a detail, and Fig. 6. indicates a coupling for use when the apparatus is used for a hall light.

I have shown in the drawings a longitudinal section of my invention.

a, is the key.

b, is the spindle; *b'* a small protuberance or stop on the key bearing against the stop *c*, on the under side of the shell *d*.

e, is a helical spring coiled around the spindle and bearing against the under surface of the disk or plate *f*, above which is the disk or plate *f'*, both plates being of insulating material. There is attached to the upper side of the plate *f*, a metallic ring *g*, which is in contact with the metallic posts *h*, *h'*, inserted in the plate *f'*; the plates *f* and *f'* are attached to the spindle and turn with it.

i is a disk or plate of insulating material through which are placed the metallic posts *k*, *k'*.

m, is a piece of metal or spring screwed onto the upper end of the spindle *b*; by means of the nut *n*, and the two springs *e*, and *m*, the several parts described are held in position.

o, are posts placed on one side of the center of the shell for the purpose of keeping the electric conductors on one side and away from the spindle so as not to interfere with its free turning, as hereinafter described.

p, *q*, and *r*, are electric conductors.

The shell *d*, is solid, that is, it is made of an entire piece of metal and adapted to be screwed into tubes in which are to be placed the conducting wires. Heretofore the part corresponding to my shell has been made in two parts, of thin metal, the two parts being adapted to be snapped together, that is, the

edge of one closed over that of the other. All the operative parts of the device are put together and operate without any assistance from this shell, which is, in fact, only a cover.

5 By making the shell in one entire piece, greater strength and more security for the parts contained therein, are secured; and also the adaptability of attachment of the shell to the tubes containing the conducting

10 wires is obtained. As a result the whole will be as firm as a gas cock. It will be seen also that my shell is not, as in the case of that heretofore in use, a mere cover, and having no function but that of merely protecting the

15 operative parts. In mine the tubes are screwed directly to the shell, and it is a support for the operative parts contained within it. A practical result of this arrangement is the firmness and steadiness of operation above

20 mentioned. In the old form too, the outlet and inlet must be opposite to each other, while in mine they may be at any desired angle, one to the other. In consequence of this fact my device can be adapted to be used

25 as a center, or hall, light, which when the old form is used, is not possible. When used in this way it is supplied with a nozzle in the upper side of the shell, to which the electric lamp is to be attached, the spindle being under the shell, and the whole will be arranged

30 substantially as if it were a gas-light.

The operation of my invention is as follows: A lamp being attached to the above described device, the key *a* is turned so as to bring the

35 bases of the posts *k*, *k'* in contact with the upper end of the posts *h* *h'*. There will then be a complete circuit through the conductor *q*, posts *k'*, and *h'*, ring *g*, posts *h* and *k*, con-

ductor *r*, to the lamp, and from the lamp, through conductor *p*. When the key is turned 40 so as to bring the stop *b'* against the stop *c*, and the posts *h*, *h'* are removed from their electrical contact with the posts *k*, *k'* the circuit is broken.

It is obvious that my invention will control 45 one or more circuits and that the inlets or outlets may be at any angle required; and the lamp may be placed in any desired position or angle.

What I claim, and desire to secure by Letters Patent, is—

1. In an electric switch the combination with an electric lamp and suitable conductors, of a key and spindle, the spindle provided with an insulated plate have thereon two conducting posts, and adapted by means of the 55 key to be brought into, or removed from, contact with two conducting posts, electrically connected respectively with said conductors, so that the electric circuit can be made and 60 broken, the spindle, plate, and posts, being contained within a solid shell connected with a tube in which the conductors are placed, substantially as and for the purpose above described. 65

2. In an electric switch the combination of the key *a*; the spindle *b*; the plates *f*, *f'*, provided with the posts *h*, *h'*, and the ring *g*; the plate *i'*, provided with posts *k*, *k'*; and the electric conductors *p*, *q*, and *r*; substantially 70 as and for the purpose above described.

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Witnesses:

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