

No. 842,843.

PATENTED JAN. 29, 1907.

A. H. WILLIAMSON.
SAFETY ELECTRIC SWITCH.
APPLICATION FILED FEB. 3, 1906.

Fig. 1.

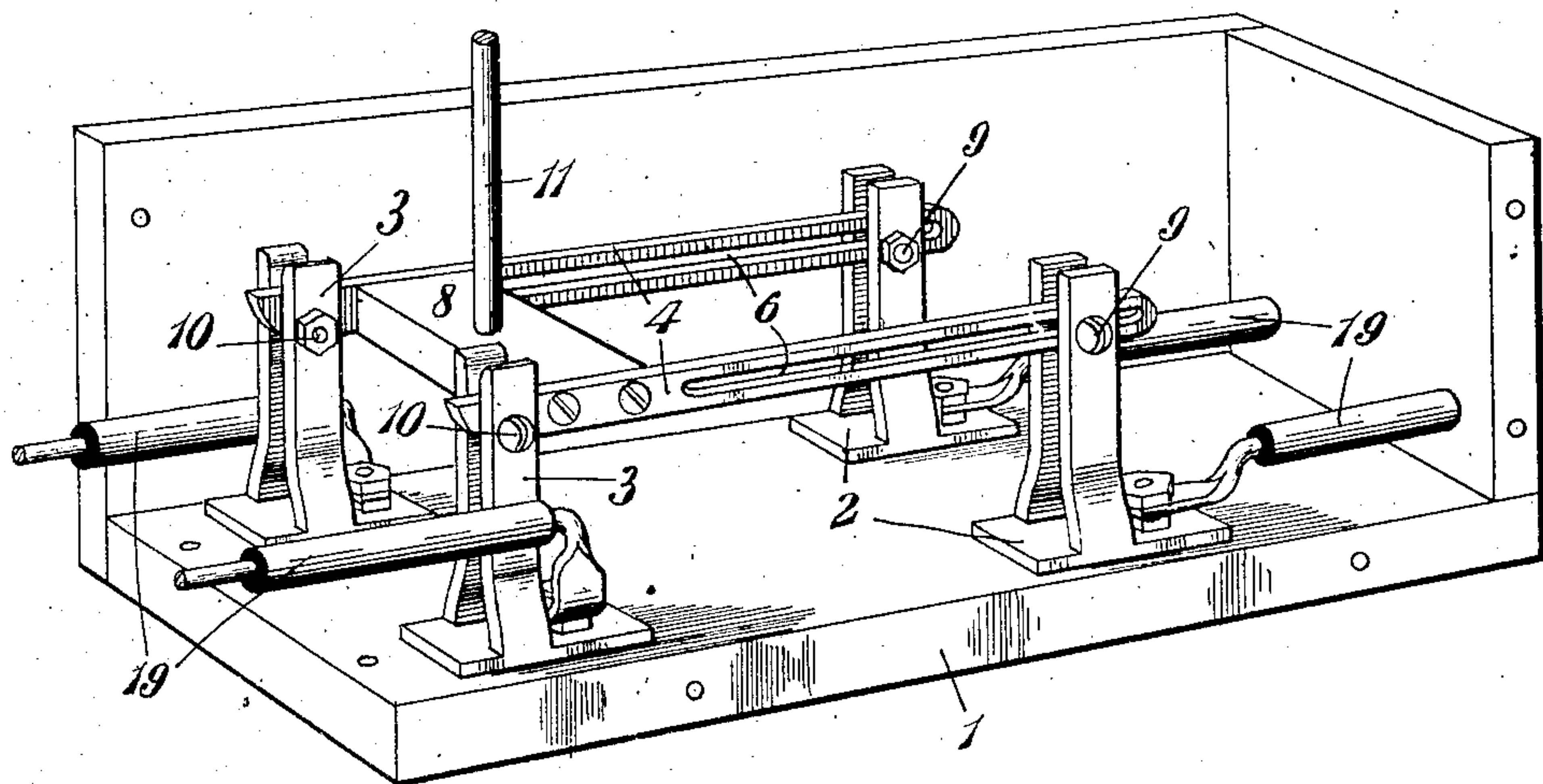


Fig. 2.

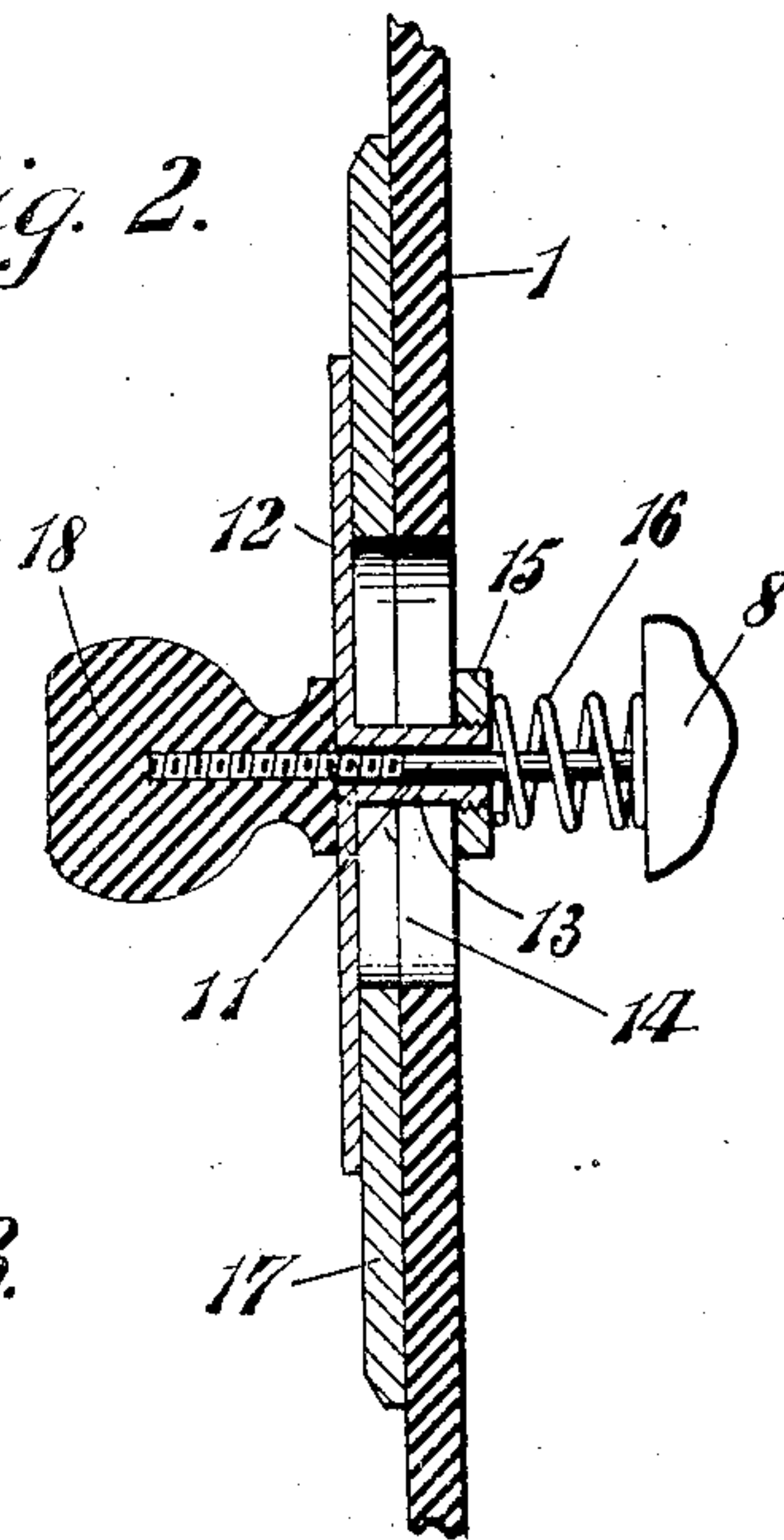


Fig. 3.

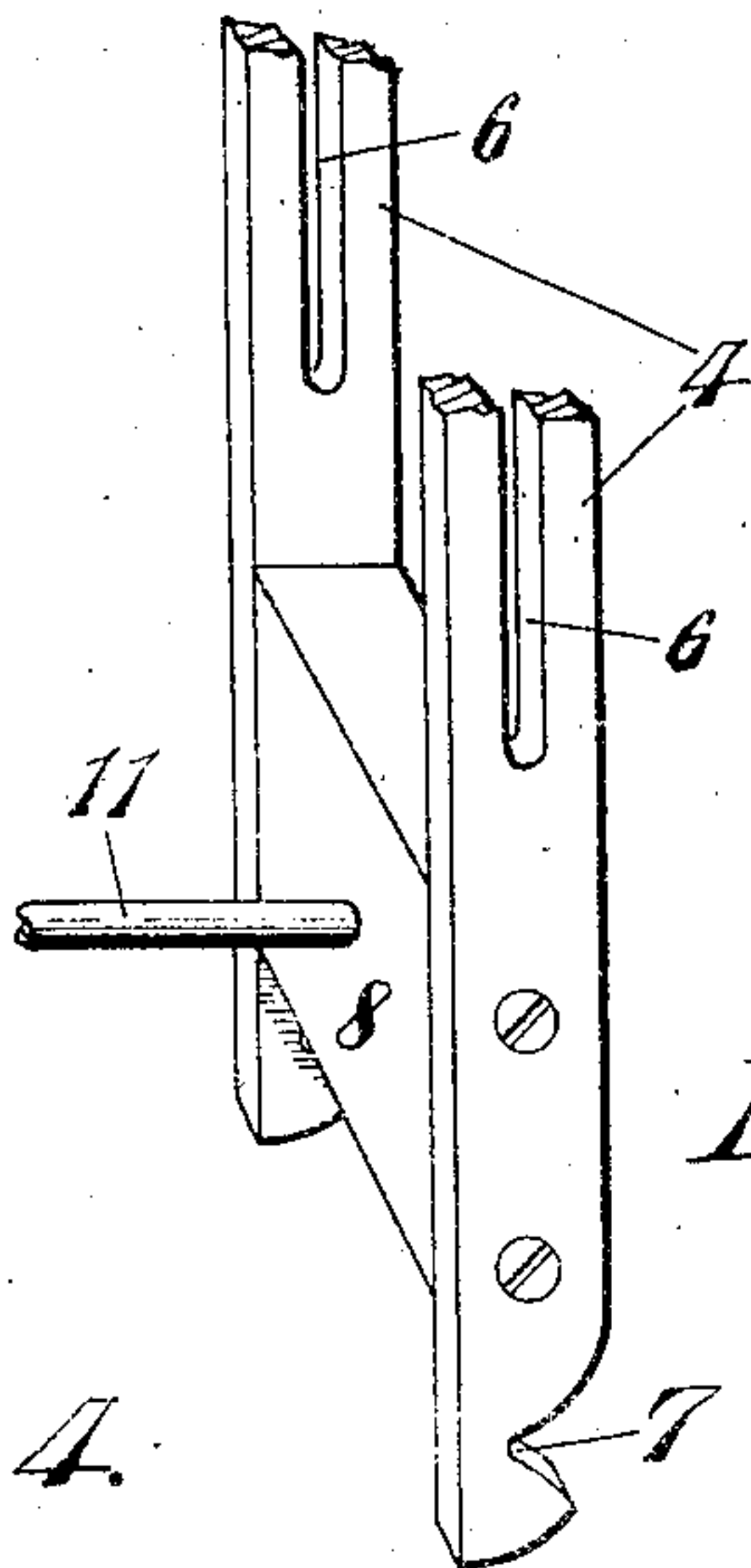
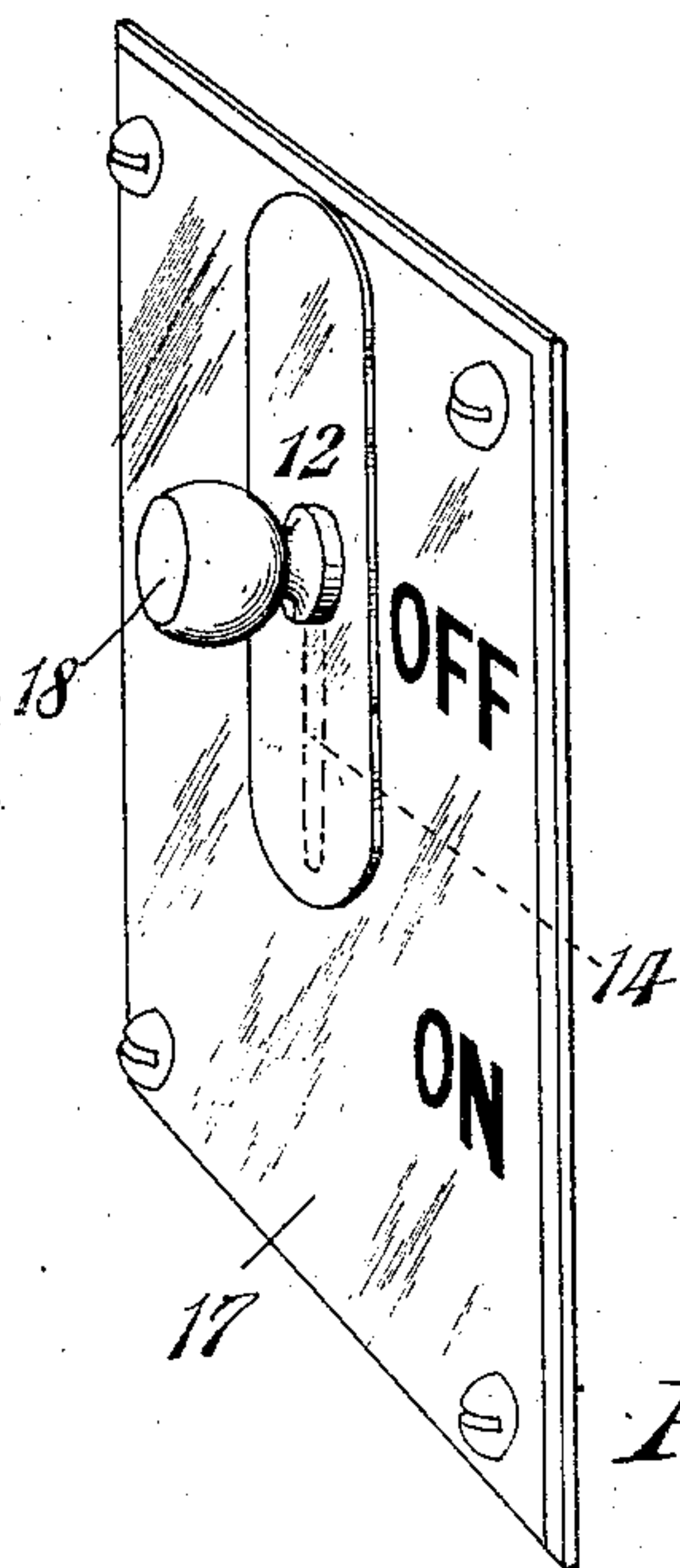


Fig. 4.



Witnesses

Stuart H. Williamson

William L. Armstrong

Inventor

Arthur H. Williamson

By

Fred B. Fetherstonhaugh *Att'y*

UNITED STATES PATENT OFFICE.

ARTHUR HAROLD WILLIAMSON, OF LACHINE, QUEBEC, CANADA.

SAFETY ELECTRIC SWITCH.

No. 842,843.

Specification of Letters Patent.

Patented Jan. 29, 1907.

Application filed February 3, 1906. Serial No. 299,231.

To all whom it may concern:

Be it known that I, ARTHUR HAROLD WILLIAMSON, of the town of Lachine, in the Province of Quebec and Dominion of Canada, have invented certain new and useful Improvements in Safety Electric Switches, of which the following is a full, clear, and exact description.

My invention relates to safety electric switches; and the object is to provide a simple and easily-operated switch that will be so constructed as to preclude any possibility of burning or otherwise injuring the operator. To accomplish this object, I provide a casing of insulating material containing the switch mechanism and having a protected knob or handle protruding therefrom. The casing may be set in a wall or in any other convenient place and the protected handle operated with perfect safety.

In the drawings which illustrate my invention, Figure 1 is a perspective view of the device, showing the casing and interior mechanism. Fig. 2 is a sectional elevation of the operating-handle containing the protecting device. Fig. 3 is a perspective view of the switch-blades. Fig. 4 is a perspective view showing the top of the device as it would appear when set in a wall.

Referring to the parts, 1 designates a casing of insulating material, such as fiber or vulcanite.

2 designates the positive poles of the switch, each supported on a suitable base and comprising upright members, as shown in Fig. 1. 3 designates similar negative poles, and 4 switch-blades having slots 6 at one end and notches 7 at the opposite end. The blades are rigidly connected by means of an insulating cross-piece 8 and are adapted to slide longitudinally on the bolts 9, connecting the sides of the posts 2. The notches 7 in the opposite ends of the switch-blades are adapted to engage the connecting-bolts 10 of the negative poles 3.

11 designates a threaded post supported on the insulating member 8 and is adapted to extend upwardly through a slot 14 in the cover of the casing.

12 designates a guard of suitable material for the knob or handle of the switch. The guard 12 is placed over the slot 14 and has an integral sleeve 13, adapted to receive the post 11. A nut 15 under the cover of the casing keeps the guard secured in position.

A spring 16, surrounding the post 11 be-

tween the cover of the casing and the member 8, is adapted to keep the switch-blades 4 securely in engagement with the poles 3.

17 designates a plate which may be fastened to the cover of the casing, if desired.

18 is an internally-threaded knob or handle adapted to be screwed to the post 11 above the guard 12.

19 represents line-wires entering the casing and fastened to the poles in the usual manner.

It will be obvious that when the parts are assembled in position and the switch closed the spring 16 will force the switch-plates 4 into engagement with the forked ends of the poles 3, so that the notches 7 will engage the pins 10. When it is desired to open the switch, the knob is drawn upwardly against the spring and at the same time slid in the slot 14 until the ends of the switch-blades are out of engagement with the posts 3. The switch-blades will have a longitudinal sliding motion and at the same time a pivotal movement on the pins 9, which will facilitate rapid breaking of the circuit. The notches 7 will serve to prevent the blades being disengaged by jarring or other means from the pins 10. The projecting-plate 12 will effectually prevent any flashes escaping through the slot to injure the operator.

Having thus described my invention, so that the same may be readily understood by those skilled in the art to which it appertains, what I claim, and desire to secure by Letters Patent, is—

1. In an electric switch, a casing of insulating material, terminal poles mounted in said casing, switch-blades slidably mounted on one pair of poles and having notches adapted to engage the opposite poles, an insulating member connecting said switch-blades, a threaded post mounted on said insulating member, and a helical spring surrounding said post adapted to maintain the switch-blades in engagement with the poles.

2. In an electric safety-switch, a casing of insulating material, terminal poles mounted in said casing, a pair of slotted switch-blades pivotally and slidably mounted on one pair of terminal poles, said switch-blades having notches in their opposite ends adapted to engage a second pair of terminal poles, an insulating member connecting said switch-blades, a threaded post mounted on said insulating member, and adapted to operate in a slot in the cover of said casing.

3. In an electric switch, a casing, terminal poles mounted therein, slotted switch-blades slidably and pivotally mounted on one pair of terminal poles, notches in the ends of said switch-blades adapted to engage a second pair of terminal poles, an insulating member connecting said switch-blades, a threaded post mounted in said insulating member, a compression-spring surrounding said post, a handle mounted on said post, and a guard-plate mounted beneath said handle.

4. In a device of the class described, a casing, terminal poles mounted therein, slotted switch-blades pivoted to one pair of terminal poles and adapted to slide in and out of en-

gagement with the second pair of terminal poles, an insulating member connecting said switch-blades, a post mounted in said insulating member adapted to operate in a slot in a cover of the casing, a helical spring surrounding said post, a guard-plate mounted on said post above the slot, and a handle of insulating material removably mounted on the extremity of said post.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

ARTHUR HAROLD WILLIAMSON.

Witnesses:

D. W. ST. MARTIN,

J. ANDERSON BISHOP.