

No. 742,449.

PATENTED OCT. 27, 1903.

H. KRANTZ.  
QUICK BREAK SWITCH.

APPLICATION FILED JUNE 4, 1903.

NO MODEL.

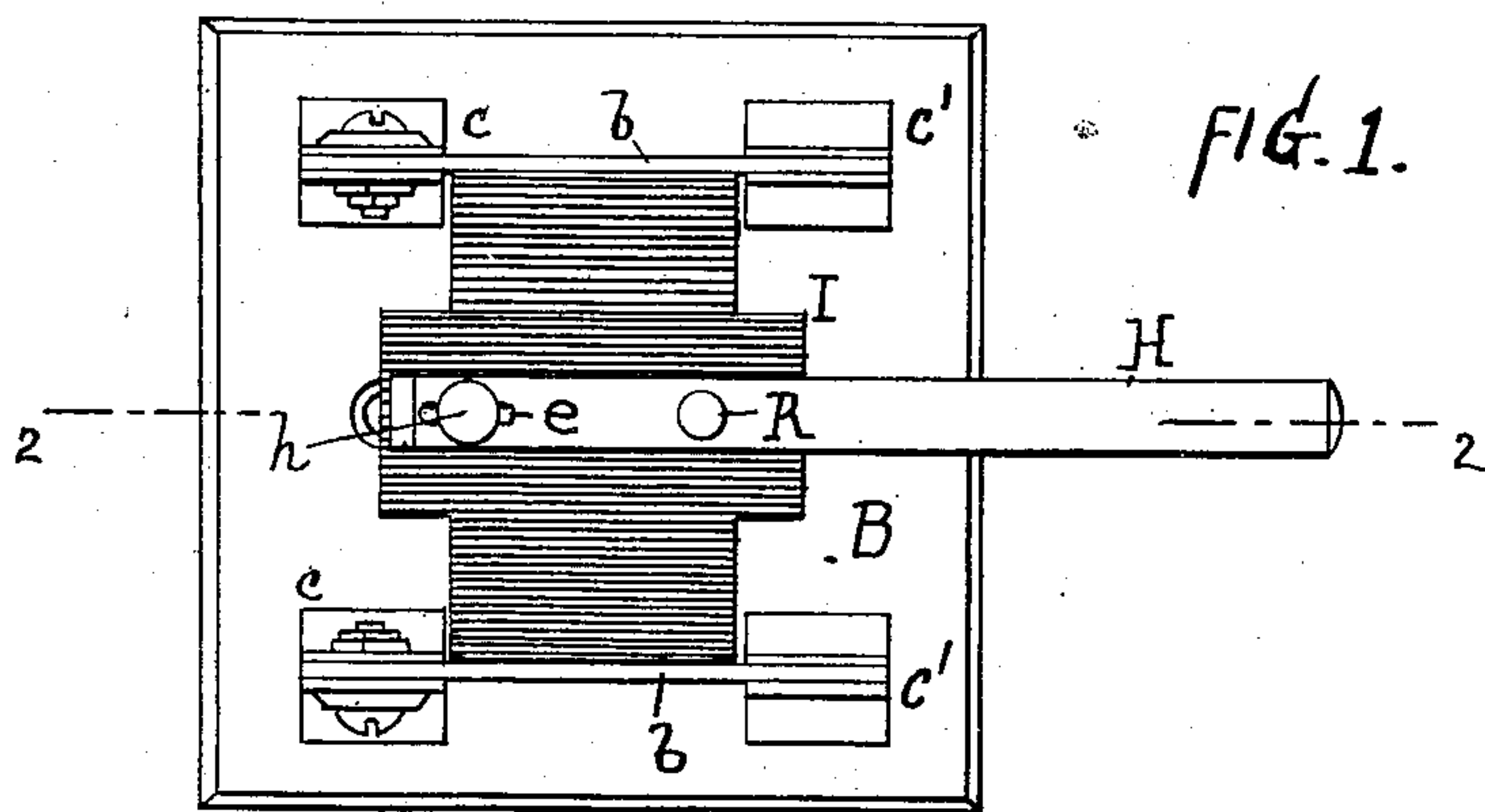


FIG. 1.

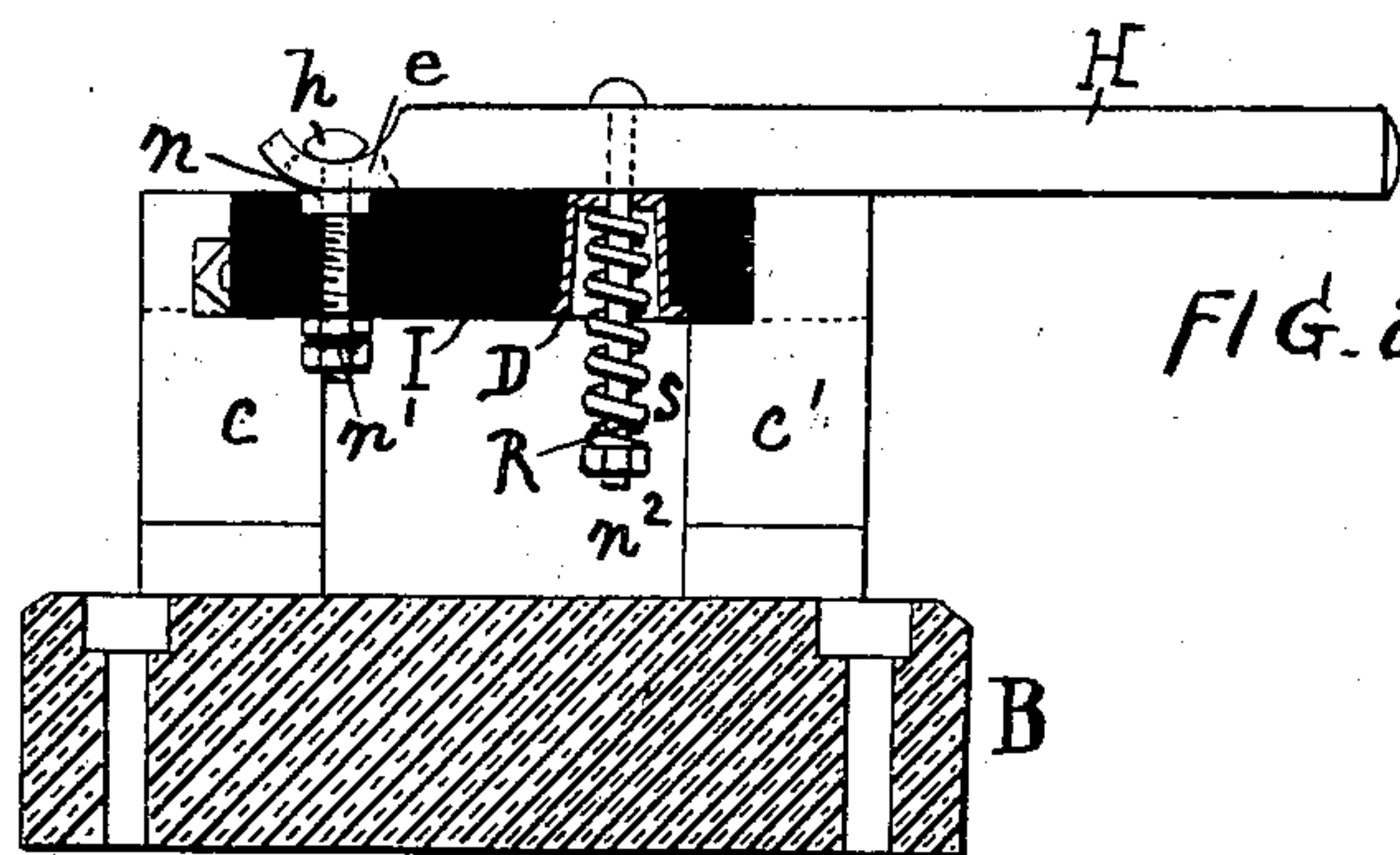


FIG. 2.

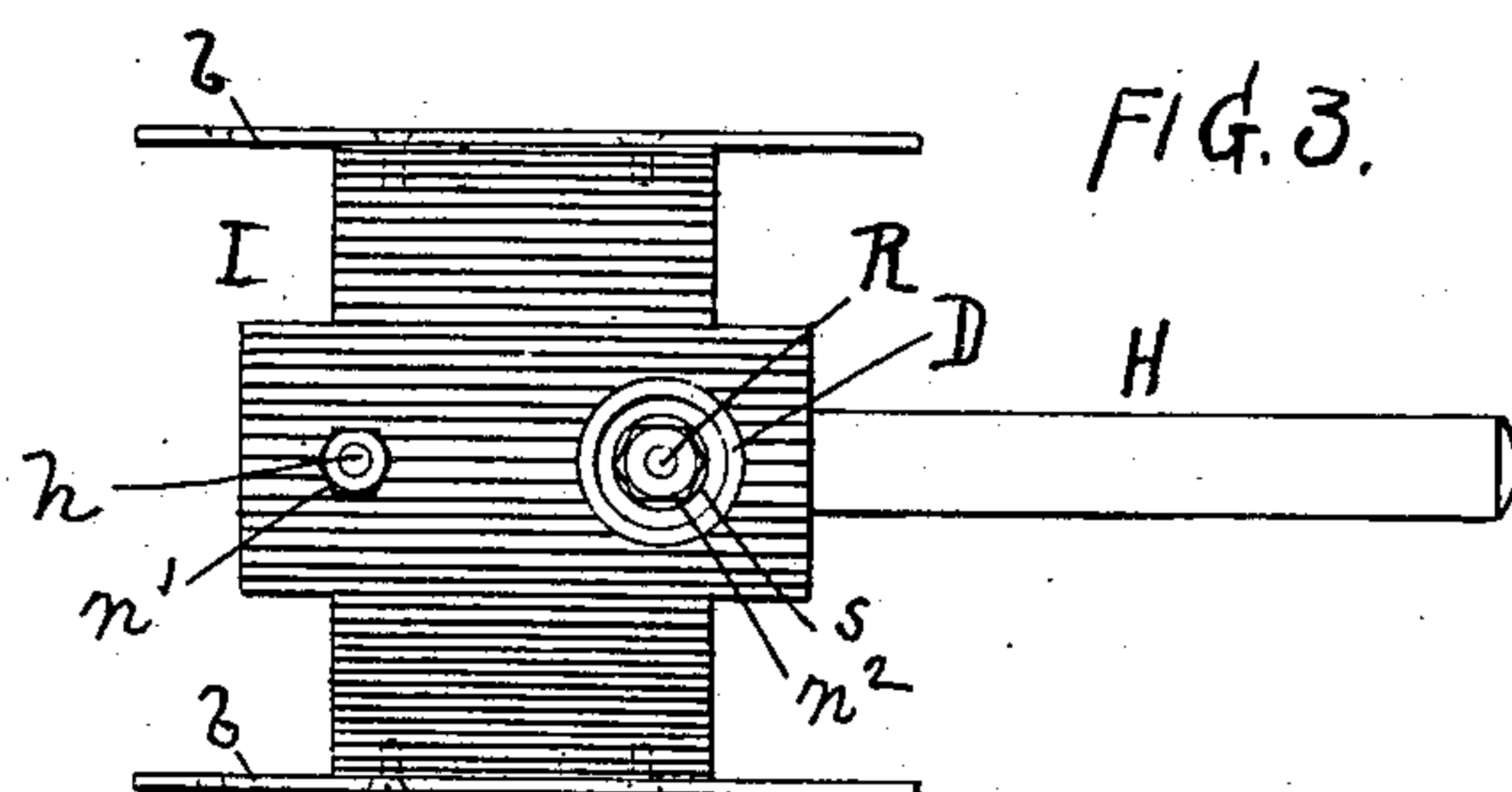


FIG. 3.

WITNESSES:

*F. W. Wright.*  
*Walter Abbe*

INVENTOR

HUBERT KRANTZ

BY

*Horizon and Horizon*  
HIS ATTORNEYS.

# UNITED STATES PATENT OFFICE.

HUBERT KRANTZ, OF BROOKLYN, NEW YORK.

## QUICK-BREAK SWITCH.

SPECIFICATION forming part of Letters Patent No. 742,449, dated October 27, 1903.

Application filed June 4, 1903. Serial No. 160,124. (No model.)

*To all whom it may concern:*

Be it known that I, HUBERT KRANTZ, a citizen of the United States of America, residing in the borough of Brooklyn, in the county of Kings, State of New York, have invented an Improved Quick-Break Switch, of which the following is a specification.

This invention has for its object to improve the construction of quick-break knife-switches.

In the accompanying drawings, Figure 1 is a plan of a knife-switch constructed according to this invention. Fig. 2 is a section on the line 2 2, Fig. 1; and Fig. 3 is an inverted plan of the blades, lever, and insulating-block separate from the switch.

To the base-plate B the usual clips *c c* and *c' c'* are fastened, the clips *c c* being adapted to pivotally secure the blades *b b* between them, while the clips *c' c'* are so placed that the free ends of the blades will enter between them and make contact when the switch is closed, as usual. The blades are secured to an insulating-block I, shown cut away at the corners to accommodate the clips *c c'*. The blades *b* are formed, as usual in switches of this character, of flat strips of metal pivoted at their outer ends. The insulating-block I is preferably made of a substantial thickness and placed between the blades, so that the sides of the block will fit against the flat sides of the blades, thus securing a simple construction and making a switch of little height, a feature of great importance when switches of this type are used in panel-board boxes.

A handle or lever H is pivotally mounted on the insulating-block I, while a rod R projects from the handle through an opening in the block. A spring *s* is mounted on the rod, so as to be compressed upon the movement of the lever.

In the drawings I have shown the handle or lever H as having an elongated slot *e* at its rear end curved above and below the slot and pivotally secured to the block I by a headed bolt *h* passing through the slot and having a nut *n* threaded thereon to act as a stop-piece to secure the freedom of pivotal movement to the lever H, while nuts *n'*, below the block, hold the bolt securely in place. Near the forward end the block I is

recessed, as shown, and a flanged cup D, having a central opening, is secured in the recess. A rod R, secured to the lever H, passes through the opening in the cup and carries the interposed spring *s*, held in place by a nut *n*<sup>2</sup> on the end of the rod.

In operation the handle H is lifted to open the switch, pivoting on the insulating-block I and compressing the spring *s* until no further compression is possible, when the lifting-pressure will be taken by the block itself disengaging the blades *b b* from the clips *c' c'*, whereupon the blades will make a quick break from the clips under the tension of the spring.

I claim as my invention—

1. An electric switch, comprising a base, stationary contacts, contact-blades composed of flat strips of metal pivoted to said base, an insulating-block secured between said blades, the sides of the block being secured to the sides of the flat contact-blades, a lever pivotally mounted at that end of said block adjacent to the pivot of the blades and an interposed spring between the lever and block, substantially as described.

2. An electric switch, comprising a base, stationary contacts, contact-blades pivoted to said base, an insulating-block secured to said blades, a lever pivoted to the block, a rod secured to the lever passing through a hole in the block and an interposed spring between the block and free end of the rod, substantially as described.

3. An electric switch, comprising a base, stationary contacts, contact-blades pivoted thereto, an insulating-block secured to said blades, a lever having an elongated slot at one end, a headed bolt passing through said slot, the end of the lever being formed to permit the pivotal action of the lever and to cause the elongated slot to freely slide under the headed bolt, and an interposed spring between the lever and block, substantially as described.

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

HUBERT KRANTZ.

Witnesses:

CHARLES MANTNER,  
J. A. NEWTON.