

(No Model.)

E. A. PARSON.  
MULTIPLE ELECTRIC FUSE BOX.

No. 520,378.

Patented May 22, 1894.

Fig. 1.

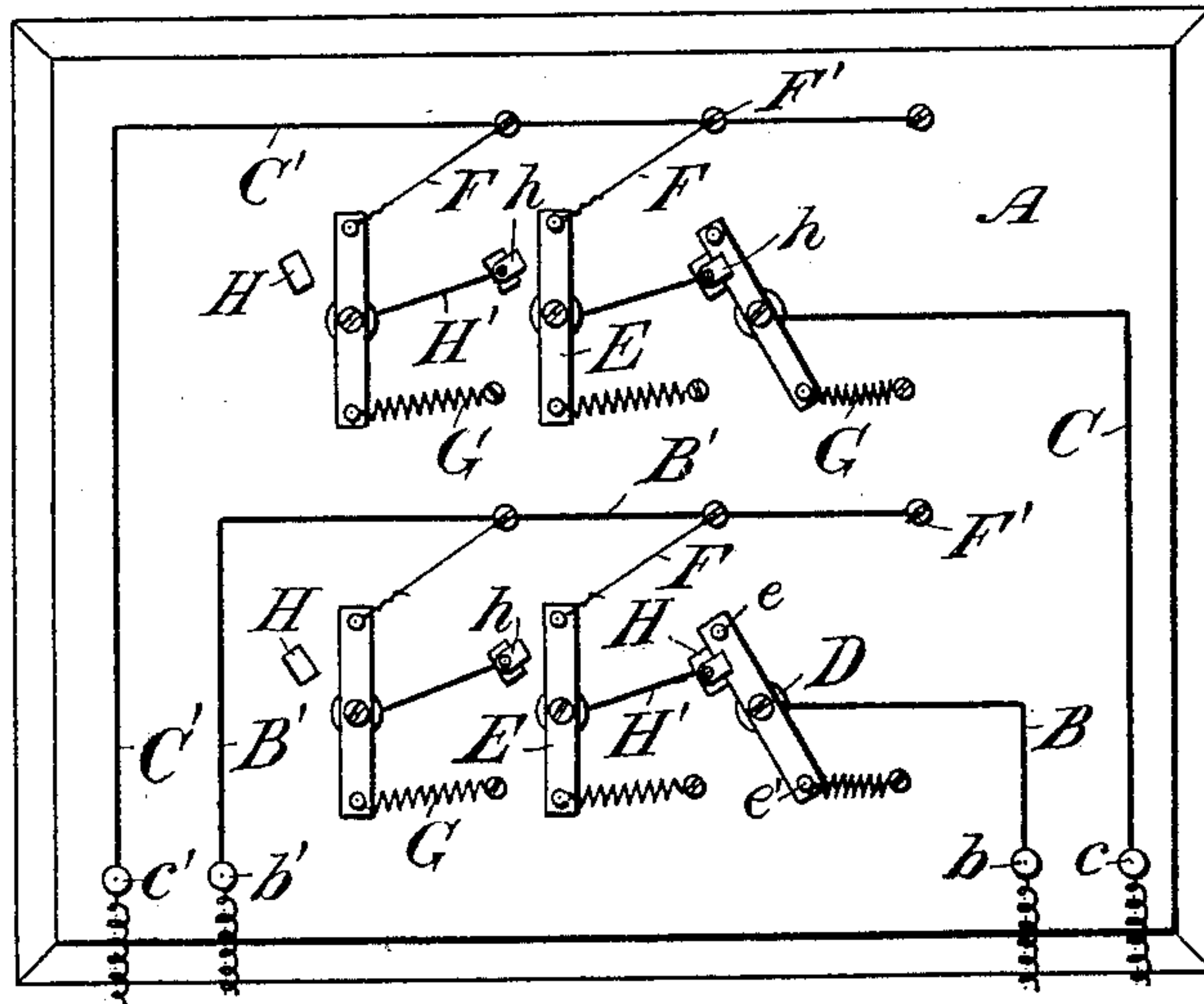


Fig. 2.

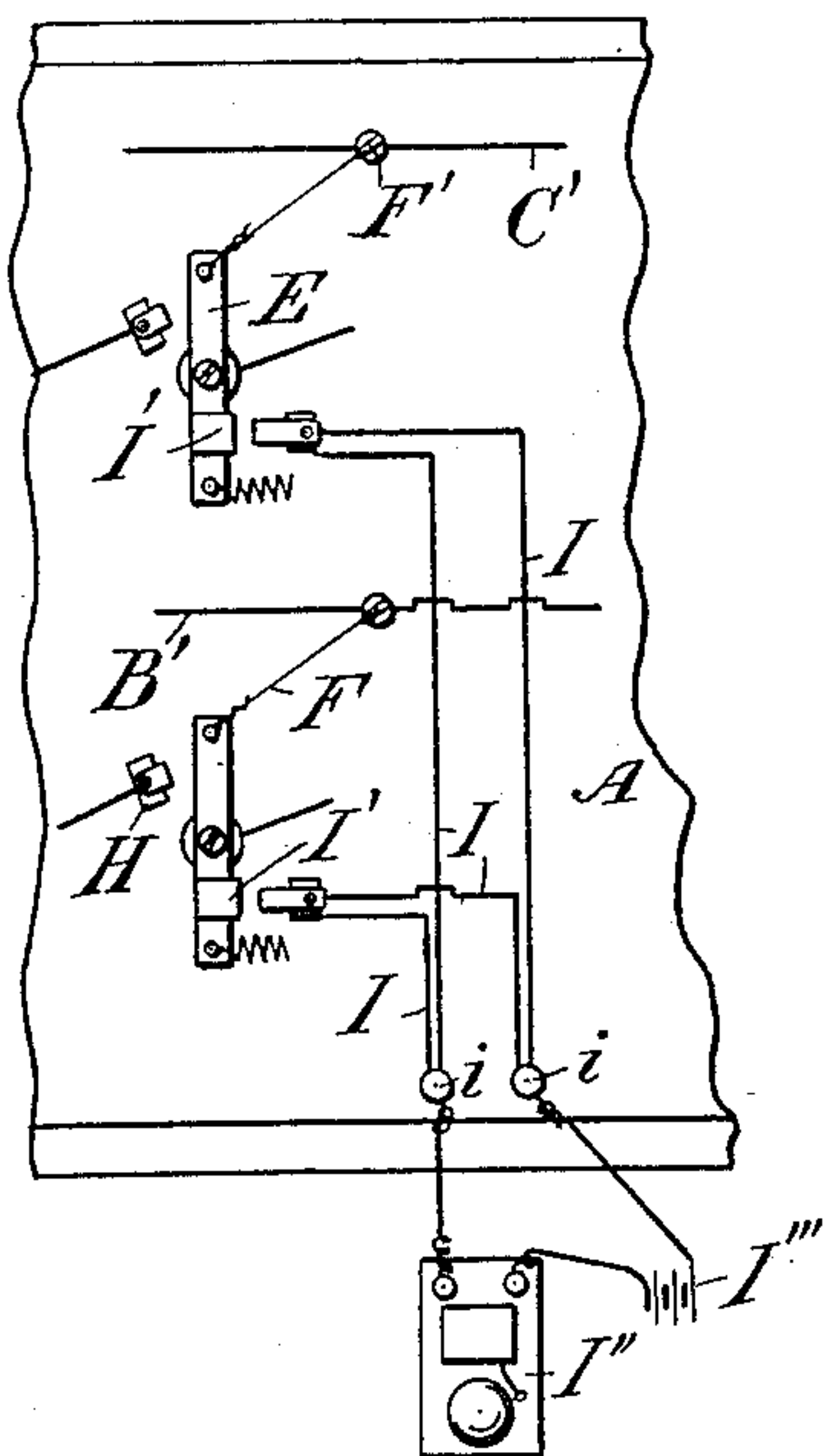
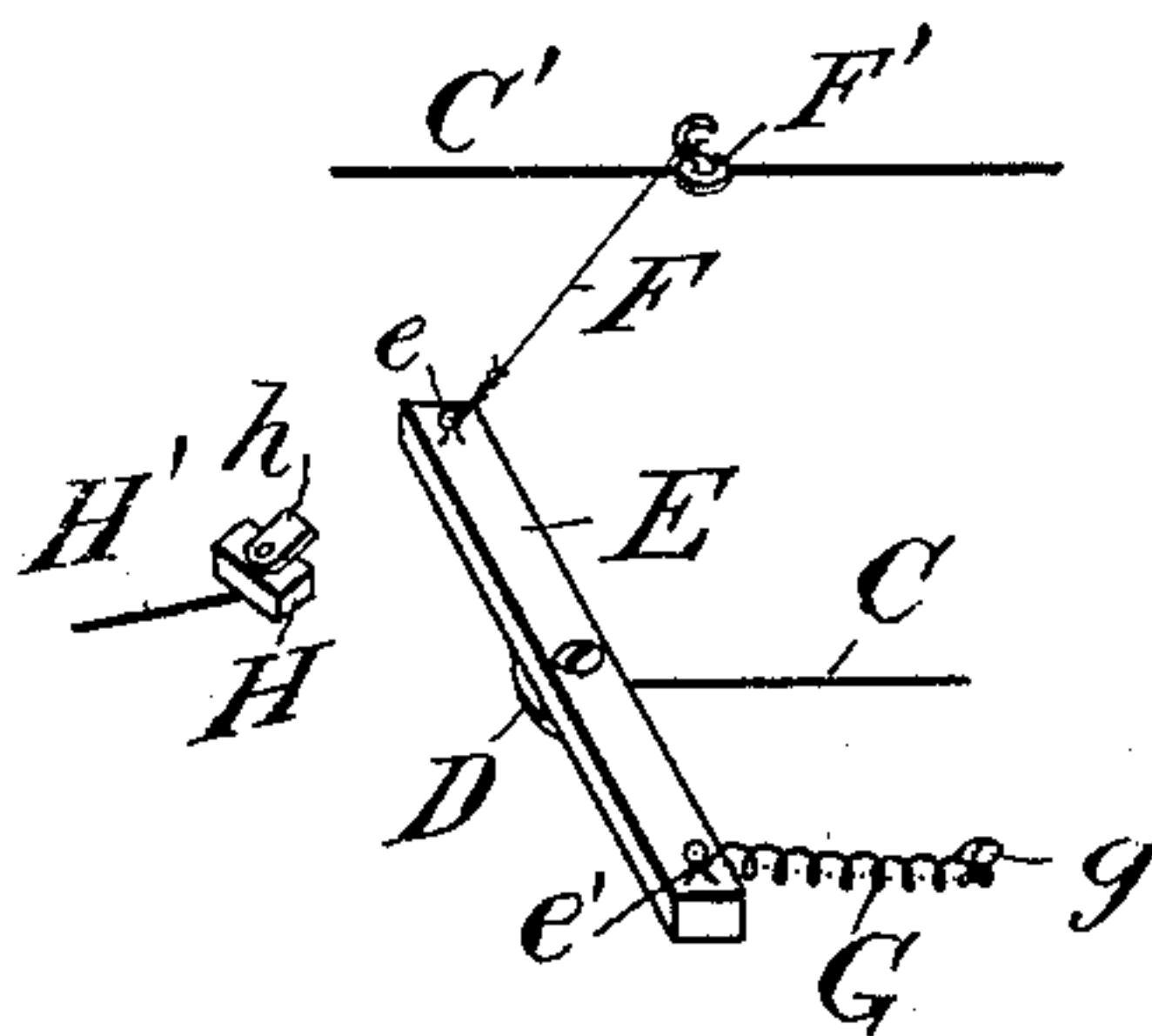


Fig. 3



Witnesses:  
Chas. Bailey.  
W. H. Voffke.

Edward A. Parson

Inventor

by A. Harney  
his Attorney.

# UNITED STATES PATENT OFFICE.

EDWARD A. PARSON, OF OTTAWA, CANADA, ASSIGNOR OF ONE-HALF TO  
HALDANE MILLAR, OF SAME PLACE.

## MULTIPLE-ELECTRIC-FUSE BOX.

SPECIFICATION forming part of Letters Patent No. 520,378, dated May 22, 1894.

Application filed January 16, 1894. Serial No. 497,113. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD A. PARSON, of the city of Ottawa, in the county of Carleton and Province of Ontario, in the Dominion of  
5 Canada, have invented certain new and useful Improvements in Multiple-Electric-Fuse Boxes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part hereof.

My invention, which will be hereinafter fully set forth and claimed, relates to fuse boxes for electric circuits.

The object of my invention is a fuse box  
15 containing a number or series of fuses, one of which only shall be in circuit in any one conductor at any given time and that as soon as this shall have been destroyed, the next one in the series shall come into circuit automatically. An alarm may also be connected  
20 with it that shall give notice when the last or last pair is thrown into the circuit.

Figure 1 is a view of my improved fuse box, partly diagrammatical, showing one  
25 fuse in each series burned out. Fig. 2 is a similar view of a part only, showing the alarm connection and Fig. 3 is a detail of the operating mechanism in perspective view.

Upon a base A of non-conducting material are secured the two conductors B and C with their terminals *b* and *c* and with disconnected continuations B' and C' and their terminals *b'* and *c'*, which, when the two parts of each conductor are connected, form part  
35 of the circuit to be protected by fuses; *b* and *c* being the main line connections of the flow and return respectively. The free terminals of the conductors B and C are electrically connected with, or form themselves each, a  
40 metallic base or washer, D, which is in electrical contact with a metallic arm or double lever, E, pivoted upon it. This lever is connected to the other part of the conductor, B' or C', as the case may be, by means of the  
45 fuse wire F, engaging a pin, hook or screw *e* at one end of the lever and a post, hook or screw, F', connected with the conductor. The lever end which is held by the fuse wire is drawn in the opposite direction in which  
50 it is held by said wire, so as to cause the latter to be somewhat straight, by means of a

spring, such as G applied to the opposite end of the lever by means of another pin or hook, *e'*, the other end of said spring being secured to the base A by a pin or screw *g*. The electric connection of the disrupted conductor B  
55 B' or C C', is thus complete, the current passing from the connected washer D through the lever E and pin *e* to the fuse wire F, thence through the connected post F' into the wire  
60 B' or C', as the case may be.

In the path of the lever end which is held by the fuse wire, as it is swung by the spring, is placed a stop, H, secured to the base A, against which said lever will be moved by  
65 the spring G and abut thereon in case the fuse wire F should cease to hold it back, by reason of its being severed by fusion or other cause, at which moment it would of course also cease to act as an electric connection between the lever E and the post F'. Said stop  
70 H is adapted to make electric connection with the lever E, when abutting on it, such connection being assisted by the flexible plate *h*, and is electrically connected with a  
75 wire H' which extends to the base D of the next lever E in the series, in the same manner as the wires B or C extend to the first in the series. Thus the lever E, fuse F, post F' on the wire B' or C', spring G, stop H and  
80 connecting wire H' may be repeated as many times as may be desired, three being shown in the drawings on each wire, the connecting wire H' not being, of course, required on the last stop in the series.

An alarm may be provided by causing the last lever E but one in each series to close a separate electric circuit I, having the terminals *i* on the base A, by a contact piece I' operated by the spring G when held against the  
90 stop H, said circuit operating a bell I'' by means of a battery I''' and thus giving notice that the last fuse in the series is in use.

It will be observed that the current would pass through the conductor B and washer D,  
95 then through part of the lever E into the fuse wire F and through the post F' into the continuation of the same conductor, B'; thence to the terminal *b'* into the lamp or other circuit. It will then return by the terminal  
100 *c'* through the conductor C', pass through the last post F' thereon into the fuse wire F



connected therewith and by the lever E to which it is hooked into the continuation of the same conductor C and to the terminal c. Should one or both of the fuse wires through  
 5 which the current passes be burned, the lever E to which it is attached is liberated, and the spring G swings it against the stop H and the next fuse in the series is at once brought into the circuit. Thus one after the  
 10 other fuse may be burned out without interrupting the service and when the last in the series is thrown into use, a signal, if an alarm is provided, will announce the fact.

The fuse wire may be in any convenient  
 15 shape, loops being twisted at the ends, or they may be provided with permanent eyes. The levers E and springs G, also, may take different shapes, as may the stops, binding posts and terminals.

20 I claim as my invention—

1. The combination of a disrupted conductor B B' provided with suitable terminals b and b', a series of posts F' electrically secured upon the disrupted part B', a series of  
 25 levers E each pivoted upon a base D electrically connected with a part of a conductor and having pins or posts e and e' at the ends, a fuse wire F connecting each pin e to a post F', and a spring G drawing the lever by the  
 30 post e' in a direction to strain said fuse wire, and the series of stops H serving as abutments for the lever E when operated by the springs and having electric conductors H' connecting the base D of the next lever, the disrupted  
 35 part B of said conductor secured to the first lever in the series and the insulating base A upon which said parts are secured, substantially as set forth.

2. In a multiple fuse box, the combination

of a lever in electric connection with a disrupted circuit and tended to be swung upon  
 40 a pivot in one direction and held by a fuse wire in electric connection with the other part of the disrupted circuit in the opposite direction, of an electric bell circuit disrupted by  
 45 terminals placed adjacent to said lever and adapted to be brought into electric connection by a conducting portion of an insulated part of said lever when operated by the spring after the fuse wire has become inoperative, substantially as set forth. 50

3. In a multiple fuse box, the combination of a disrupted conductor having one terminal of one part electrically secured to a base carrying a lever, a lever pivoted at a point between its ends upon said base and making  
 55 electric connection therewith and adapted to transmit the current to one end thereof, a spring having one end secured to the non-conducting end of said lever adapted to swing it in one direction, a fuse wire secured to the  
 60 opposite and conducting end of said lever and to the other part of the disrupted conductor in such a position as to hold the lever against the pressure of the spring and prevent it being swung by the spring, a stop placed in the  
 65 path in which the lever is swung by the spring adapted to make electric connection when in contact with said lever, and an electric connection of said stop with the pivot base of  
 70 another similar lever similarly held connected and operated, substantially as set forth.

In testimony whereof I have signed in the presence of the undersigned witnesses.

EDWARD A. PARSON.

Witnesses:

H. MILLAR,  
 A. HARVEY.