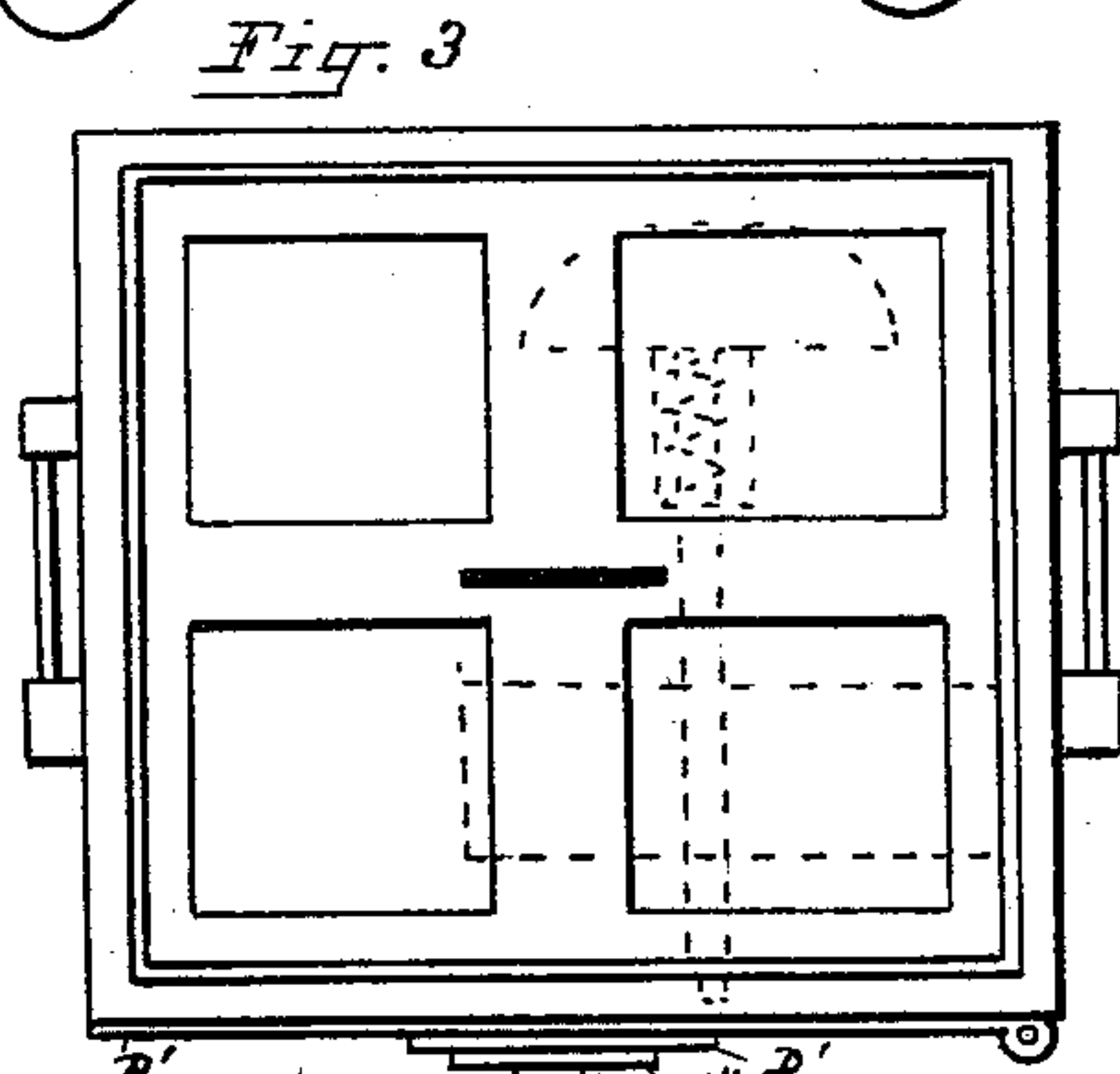
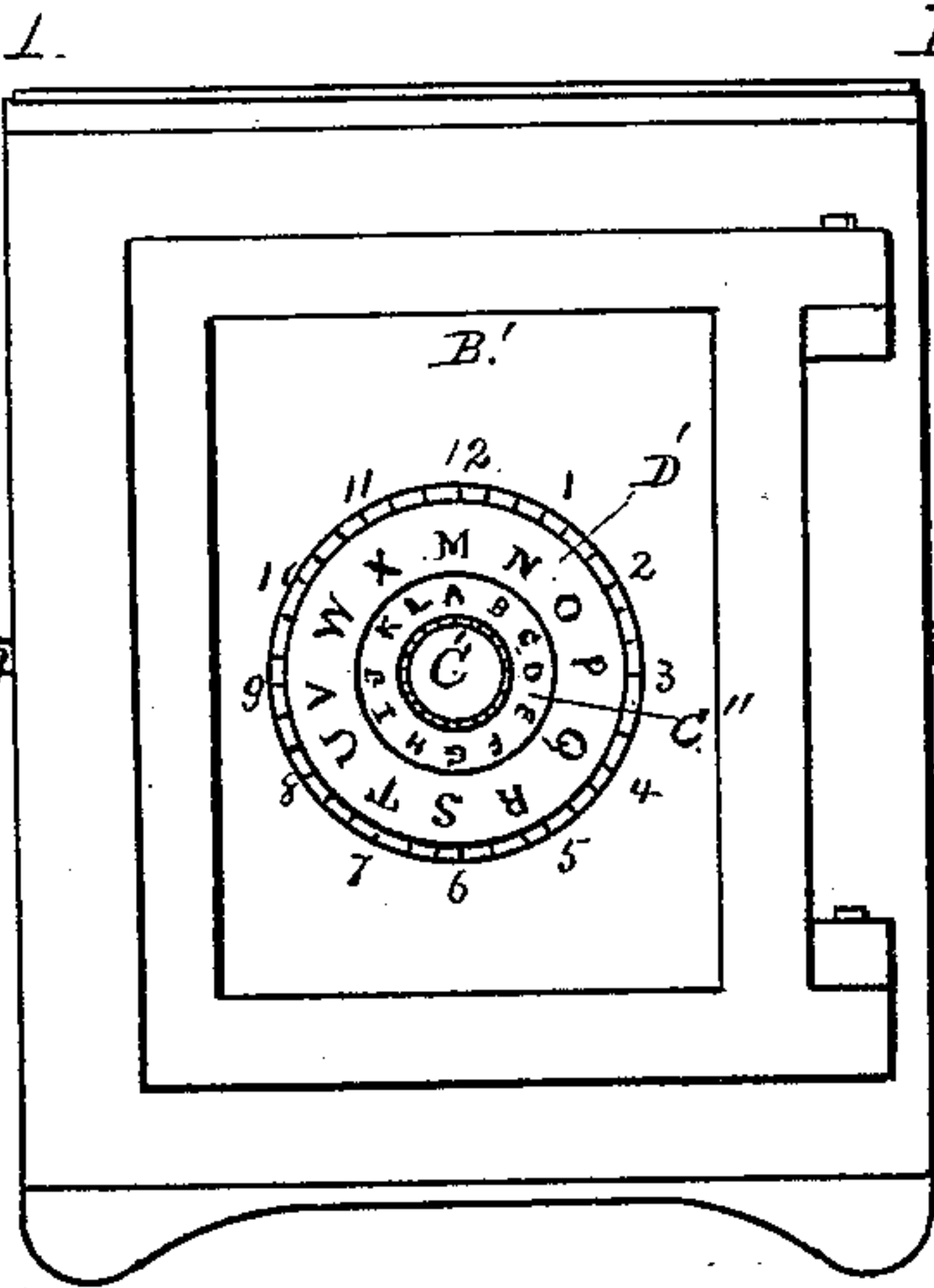
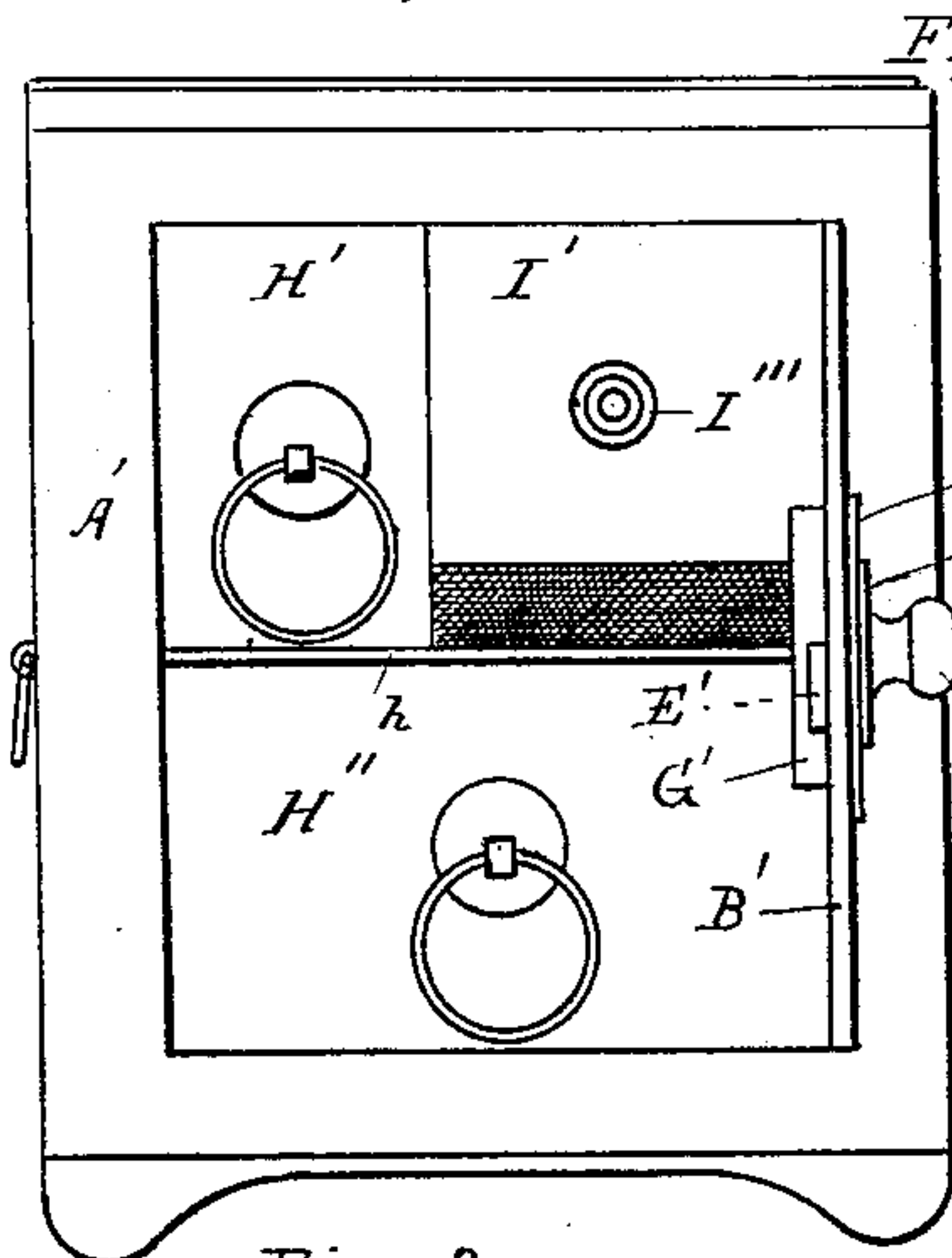


(No Model.)

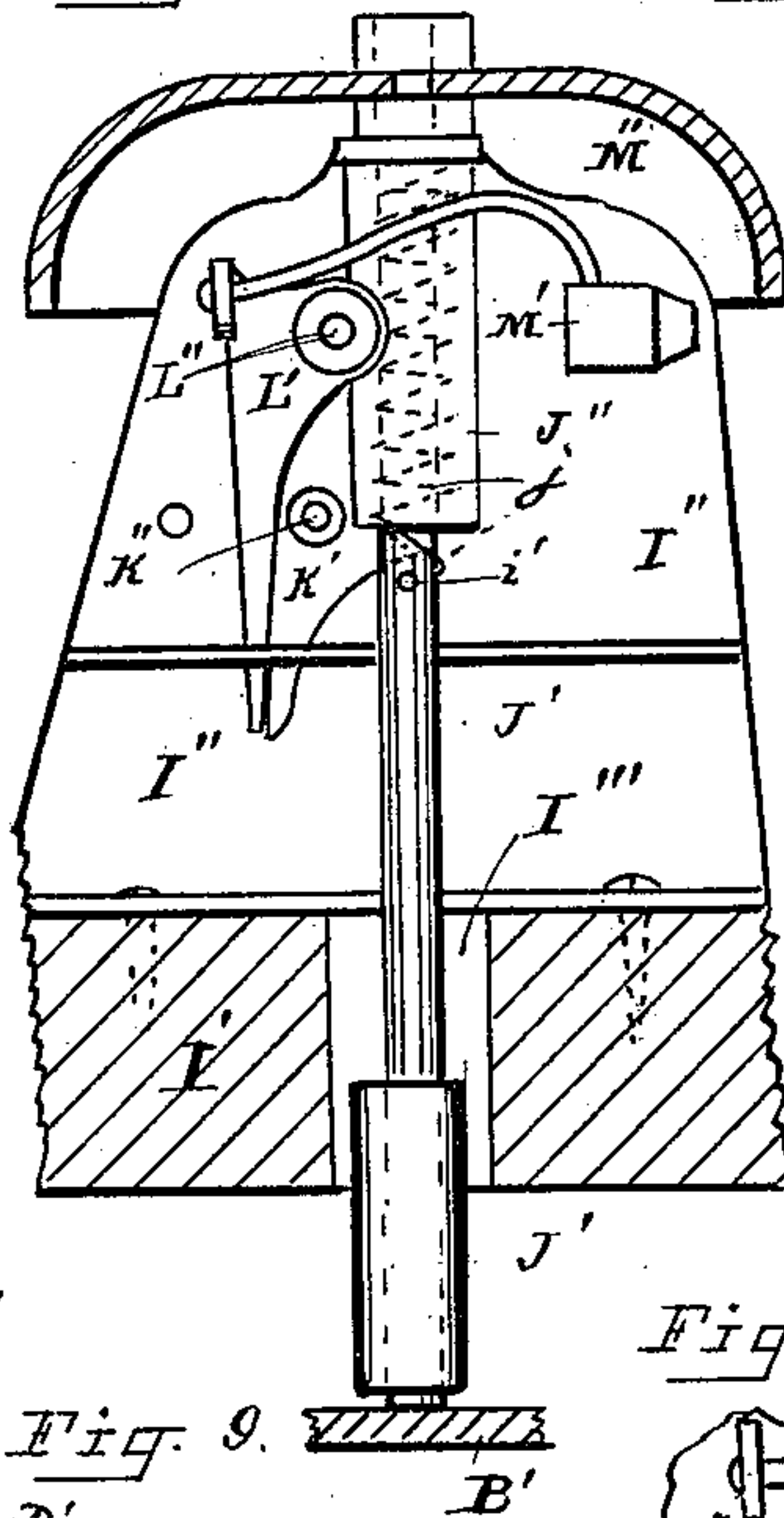
J. S. MINNIS.  
SAFE ALARM.

No. 403,688.

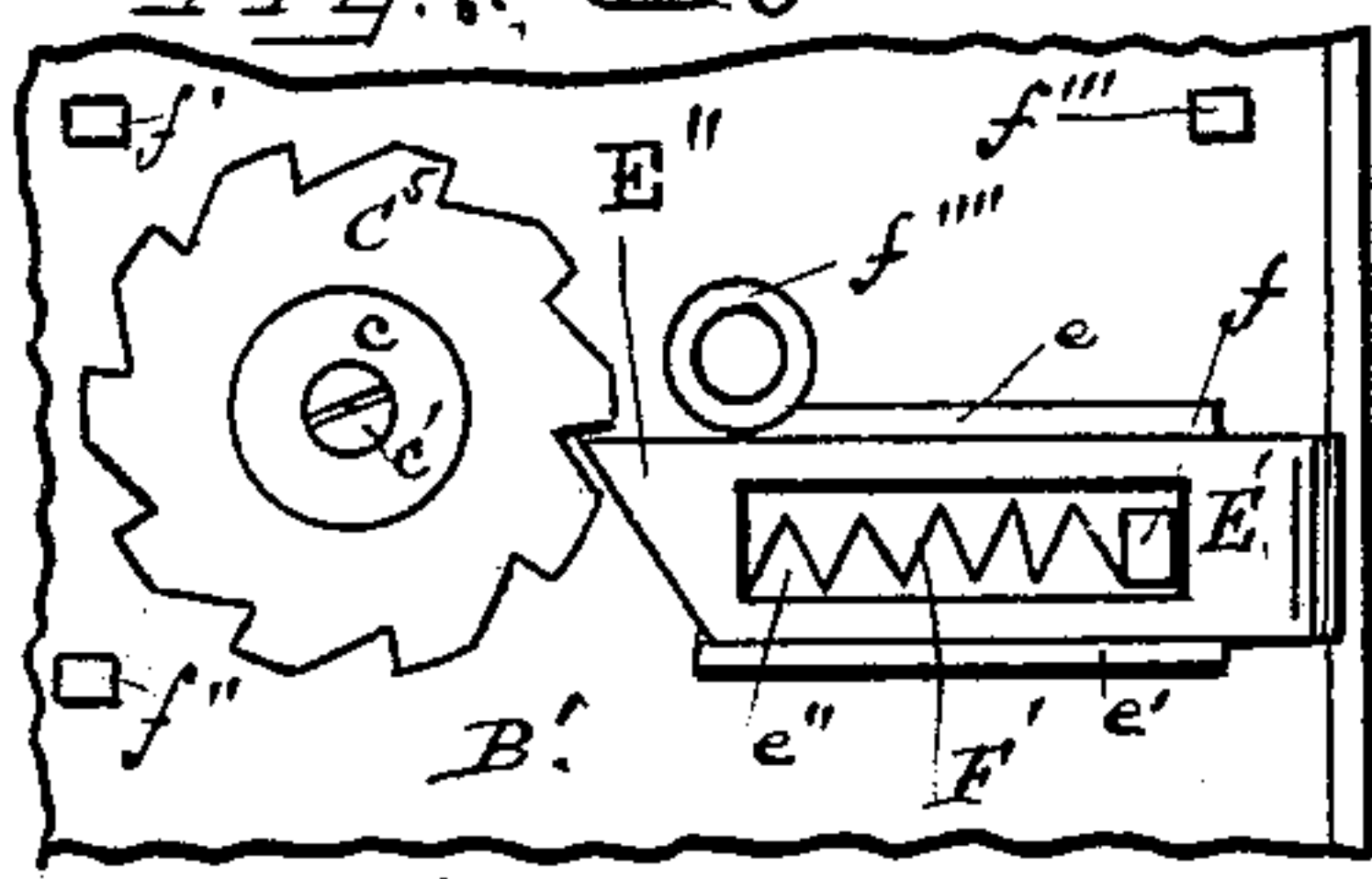
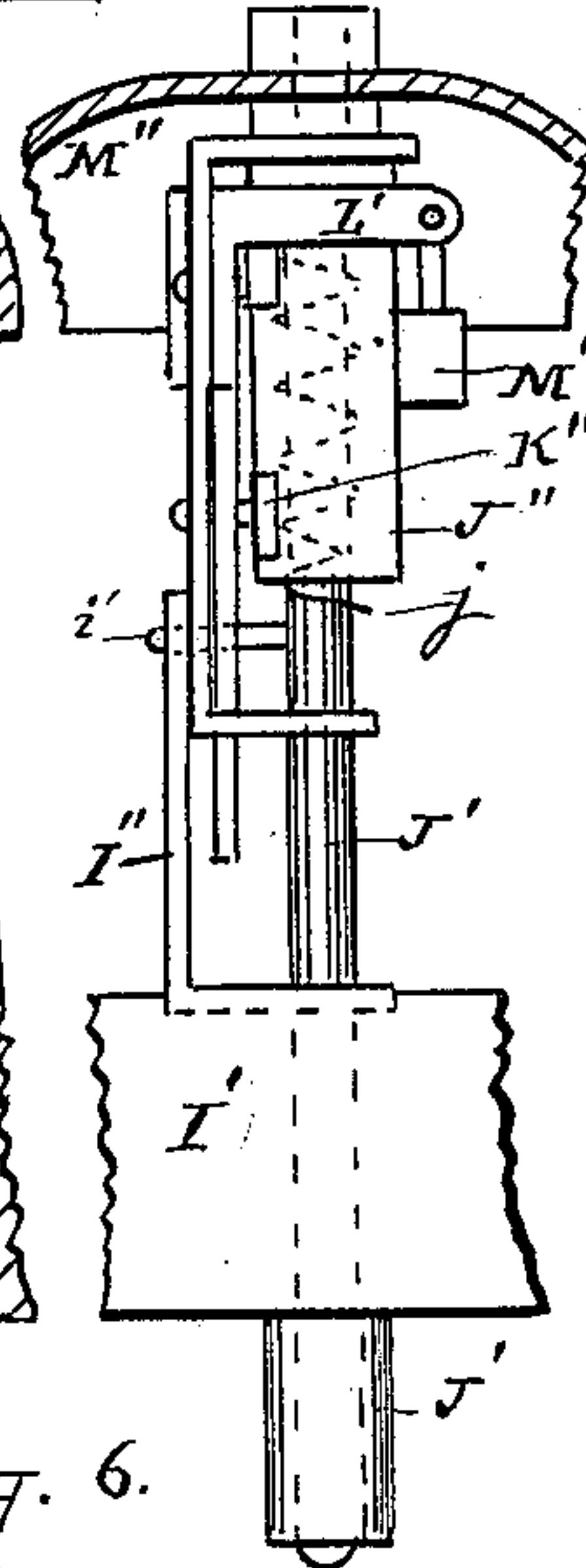
Patented May 21 1889.



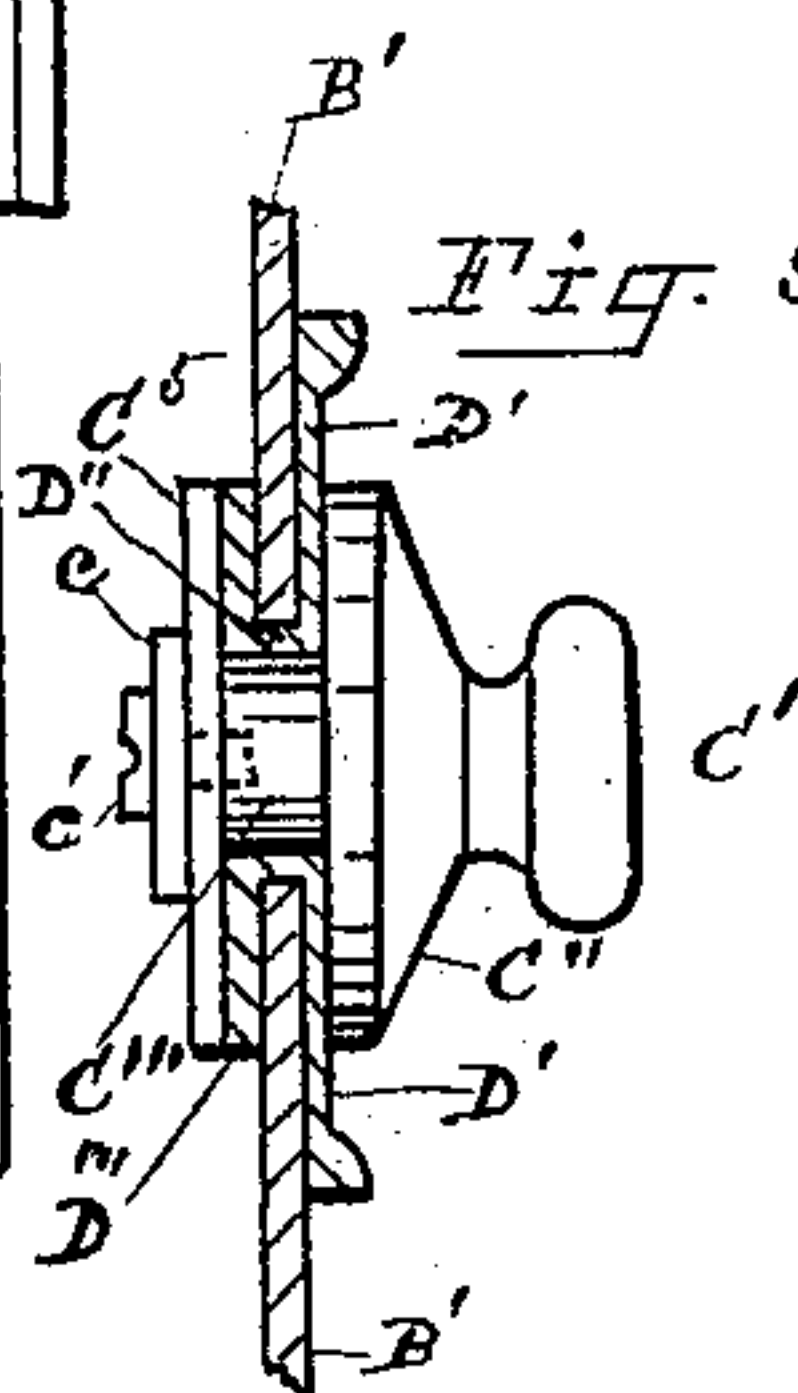
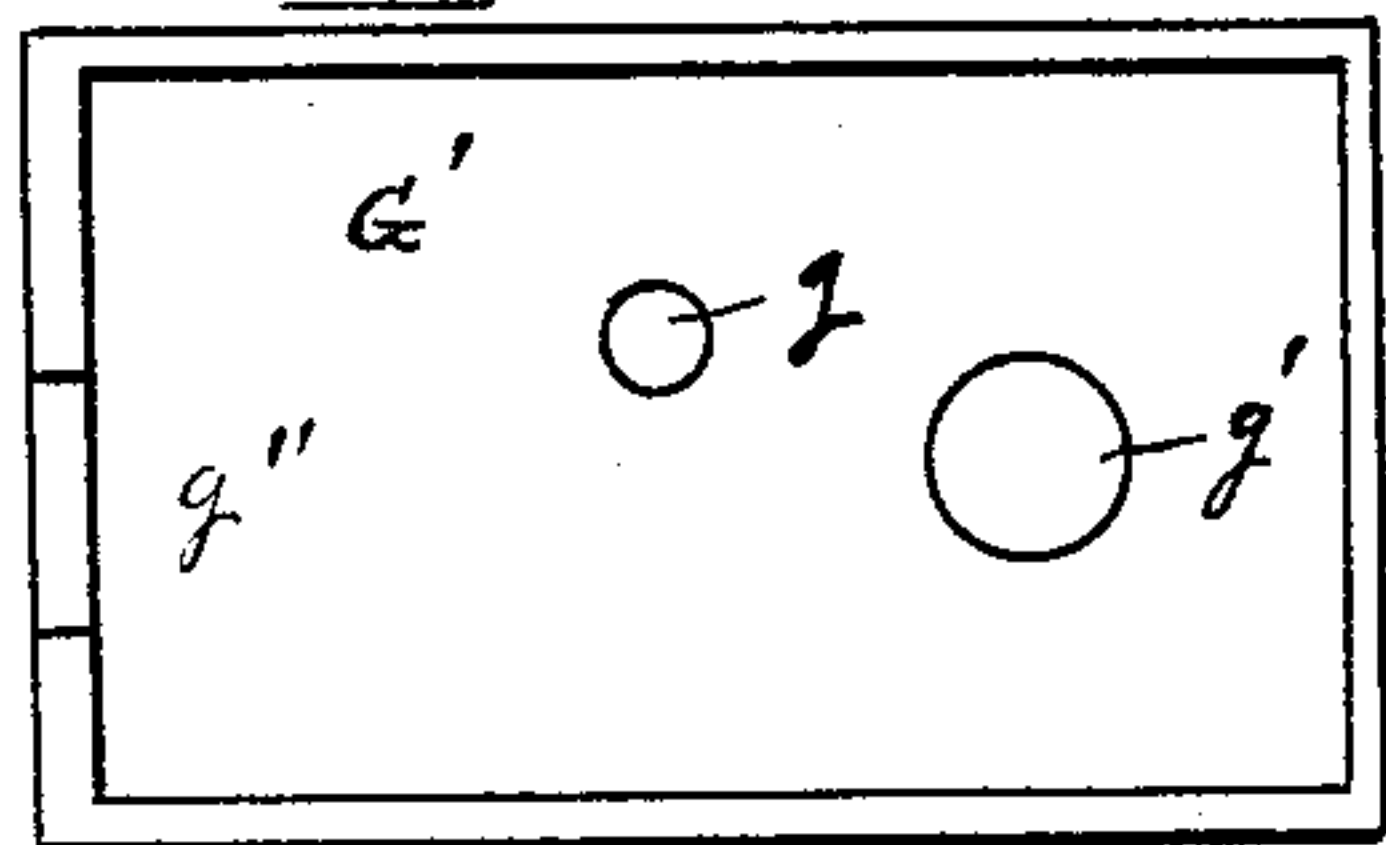
*Fig. 4.*



*Fig. 5.*

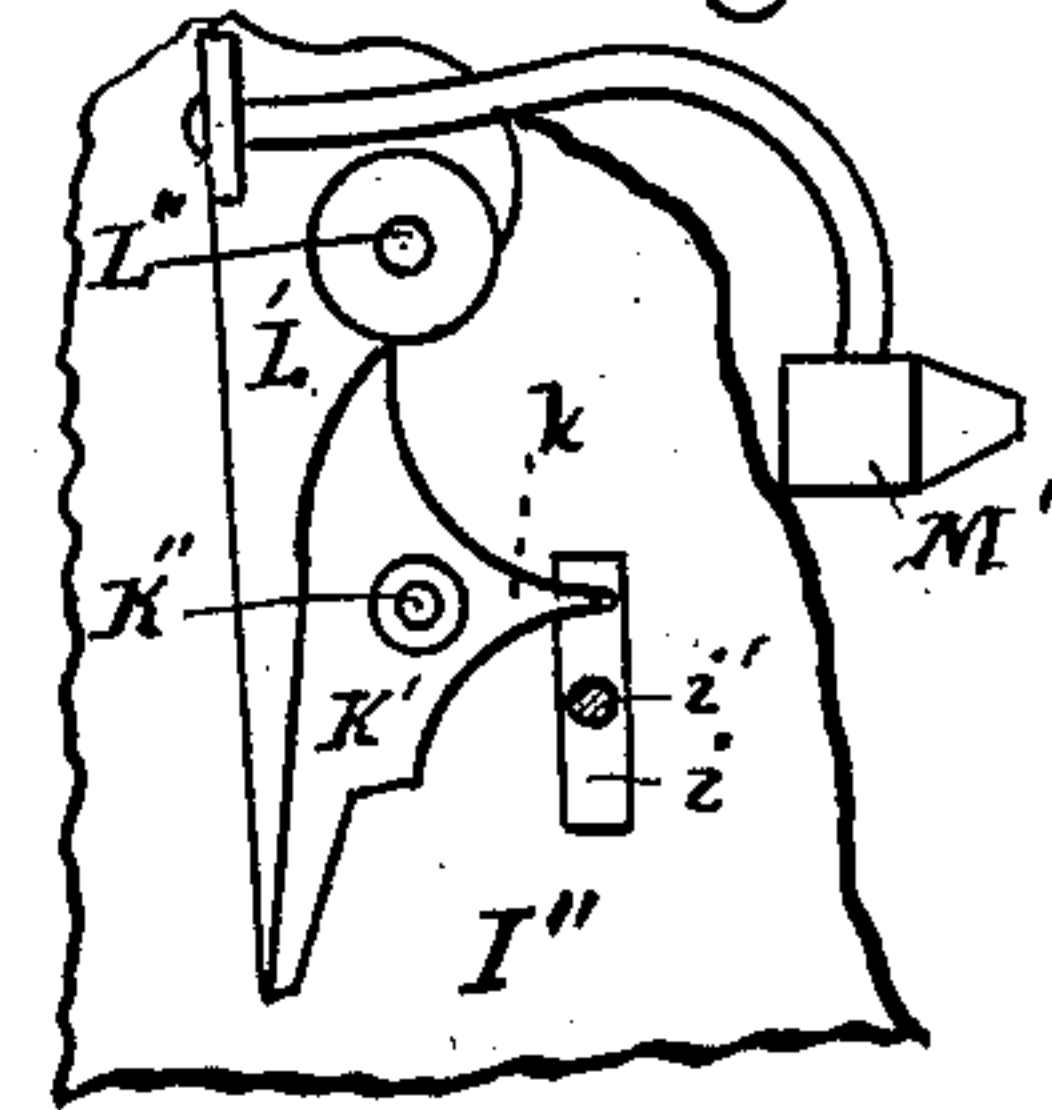


*Fig. 7.*



*Fig. 9.*

*Fig. 10.*



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INVENTOR,  
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ATTORNEY.



# UNITED STATES PATENT OFFICE.

JOSEPH S. MINNIS, OF EVANSVILLE, INDIANA.

## SAFE-ALARM.

SPECIFICATION forming part of Letters Patent No. 403,688, dated May 21, 1889.

Application filed January 5, 1889. Serial No. 295,540. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH S. MINNIS, a citizen of the United States, residing at Evansville, in the county of Vanderburg and State of Indiana, have invented certain new and useful Improvements in Safe-Alarms; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to improvements in safes for the security of valuables, and has for its object to furnish a convenient receptacle for money and other things of value.

The nature of the invention consists in a metal case or box provided with a hinged door having a combination-lock which may be changed from one combination to another; in providing the said box with a bell or gong having a rod provided with a suitable spring or springs, whereby the end of the rod presses outwardly against the door when shut, the action of the spring being such that when the door is unlocked it will fly open and the bell or gong will sound an alarm, and in like manner when the rod is pressed backward by shutting the door the alarm will also be sounded.

In the drawings forming a part of this specification, in which like letters of reference indicate corresponding parts, Figure 1 is a front elevation of the safe with the door open. Fig. 2 is also a front elevation of the safe, in which the door is shut. Fig. 3 is a plan view of the safe, in which broken lines indicate the position of the bell and rod. Figs. 4, 5, and 6 are detailed detached views of the bell and its actuating mechanism. Fig. 7 is a view of the lock taken from the inside of the door after the covering-plate has been removed. Fig. 8 is a view of the inside of the covering-plate. Fig. 9 is a detailed view of the knob and adjacent mechanism by means of which the door may be locked and unlocked as well, or various changes may be made in combinations—the plate D' and its connections with a part of the door B' shown in section.

The letter A' indicates the front of the safe.

B' is the door; C', the knob; C'', the outer plate forming part of the knob C'.

C''' is a shaft extending through the door and having on its inner extremity and firmly attached thereto by means of a washer, c, and screw c' a notched plate, C<sup>5</sup>.

D' is a circular plate somewhat larger than the plate C'', and is provided with a hollow shaft, D'', and inner plate, D''', also having notches to correspond with the notches of the plate C<sup>5</sup>. The shaft C''' penetrates the hollow shaft D'' and turns freely therein.

E' is a bolt on the inside of the door adapted to slide freely between guides e e'. This bolt has a slot, e'', to receive a spiral spring, F', one end of which bears against the inner end of the bolt and the other against a stud, f, projecting from the door inwardly. f' f'' f''' are also small studs which serve the purpose to maintain the plate G' in its proper position as a cover to mechanism of the combination-lock.

f'''' is a boss having a threaded opening to receive the screw which passes through the opening g in the plate G', whereby the plate is secured to the door. The opening g' is for the passage of the screw c' into the shaft C'''.

H' H'' are drawers. h is a shelf to support the drawer H'.

I' is a piece of wood or metal suitably secured to the safe itself, to which the framework I'' of the bell, with its operating mechanism, is fastened. An opening, I''', permits the passage of the rod J' and allows it to slide back and forth freely therein. At the lower end the rod J' enters a tube, J'', and is surrounded by a spiral spring, j, which forces the rod J' in an outward direction, so that the rod J' presses against the inside of the door of the safe when shut. A pin, i', projects in a backward direction from the rod J' through a slot, i, in the frame I''. A small flat piece of metal, k', having a point, K, is pivoted to the frame I'' at K'', and is adapted to oscillate on its pivot. When the pin i' is brought to bear upon the point K, either by the pressure of the door upon the outer end of the rod J' when in the act of shutting the door or by the outward pressure of the spring j when the door is unlocked and flies open, the pivoted lever L', having a pivot, L'', attached to the frame I'',



lies close to the piece K', and when this piece oscillates upon its pivot K'' it produces vibrations in the lever L', to the lower end of which is secured the hammer M', and this causes the hammer M' to strike the bell M'' in either opening or shutting the door of the safe.

It has already been mentioned that the plate C<sup>5</sup> and plate D''' are provided with notches which correspond with each other. Two of these notches (*i. e.*, one notch in each plate) are much larger than all the rest and are adapted to receive the point E'' of the bolt E', when these large notches are exactly over each other, and at no other time. The spiral spring e'' has a normal tendency to push the bolt into the large notches whenever the relative position of the two plates permits this to be done; therefore, whenever the plates have been adjusted to the proper position, the end E'' of the bolt E' enters the large notches and is thereby withdrawn from its socket in the door-frame and the door flies open, and at the same time the alarm is sounded in the manner hereinbefore described.

Any two letters, as shown in the drawings on the plates D' and C'', (one letter from each plate,) may be used to form a combination by means of which the notched plates C<sup>5</sup> and D''' may be turned to the proper position for locking and unlocking the safe. These notched plates are turned by the plate D' and knob C'.

The circle of figures on the outside of the large plate D' (shown in Fig. 2) is intended to determine the position in which the knob C' and plate D' must be placed in order to lock or unlock the door of the safe. Thus if the letters A M (shown in Fig. 2) form the proper combination to open the door they should be placed, as shown in the drawings, in a line and under the figure 12.

In the drawings, Figs. 1, 2, and 3 are on a smaller scale than the detached views of several of the parts shown in Figs. 4, 5, 6, 7, 8, and 9.

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

The combination, with the alarm-bell secured inside of the safe, of the sliding rod and its actuating-spring, a projecting pin at one side of the rod, a pivoted piece, K, operated by said pin, a pivoted lever, L', and hammer M', operated thereby to strike the bell and sound the alarm when the door of the safe is opened or closed, substantially as and for the purposes set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH S. MINNIS.

Witnesses:

W. P. LEONARD,  
JAMES F. WOODS.