

(No Model.)

W. S. HULL.
JAIL DOOR ALARM.

No. 494,923.

Patented Apr. 4, 1893.

Fig. 1.

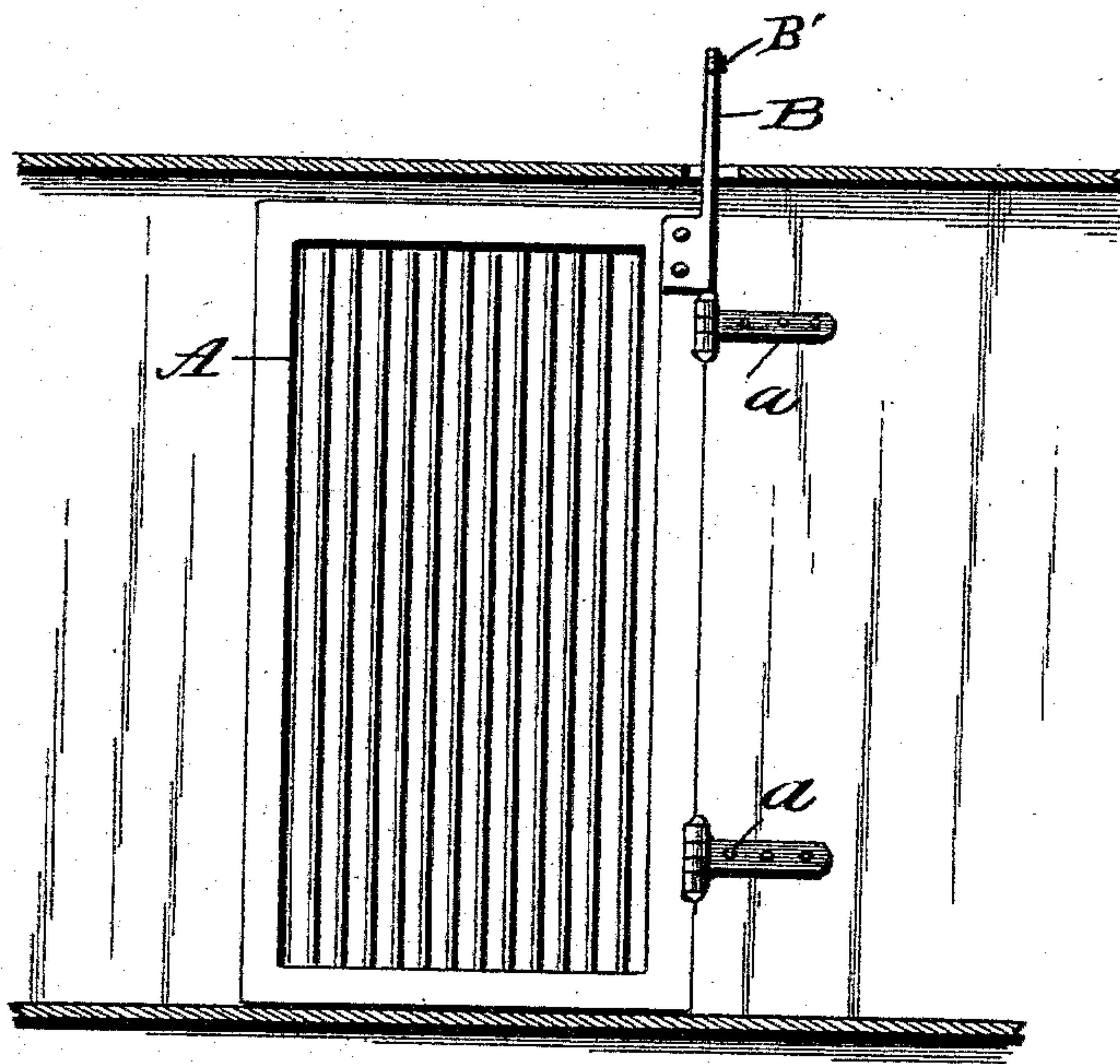
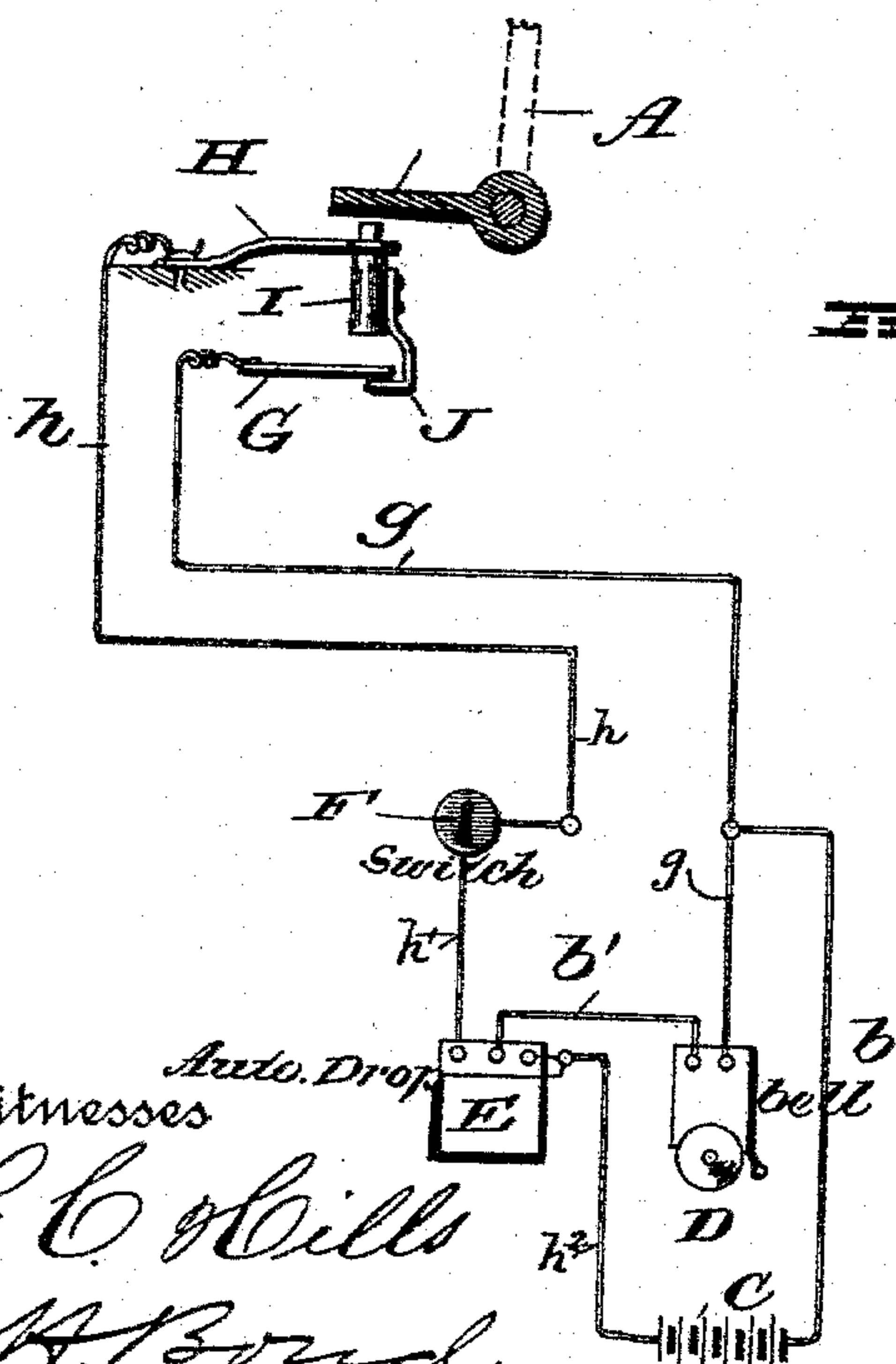


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM S. HULL, OF SHEFFIELD, ALABAMA.

JAIL-DOOR ALARM.

SPECIFICATION forming part of Letters Patent No. 494,923, dated April 4, 1893.

Application filed September 19, 1892. Serial No. 446,339. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. HULL, a citizen of the United States, residing at Sheffield, in the county of Colbert, State of Alabama, have invented certain new and useful Improvements in Jail-Door Alarms, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention has for its objects among others to provide a simple and cheap and efficient jail door alarm which can be readily applied to any jail cell door, or other door, and so arranged that the jailer will be warned
15 when the prisoners tamper with the doors and also give him warning when handling prisoners if any of the doors are open. Thus, if he should want to feed the prisoners, at night and the lights are dim the prisoners
20 cannot play tricks on him by slamming the doors, when ordered, and then pushing it slightly ajar so that when the jailer throws his lever bolts from the outside they pass behind the door instead of over its face and thus
25 leave the door unlocked so that when the jailer opens the corridor door and goes in they can rush upon him and overpower him and escape. This is prevented because unless the door is closed tight the bell will continue to
30 ring and thus warn the jailer. When the jailer desires to give the prisoners access to the corridor he can turn the switch and thus stop the ringing of the alarm.

In its preferable form the invention comprises a crank rod or arm connected with the door at the hinge side and suitable devices actuated by this crank rod through the movement of the door to sound an alarm. The movement of this rod will influence an electric current, by closing the circuit when the door is open and opening the circuit when the door is closed.

45 The invention embodies simplicity of construction, ease of application and efficiency in operation, with durability.

Other objects and advantages of the invention will hereinafter appear and the novel features thereof will be specifically defined by the appended claim.

50 The invention is clearly illustrated in the

accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which

Figure 1 is a sectional view of the floors of a jail with the door in front elevation showing the rod or arm attached to the hinge-side of the door. Fig. 2 is a diagrammatic view showing the electric connections, with the door rod or arm just leaving the push button.

Like letters of reference indicate like parts in both of the views where they appear.

Referring now to the details of the drawings by letter, A designates a door of usual construction hung upon hinges as *a*, and while I have shown but one door it will of course be understood that a plurality of them may be arranged as is usual in jails and all locked by the turning of a single lever, but as the manner of locking forms no part of this invention I have chosen to show but one door and have omitted the locking means.

On the hinge-side of each cell door is attached in any suitable manner a crank-rod B, B' which projects above the top of the door into a box or casing (not shown) in the corridor where there are two or more tiers of cells, and where there is only one tier of cells the rod should project through the top of the corridor into a metallic box or casing. The crank portion of the rod is above the ceiling or upper floor as seen in Fig. 1; it is designated by the letter B'.

Upon reference to Fig. 2 the electrical connections will be readily understood. In this view C designates the battery, D the bell, E the automatic drop and F the switch, all of known or any approved form of construction. They are connected up in the proper manner by the wires which, in practice, although not so here shown, are designed to be incased in suitable metallic pipes or other coverings.

G is a contact plate suitably supported and having connected therewith the wire *g* which extends to the bell D and by a branch wire *b* is connected with one pole of the battery as shown.

H is a spring plate connected by the wire *h* to the switch from which wire *h'* extends to the automatic drop E and the drop is, by a wire *h²* connected to the other pole of the bat-

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tery. A shunt wire *b'* connects the automatic drop to the bell.

I is a push button carried by the spring plate H and in turn carries a hook contact plate, the hook of which is designed to overlap the end of the contact plate G as shown in Fig. 2. The end of the push button projects beyond the face of the spring plate in position to be engaged by the crank rod or arm B' when the door is closed which depresses the push button and plate J so that the latter is out of contact with the plate G.

The operation of the electric devices shown in Fig. 2 is as follows: When the door is opened, even to a very slight extent, the spring plate H brings the plate J into contact with the plate G; this closes the circuit and the current produces an alarm at the bell and at the same time releases the automatic drop whereby the bell remains in circuit extending through the conductors B and G from the battery to the bell, shunt wire *b'* and wire *h*² from the bell through the drop back to the battery. This although the door may be again suddenly closed so as to throw the plate J out of contact with the plate G the bell continues to sound an alarm, notwithstanding the breaking of the circuit by thus closing the door, and the alarm will continue to sound until the automatic drop is raised to cut the battery out of circuit. The switch J serves its usual function to throw the electrical devices temporarily out of use when desired.

The construction and arrangement of parts above described constitutes the preferable form of my invention but I do not confine myself to the exact form shown as I have already devised other forms which, while differing slightly in details, operate in substantially the same manner to accomplish the same result.

It will be seen by the description above

given of the construction and arrangement employed that none of the exposed parts are capable of being manipulated by a person so as to make or break the electric circuit to prevent or produce an alarm. The rod B and its arm B' are situated beyond the floor or ceiling and are not electrical devices so that the exposed part of the rod cannot possibly be made the instrument of communication with the devices which affect the circuit controlling devices.

I am aware that spring contact plates are of themselves, old devices and have been applied to doors and windows in such manner that the opening of the same will complete an electrical circuit and sound an alarm but such devices have been placed in positions where the introduction of a thin metallic blade or wire could be accomplished so as to produce an operation of the alarm.

What I claim as new is—

In jails, prisons and the like structures, the combination with a door having a rod as B projecting from and substantially in line with its hinge line and provided with an arm located at a point inaccessible from the door, of a spring plate carrying a push button normally held by said plate in contact with said arm when the door is closed, a contact plate carried by the push button and normally held by said contact plate, with a companion plate and an open electrical circuit having therein an alarm and an automatic drop connected with each other and with the battery which is in said circuit, substantially as specified.

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

WILLIAM S. HULL.

Witnesses:

J. M. PINKSTON,
HERMAN F. JONES.