

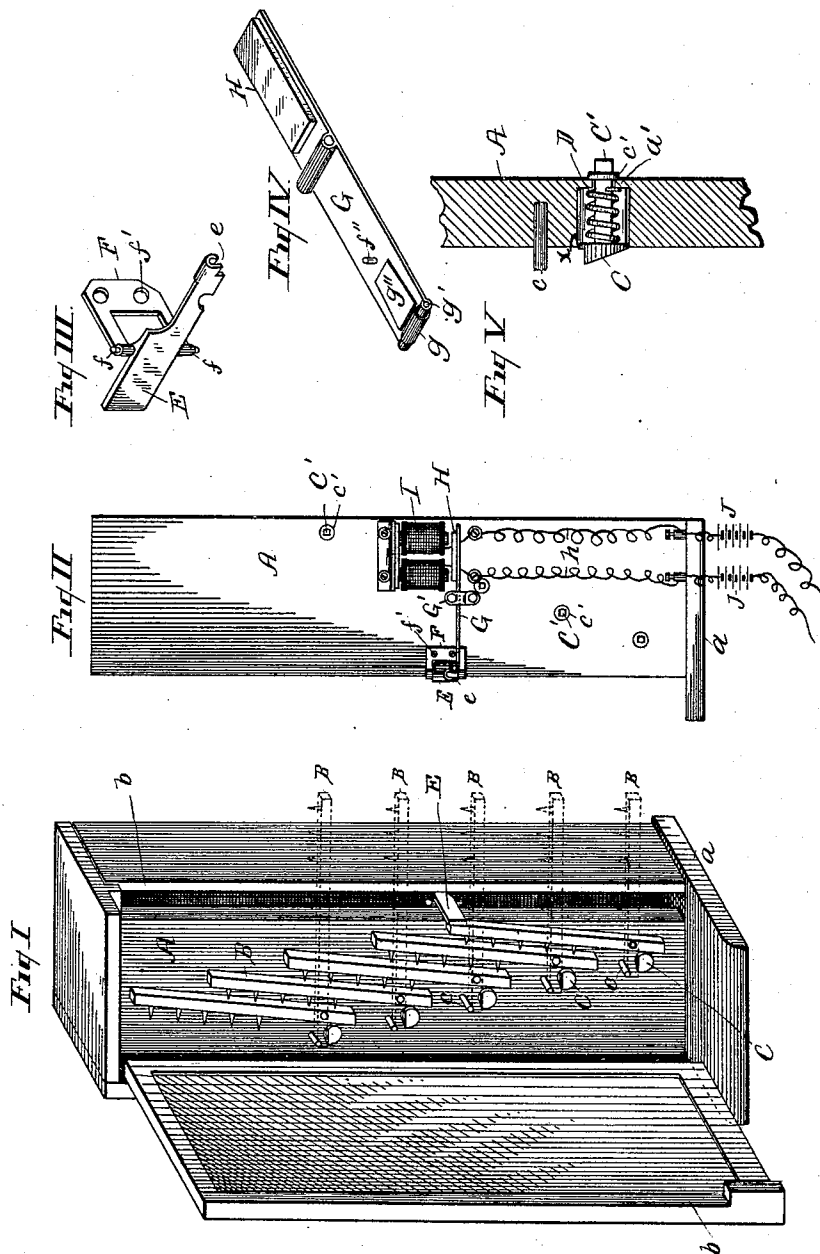
(No Model.)

B. LYONS.

ELECTRICAL DROP BAR FOR DOORWAYS.

No. 461,355.

Patented Oct. 13, 1891.



Witnesses

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UNITED STATES PATENT OFFICE.

BENJAMIN LYONS, OF KANSAS CITY, MISSOURI.

ELECTRICAL DROP-BAR FOR DOORWAYS.

SPECIFICATION forming part of Letters Patent No. 461,355, dated October 13, 1891.

Application filed February 18, 1891. Serial No. 381,829. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN LYONS, a citizen of the United States, residing at Kansas City, in the county of Jackson, State of Missouri, have invented certain new and useful Improvements in Electrical Drop-Bars for Doorways, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improved electric drop-bars for doorways; and it consists in the novel construction and arrangement herein-after fully set forth and described.

The objects of my invention are, first, to provide a means whereby the exit or entrance of a store or other business place may be cut off instantly by means of a series of metallic bars falling across the same (when desired) by operating a button or its equivalent, thereby energizing a magnet, which will release said bars from a supporting-key; second, to attain these ends with simplicity and economy, which I do by constructing and operating the device illustrated in the accompanying drawings, in which—

Figure I is a perspective view of my device, showing it incased in a boxing or jamb made to receive it. Fig. II is a side elevation of said device, illustrating the magnets, &c., by which it is operated. Fig. III is a detail in perspective of the key or lever and its hinged support, by means of which the metallic bars are held in an upright position. Fig. IV is a detail in perspective of the lever and armature which releases said key; and Fig. V is a partly broken away sectional view of the standard to which my device is secured, showing one of the bolts or pins which automatically lock the bars when they have fallen to a horizontal position.

Referring to the drawings by letter, A represents a standard or post rigidly secured to a base *a* or to the floor, which is provided with a series of steel bars B, thickly studded with barbs or spikes on one or more sides. These bars are securely pivoted to said standard by suitable rivets or bolts, their normal position being as shown in Fig. I.

C are bolts which have their front ends beveled, as seen in Fig. V. These bolts C have shafts *C'*, which extend through the standard

A and are provided with collars *c'*, which hold them in place. Encircling these shafts are coil-springs D, which are seated in recesses X, made in the standard A. One end of said springs bears against the head of said bolts, while the opposite end bears against bottom of the recess *a'*, thereby forcing said bolts outward, so that when the bars B are released and are falling to a horizontal position the bolts are forced backward, and when said bars have fallen to a level said bolts are thrown out by springs D, thereby locking the bars down. The pins *c* act as a check to the fall of the bars, which, as is readily seen, are securely locked between said bolts C and pins *c*.

E represents a key pivotally secured to the standard A by means of a pin *f*, which passes through the support F, said support being rigidly fastened to the standard A by suitable screws or bolts passing through perforations *f'*.

e is the end of key, which when in its normal position rests against the friction-roller *g*, which is secured on lever G by means of pin or shaft *g'*.

g'' is a plate over which the end of the key G travels when thrown out of position.

f'' is a stop-pin rigidly secured on lever G, and is for the purpose of preventing the key E from passing off from said lever.

H represents the armature, which is secured to lever G. This being attracted by the magnet I releases the key E, which supports the bars B. The lever G is pivoted near its center by a pin and bearing *G'*, as seen in Fig. II. This lever is operated by the magnets I, which are energized by batteries J.

Where narrow or single doors are used the device as illustrated in Fig. I is sufficient; but in wide or double doors or such other places as it may be found desirable and convenient they may be used doubly, one on each side, the operation being the same.

This invention is designed to be used in banks, jewelry stores, jails, and all other places where they may be conveniently applied, and are for the purpose of closing the entrance or exit to any building or place instantly, thereby cutting off the channel of escape from any one on the inside should they attempt to get away with stolen goods.

The operations of my device are very simple and are as follows: The device illustrated in

the accompanying drawings being properly secured to the jamb of the door, a circuit-wire is extended from the battery J throughout the building, and suitable buttons or their equivalent are placed at convenient intervals, which will contact with said circuit - wire. When it is desired to shut any exit or entrance instantly, any one of the buttons or their equivalent may be pressed, which will energize the magnet, thereby attracting the armature H, throwing lever G and friction-roller g, thus releasing the key E, thereby allowing the bars B to drop of their own specific gravity, as heretofore described.

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

1. An electric drop-door constructed of a series of barbed bars which are operated by electrical devices and locked automatically by

bolts and pins, substantially as set forth and described.

2. In an electric drop-door, the combination of a series of barbed bars pivoted to the standard A, a series of locking bolts and pins, together with keys and levers, and a magnet for operating the same, as fully set forth and described.

3. In an electric drop-door, the combination of a series of barbed bars, a series of locking bolts and pins, together with keys and levers, and a magnet for operating the same, as fully set forth and described.

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

BEN. LYONS.

Witnesses:

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