No. 840,701. PATENTED JAN. 8, 1907.

C. LAMAREAUX.

FIRE DOOR RELEASING DEVICE.

APPLICATION FILED MAR. 12, 1906.

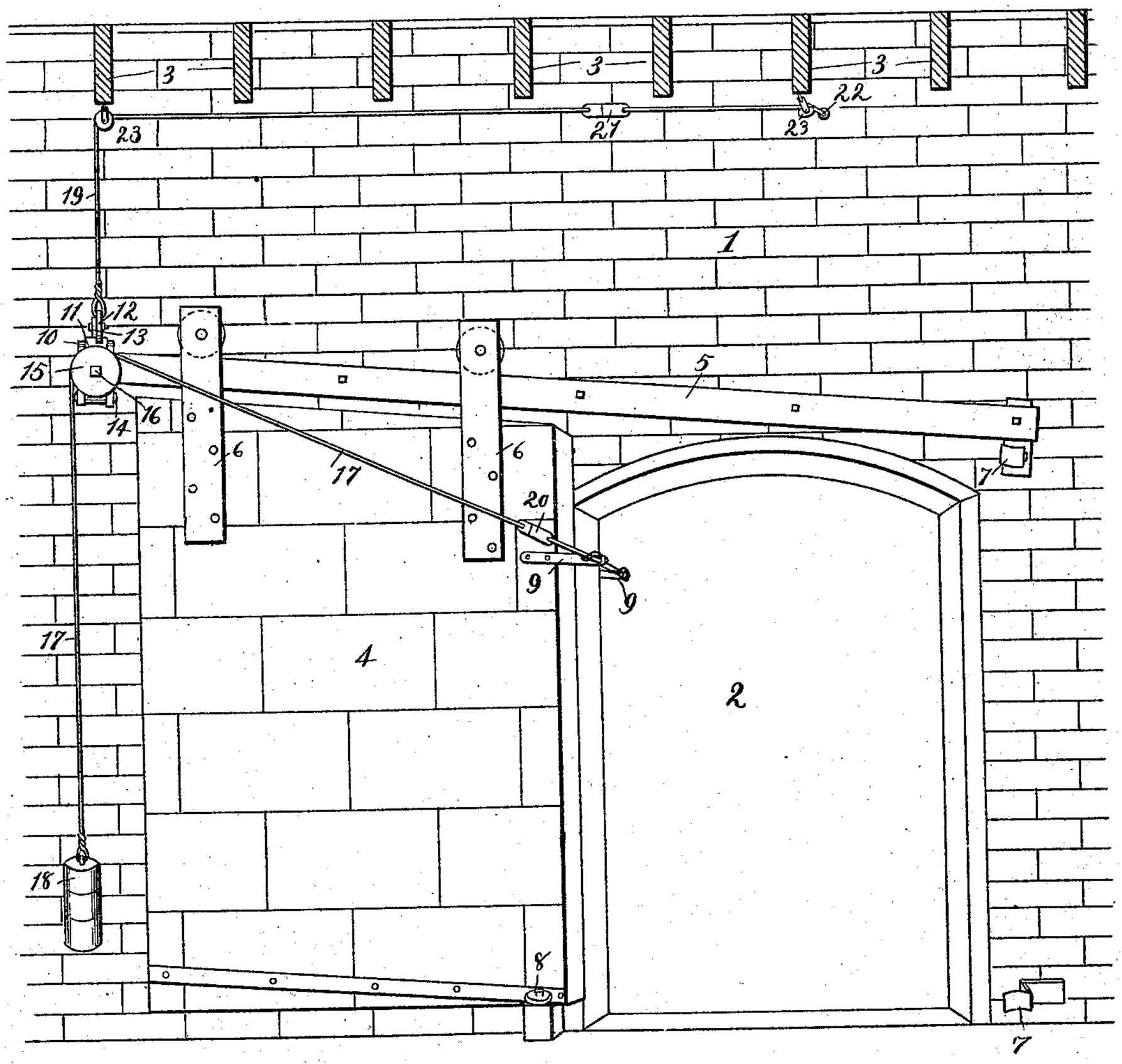

Fig. 1.

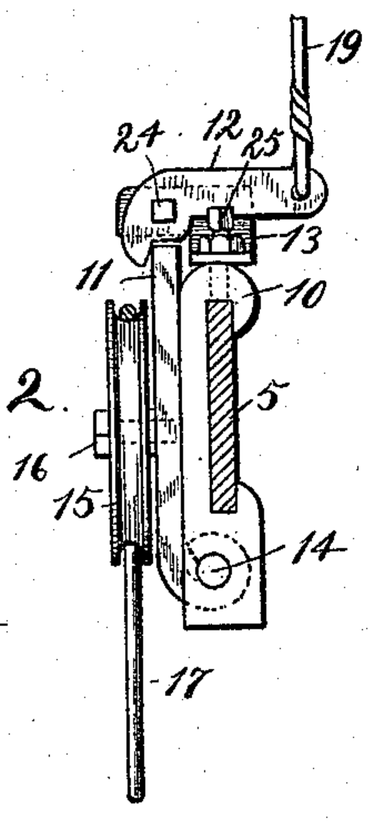

Fig. 2.

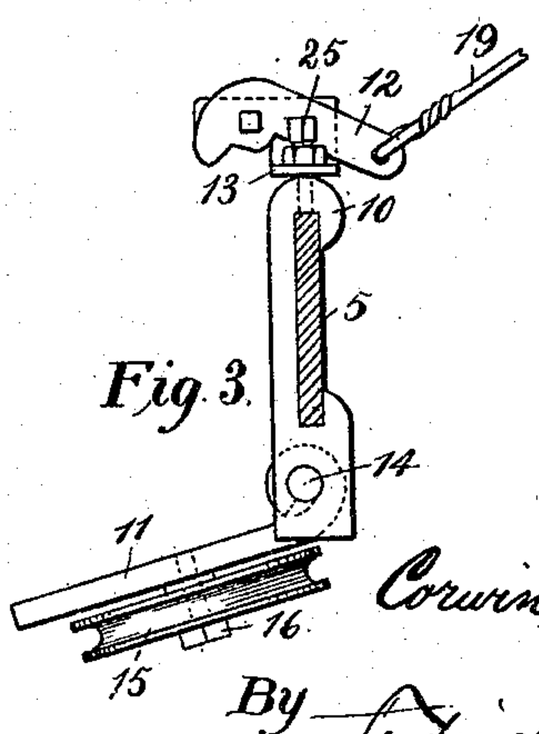

Fig. 3.

Witnesses:

Chas. F. Bassett

M. A. Milord

Inventor

Corwin Lamareaux

By Frederick Benjamin

Atty.

UNITED STATES PATENT OFFICE.

CORWIN LAMAREAUX, OF AURORA, ILLINOIS, ASSIGNOR TO THE RICHARDS MANUFACTURING COMPANY, OF AURORA, ILLINOIS.

FIRE-DOOR-RELEASING DEVICE.

No. 840,701. Specification of Letters Patent. Patented Jan. 8, 1907.

Application filed March 12, 1906. Serial No. 305,553.

To all whom it may concern:

Be it known that I, CORWIN LAMAREAUX, a citizen of the United States, residing at Aurora, in the county of Kane and State of Illinois, have invented certain new and useful Improvements in Fire-Door-Releasing Devices, of which the following is a specification.

This invention relates to improvements in means for automatically releasing closures, such as fire-doors, through the instrumentality, primarily, of fusible links or similar devices which are adapted to separate or disassemble when subjected to a high temperature.

The especial object of the improvements which form the subject-matter of this application is to provide easily-applied and quickly and effectively operatable connections for the closures whereby the latter will be promptly and certainly released in case of fire and which at the same time will not interfere with the ordinary opening and closing of the closures.

In the accompanying drawings I have shown a preferred adaptation of my invention in the following views:

Figure 1 shows in elevation a wall and fire-door equipped with my improved releasing means. Fig. 2 is a detail, on an enlarged scale, of an important element of my invention shown in its normal position; and Fig. 3 is a view of the same parts in their released positions.

Referring to the details of the drawings, 1 represents a masonry wall in which a doorway 2 is provided. Joists 3 extend from the top of the wall, and a metal fire-door 4 is mounted by hangers 6 6 on the inclined track 5, the latter being secured to the wall above the doorway and door, all in the usual manner.

7 7 represent ordinary stops, and 8 a guide-roller for the door.

9 is an arm secured to the door and projecting from the front edge thereof.

10 is a back-stop plate which is adjustably secured to the track by stud-bolt 25. In the lower part of plate 10 a pin 14 is fixed, on which is hinged a plate 11. To the top of the plate 10 a bracket 13 is secured by the bolt 25 and overhangs the plate 11. On this bracket a latch 12 is pivoted by a bolt 24, and below its pivotal point the latch is formed with a hooked end, which is adapted to engage the upper edge of the plate 11. To the rear end of the latch one end of a rope 19 is secured. This rope passes upwardly and over pulleys 23, which are pendent from the joists 3, and then passes through a hole 22, which is provided therefor through the wall 3. A fusible link 21 is arranged in the rope 19 and forms an element thereof.

On the opposite side of the wall the construction and arrangement above and hereinafter described are duplicated if two doors are desired for the opening 2, and the release of either door through the fusing of the link 21 will operate to close the complementary door. If a second door is not desired, the end of the rope 19 will be secured in any convenient manner.

A stud-bolt 16 projects at right angles from the plate 11, and on the same is rotatably mounted a grooved pulley 15. Over this pulley is arranged a rope 17, one end of which is secured to a weight 18 and the other end to the arm 9, and in this rope, as an element thereof, is arranged a fusible link 20, the latter being placed adjacent to the forward edge of the door. The tension exerted by the weight is sufficient to maintain the door open against gravity and also to pull the plate downwardly to the position shown in Fig. 3 whenever the latch 12 is disengaged from said plate. If the link 21 should become fused, the tension on the latch 12 would be removed, whereupon the tension on the plate 11 exerted by the rope 17 and weight 18 would pull the plate downwardly, thus throwing the rope off the pulley 15, and thereby releasing the door and permitting it to move forward on the track by gravity. As the construction and arrangement of the parts described is the same on both sides of the wall, it is manifest that the fusing of the links 21 on either side of the wall will release both doors, the rope 19 being continuous and having its ends secured to both latches.

If the link 20 should fuse, the weight 19 would drop, and thus release the tension on rope 17 and permit the door to close by gravity. As the link on the opposite side of the doorway which corresponds to 20 is located adjacent to the doorway-opening, it is apparent that the heat passing through the doorway will fuse both of said links, and thus release both doors.

Having thus described my invention, what I claim as new is—

1. Means for releasing slidable closures, comprising a hingedly-mounted pulley, a latch normally holding said pulley in operative position, a rope arranged on said pulley, secured to said closure and having a fusible element therein, means holding said rope under tension and means holding said latch in operative position.

2. Means for releasing slidable closures, comprising a pulley adapted to be thrown into inoperative position, a latch normally holding said pulley in operative position, a rope arranged on said pulley, secured to said closure and having a fusible element therein, a weight secured to said rope, and means holding said latch in operative position, said means comprising a fusible element.

3. Means for releasing slidable closures, comprising a fixed plate, a plate hinged on the fixed plate, a latch holding the hinged plate in apposition with the fixed plate, a pulley mounted on said hinged plate, means comprising a fusible element for operating said latch, a rope secured to the closure and passing over said pulley, said rope having a fusible link therein, and means for holding said rope under tension.

4. Means for releasing slidable closures, comprising a track, a plate adjustably arranged on the track, a plate hinged on said adjustable plate, a pulley mounted on said hinged plate, a rope arranged to travel on said pulley, said rope connected with the closure and carrying a weight and comprising a fusible link, a pivotally-mounted latch having one end engaging said hinged plate and having a rope secured to its other end, said rope comprising a fusible link.

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

CORWIN LAMAREAUX.

Witnesses:

GOVA M. RUSSELL,

LEE MIGHELL.