

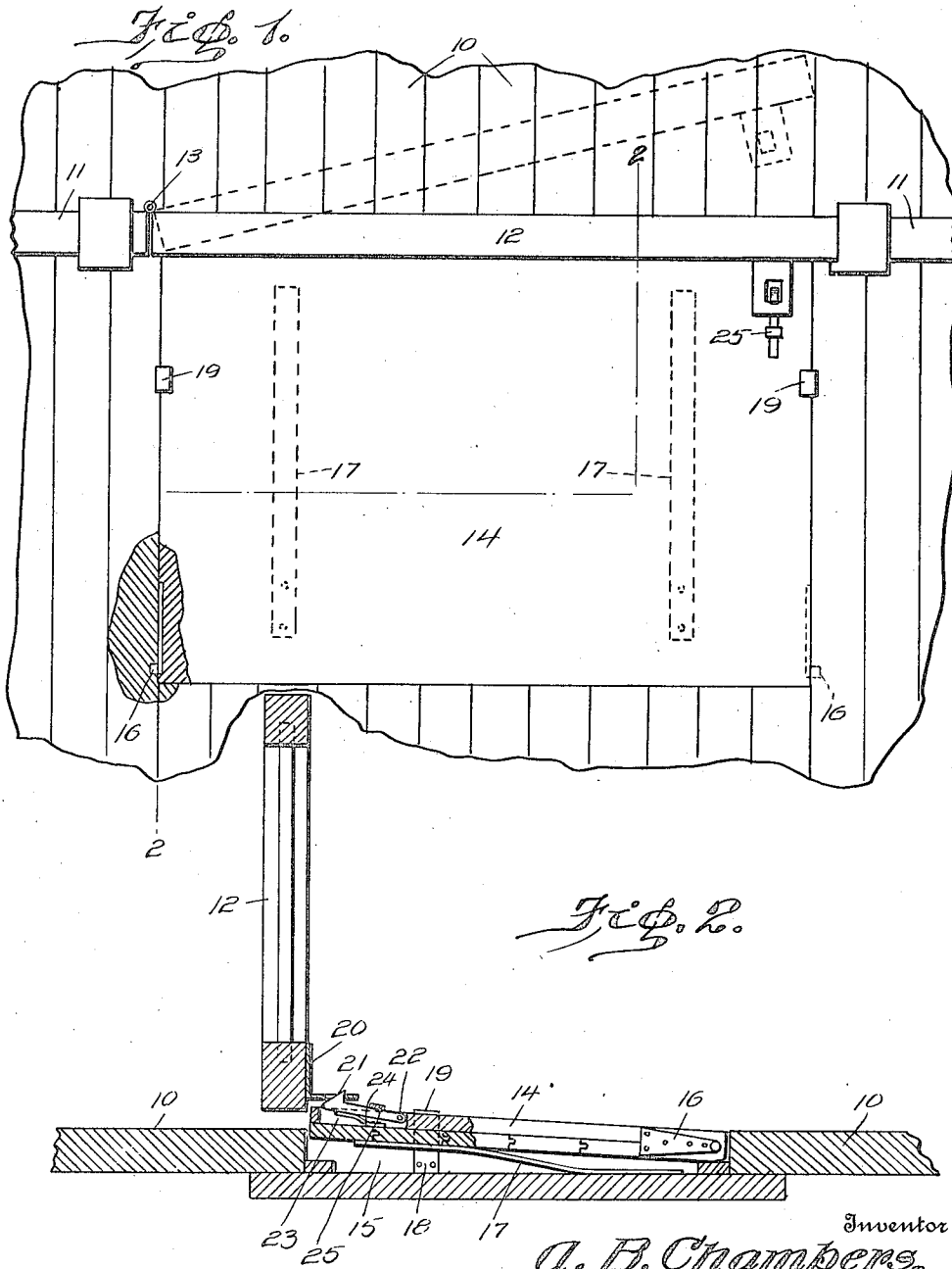
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A. B. CHAMBERS

DOOR OR GATE LATCH

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UNITED STATES PATENT OFFICE.

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DOOR OR GATE LATCH.

Application filed October 8, 1921. Serial No. 506,347.

To all whom it may concern:

Be it known that I, ARTHUR B. CHAMBERS, a citizen of the United States, residing at Memphis, in the county of Shelby and State of Tennessee, have invented certain new and useful Improvements in Door or Gate Latches, of which the following is a specification.

This invention appertains to door and gate latches generally, and more particularly to a type of the same adapted for use in conjunction with the door or gate normally closing the entrance to the merchandise sales room or space as disclosed in my co-pending application entitled "Self service stores", as filed under date of October 8, 1921, and serially numbered 506,345.

The principal object of the present invention is to provide for a device of the class mentioned, and one of a nature capable of operation for the securing or retaining of a door or gate in its normally closed position and of being actuated to admit of the opening of the door or gate from one direction only.

Another object of the invention is to provide for a door or gate latch mechanism as characterized, and one capable of being actuated by the foot or feet of a person to released position, whereby a door or gate may be moved from normally closed position to open position in a manner leaving the hands of the person free for other uses, such as the carrying of baskets, packages or the like, the door or gate and latch mechanism returning to closed and operative position after the weight of the person has been removed from the latter.

With the foregoing and other objects in view, the invention resides in the certain novel and useful construction, arrangement, and operation of parts as will be hereinafter more fully described, set forth in the appended claims, and illustrated in the accompanying drawing, in which:—

Figure 1 is a fragmentary plan view, partly in section, of a floor surface, and showing the latch mechanism as installed therein and cooperative with a door or gate, and,

Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1.

Referring to the drawing, the numeral 10 designates the floor of a room of a building, such as is used for business purposes or the like, and which is to be divided by means of a railing 11 having a door or gate 12 normally closing and opening in the railing 11, the said door or gate 12 being spring hinged as at 13 to one of the uprights of the latter for swinging movements to closed position, in which position the free vertical edge thereof abuts a jamb 11', carried by the railing at the side of the opening opposite to that at which the door or gate 12 is hinged, whereby it is prevented from being opened from but one direction only.

For normally securing the door or gate 12 in closed position, and for allowing the same to be opened from one direction only, a latch mechanism is provided, and the same is carried by and operable with a lock board or platform 14, which is of an area to fit into a recess or opening 15 formed in the floor surface 10, the latter being disposed to one side of the door or gate 12 and having one of its longer side edges disposed in the plane of the adjacent and parallel sides thereof. The lock board or platform 14 is hinged as at 16 to the outer of the longer side edges of the recess or opening 15, and is normally supported in inclined position by means of a pair of leaf spring members 17 disposed within said recess or opening 15, so that the rear or upper side edge thereof lies in a plane to be abutted by the lower bar or frame member of the door or gate 12. To limit the upward movement of the lock board or platform 14, under the action of the underlying springs 17, a pair of stop members 18 are secured vertically of the opposite end edges of the recess or opening 15, and have their upper free ends angularly bent to provide portions 19 arranged in overlapping relation with respect to the adjacent end edges of the lock board or platform, and these portions 19 are abutted by the latter, when the same is in its normally inclined and operative position.

The door or gate latching mechanism comprises a keeper member 20, in the form of an angular bracket secured to the outer side of the door or gate 12, which is engaged by a latch member 21, whenever the door or gate

12 is moved or otherwise returned to its normally closed position, the latch member 21 being pivoted as at 22 within a recess 23 formed in the upper face of the lock board or platform 14, and in proper position for the purpose. The latch member 21 is maintained in its operative position for snapping into position with the keeper bracket 20 by means of a spring 24, and is limited in its upward movement under the tensioning action of the spring 24, by means of a stop member 25, which is secured across the recess 23 substantially as is shown in the drawing.

15 In the operation of a device, when a person desires to pass in the proper direction through the door or gate 12, he or she will of necessity step upon the lock board or platform 14, pressing the same downwardly against the tension of the spring 17, when the latch member 21 will disengage from the keeper bracket 20, and release the door or gate 12, so that the same can be readily pushed or otherwise moved to open position, from which position it automatically returns by reason of the spring action of the hinges 13, to closed and latched position, the board or platform 14, and the latch member 21 carried thereby, having in the meantime been restored to normally operative position by their respective springs 17 and 24.

From the foregoing, it will be readily apparent that the invention provides for a novel and useful means for latching and releasing doors and gates of all classes and descriptions, and particularly those doors and gates used to close division railings of self service stores, where it is desirable to have persons enter a stock sales room in one direction only, a separate exit being provided for their passage from the latter to the cashier's desk, and outwardly of the store or building.

45 It will be understood that, while a preferred embodiment of the latch device has been described and illustrated herein in specific terms and details of construction, arrangement and operation, various changes in and modifications of the same may be resorted to without departing from the spirit of the invention, or the scope of the claims appended hereto.

Having thus fully described the invention, what is claimed, is:—

55 1. In a latch device as characterized, a lock board hingedly mounted within a recess formed in the floor of a building, spring means normally tensioning said lock board in normally and forwardly inclined position, a latching element pivotally mounted on said lock board for latching a door or gate in a normally closed position, and spring means normally tensioning said element in its operative position, said lock board be-

ing operable by the weight of a person stepping thereon for effecting the release of said element whereby the door or gate may be moved from its normally closed position in the predetermined direction.

2. In a device for the purpose set forth, a locking board adapted to be mounted in a recess formed in the floor of a building and hinged at one end to the walls of the recess, means positioned below the lock board for normally positioning it in a raised inclined position with respect to the hinged end of said board, said board having its upper face provided with a recess at the raised end thereof, and a spring controlled latching element pivotally supported in said recess for latching a door or gate in normally closed position and releasable from said latching engagement when the raised end of the lock board is lowered by pressure applied thereto.

3. In a device for the purpose set forth, a locking board adapted to be mounted in a recess formed in the floor of a building and hinged at one end to the walls of the recess, means positioned below the lock board for normally positioning it in a raised inclined position with respect to the hinged end of said board, said board having its upper face provided with a recess at the raised end thereof, a spring controlled latching element pivotally supported in said recess for latching a door or gate in normally closed position and releasable from said latching engagement when the raised end of the lock board is lowered by pressure applied thereto, and means positioned at the sides of said lock board for limiting the upward movement of the free end thereof.

4. The combination with a support or floor provided with a recess, of a lock board positioned therein, means carried at the sides of said board at one end thereof and engaging in the side walls of the recess for hinging the board to the support, means arranged within said recess and bearing against the lower face of the board for maintaining the latter normally in a forwardly inclined position, a pivotally mounted latching element carried by said board for latching the door or gate in a normally closed position, and resilient means normally maintaining said latching element in its operative position with respect to the door or gate, said lock board being operable when pressure is applied thereto to release said element from the door or gate.

5. The combination with a support or floor provided with a recess, of a lock board positioned therein, means carried at the sides of said board at one end thereof and engaging in the side walls of the recess for hinging the board to the support, means arranged within said recess and bearing against the lower face of the board for main-

taining the latter normally in a forwardly inclined position, a pivotally mounted latching element carried by said board for latching the door or gate in a normally closed position, resilient means normally maintaining said latching element in its operative position with respect to the door or gate, said lock board being operable when pressure is applied thereto to release said element from the door or gate, and means secured to the side walls of the recess for limiting the upper movement of said board. 10

In testimony whereof, I affix my signature hereto.

ARTHUR B. CHAMBERS.