

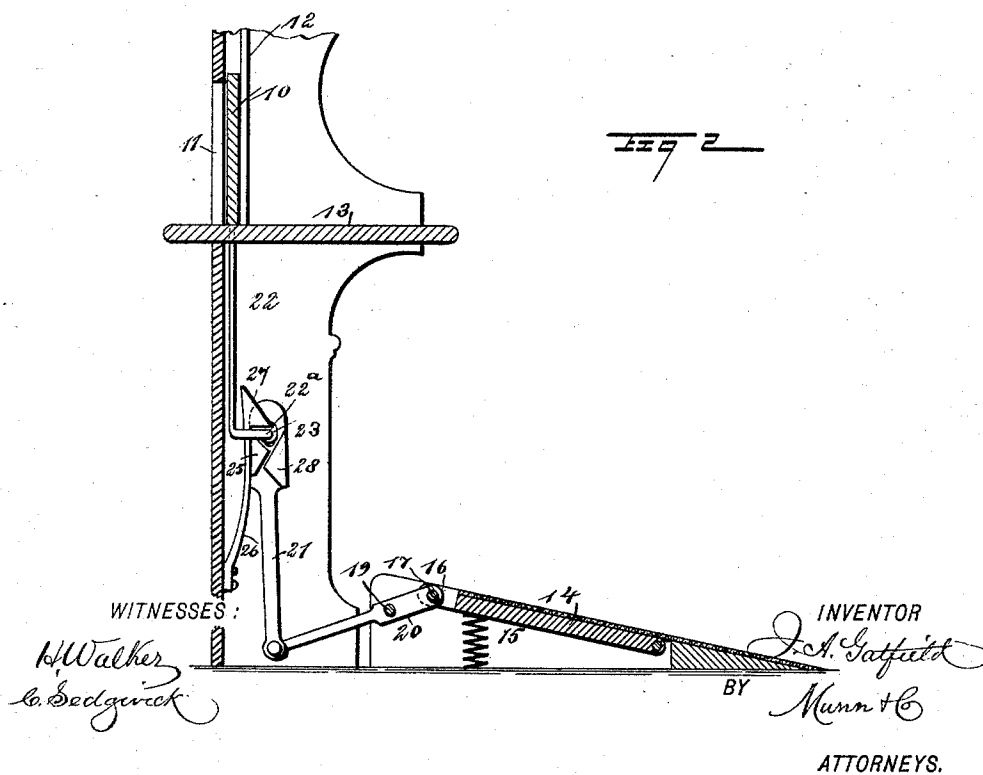
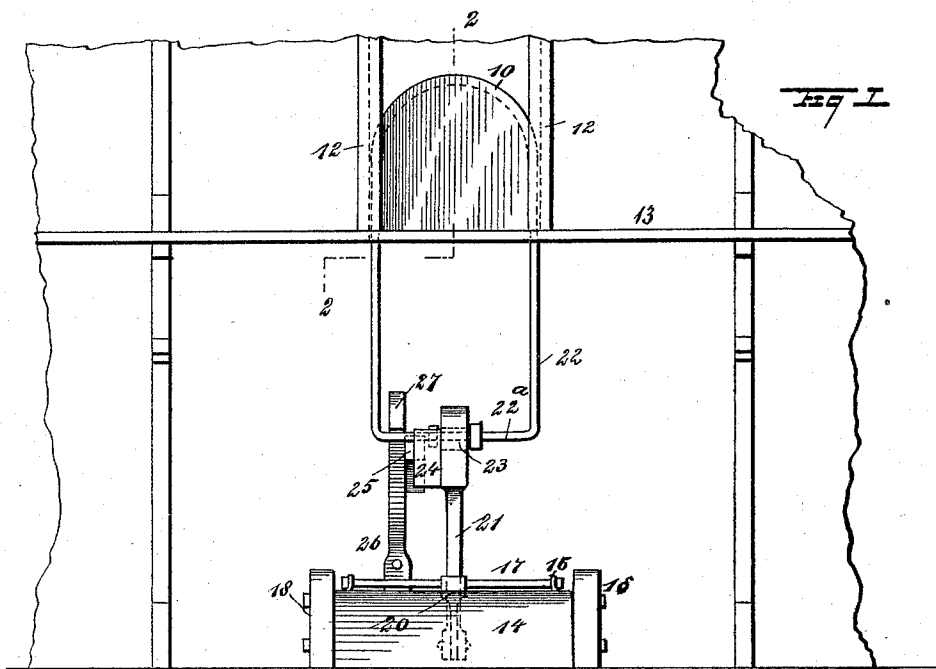
(No Model.)

J. A. GATFIELD.

DEVICE FOR AUTOMATICALLY CLOSING AND OPENING SLIDING DOORS.

No. 485,926. Patented Nov. 8, 1892.

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UNITED STATES PATENT OFFICE.

JAMES ALFRED GATFIELD, OF DURHAM, CANADA.

DEVICE FOR AUTOMATICALLY CLOSING AND OPENING SLIDING DOORS.

SPECIFICATION forming part of Letters Patent No. 485,926, dated November 8, 1892.

Application filed March 30, 1892. Serial No. 427,105. (No model.)

To all whom it may concern:

Be it known that I, JAMES ALFRED GATFIELD, of Durham, in the Province of Ontario and Dominion of Canada, have invented a new and Improved Device for Automatically Closing and Opening Sliding Doors, of which the following is a full, clear, and exact description.

My invention relates to a device for automatically opening and closing sliding doors, and has for its object to provide a means whereby when a cashier stands in front of his desk-window or other opening usually covered by a sliding door the door will be opened automatically to disclose the opening and whereby the moment the cashier leaves the window the slide will be automatically closed over the same, thus preventing the possibility when no one is at the window of persons from outside reaching that which is near the inside of the window.

Another object of the invention is to provide a means for automatically opening and closing the window, which will act to hold the shutter of the window in an elevated position, unclosing the window while the cashier remains thereat without taxing said cashier's strength and without requiring the least attention from him.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a front elevation of the device, illustrating it as applied to the shutter of a cashier's window; and Fig. 2 is a section taken, practically, on the line 2 2 of Fig. 1 through the window and the compartment in which it is located, a portion of the device appearing in vertical section and the remainder in side elevation.

The shutter 10, employed to close the window-opening 11, is held to slide in suitable slideways 12, usually produced upon the inner wall of the compartment or partition in which the window-opening is made, as shown in Fig. 1, and the window-opening 11 in the drawings

is such as is usually made for cashiers, being located over a desk 13.

Upon the floor in front of the window-opening and shutter a platform 14 is located. This platform is pivoted at its lower end and is normally maintained in an upwardly-inclined position through the medium of one or more springs 15 placed beneath it near the upper end, as shown in Fig. 2. The platform is usually made with ears 16, projecting from its sides beyond its upper end, and these ears are connected by a rod 17. The platform is usually pivoted to side pieces 18, which are tapering at their upper surfaces and extend beyond the elevated end of the platform, and these sides are preferably so constructed that when the platform is not under pressure the upper edges of the sides will be flush with the upper face of the platform.

In front of the elevated end of the platform a rod 19 is fixed, and upon this rod a treadle 20 is fulcrumed, the inner end of the treadle being pivotally connected with the platform-rod 17. The outer end of the treadle is in pivotal engagement with a vertically-disposed pitman 21, and this pitman is attached to the lower end of a yoke 22, which yoke is directly connected with the shutter 10. The lower end of the yoke, which is horizontally located, as illustrated at 22^a, passes through an elongated opening 23 in the head of the pitman, and the pitman has formed upon one face a trip-block 24, which block is essentially of angular shape. This block is adapted for engagement with a similarly-shaped block 25, which may be termed a "keeper-block," the latter block being fast upon a spring-latch 26, below the head 27 of said latch, and the latch is attached to the front wall of the compartment in which the device is located or to the partition in which the window-opening is formed, the location of the latch being such that when the shutter is in its closed position the head of the latch will be over the lower horizontal portion of the yoke 22, as shown in Fig. 2. When the latch is in its locking position, one inclined face of its keeper-block will be immediately opposite an inclined face of the trip-block upon the pitman.

The operation of this device is apparent,

and may be briefly stated as follows: The moment a person steps upon the platform 14 the platform at its free end is depressed, the forward end of the lever 20 is elevated, and
 5 the pitman 21 is consequently carried upward. In moving upward the trip-block of the pitman presses against the keeper-block of the latch and forces the latter back a sufficient distance to free its head from the lower
 10 portion of the yoke 22, and as the pitman passes farther upward the shutter is elevated and will remain in that position while the platform is depressed. The moment, however, that pressure is removed from the plat-
 15 form the free end of the platform rises through the medium of its spring and the pitman is carried downward at the same time, permitting the shutter to drop by its own gravity.

20 It will be observed that by means of this device, which is conveniently and economically applied, the window will not be left unguarded when the person whose duty it is to attend at the window has left it temporarily,
 25 as the moment that the party leaves the platform the shutter closes and the moment that he steps to the window again the shutter is elevated and the window opened.

Having thus described my invention, I
 30 claim as new and desire to secure by Letters Patent—

35 1. The combination, with a shutter, of a pivoted platform having a lever connection with the shutter to open it and an automatically-operating latch mechanism to lock the

shutter against opening when the platform is relieved of pressure and to release the shutter when pressure is applied to the platform to open the shutter, substantially as set forth.

2. The combination, with a shutter and a
 40 pivoted spring-controlled platform, of an extension of the shutter, a latch adapted for engagement with the extension, and a lever connection between the free end of the platform and the extension of the shutter, as and for
 45 the purpose set forth.

3. The combination, with a shutter, a platform pivoted at one end and spring-pressed at the other, and an extension from the shutter, extending downward in direction of the
 50 platform, of a spring-latch adapted for engagement with the extension and a trip mechanism adapted to act upon the latch when the platform is depressed, substantially as and
 55 for the purpose set forth.

4. The combination, with a shutter, a yoke extension therefrom, and a platform pivoted at one end and spring-controlled at its opposite end, of a latch adapted for engagement
 60 with the yoke of the shutter, a pitman connected with the shutter-yoke, a lever connection between the pitman and the platform, and a trip mechanism carried by the pitman and adapted for engagement with the latch, as and for the purpose set forth.

JAMES ALFRED GATFIELD.

Witnesses:

J. P. TELFORD,
 W. R. VAIR.