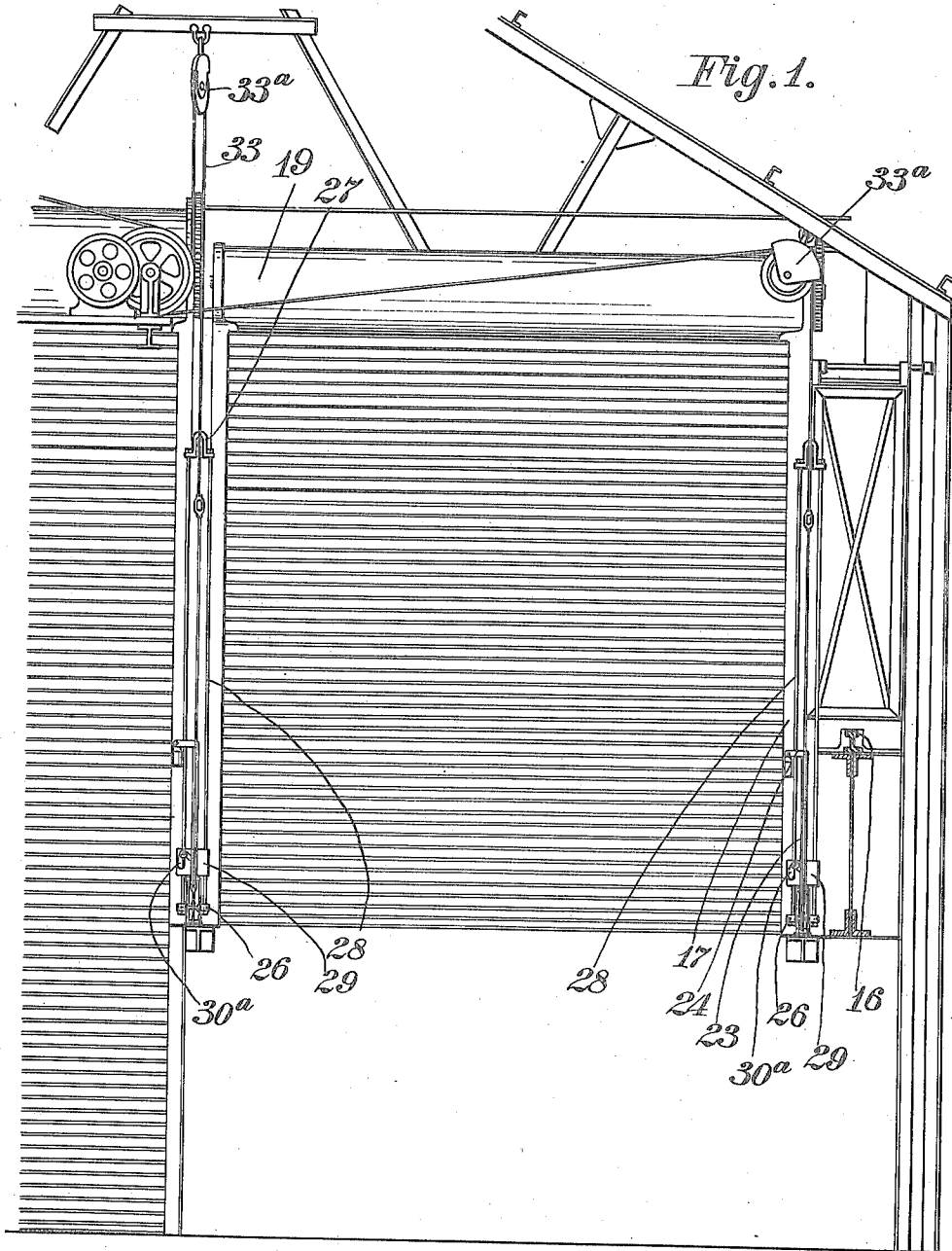


E. H. McCLOUD,
DOOR POST OPERATING DEVICE.
APPLICATION FILED DEC. 24, 1914.

1,283,836.

Patented Nov. 5, 1918
5 SHEETS—SHEET 1.



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5 SHEETS—SHEET 2.

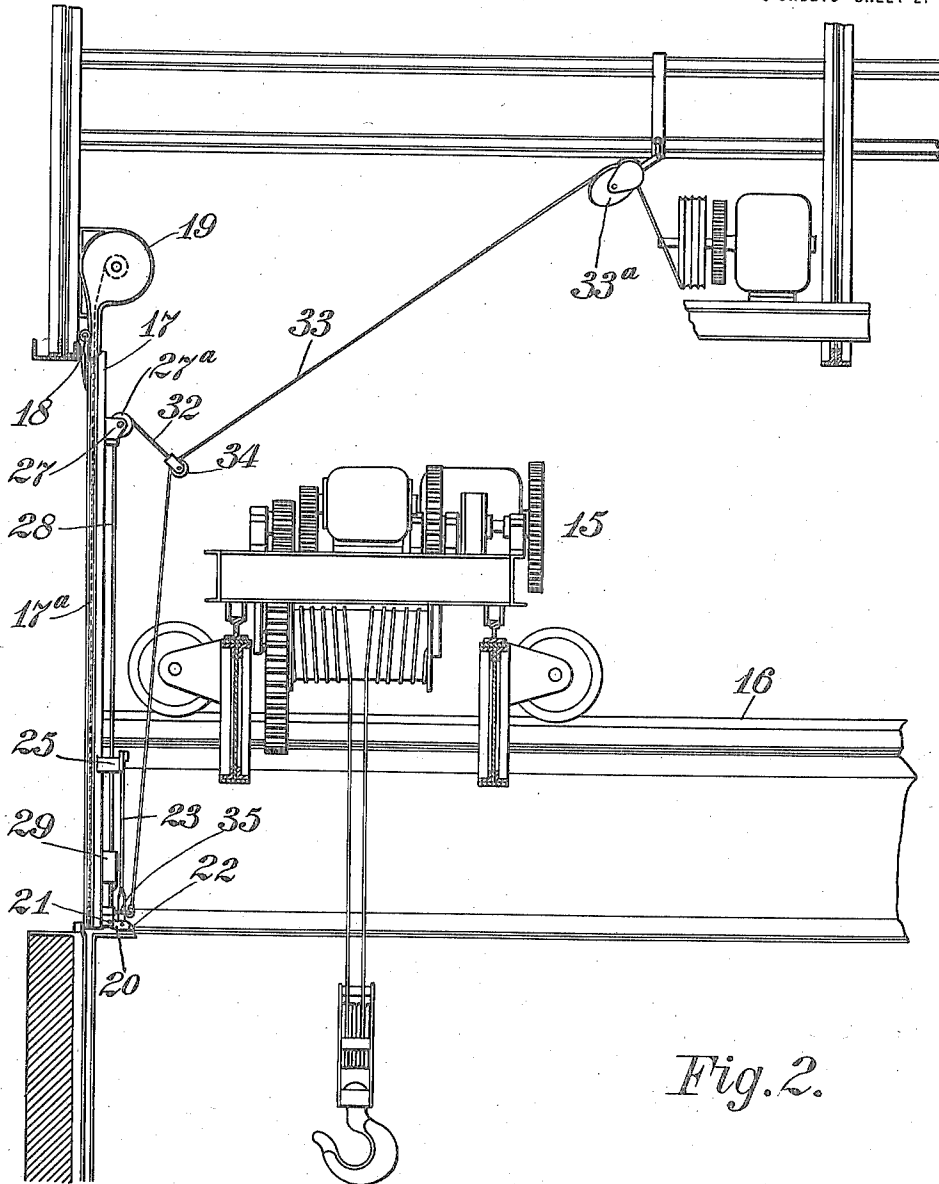


Fig. 2.

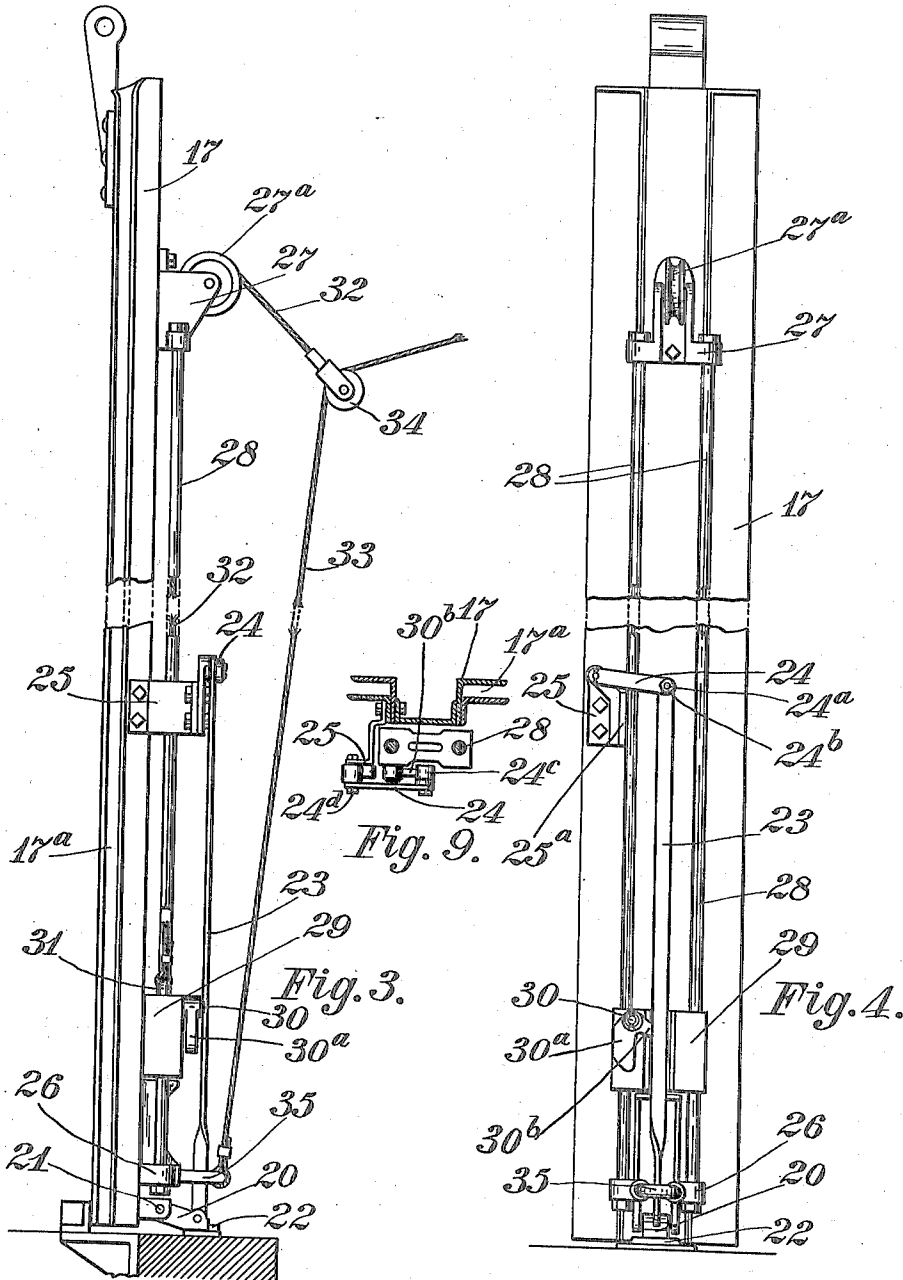
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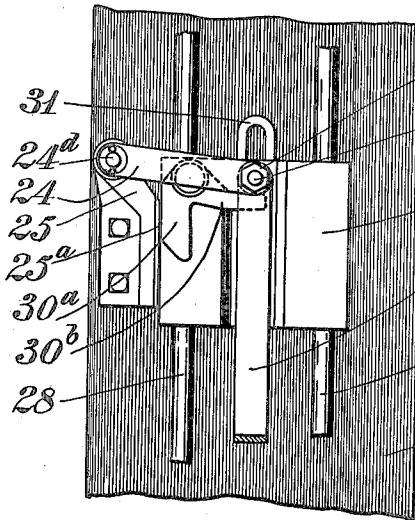


Fig. 5.

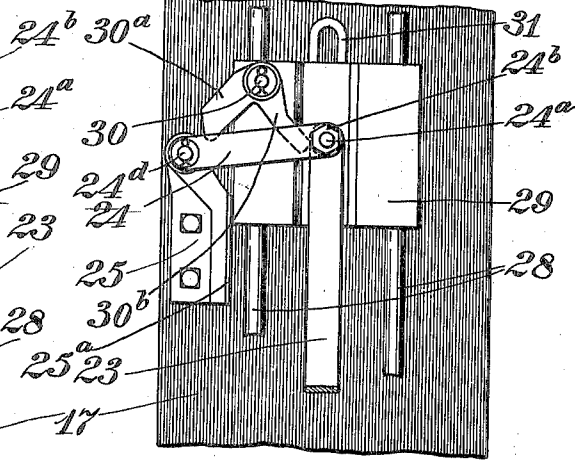


Fig. 7.

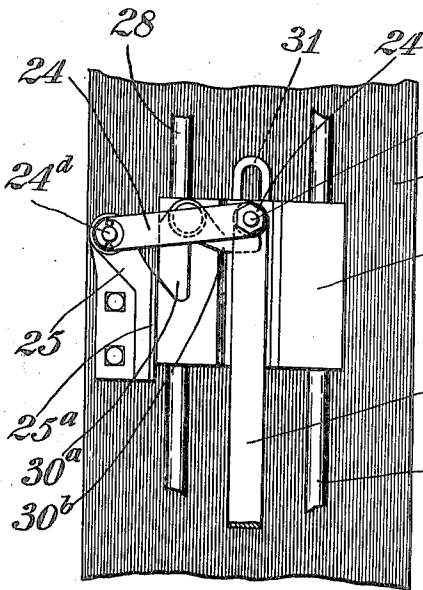


Fig. 6.

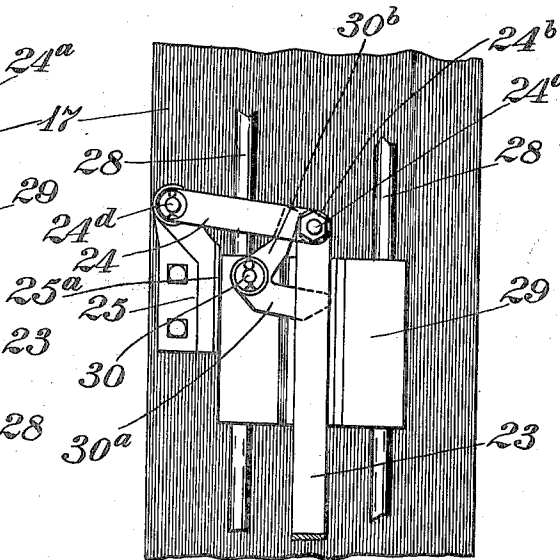


Fig. 8.

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5 SHEETS—SHEET 5.

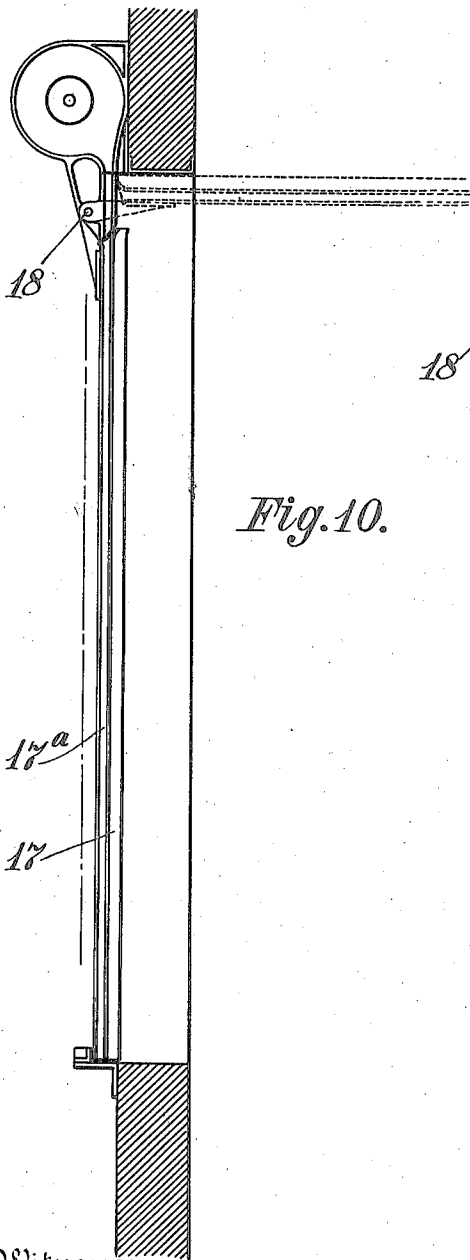


Fig. 10.

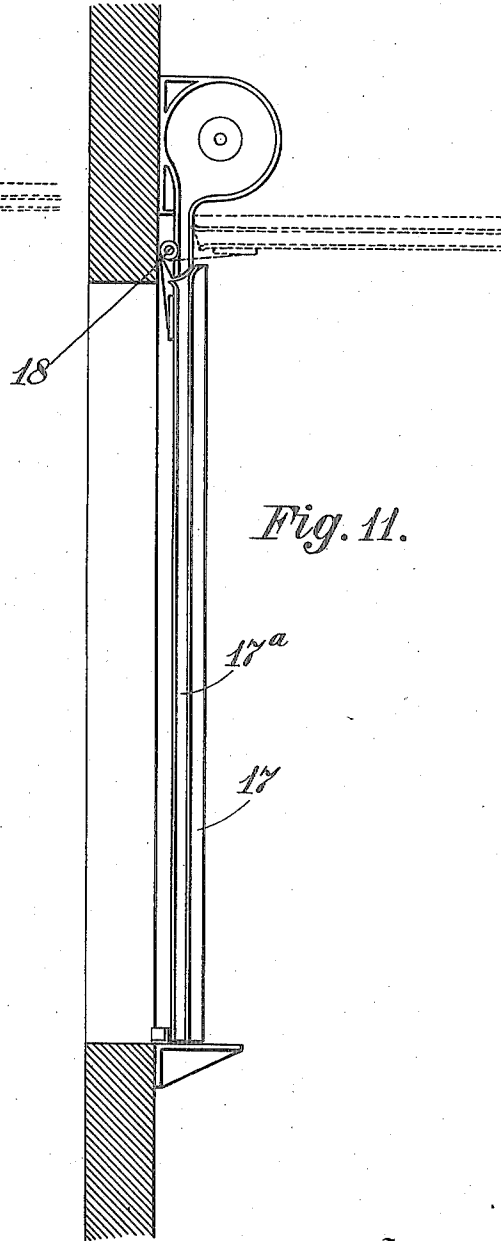


Fig. 11.

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UNITED STATES PATENT OFFICE.

EDWARD H. McCLOUD, OF COLUMBUS, OHIO, ASSIGNOR TO THE KINNEAR MANUFACTURING COMPANY, OF COLUMBUS, OHIO, A CORPORATION OF WEST VIRGINIA.

DOOR-POST-OPERATING DEVICE.

1,283,836.

Specification of Letters Patent.

Patented Nov. 5, 1918.

Application filed December 24, 1914. Serial No. 878,854.

To all whom it may concern:

Be it known that I, EDWARD H. McCLOUD, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Door-Post-Operating Devices, of which the following is a specification.

This invention as herein shown relates especially to doors for crane openings and has for its objects, among others, to provide improved means whereby interference of the crane with the door operating devices—or reversely, interference of the door operating devices with the crane—is avoided, and means whereby the operation of the door and door latching devices in such structures is facilitated and made more certain.

The invention is embodied in the construction herein shown and described and finally claimed.

In the accompanying drawings—

Figure 1 is a view in front elevation of a crane opening with parts in section.

Fig. 2 is a vertical section through the door showing in full lines the door post in vertical position and in broken lines in horizontal or raised position.

Fig. 3 is a side view on a larger scale broken out near the middle showing the post and its latching and operating devices.

Fig. 4 is a front view of the same.

Figs. 5, 6, 7 and 8 are front views on a still larger scale showing the latch bar operating device in various of its positions.

Fig. 9 is a plan view of the latch operating device.

Figs. 10 and 11 are side views showing the two modes of mounting the door post with reference to the opening in the building.

In the views 15 designates the crane which runs upon tracks 16. The character 17 designates the door posts, one at each side of the door being provided in practice, said post being hinged as at 18 to swing upward into the building. These door posts each carry a channel or guide 17^a that receives an edge of the curtain, said edges sliding in said channels and winding up into a hood 19. Each post is provided at its lower end with a latch 20 pivoted at 21, said latch engaging a lug 22 on a fixed part to hold the post latched when the door is closed. Connected with and extending vertically upward from the latch is a latch

operating bar 23 that is connected at its upper end to a shorter link 24 by a pin 24^a secured by a nut 24^b, said pin 24^a having a projecting head or stud 24^c at the inner side. The shorter link 24 is pivoted at 24^d to a bracket 25 secured on the door post. Also secured on each post between the lower and upper brackets 26 and 27 respectively are vertically arranged rails 28 upon which slides a block 29 carrying pivoted thereto at 30 a trip lug having two arms 30^a and 30^b, the arm 30^a being the heavier so as to hold the other normally extended in substantially horizontal position. Attached to an eye 31 on the upper end of each of the blocks 29 is a short cable 32 that passes around a suitable pulley as at 27^a on the upper bracket 27 and has at its free end a pulley 34. Connected with an eye 35 on each of the lower brackets 26 is a long cable 33 that passes around the pulley 34, thence to another pulley 33^a and thence to the winding or operating drum of an ordinary winding motor. The operating construction for each door post is substantially the same but the arrangement differs, as can be well understood by those skilled in the art, in such details as are necessary to secure equal and synchronous operation of the two posts.

Because the cable 33 is normally bent where it passes the pulley 34 draft on that cable tends to draw up the slide block 29 until the arm 30^b strikes the stud 24^c thereby lifting the latch operating rod and releasing the latch. A vertical shoulder 25^a on the bracket 25 holds the trip lug from oscillating under the weight of the latch rod 23 until the arm 30^a of the trip lug has been carried up past said shoulder 25^a thereby releasing and permitting it to drop into position to allow the latch to engage the lug 22 when the door is closed. The slide however, continues to pass upward as illustrated in Figs. 5, 6 and 7. When the slide comes down, as in closing the door, the arm 30^b of the trip strikes the stud 24^c thereby tilting the trip, as shown in Fig. 8 until said arm 30^b passes the stud 24^c after which the trip assumes the position shown in Fig. 6 with the arm 30^b below the stud 24^c ready to raise the latch operating bar upon a subsequent operation of the slide block 29 as just described. It will be observed that in so far as the posts are concerned it is only necessary to operate the hoisting motor to effect the raising and

lowering of the posts and that the operation of the latch is entirely automatic. After the hoisting operation the latch is restored to normal or latching position and when the posts drop to vertical position the latch proper rides over the lug or catch into latching position. When the door is hoisted the cable 33 straightens and when the door is lowered said cable is bent as shown by the weight of the block 29. The cable is therefore flexed out of interfering position.

The door posts can be hinged or mounted at the sides of the door opening in position to receive the sliding edges of the flexible rolling curtain, either interiorly or exteriorly of the building, as shown in Figs. 10 and 11. The choice of mounting is determined by the available head room for the hood of the rolling curtain or by other conditions that make one location more desirable than the other. Fig. 10 illustrates an example of exterior mounting while Fig. 11 shows an interior mounting.

The parts are susceptible of considerable modification without departing from the substance of the invention as claimed.

What I claim is:

1. In combination with a hinged member, a latch for said member, a sliding device carrying a trip to operate the latch to release the hinged member and permit the latch to

be restored to latching position upon the hinged member prior to the restoration of the hinged member to lowered position, a hoisting member connected with the hinged member and means whereby said hoisting member actuates the sliding device, substantially as described.

2. In combination with a swinging member, a latch for said member, a sliding device carrying a trip to operate the latch to release the swinging member and permit the latch to be restored to latching position upon the swinging member prior to the restoration of that member to fully lowered position, a flexible member connected with said sliding device, and a flexible hoisting member connected with and operating on the first mentioned flexible member.

3. In combination with a swinging member, a latch for said member, a sliding device carrying a trip to operate the latch to release the swinging member, means for holding said trip in position to actuate the latch, said trip adapted to yield under the latching device after passing the trip holding device.

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