Sept. 14, 1926. 1,599,438

N. B. SHELLY

LATCH DEVICE FOR SLIDING DOORS

Filed Dec. 5, 1925 2 Sheets-Sheet 1

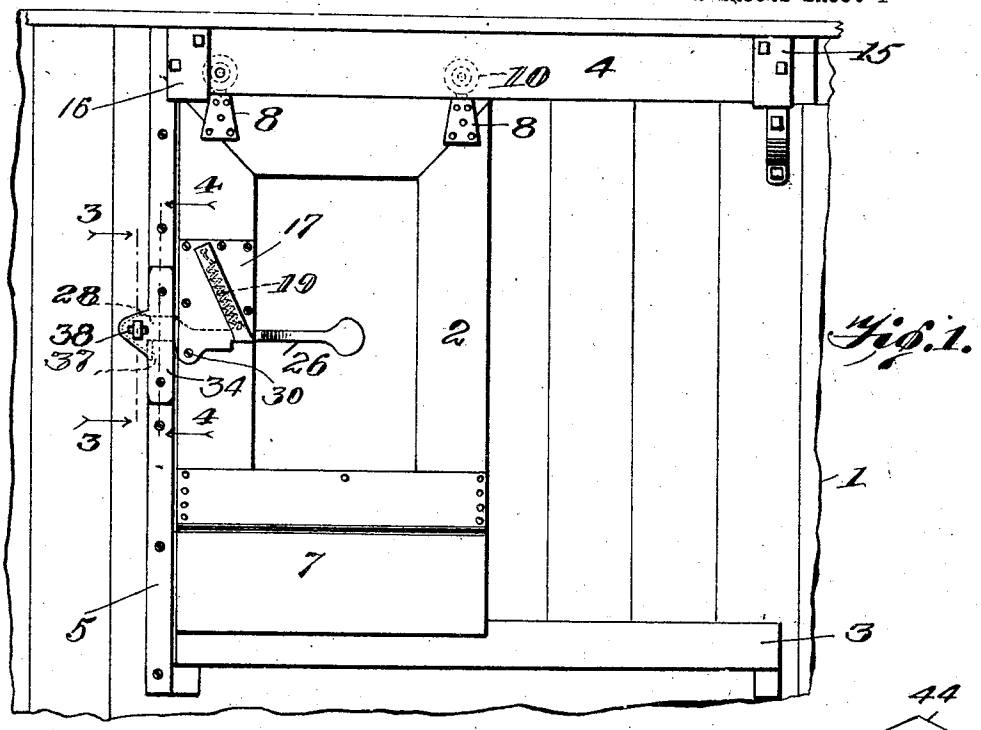



Fig. 1.

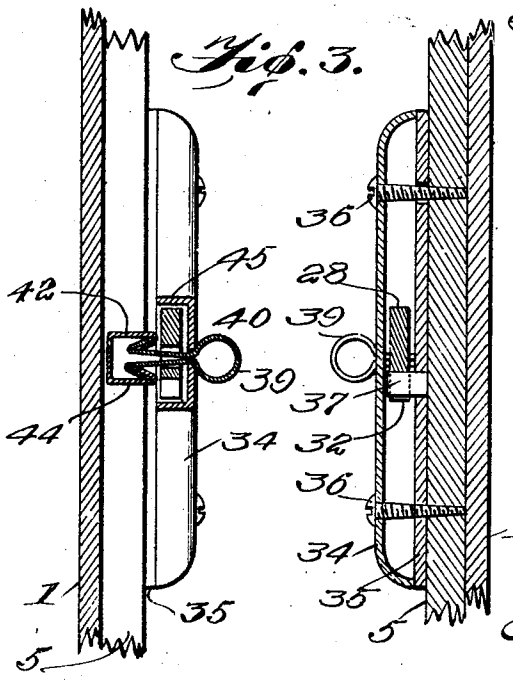



Fig. 3.

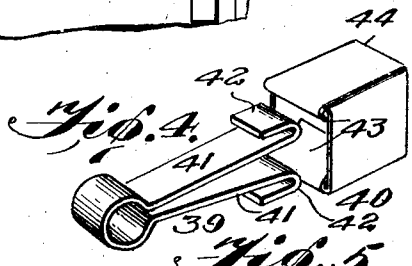



Fig. 4.

Fig. 5.

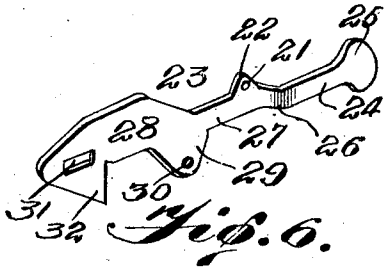



Fig. 6.

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Filed Dec. 5, 1925 2 Sheets-Sheet 2

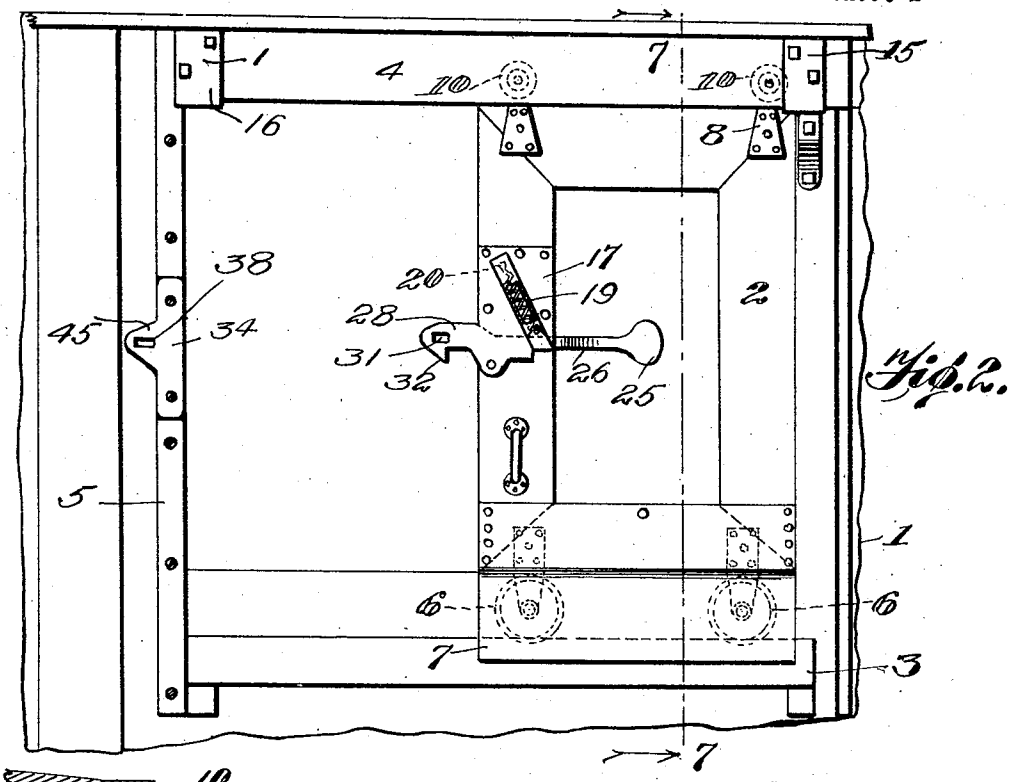



Fig. 2.

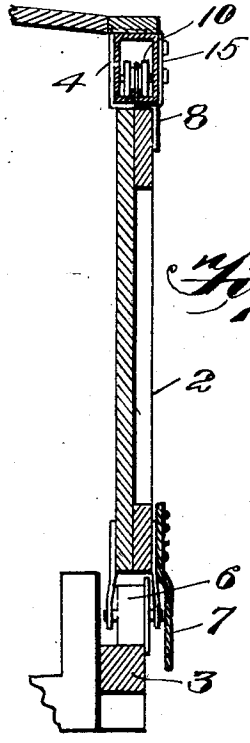



Fig. 7

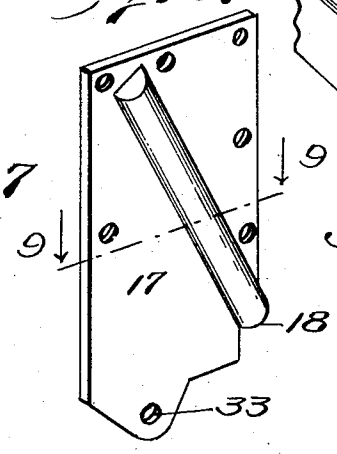



Fig. 8.




Fig. 9.

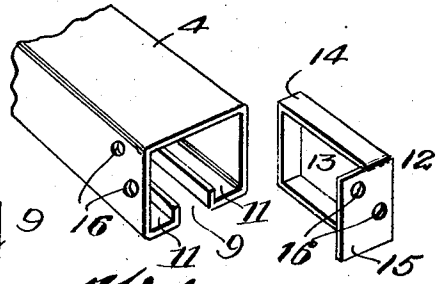



Fig. 10. Fig. 11.

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# UNITED STATES PATENT OFFICE.

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## LATCH DEVICE FOR SLIDING DOORS.

Application filed December 5, 1925. Serial No. 73,363.

This invention relates to a combined latch, door and seal.

The object of the invention is the construction of a simple and efficient latch device for fastening a sliding door or other closure in a closed position.

Another object of the invention is the construction of a simple and efficient track structure supporting a sliding door.

A further object of the invention is the construction of a latch device which is adapted to receive a seal for preventing the latch device from being fraudulently actuated.

With the foregoing and other objects in view, my invention comprises certain novel constructions, combinations and arrangements of parts as will be hereinafter fully described, illustrated in the accompanying drawings and more particularly pointed out in the appended claim.

In the drawings:

Figure 1 is a view in front elevation of an apparatus constructed in accordance with the present invention, showing the same in a closed position, while

Figure 2 is a similar view showing the apparatus in an open position.

Figure 3 is a sectional view taken on line 3—3, Figure 1, and looking in the direction of the arrows.

Figure 4 is a sectional view taken on line 4—4, Figure 1, and looking in the direction of the arrows.

Figure 5 is a perspective view of the seal device.

Figure 6 is a perspective view of the latch.

Figure 7 is a sectional view taken on line 7—7, Figure 2, and looking in the direction of the arrows.

Figure 8 is a perspective view of the front plate of the latch device.

Figure 9 is a sectional view taken on line 9—9, Figure 8, and looking in the direction of the arrows.

Figure 10 is a fragmentary, perspective view of the track.

Figure 11 is a perspective view of one of the two end caps for the track.

Referring to the drawings by numerals, 1 designates an ordinary box car, constituting a support, upon which is slidably mounted the door 2 by means of tracks 3 and 4. The door abuts against a cleat or upright 5 when in its closed position.

The door 2 is supported upon rollers 6 (Fig. 7) at its lower end, and a guide plate 7 protects these rollers. Extending from the upper portion of the door 2 are brackets 8, which brackets project through the slot 9 of track 4 (Fig. 10) and these brackets are suspended upon rollers 10 that travel upon the guide ways 11 of track 4, Figure 10. At each end of track 4 is an end cap 12. Each end cap 12 comprises an outer portion 13 connected to a rectangular frame 14. A comparatively large end plate 15 constitutes a part of said rectangular frame, this projecting plate 15 being provided for overlapping a considerable portion of one of the sides of track 4. In end plate 15 is a pair of apertures 16 which register with similar apertures 16 formed upon the plate engaging side of track 4. In these registering apertures 16 suitable fastening means may be placed for fastening the cap upon the end of the track for keeping the door from being misplaced off the track.

My latch device comprises a front plate 17 which is suitably fastened to the front of the door 2. This plate 17 is provided with an outwardly bulged spring receiving housing 18, which housing extends in an inclined position upon the plate 17 to efficiently accommodate the coil spring 19 mounted in the housing 18. The upper end of coil spring 19 is fastened, at 20, and the lower end of said spring is fastened in the eye 21 of lug 22 of the latch 23. This latch 23 comprises a body 24 that has at its outer end a grip 25. The body 24 is bent inwardly, at 26, and this inner bent end 26 terminates in a straight neck 27 from which rises the apertured lug 22. Integral with the inner end of neck 27 is the elongated head 28 from which head 28 depends the throat 29, which throat is provided with an aperture 30. In the outer end of the head 28 is an elongated aperture 31, and depending from the outer end of the head 28 is a V-shaped lip 32. The aperture 30 registers with the aperture 33 formed in the lower end of plate 17, and in these registering apertures 30 and 33, suitable fastening means is positioned for pivotally mounting the latch 23 on the door 2 behind the face or front plate 17.

An outwardly bulged keeper plate 34 is fastened over an inner keeper plate 35 (Fig. 4) by means of screws 36 which screws extend into the upright 5 of box car 1. A lug 37 is formed upon the inner plate 35 over

which lip 32 of the latch 23 is adapted to ride so as to normally retain the door or closure 2 in a closed position. The outwardly bulged plate 34 is provided with an elongated aperture 38. The aperture 31 of latch 23 is adapted to register with aperture 38, when the door is closed against upright 5, and in these registering apertures, I place the tongue 39 of the seal device 40. The tongue 39 includes spring prongs 41 that have hooks 42 on the outer ends of the prongs and these hooks 42 hook under the inwardly extending flanges 43 of the box-like member 44 of the seal device. This box-like member 44 is placed behind the outer keeper plate 34, and behind the portion 45 in which the elongated aperture 38 is formed. When the seal device is in position as shown in Figures 1, 3 and 4, the tongue of the seal device will be extended through the outer keeper plate and the latch, and it will not be easy for the fraudulent opening of the door.

When the seal device is not used to securely fasten the door or closure in a closed position, then said door will be kept closed by the latch engaging the lug 37. The coil spring 19 exerts an upward pull upon the outer end of the latch and thereby normally holds the head of the latch in position to engage and ride over lug 37, and when over said lug, the latch will not accidentally be displaced but will have to be operated by manual force to enable the door to be opened.

While I have described the preferred embodiment of my invention and illustrated the same in the accompanying drawings, certain minor changes or alterations may appear to one skilled in the art to which this invention relates during the extensive manufacture of the same, and I, therefore, reserve the right to make such changes or alterations as shall fairly fall within the scope of the appended claim.

What I claim is:

In a latch device for a sliding door, the combination of a front plate, a latch behind said front plate, said latch comprising a body formed or stamped from a single sheet-like piece, said body bent inwardly at its inner end and provided with a grip on its outer end, said inwardly bent inner end provided with a neck extending therefrom, said neck having an upstanding apertured lug, said neck terminating at its inner end in an elongated head, said head provided near its outer end with an elongated seal-receiving aperture, said head provided at its outer end with a depending V-shaped lip and at its inner end with a depending apertured throat, a spring secured to said upstanding apertured lug and to said front plate, and a keeper-plate provided with a lug adapted to be engaged by said latch.

In testimony whereof I hereunto affix my signature.

NATHANIEL B. SHELLY.