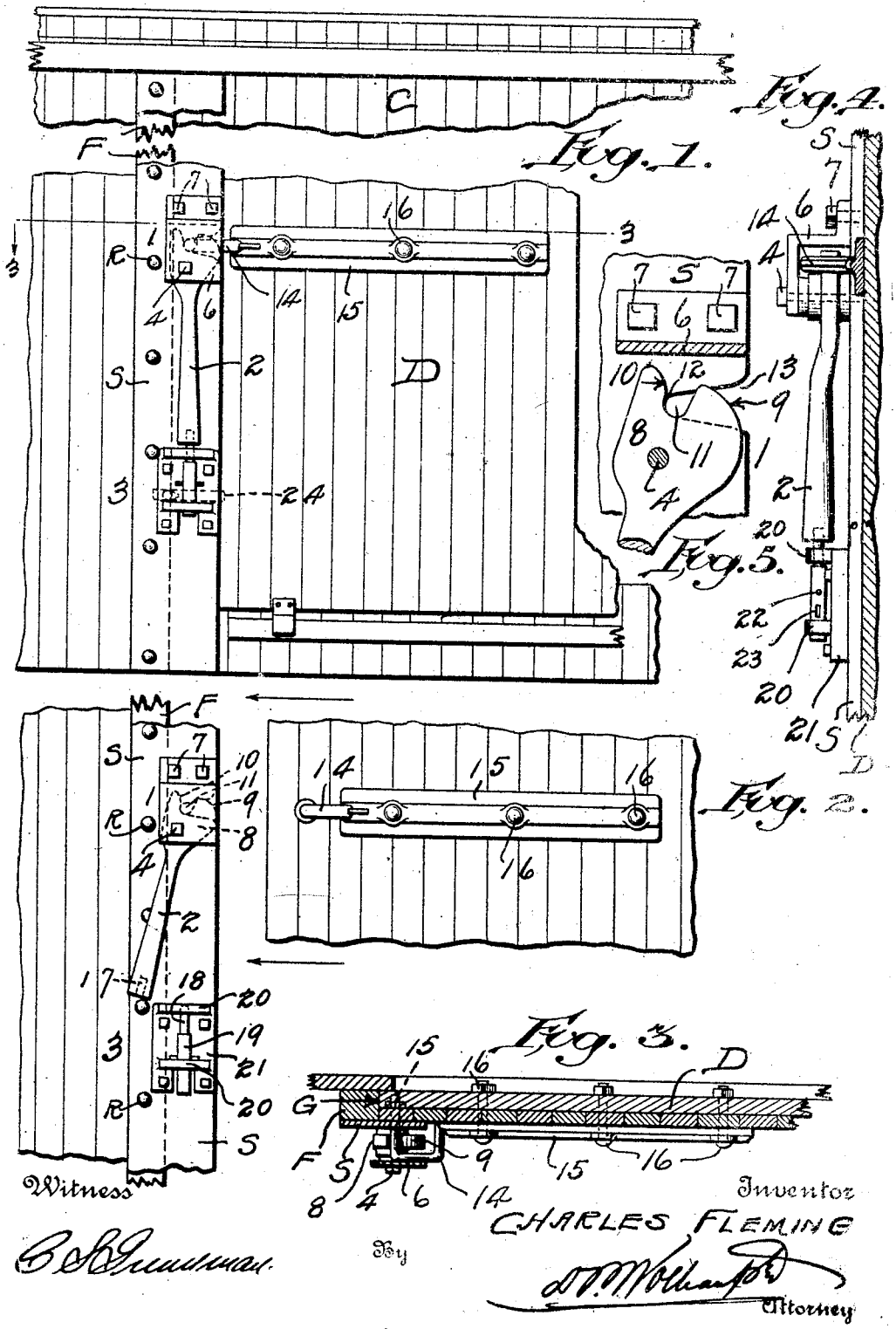
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CAR DOOR FASTENER.

APPLICATION FILED NOV. 6, 1915.

1,175,349.

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UNITED STATES PATENT OFFICE.

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CAR-DOOR FASTENER.

1,175,349. Specification of Letters Patent. Patented Mar. 14, 1916.

Application filed November 6, 1915. Serial No. 60,039.

To all whom it may concern:

Be it known that I, CHARLES FLEMING, a citizen of the United States, residing at South Bartonville, in the county of Tazewell and State of Illinois, have invented certain new and useful Improvements in Car-Door Fasteners, of which the following is a specification.

This invention relates to door fastenings and more especially to a locking device of special utility in connection with freight car doors of the horizontally sliding type.

To this end, the invention contemplates a novel fastening device that acts as a latch to releasably hold the door closed, and which may also be positively locked so that none except authorized parties can obtain access to the contents of the car. In this connection, the invention also aims to provide a fastener that may be readily attached to the frames of doors of various constructions now in use, as well as those constructed especially for this type of fastener.

Another object of the invention is to provide a fastener, whereby a standard type of car seal such as required in railway car handling, may be readily used, and also provide a fastener in the nature of a combined locking device and door opening lever, which is of special advantage when the door sticks. That is to say the invention has in view the provision of means for forcing the door from its closed position when the same is stuck, due to being swollen from dampness or other conditions, thus facilitating the access to the contents of the car.

A further object of the invention is to provide a practical, substantial and reliable construction that may be produced at a relatively low cost, and which because of its simplicity involves little or no cost of maintenance.

As a still further object, the invention has in view a novel fastening device including the special characteristics mentioned that will work automatically as far as releasably latching the door is concerned. That is to say, it is proposed to provide a fastening device having means, whereby the element to be locked carried by the door will tilt or rock the same to thus automatically engage the door carried member.

With the above and other objects in view which will more readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts hereinafter more fully described, illustrated and claimed.

A preferred and practical embodiment of the invention is shown in the accompanying drawings, in which—

Figure 1 is an elevation of a sliding car door and a portion of the door frame showing the application of the present fastening device. Fig. 2 is a more or less fragmentary elevation showing the position of the parts of the fastening device before they assume the engaged position shown in Fig. 1. Fig. 3 is a horizontal sectional view on the line 3—3 of Fig. 1. Fig. 4 is a detail side elevation of the fastening device. Fig. 5 is an enlarged detail view of the latch head and guide slot in the door frame.

Similar reference characters designate corresponding parts throughout the several figures of the drawings.

Although the present invention is susceptible of use in connection with sliding doors, adapted for various uses, it is preferred to utilize the same in connection with the usual type of sliding freight car door. Accordingly, as will be apparent from the drawings the present invention is shown in connection with a portion of a freight car designated generally as C, having therein a conventional type of sliding door D, which in its closed position abuts with the vertically arranged frame bar F. This frame bar has secured to its outer face a vertical holding strip S, which is rigidly secured thereto by means of suitable fastenings or rivets R, to thus provide a holding guide G, Fig. 3, for holding and concealing the front edge of the door in its closed position, to thus prevent access to the car at this point. The present fastening device designated in its entirety as 1 is preferably secured to the outer face of the holding strip S, and essentially includes a swinging latch lever 2 having a locking device at its free end, designated generally as 3.

Referring more particularly to the novel structural features and characteristics of the fastening device, it will be observed that the latch lever 2 is pivotally supported on a transverse pivot bolt 4 having one end secured in the holding strip, while the opposite end is supported in a web 5 of the latch housing 6, which is secured to the holding strip S,

as indicated at 7. The upper portion of the latch lever 2 is provided with a latch head 8, and as will be observed more particularly from Figs. 1 and 2, the pivot 4 is mounted eccentrically in the head so that the lever normally assumes a tilted or oblique position as shown in Fig. 3 when the door is open. The said latch head 8 is provided at one side with a curved buffer nose 9, and also with a cam face 10 having therebetween an intermediate keeper notch 11. This intermediate keeper notch 11 is adapted to register with the closed end 12 of a clearance slot 13 formed in the holding strip S.

As will be apparent from Figs. 1 and 2, the buffer nose 9 of the latch head normally prevents an entrance to the clearance slot 13. Therefore, in order for the keeper notch 11 to receive a member to be locked carried by the door, the lever must be tilted so that the notch lies in substantially the same general direction as the said slot. As will be clear from the drawings, the clearance slot 13, and keeper notch 11 are located in the path of movement of a locking eye 14 carried by the door D. This locking eye is preferably in the form of an angular loop, and is carried by an attaching plate 15 which may be secured to the door D by the fastenings 16. In order to provide for securely maintaining the side of the eye 14 that abuts with the buffer nose 9 of the latch head, in working position, the end of the eye is carried to the inner face of the door as indicated in dotted lines in Fig. 3 by the reference 15, where it may be provided with a suitable nut.

Assuming that the locking eye 14 is in the position shown in Fig. 2, and the door D is to be closed or pushed toward the holding guide G, it will be apparent that the said locking eye will initially strike the buffer nose 9 of the latch head, and owing to the curvature thereof and the fact that the head is eccentrically pivoted, the same will force the latch member in the direction of the arrow shown in Fig. 2 to thus automatically permit the eye 14 to enter the keeper notch 11. That is to say, the rigid eye 14 will slidably press on the curved buffer nose 9 to thereby tilt the whole lever on its eccentric pivot 4. The momentum of the door going to its full closed position will then cause the handle portion of the latch lever to assume a vertical position as shown in Fig. 1. Thus, the door will be automatically latched, and will be held in this position without any further manual attention.

It will be noted in connection with the swinging latch lever 2, in view of the foregoing description that the same includes a handle portion having at one end a latch head 8 for engaging with a member to be locked carried by the door. However, this means only releasably holds the door in its closed position, and in order to provide for the positive locking thereof, the end of the lever opposite the latch head is provided with a positive locking device 3. Although any suitable means may be utilized for locking the end of the handle portion of the lever opposite the latch head, it is preferred to provide the end of the lever 2 with a keeper socket 17 for receiving the locking end 18 of a locking bolt 19 which is slidably supported in the projecting guide eyes 20 of a bracket 21. This locking bolt 19 is provided with a cross pin 22 for preventing the bolt from sliding through the lower guide member 20, and is also provided with an opening 23 which may be utilized to receive a suitable car seal 24, such for instance as designated in dotted lines in Fig. 1. It will, therefore, be obvious that when the lever member 2 is in its vertical position as shown in Fig. 1, and it is desired to lock the door, the sliding bolt 19 may be lifted upwardly so that the locking end 18 thereof enters the keeper socket 17.

In the event that the door D becomes stuck so that it is difficult to open, the present type of fastening device makes it specially convenient for prying the same open. That is to say, when the locking bolt is disengaged from the lower end of the latch lever, the handle portion thereof may be grasped, and the lever turned on its pivot 4 so that the cam face 10 which forms one side of the keeper notch 11 will exert an opening pressure on the locking eye 14.

From the foregoing description, it is thought that the construction, operation, and many features and advantages of the invention will be readily apparent, and it will of course be understood that various changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit of the invention or scope of the appended claims.

I claim:

1. A fastening device for sliding doors comprising a pendent lever provided at its upper end with an enlarged latch head having a pivotal point of support which normally suspends the lever at an angle to the perpendicular, said latch head having a notch and a buffer nose disposed at one side of said pivotal point, a locking eye having a path of movement intersecting said buffer nose of the lever, and a locking device for holding the lever in a vertical position when engaged with the latch head.

2. A fastening device for doors including in combination with a door and a door frame, a holding strip having a slot, a housing plate secured to said strip adjacent said slot, a locking eye carried by the door, and a swinging latch lever having a latch head provided with a cam face and a buffer nose, and a keeper notch intermediate the

same, said lever also having a depending handle portion, and means for locking the free end of the handle.

3. A fastening device for doors including in combination with a door and a door frame, a holding strip having a slot, a housing plate secured to said strip adjacent said slot, a locking eye carried by the door, and a swinging latch lever pivoted between said housing plate and the holding strip and having means for automatically engaging said eye, and also having cam means for forcing the eye on the door out of latched engagement, said lever also having a depending handle shank portion and means for positively locking the free end of the handle of said swinging lever.

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

CHARLES FLEMING.

Witnesses:
E. E. BLACK,
C. W. MARSHALL.