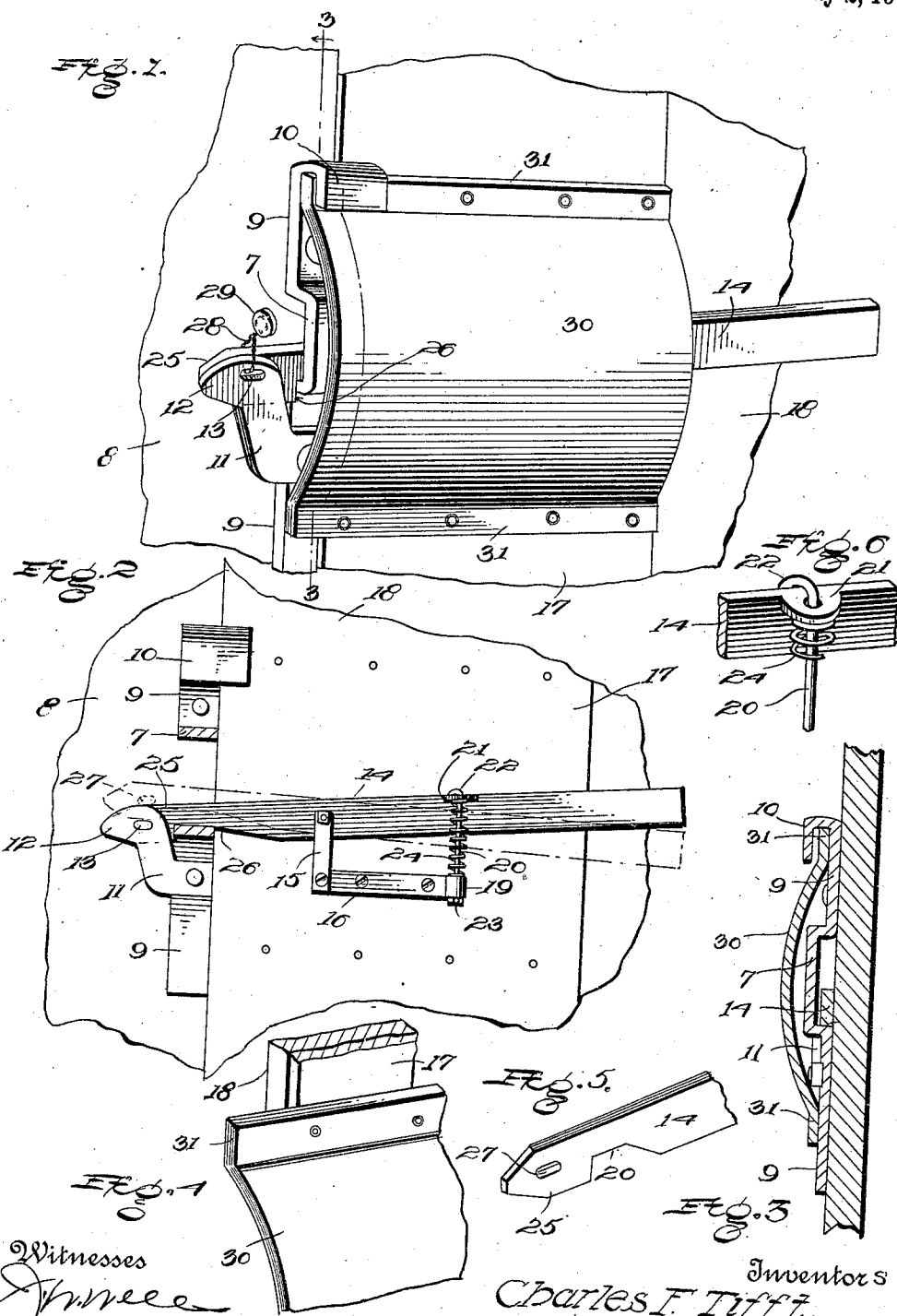


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 FREIGHT CAR DOOR LATCH.
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UNITED STATES PATENT OFFICE.

CHARLES F. TIFFT AND NATHANIEL B. SHELLY, OF BRAINERD, MINNESOTA.

FREIGHT-CAR-DOOR LATCH.

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To all whom it may concern:

Be it known that we, CHARLES F. TIFFT and NATHANIEL B. SHELLY, citizens of the United States, residing at Brainerd, in the county of Crow Wing and State of Minnesota, have invented certain new and useful Improvements in Freight-Car-Door Latches, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to latches for doors of freight cars, and the principal object of the same is to provide a latch that can be locked in a fastening position by means of a seal and also to provide novel means for shielding the latch so that dust, dirt, snow or other foreign matter cannot render the latch inoperative.

With the above and other objects in view the invention contemplates equipping a door frame of a car with a keeper and a sealing lug and the door with a manually operable latch bar for engaging said keeper and adapted to be locked to said lug by a seal, and a latch shield carried by the door for inclosing the latch bar and keeper when in latching engagement.

In carrying out the objects of the invention generally stated above it will be understood, of course, that the essential features thereof are necessarily susceptible of changes in details and structural arrangements, one preferred and practical embodiment of which is shown in the accompanying drawings, wherein:—

Figure 1 is a perspective view of the improved car door latch. Fig. 2 is a view in front elevation, the keeper being shown in section and the shield removed. Fig. 3 is a vertical sectional view taken on the line 3—3, Fig. 1. Fig. 4 is a fragmentary detail perspective view showing the manner of spacing the shield from the car door. Fig. 5 is a detail fragmentary view of the head of the latching bar. Fig. 6 is a similar view showing the means for normally holding the latching bar in position to engage the keeper.

Referring to the accompanying drawings by numerals, it will be seen that the improved car door latch comprises an upstanding keeper loop 7 that is vertically arranged at one vertical edge of a doorway in a car 8, the said loop being preferably formed from a plate, the upper and lower portions 9 of which are suitably fastened to the car.

The upper end of the said plate is bent outwardly and downwardly to provide a transverse guiding and holding channel 10. The lower portion of said plate has one end of a lug 11 rigidly fastened thereto, said lug projecting outward and upward and terminating in a head 12 that is in alinement with the keeper loop 7 and is provided with a transverse opening 13.

The latching bar 14 is pivotally connected to the upper end of a standard 15 projecting from the forward end of a supporting strap 16 that is rigidly fastened to a spacing strip 17 carried by the car door 18. The rear end of strap 16 is provided with a transverse eye 19 through which a guide rod 20 is slidable. Said rod 20 projects through a laterally projecting ear 21 carried by latching bar 14 and has a hook 22 at its upper end that engages over the upper longitudinal edge of said bar 14. The lower end of rod 20 is provided with a head 23 that abuts the lower end of eye 19 and thereby limits the upward movement of said rod. A spring 24 is coiled about rod 20 and has its upper end bearing against ear 21 and its lower end bearing against eye 19 so that the tension of said spring is constantly exerted to rock the rear portion of the bar 14 upward. The head 25 of bar 14 has a keeper-engaging notch 26 formed in its lower edge and said head is provided with a transverse opening 27 that alines with the opening of lug 11 when the bar 14 is engaged with the keeper 7 so that said head can be locked to said lug by means of the wire 28 and seal 29, as is clearly shown in Fig. 1.

A transversely bowed shielding plate 30 has its flanged longitudinal edges 31 rigidly fastened to the spacing strip 17 with the forward end of said shield projecting beyond the latching edge of the door 18. Said shield incloses the pivotal support for the bar 14 and also the rod 20 and its forward end projects beyond the forward vertical edge of the door 18 so that its upper edge will engage the channel 10 when said door is closed.

As will be clear, the improved latch is of special utility in connection with sliding doors of cars, and it will be understood from the foregoing that when the door 18 is closed, the head 25 of latching bar 14 passes through loop 7 and the notch 26 engages with said loop, said bar being normally held in position to retain the head engaged with

said loop by the tension of spring 24. To release the door, the projecting rear end of the bar is manually rocked to raise the head from the base of said loop, whereupon the door can be readily opened.

It will be seen that this invention provides simple means whereby the door can be latched in a closed position, and when desired, the door can be locked against unauthorized opening by means of a wire, such as 28, that is passed through the head of lug 11 and the head of bar 14 and the seal 29 that is clamped to the said wire. It will also be seen that the shield 30 in addition to protecting the latch, provides simple means for engaging the channel 10 to support the door against lateral pressure.

What we claim as our invention is:—

1. A latch for a freight car door comprising a keeper provided with a loop and a transverse holding channel, an angular lug projecting from the base of said keeper and having a head provided with a transverse opening, a latching bar, means for pivotally connecting said bar to a car door, said bar provided with a head for engaging said keeper, said head provided with a transverse opening that aligns with the opening of said lug when said head is engaged with said keeper, means engaging said aligned openings to lock the head to said lug, and a shield adapted to be fastened to the car door for shielding said latching bar and having a projecting end that slidably engages said channel.

2. A car door latch comprising a keeper formed of a narrow plate shaped to provide a latch receiving loop and a transversely arranged overhanging upper holding channel,

a latching bar for engaging said loop, means carried by said keeper adapted to be locked to said bar, and a shielding plate for inclosing said loop and the portion of the bar engaged therewith and for slidably engaging said channel.

3. A car door latch comprising a latching bar provided with a laterally projecting ear, a supporting strap provided with an end eye, a standard carried by said strap, means for pivotally connecting said bar to said standard, a rod slidable through said sleeve and ear and having an end hook for engaging said ear, a spring coiled about said rod, and bearing against said sleeve and ear, a keeper for one end of said bar, and means for shielding said keeper and bar when in latching engagement.

4. A latch for sliding doors of cars comprising a plate carried by one side of a doorway and provided with an overhanging upper channel and an intermediate latching bar engaging loop, a latching bar pivotally connected to said door and having one end adapted for engagement with said loop, means for normally holding said bar in engagement with said loop, and a bowed shielding plate spanning a portion of said bar and having its upper and lower edges fastened to said door and having one end projecting beyond one vertical edge of the door for slidably engaging the said channel.

In testimony whereof we hereunto affix our signatures in presence of two witnesses.

CHARLES F. TIFFT.

NATHANIEL B. SHELLY.

Witnesses:

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GOTTFRED S. SWANSON.