Nov. 13, 1928. 1,691,028

F. AXELSON

CAR DOOR LATCH

Filed Sept. 26, 1927

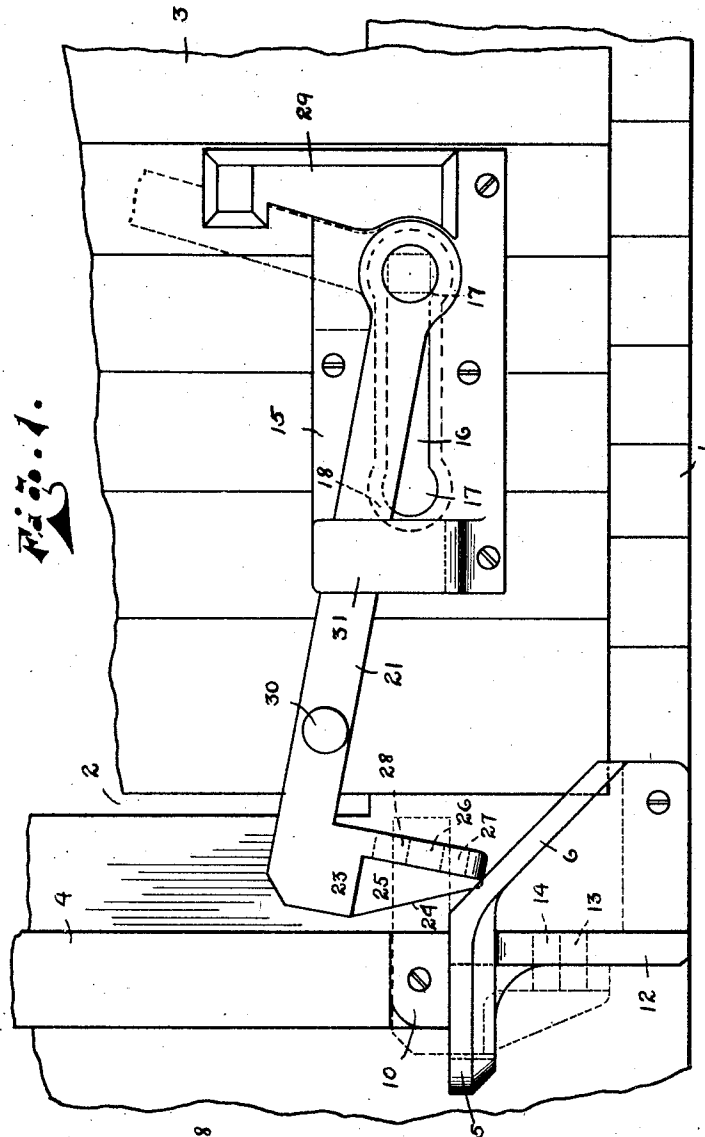


Fig. 1.

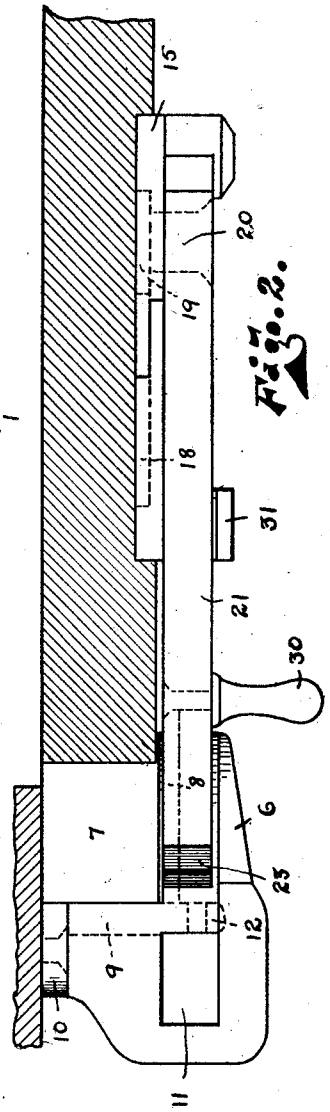


Fig. 2.

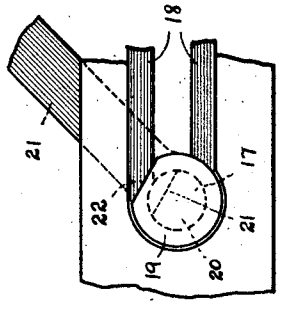


Fig. 3.

Inventor

FRED AXELSON.

By Geo. Stevens.

Attorney

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FRED AXELSON, OF NORTHOME, MINNESOTA.

CAR-DOOR LATCH.

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This arrangement relates to door holding devices and has special reference to such a device designed particularly for the holding of car doors either closed or ajar.

The principal object is to provide simple and practical means of insuring the tight closing of a door, or positively holding the same somewhat ajar.

Other objects and advantages of the invention will appear in the further description thereof.

Referring now to the accompanying drawing forming part of this application, and in which like reference characters indicate like parts:

Figure 1 is a front elevation of the lower corner of a car door as applied to the door opening therein having the improved holding device applied thereto;

Figure 2 is a top plan view of the holding device showing the door in cross-section; and

Figure 3 is a fragmental elevation of the back side of the rearmost end of the door engaging portion of the device.

1 represents the side of an ordinary box car with the door opening 2 therein, while 3 is the outside door of a car as commonly found thereupon, and which when closed abuts against the stop 4 adjacent the front edge of the door opening.

Just beneath the lower end of the stop 4 I install a catching bracket comprising the horizontally disposed portion 5 and the inclined portion 6, the same being substantially L-shaped in plan view providing the channel like corner indicated at 7, being a continuation of the jam space formed by the stop 4 adjacent the edge of the door opening so that the front edge of the door 3 enters intermediate of the inclined portion 6 of the catch and the outer face of the car.

This catch bracket is provided with the vertical web portion 8 for supporting the inclined portion 6, and a like web portion 9 at right angles thereto, the face of which is in line with the face of the stop 4 and also has an upwardly extending flange portion 10 for secure engagement with the side of the car. A rectangularly shaped hole 11 is formed through the horizontal shelf-like portion 5 of the catch bracket and just beneath the innermost edge of same is a continuation of the web 9 as indicated at 12 the same extending outwardly beyond the web 8 and provided with two horizontally disposed openings, the lower one preferably being a round hole as indicated at 13 for the reception of any desired kind of padlock or the like and the other hole preferably a vertically elongated slot indicated at 14 for the reception of the common car seal when desired.

The cooperative holding means located adjacent the lower front corner of the door 3 comprises the door plate 15 which may be made of one or more parts as desired and preferably let into the outer face of the door so as to be substantially flushed therewith. This is a rectangularly shaped plate approximately seven or eight inches in length and provided with a central through slot 16 therein, which slot, adjacent both ends of the plate 15, terminates in slightly enlarged circular openings 17, the center of the circular openings being slightly below the center line of the slot for purposes hereinafter described.

The slot 16 and its accompanying circular openings are stepped in sectional appearance, that is to say, a recessed or stepped edge is formed thereabouts from the inner side of the plate as indicated at 18, so that the head 19 of the pin 20, which pivotally supports the pawl or dog 21, may operate within said stepped portion, and not project beyond the innermost flush face of the plate 15, thus permitting of the free horizontal and rotative action of the pin 20. The head 19 of the pin 20, as well as the pin itself, are flattened upon one side thereof, as indicated at 21 in respect to the pin and at 22 in respect to the head thereof, so that at a certain angular position of the pawl 21 the pin may be slid carrying of course the lower end of the pawl with it to either end of the slot where it is rotatable in either of the circular enlargements 17 of the slot. By this means it is quite evident that the dog must be carefully held at the proper angle in order to adjust it from one end of the slot to the other; otherwise it will freely rotate within whichever circular enlargement it is allowed to remain, and, as is further apparent from viewing Figure 3 of the drawing, the dog must be manually lifted as well as turned to the proper angle before it can be adjusted from one end of the slot to the other, which counteraction of gravity will not normally take place by any ordinary manipulation of the car door.

The free end of the dog is formed with a hook, finger, or nose-like portion 23, the inner face of which is at right angles to the body portion of the dog 21, and its outer face inclined as at 24, this inclined portion being

stepped as at 25, forming the web-like lateral extension 26, in which is formed a hole 27 and a slot 28 for registration with the hole 13 and slot 14 respectively in the catch bracket when the dog is in hooked engagement with said bracket by the finger or nose 23 being dropped within the hole 11 in the bracket.

The inclined front face of the nose 23 of the dog is for the purpose of lifting engagement with said bracket so that if the dog is in its dropped condition and strikes the bracket when the door is slammed shut, it will mount the same and automatically drop within the opening 11, insuring a positive catching and holding means for the door when it is closed or even if the dog is in its inactive position, for example reclining against the supporting bracket 29 formed integrally with the plate 15 at the closing of the door, the jar will throw its forwardly and also become automatically engaged with the bracket.

For convenient manual manipulation of the dog, I have shown a small handle 30 extending laterally from adjacent the free end thereof, and on the front outer face of the plate 15 is integrally formed a guiding member 31 between which and the plate 15 the dog is guided while in its holding position.

By the elognation of the slot 16 and the possibility of adjusting the dog 21 from one end thereof to the other, it is apparent that the extent of protrusion of the free end of the dog beyond the front edge of the door may be varied, that is to say, if the dog is in the forward extremity of the slot for pivotal engagement therein it will drop into the hole 11 in the bracket before the front edge of the door strikes the stop 4 of the opening, and thus the door be held ajar just the length of the slot 16. This is provided for furnishing convenient means in insuring ventilation of the car in the event of live stock being conveyed therein and whereby a predtermined permanent opening of the door may be insured during the transportation of such; or it may be desirable to have the door remain open a slight distance for other purposes, and in this manner an exceedingly simple and convenient device is provided for such purpose.

As is obvious the specific features of the disclosure here illustrated may be varied to considerable extent without departing from the spirit of the invention, and, having described the same, what I claim and desire to secure by Letters Patent, is:

A door holding means of the character described comprising a catch bracket having a hole therein and an inclined face adjacent the hole, said bracket having means for permanent attachment adjacent the door opening, a pivotally mounted dog carried by the door for automatic engagement with the bracket, and means whereby the dog may be adjusted for predetermined spacing of the door ajar.

In testimony whereof I affix my signature.

FRED AXELSON.