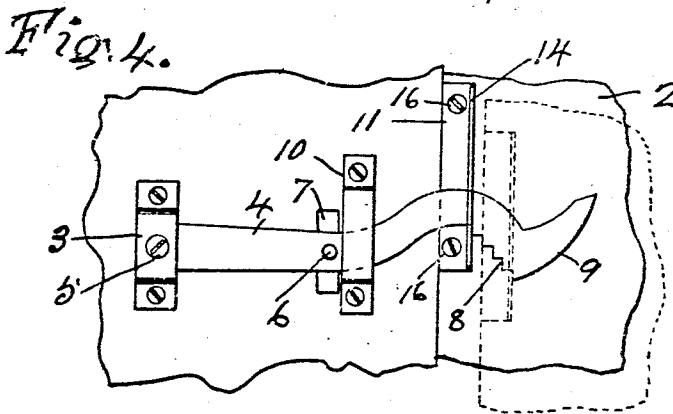
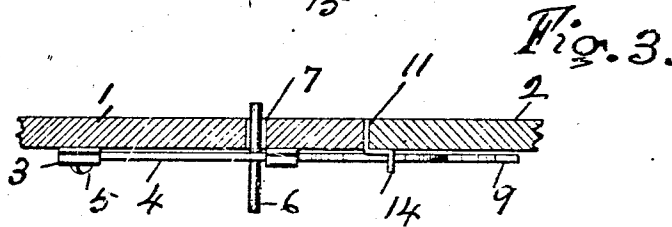
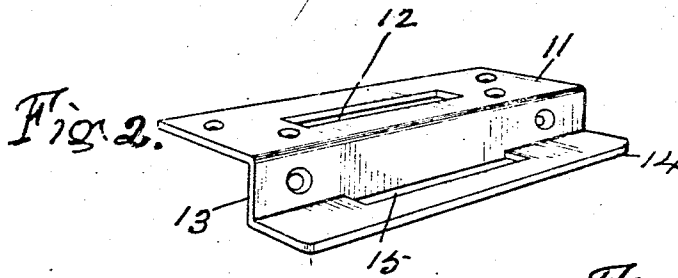
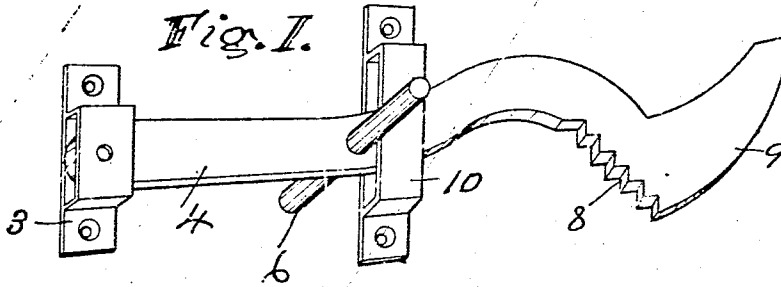


A. NEUENSCHWANDER.
BARN DOOR LATCH.
APPLICATION FILED MAR. 6, 1909.

964,876.

Patented July 19, 1910.



WITNESSES:

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ADAM NEUENSCHWANDER, OF BERNE, INDIANA.

BARN-DOOR LATCH.

964,876.

Specification of Letters Patent.

Patented July 19, 1910.

Application filed March 6, 1909. Serial No. 481,770.

To all whom it may concern:

Be it known that I, ADAM NEUENSCHWANDER, a citizen of the United States, residing at Berne, in the county of Adams, in the State of Indiana, have invented certain new and useful Improvements in Barn-Door Latches; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to improvements in barn door latches, specially designed for use on double sliding doors.

It is well known that sliding barn doors frequently sag very materially and thereby spread apart and render the latch therefor useless by throwing it out of alinement with its catch and too far away from the same and also that sometimes there is an uneven settling or sagging of the part of the structure on which one of the doors is suspended, thereby spreading the doors too far apart to enable the latch to engage the catch.

The object, therefore, of my present invention is to provide an improved barn door latch which can be opened from either the inside or the outside of the door with equal facility, and which is so constructed as to properly engage its coacting catch even when there has been a considerable settling of one of the doors or of the part carrying the catch.

My present invention consists of a novel form of latch pivoted at one end and provided with means at its other end for engaging the catch at slightly different relative vertical positions, and having near the middle of its length means for operating the same from either side of the door.

The novel feature of my invention resides in the construction and coöperation of the latch with its engaging means.

Similar reference numerals indicate like parts in the several views of the drawings in which—

Figure 1 is a perspective view of my improved latch in position in its guiding and securing means. Fig. 2 is a perspective view of the preferred form of catch employed with the latch. Fig. 3 is a fragmentary cross-section of a pair of sliding barn doors on which my invention is employed showing the relative arrangement of the coacting

parts. Fig. 4 is a view in elevation of my invention in position upon the fragments of two meeting sliding barn doors, showing in dotted lines how my invention acts when the doors are considerably spread apart.

All parts of my invention are made of suitable metal.

The sliding doors 1 and 2 are of the usual construction and operation and are suspended in the usual or other proper manner. To the outer face of the door 1 is fixed a common form of metal strap 3 in which the rear end of the latch 4 is pivotally secured by means of the bolt or screw 5. The latch 1 has, preferably, near the middle of its length, a transverse pin 6 fixed therein and whose ends are sufficiently extended to form proper latch handles.

As shown in Fig. 3, the inner end of the pin 6 is loosely arranged in the vertical slot 7 in the door 1, and has its inner end extended beyond the slot, to form a convenient means for raising the latch from the inside of the door. The other and forward end of the latch 4 is upwardly curved and provided upon its lower face with an inclined rack or notched portion 8, and has its outer adjacent extremity 9 upwardly curved to automatically guide the latch to its engagement in closing the door.

The latch 4 passes loosely through a second metal strap 10, which is fixed on the door 2 and supports the latch in substantially a horizontal position when the door is open. This strap 10 has sufficient length to give the latch suitable vertical play therein under all conditions of service.

My invention can be employed with any suitable form of catch, though I preferably employ the form shown in Figs. 2, 3 and 4, consisting of a plate 11 having a longitudinal slot 12 therein, and provided with a longitudinal off-set 13 and a portion 14 in a plane parallel to that of the plate 11, and provided with a longitudinal slot 15. This plate is rigidly secured in position by proper screws 16, as shown in Figs. 3 and 4, in which the body of the plate rests in a suitable recess in the edge of the door 2 and the portion 14 projects outwardly at right angles to the door whereby it is in position to engage the notched portion 8 of the latch when in position in the slot 15 as shown in Fig. 4.

The operation and manner of employing

my invention thus described is obvious, and briefly stated is as follows: When the latch 4 is engaged with the catch and it is desired to open either door 1 or 2 from either the outside or the inside, the operator simply raises the latch by means of the pin 6 until it escapes its engagement, after which either door may be opened in the usual manner. The doors can readily be closed without touching the latch, by sliding them together, since the curved portion 9 of the latch will guide it to its engagement with the plate 11 in the slot 14 in a well understood manner, by its own gravity, and the inclined arrangement of the notches enables the latch to continue without interruption its sliding movement to its engagement with the proper notch 8. Should it be desired to have the latch 4 engage the plate 11 in the slot 12 instead of in the slot 15 the plate is simply reversed end for end. It is obvious that when, for any cause, the door 2 should sag or settle it would assume approximately the position shown in the dotted outline in Fig. 4 thereby leaving a space between the doors adjacent to the latch, whereby the latch will engage the plate 11 in the last instead of the first of the notches 8, while if the latch has but one

point of engagement as usual, it would not latch at all. 30

It is also obvious that my invention can be employed upon a single sliding door as well as on double doors.

Having thus described my invention and the manner of employing the same what I desire to secure by Letters Patent is: 35

In a barn door latch, a gravity latch-bar pivotally mounted at its inner end, and having its outer end upwardly curved to provide upon its lower face a forwardly inclined rack to engage a coacting catch, and having its adjacent extremity provided with an oppositely inclined and forwardly projecting lug adapted to automatically guide the latch-bar to its engagement; means for securing the latch-bar in its normal position; means for disengaging the latch-bar; and a fixed coacting catch to engage the latch-bar. 40 45 50

Signed by me at Berne, Adams county, State of Indiana, this 13th day of February, 1909.

ADAM NEUENSCHWANDER.

Witnesses:

J. D. WINTEREGG,
EMIL LIECHTZ.