No. 841,910. PATENTED JAN. 22, 1907.

L. A. WEST.

SLIDING DOOR FASTENER.

APPLICATION FILED MAY 26, 1905.

Fig. 1.

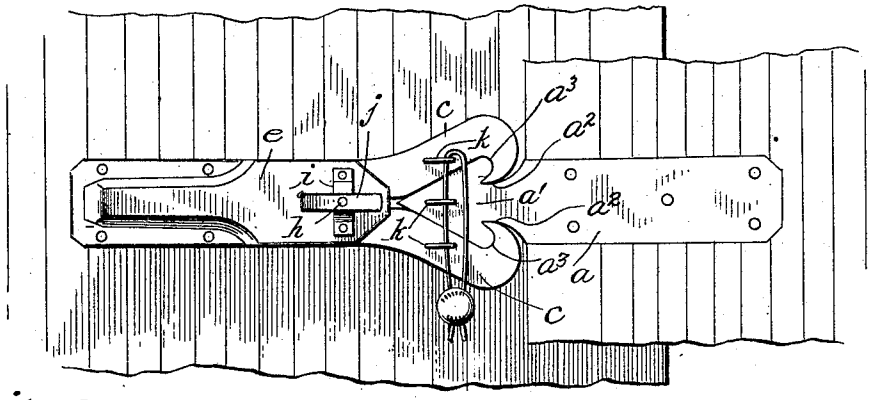



Fig. 2.

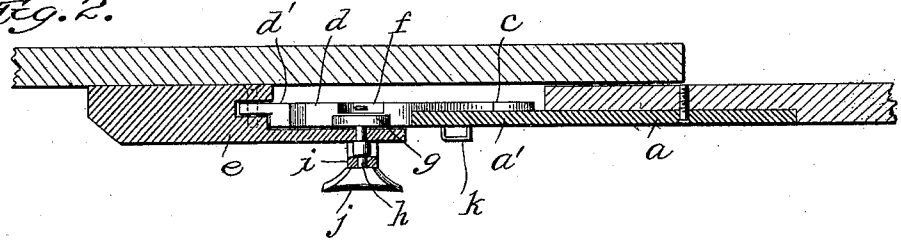



Fig. 3.

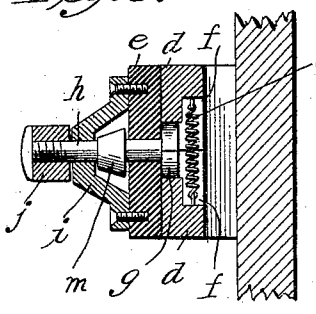
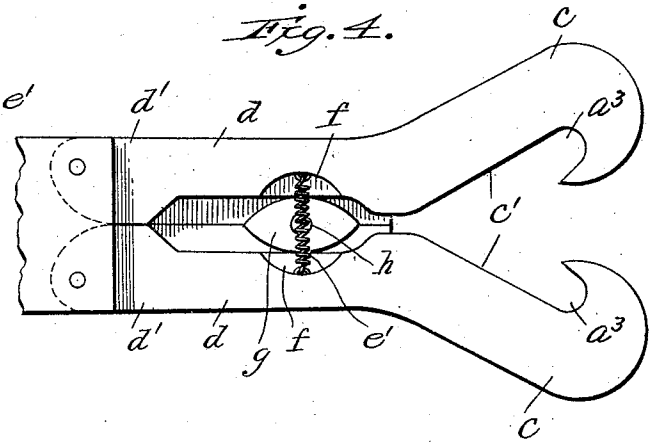



Fig. 4.




Inventor,

Lee A. West,

By Davis & Davis,

Attorneys

Witnesses

Edwin L. Yewell

W. C. Gisel.

THE NORRIS PETERS CO., WASHINGTON, D. C.

# UNITED STATES PATENT OFFICE.

LEE A. WEST, OF DARVILLS, VIRGINIA.

## SLIDING-DOOR FASTENER.

No. 841,910. Specification of Letters Patent. Patented Jan. 22, 1907.

Application filed May 26, 1905. Serial No. 262,482.

*To all whom it may concern:*

Be it known that I, LEE A. WEST, a citizen of the United States of America, and a resident of Darvills, county of Dinwiddie, State of Virginia, have invented certain new and useful Improvements in Sliding-Door Fasteners, of which the following is a full and clear specification, reference being had to the accompanying drawings, in which—

Figure 1 is a front elevation showing my improved latch attached to a box-car door; Fig. 2, a longitudinal section thereof; Fig. 3, a transverse section taken through the opening-cam, and Fig. 4 a back view of the main part of the latch detached.

The object of this invention is to provide a simple device which will automatically latch or lock the sliding door when it is slid to a closed position, it being adapted for substitution for the hasp and staple devices in general use.

To the accomplishment of this object and such others as may hereinafter appear; the invention consists of the parts and combination of parts hereinafter fully described, and particularly pointed out in the appended claims, reference being had to the accompanying drawings, forming a part of this specification, in which the same reference characters designate like parts throughout the several views.

Referring to the drawings by letters, *a* designates a keeper which is carried by the door, its head portion *a'* projecting beyond the edge of the door and having the shape of an arrow-head, the rear edges of the lobes of the arrow-head being undercut to form recesses, as indicated at $a^2$, for a purpose hereinafter described.

The latch member consists of a pair of hooks *c*, curved inward and backward toward each other at their outer ends, forming pockets $a^3$, and having their side edges *c'* inclined away from each other forwardly, so that the space between the hooks shall have approximately the same shape as the arrow-head part of the other member. The two hooks have straight shanks *d*, which are pivoted at their rear ends in a slot in the forward edge of the supporting block or plate *e*. The said shanks are provided at their pivoted ends with heads *d'*, which butt against each other and maintain the hooks in the proper relative position. The hooks are normally drawn together by a contractile coil-spring *e'*, which connects the inner edges of the shanks and lies in recesses *f*, formed in the inner edges of said shanks. The shanks are cut out along their inner edges to form a cavity in which lies the elliptical opening-cam *g*, which is fastened to the inner end of the shaft or pin *h*, journaled in an extension of the supporting-plate and a bracket *i*, fastened to the front of the said extension. The outer end of the shaft is provided with a thumb-piece *j*, by which the cam may be readily turned to separate the hooks and release the arrow-head. Shaft *h* is also provided with a nut or enlargement *m*, located between the bracket *i* and the supporting-plate *e*, to prevent any longitudinal movement of the shaft should the thumb-piece be removed for any reason, thereby keeping cam *g* always in an operative position.

The supporting plate or block is bolted to the side of the car in line with the arrow-head, so that when the door is slid to a closed position the arrow-head will strike centrally between the hooks and spread the same, and when the head passes beyond the inner ends of the hooks the hooks will snap behind the shoulders of the head, and thus automatically lock it between the hooks. It will be observed, further, that the inclined edges of the head portion will strike against the oppositely-inclined edges *c'* of the hooks, and as these hooks are drawn normally together by a spring this will serve as a buffer to relieve the shock of closing the door.

After the arrow-head passes beyond the points of the hooks and the hooks have closed inward a slight backward movement of the door brings the undercut lobes into the pockets $a^3$ of the hooks, thereby making it impossible to release the arrow-head without first pushing the door toward the latch member and holding it there while the hooks are held apart by the cam while the keeper is being withdrawn from between the hooks. This is a feature of importance, as it avoids a serious drawback arising from the use of the ordinary latches, this drawback resulting from the liability of the jolting of the car separating the fasteners and leaving the door free to be jolted from its tracks and lost. This loss of car-doors is a serious item in the expense of all railways. Attached to the face of each hook and to the face of the arrow-head are staples *k*, these staples being in vertical alinement, so that a sealing-wire may be passed through them readily.

This lock is especially adapted for car-doors of the overhanging or overlapping design, requiring very heavy locks, and to avoid the necessity of the use of a casing, which would be detrimental, owing to its size and of its being secured to the car and in contact therewith, which would be a means of accumulating snow, ice, &c., thereby rotting the woodwork, I position the locking-hooks free from contact with the side of the car, forming sufficient clearance between the hooks and the side of the car to obviate this serious objection, and to prevent the exposure of the operating parts they are placed within the side lines of the hooks.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. An automatic car-door fastener comprising an arrow-head keeper, a latch member consisting of a pair of pivoted hooks, a hook-supporting plate provided with an extension, a bracket secured to the extension, means for opening the hooks embodying a shaft journaled in the extension of the supporting-plate and the bracket, and a cam and a thumb-piece secured to the opposite ends of the shaft, and means upon the shaft between the bracket and the extension of the supporting-plate to retain the opening means in an operative position.

2. An automatic car-door fastener comprising an arrow-head keeper, a latch member consisting of a pair of pivoted hooks, a hook-supporting plate provided with an extension, a bracket secured to the extension, means for opening the hooks embodying a shaft journaled in the extension of the supporting-plate and the bracket having a cam and a thumb-piece secured to the opposite ends thereof, means upon the shaft between the bracket and the extension of the supporting-plate to retain the opening means in an operative position, and means for holding the hooks normally in a closed position.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 26th day of May, 1905.

LEE A. WEST.

Witnesses:
LINWOOD LAMBERT,
ALEX B. BRAGG.