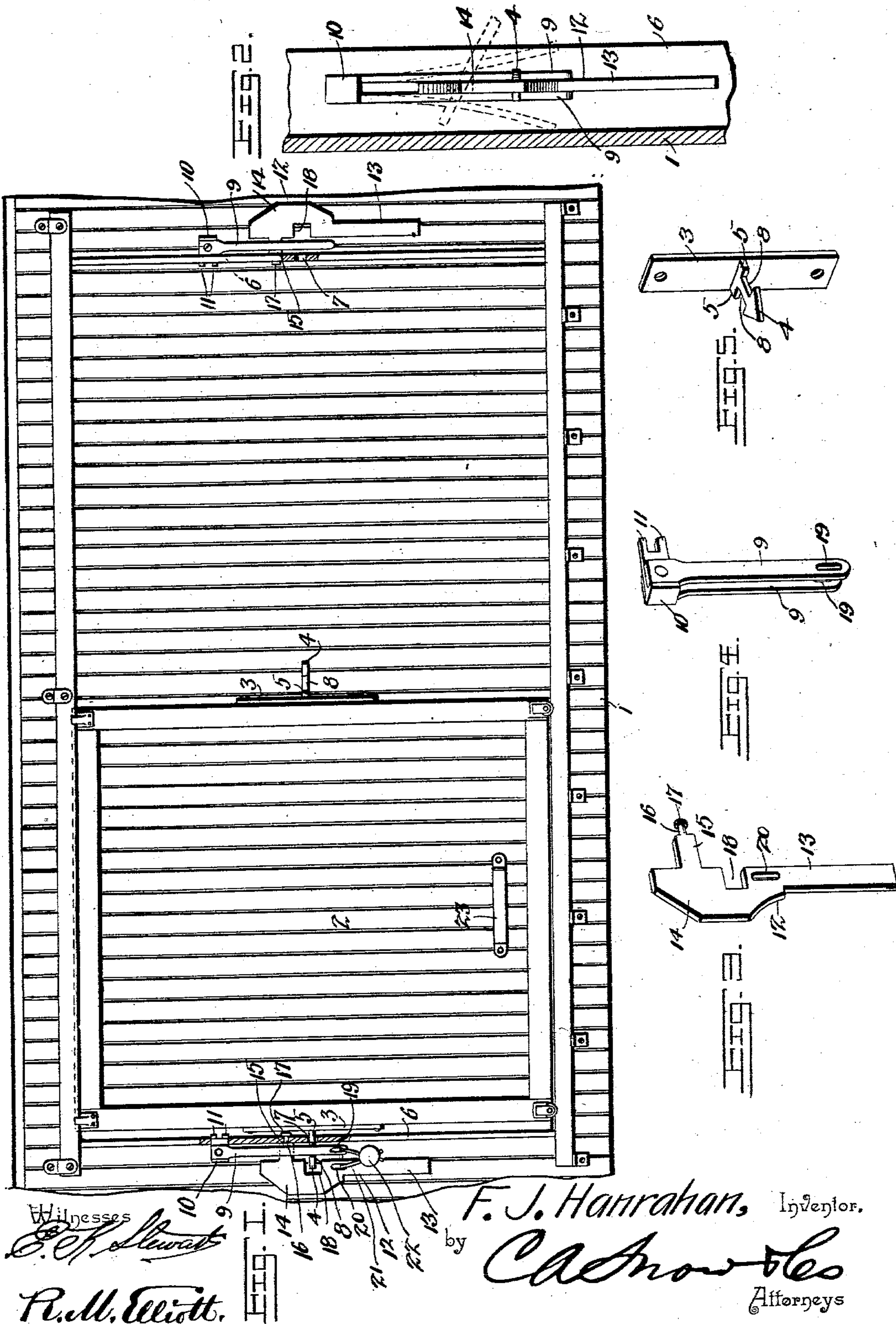


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Patented Dec. 30, 1902.

F. J. HANRAHAN.
SLIDING DOOR LOCK.
(Application filed Aug. 13, 1901.)

(No Model.)



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UNITED STATES PATENT OFFICE.

FRANCIS J. HANRAHAN, OF CATAWISSA, PENNSYLVANIA.

SLIDING-DOOR LOCK.

SPECIFICATION forming part of Letters Patent No. 716,890, dated December 30, 1902.

Application filed August 13, 1901. Serial No. 71,955. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS J. HANRAHAN, a citizen of the United States, residing at Catawissa, in the county of Columbia and State of Pennsylvania, have invented a new and useful Lock for Sliding Doors, of which the following is a specification.

This invention relates to locks for sliding doors.

10 The object of the invention is to present a cheap, durable, and thoroughly-efficient form of lock which may be readily applied to a door already in use without necessitating any change in its structural arrangement
15 and which when positioned for use will be easy to operate and will securely hold the door either in its open or closed position.

With these and other objects in view, as will appear as the nature of the invention is better understood, the same consists in the novel construction and combination of parts of a lock for sliding doors, as will be hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which like numerals of reference indicate corresponding parts, there is illustrated one form of embodiment of the invention capable of carrying the same into practical operation, it being understood that the elements therein exhibited may be varied or changed as to shape, proportion, and exact manner of assemblage without departing from the spirit of the invention, and in the drawings—

35 Figure 1 is a view in front elevation of a portion of the side of an ordinary box-car, showing the door thereof equipped with the lock of this invention. Fig. 2 is an end view of the locking mechanism. Fig. 3 is a detached detail view of a combined locking and unlocking lever associated with the locking mechanism. Fig. 4 is a perspective detached detail view of one of the spring-keepers constituting a part of the locking mechanism.
45 Fig. 5 is a detached detail perspective view of one of the catches that engages the keeper shown in Fig. 4 for holding the door either opened or closed.

Referring to the drawings, 1 designates the side of an ordinary box-car, and 2 the later-ally-sliding door thereof. As these parts may be of any usual or preferred construction, de-

tailed description thereof is deemed unnecessary. On each side of the door is secured a plate 3, carrying an arrow-head-shaped catch 55 4, provided adjacent to the plate 3 with shoulders 5 to abut against the inner side of the door-stops 6, thus to limit the lateral movement of the door, each door-stop being provided with an opening 7, through which the head of the 60 catch projects. Between the shoulders 5 and the outer end of the catch are formed two recesses 8 to be engaged by the arms 9 of a spring-keeper secured to the outer portion of each of the door-stops, the arms 9 being se- 65 cured to a head 10, having projections 11, which are passed through openings in the door-stops and have their ends upset or riveted to hold the head in position for operation. The spring-arms 9 normally occupy a 70 position to have locked engagement with the recesses of the catch, and to effect disengagement of the said arms from the recesses when it is desired to unlock the door a lever 12 is provided, which from the double func- 75 tion it performs constitutes a combined locking and unlocking lever. When in the position shown in full lines in Fig. 2, the lever constitutes a locking-lever, as it then permits its free arms 9 to fit closely within the 80 recesses of the catch, and when moved to the position shown in dotted lines of the same figure constitutes an unlocking-lever, as it then spreads the spring-arms and permits the catch to pass therebetween. The lever com- 85 prises a shank 13 and a head 14, the latter being provided on one side with a shoulder 15 to fit between the spring-arms 9, the shoulder terminating in a pintle 16, which projects through the side portion of the door- 90 stop and has its end upset to present a stop 17, which will hold the lever from disengagement therewith. The lever is provided adjacent to the shoulder 15 with a recess 18, into which the pointed end of the catch pro- 95 jects when the door is in locked position.

So long as the lever 12 is in the position shown in full lines in Fig. 2 the spring-arms 9 will be in positive engagement with the recesses of the catch, so that the door will be 100 positively held open or closed, according to the position it may occupy and, further, that by rocking the lever to the position shown in the said figure the shoulder 15 will spread the

spring-arms 9, thereby to free them from the said recesses. As any attempt to force the door laterally when the same is locked will only result in binding the arms 9 against the outer wall of the door-stop it will be seen that if the head 4 of the catch does not break or the plate 3 does not become disengaged from the door it will be impossible to force the door open. Moreover, as the door-stops completely house the plates 3 there will be no possibility of inserting an instrument to pry the plates loose from the door.

When the door is in its closed position, as when the car contains goods, it is of course desirable that means should be provided for sealing the door, and to effect this the spring-arms 9 and lever 12 on the locked side of the door are each provided with openings 19 and 20, respectively, through which will be inserted a wire 21, carrying a lead seal 22 of the usual construction, or in lieu of the wire and seal a chain and lock may be employed for the same purpose. It will be understood that the wire passes through the openings in both the spring-arms and in the lever, so that the three elements are thus securely bound together. To facilitate moving the door from side to side, the same may be provided with an ordinary handle or handhold 23, as usual.

From the foregoing description it will be

seen that although the device of the present invention is composed of but comparatively few number of parts these are so arranged and so operate as to produce the highest results in use, and that by reason of the manner in which they are associated with the carliability of damage or of breakage by being struck by obstructions will be reduced to a minimum.

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

A car-door carrying a catch provided with recesses, in combination with a pair of self-resilient keepers to engage the recesses, the keepers being provided with orifices near their lower ends, a pivoted lever disposed between and adapted for throwing the keepers out of engagement with the recesses, said lever being provided with an orifice intermediate of its ends, the orifices in the keepers and in the lever being adapted to receive means for holding the keepers in locked engagement with the catch.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

FRANCIS J. HANRAHAN.

Witnesses:

JOHN WATSON,
R. R. ZARR.